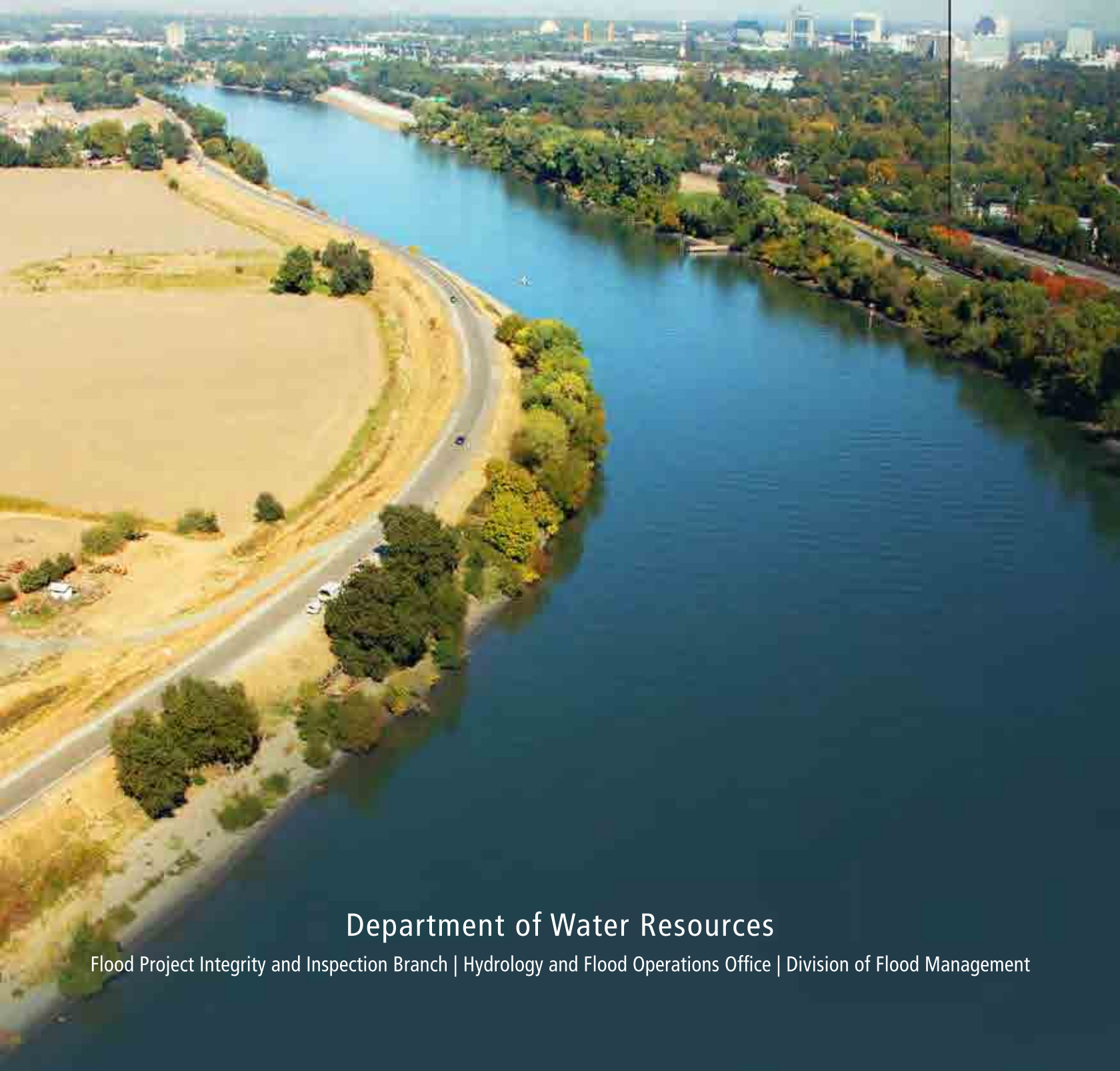
2012

# Inspection and Local Maintaining Agency Report

## of the Central Valley State-Federal Flood Protection System

Code of Federal Regulations, Title 33, Section 208.10

California Water Code Sections 9140 - 9141

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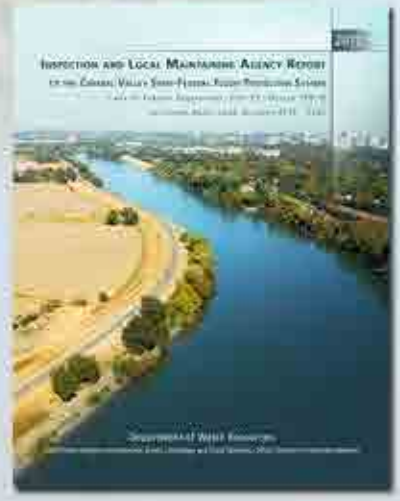
California Department of Water Resources

FLOOD EMERGENCY RESPONSE



## Distribution Information

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Successful completion of this annual report would not be possible without the dedicated efforts and assistance from the Department of Water Resources' (DWR) Inspection and Local Maintaining Agency (LMA) staff. DWR's Flood Project Integrity and Inspection Branch (FPIIB) would like to acknowledge the contributions of the following:

- Inspectors of DWR's FPIIB
- LMAs and their consulting firms who participated in meetings and workshops
- DWR Printing Production for their support

## Reader's Guide

This report is a compilation of data collected by various programs but primarily the data gathered by FPIIB. It includes information from DWR inspections, DWR's summary of LMA annual reporting derived from Assembly Bill 156 (2007), United States Army Corps of Engineers' (USACE) Inspections of the State-federal Flood Control System, DWR's Erosion Survey in the San Joaquin River, and the USACE's Sacramento Bank Project erosion data along with other relevant information. Because the report covers many programs and activities, this Reader's Guide has been provided to help the reader navigate the report.

The report begins with a text portion followed by twelve appendices (Appendix A through Appendix L). Appendices A through E are included in the hard copy of the report while Appendices F through L are included in electronic format (CD). A CD is attached in the back of the report.

Appendices A and B cover LMA summary profiles for Sacramento and San Joaquin River Flood Control Systems. Each individual LMA summary profile contains a cover page with LMA contact information, an aerial map of the levee segment(s), levee information, DWR inspection results, erosion surveys, USACE inspection results and current eligibility in the Rehabilitation and Inspection Program (RIP), and LMA summary reporting. The contact information presented in this report is for the highest authority within an LMA jurisdiction. The *Directory of Flood Officials* uses this contact information in the annual directory produced by the State-federal Flood Operations Center (FOC). A generic threat assessment and recommendation for each LMA has also been developed by DWR. Each of these appendices is preceded by system maps that show the boundaries of LMAs within the Sacramento and San Joaquin river basins.

Appendix C covers other basins that do not belong to either the Sacramento or San Joaquin River Flood Control System. Non-Project levee reporting on maintenance from an LMA is also included in this section.

Appendix D covers relevant correspondence for the LMA reporting program.

Appendix E covers supplemental figures and tables with results from the inspection program.

Appendices F through L are self explanatory and include Appendix F: Maintenance Requirements and Responsibilities, Appendix G: Inspection Category Rating Descriptions, Appendix H: Fall 2012 Levee Maintenance Inspection Summary Reports, Appendix I: 2012 Channel Maintenance Inspection Summary Reports, Appendix J: 2012 Structure Maintenance Inspection Summary Reports, Appendix K: 2012 Pumping Plant Maintenance Inspection Summary Reports, and Appendix L: 2012 Supplemental Erosion Survey of the San Joaquin River System Detailed Reports.

It may be helpful for the reader to refer to the document titled *State Plan of Flood Control Descriptive Document* (November 2010), included as an attachment to the *2012 Central Valley Flood Protection Plan* (CVFPP, July 2012). The information included in the *State Plan of Flood Control Descriptive Document* compliments to this report. Section 7.6 has more information about the relationship between the CVFPP and this report.

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Appendix E: Supplemental Figures and Tables for the Inspection Program
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Appendix G: Inspection Category Rating Descriptions—Included on the enclosed CD
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Appendix L: 2012 Supplemental Erosion Survey of the San Joaquin River System Detailed Reports—Included on the enclosed CD

## Abbreviations and Acronyms

| | |
|---|---|
| AB | Assembly Bill |
| CDEC | California Data Exchange Center |
| CO | Completely Obstructing |
| CVFMP | Central Valley Flood Management Planning |
| CFR | Code of Federal Regulations |
| CVFPB | Central Valley Flood Protection Board |
| CVFPP | Central Valley Flood Protection Plan |
| CVRWQCB | Central Valley Regional Water Quality Control Board |
| CWC | California Water Code |
| DFG | Department of Fish and Game |
| DWR or Department | Department of Water Resources |
| FCC | Federal Communications Commission |
| FCSSR | Flood Control System Status Report |
| FCWCA | Flood Control and Water Conservation Agency |
| FEMA | Federal Emergency Management Agency |
| FloodSAFE | California's comprehensive program to improve public safety through integrated flood management |
| FOC | State-federal Flood Operations Center |
| FPIIB | Flood Project Integrity and Inspection Branch |
| IRWMP | Integrated Regional Water Management Planning |
| LB | Left Bank |
| LD | Levee Districts |
| LM | Levee Mile |
| LMA/LMAs | Local Maintaining Agency/Agencies |
| LMR | Levee Mile Reports |
| LOM | Library of Models |
| MA | Maintenance Areas |
| NA | Named Areas |
| NEMDC | Natomas East Main Drainage Canal |
| NLIP | Natomas Levee Improvement Program |
| NULE | Non-Urban Levee Evaluation |
| O&M | Operation & Maintenance |
| OMRRR | Operation, Maintenance, Repair, Rehabilitation and Replacement |
| PI | Periodic Inspection |
| PL 84-99 | Public Law that defines federal rehabilitation assistance for flood control works |
| PO | Partially Obstructing |
| RB | Right Bank |
| RIP | Rehabilitation and Inspection Program |
| RD | Reclamation Districts |
| RM | River Mile |
| RS | Rock Site |
| SAFCA | Sacramento Area Flood Control Agency |
| SJAFCA | San Joaquin Area Flood Control Agency |
| SJRFCS | San Joaquin River Flood Control System |
| SPFC | State Plan of Flood Control |
| SPRR | Southern Pacific Railroad |
| ST | State Maintained Area |
| UCIP | Utility Crossing Inventory Program |
| USACE | U.S. Army Corps of Engineers |

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# 1 INTRODUCTION

For the first time ever, this report combines the results of the California Department of Water Resources' (DWR) 2012 inspections and the Local Maintaining Agencies (LMAs) annual reporting program of the State-federal flood protection system in California's Central Valley.

## *1.1 Purpose and Scope of Inspection Program*

Federal Flood Control Regulations (Title 33 of the Code of Federal Regulations, Section 208.10 (33 CFR 208.10)) require that federal flood protection facilities be inspected at least four times a year: immediately prior to the beginning of the flood season, immediately following each major high water period, and otherwise at intervals not exceeding 90 days. In addition, inspections at intermediate times may be necessary. These periodic inspections are specifically needed to ensure that maintenance measures for project facilities are being effectively carried out, not to determine other inherent problems (geotechnical, flow capacity, etc.) with the project facilities.

This *2012 Inspection and Local Maintaining Agency Report of the Central Valley State-Federal Flood Control System* is the annual report on the effectiveness of facility maintenance activities of the maintaining agencies. It serves as the report titled *Status of Project Levee Maintenance* referenced in some documents. This report covers levees, channels, and other structures, such as pumping plants. Deficiencies are noted and each agency receives a rating for the facilities within its maintenance responsibilities based on the fall inspections. The report is based primarily on DWR's inspections that were conducted during the summer and fall of 2012, and it includes information submitted by LMAs pursuant to California Water Code (CWC) Section 9141.

This annual report is intended for use by the U.S. Army Corps of Engineers (USACE), DWR, the Central Valley Flood Protection Board (CVFPB), LMAs, and other interested parties.

DWR's Flood Project Integrity and Inspection Branch (FPIIB) conducts two comprehensive levee inspections and one channel and structure inspection each year. FPIIB also conducts erosion inspections in the San Joaquin River system; these results can be found in section 5 of this report. DWR completed spring inspections in May 2012, documenting the location, size, type, and rating of maintenance deficiencies while working with the LMAs to assist in planning maintenance activities prior to the flood season. DWR completed annual fall inspections in December 2012, verifying the status of previously noted as well as any additional deficiencies that should be corrected to help ensure adequate performance during the flood season. LMAs conduct inspections in the winter and summer, completing the requirement to conduct four inspections each year. Since project facilities are inspected at least four times each year, there are other inspection reports for different uses (see side bar, page 6). DWR will report to the CVFPB on inspection activities as requested.

**Maintenance Inspection Reporting**

*2012 Inspection and Local Maintaining Agency Report of the Central Valley State-Federal Flood Protection System.* Annual report prepared by DWR based on DWR's fall and summer inspections and information submitted by the LMA - this report. This is the first in its series of combined reports.

*San Joaquin River Flood System Erosion Report.* Annual report prepared by DWR based on supplemental inspections conducted by FPIIB personnel-this report.

*Levee Mile Report.* Reports generated from inspections detailing maintenance deficiencies found during the inspection. A Levee Mile Report is generated for each unit and includes photos of some issues noted. These reports are available on the Flood System Inspection page on the California Data Exchange Center's webpage.

*Reports to the CVFPB.* Verbal presentations by FPIIB outlining inspection activities.

The USACE conducts two inspection programs, Continuing Eligibility Inspections and Periodic Inspections (PI). Both of these inspections look at the condition of the levee less frequently than DWR does, but the USACE is able to take more time and do a more thorough inspection. The USACE also determines overall ratings differently than DWR. More information can be found in the appendices. The USACE uses the overall ratings from these inspections to determine eligibility in its Rehabilitation and Inspection Program (RIP), which is known as PL 84-99. The USACE inspects and rates areas in an organization determined by the area they protect called systems. This report includes the ratings and eligibility in the RIP for systems inspected by the USACE that include any portions of each LMA in their summary profiles.

## 1.2 Purpose and Scope of LMA Reporting Program

Since 2008, LMAs have been reporting to DWR on their maintenance of their Project levees. DWR prepares the summary results for the CVFPB to meet the requirements of CWC, Section 9141. For the past four years, the program developed annual reports covering only this activity. However, from 2012 on, LMA reports are combined with reports from the inspection program and other programs as recommended by the CVFPB at their March 2012 Board meeting.

DWR identified 89 LMAs that are required to submit information to DWR pursuant to California Water Code (CWC) Sections 9140 and 9141. These 89 LMAs encompass 110 unique geographical areas called Areas.

LMAs submit specific information to DWR by September 30 of each year regarding the levees they operate and maintain. DWR summarizes the information submitted by LMAs and provides the report to the CVFPB by December 31 of each year. The information submitted by LMAs includes levee conditions and operation and maintenance activities. This information is (1) essential for a comprehensive understanding of the flood protection system in the Central Valley, and (2) critical to flood control system evaluation, assessment, and emergency response.

The LMA report is currently being implemented as part of DWR's Flood Emergency Response program by the Division of Flood Management. California's multi-faceted program, FloodSAFE California is a strategic initiative designed to improve public safety through integrated flood management. FloodSAFE California has identified the Flood Emergency Response Program as a way to manage residual flood risks and reduce the loss of lives and properties when flooding occurs.

## 1.3 Highlights of Inspection Program for 2012

DWR applied inspection criteria and overall rating methodology similar to those used in inspections since 2007. Overall, the system showed continued maintenance improvements between 2007 and 2010 but more deficiencies were noted in 2011 and 2012 compared to 2010.

- All inspections were completed in 2012. FPIIB again overcame continued resourcing challenges resulting from budget restrictions, including the elimination of overtime and flextime.
- The results of the 2012 levee inspections show 41 of the 106 Areas receiving Unacceptable ratings, increasing from 37 in 2011. The number of Areas receiving Acceptable ratings increased from 45 in 2011 to 47 in 2012. The number of Areas receiving Minimally Acceptable ratings decreased from 24 in 2011 to 18 in 2012.
- There was a significant increase in the overall length of deficiencies in 2012 compared to 2011. The overall length of issues increased most significantly in the San Joaquin River Basin, but also in the Sacramento River Basin. The overall increase can be attributed to the significant increase in the lengths of vegetation deficiencies but also crown surface and some animal control deficiencies. Most other categories had lengths similar to last year or slightly decreased. DWR continues to follow USACE inspection criteria for most categories, but uses the Levee Vegetation Management Strategy described in the *2012 Central Valley Flood Protection Plan* and the Urban Levee Design Criteria for vegetation issues.
- The 2012 inspection yielded 17 channels, 40 structures and 11 pumping plants rated as Acceptable; 8 channels and 3 structures rated as Minimally Acceptable; and 1 channel and 1 pumping plant rated as Unacceptable.
- The understanding of the responsibilities of the CVFPB and LMAs continued to evolve in 2012. As there is no maintaining agency identified for Paradise Dam and NA0006-Eastern Honcut Creek, they are currently unassigned pending a decision by the CVFPB. Other State Plan of Flood Control (SPFC) levees and structures continue to be adjusted and refined through discussions between DWR, the USACE, and the CVFPB.
- Inspection criteria were revised in 2012 to further align with the USACE's current Checklist and Flowchart criteria in many areas. DWR also removed the Partially Obstructing (PO) and Completely Obstructing (CO) ratings previously used and instituted Issue Types of Maintenance, Enforcement, and Design & System Obsolescence. Only issues with Maintenance Types assigned to them will detract from an LMA's overall rating. Issues previously rated PO and CO are now rated as M and U, respectively. For more detailed information regarding the inspection criteria, please see Appendices F and G.

- Inspectors also inspect Central Valley Flood Protection Board permits for compliance with regulations. Inspectors closed 21 permits in 2012.
- In 2012 LMAs were encouraged to use the online LMA Reporting Application to report findings from their summer and winter inspections. Any notes added by the LMAs to issues that DWR inspectors noted are now seen by DWR inspectors in the next inspection cycle and are flagged to call their attention to the information.
- In 2012 DWR added criteria similar to what was used prior to 2007 requiring LMAs to have copies of the Operations and Maintenance (O&M) Manuals, maintain a supply of emergency supplies and equipment, and be trained and prepared in the event of high water.

In this report, detailed analyses of inspection results are included as appendices. Background discussion of the State-federal flood protection system—including relationships between federal, state, and local agencies and the responsibilities outlined in Project O&M Manuals—are also included in Appendix F.

Additional FPIIB 2012 highlights:

- FPIIB continued monthly coordination meetings with the USACE to answer questions that both groups have regarding inspections, maintenance practices and recently enacted regulations. The CVFPB and DWR's Flood Maintenance Office continued their significant participation in these meetings during 2012.
- FPIIB staff continued to coordinate with and support the FOC in conducting and preparing emergency exercises, assisting in the Flood Fight Methods training, and general preparedness in responding to any flood emergency.
- In 2012 the USACE and its contractors continued to conduct Periodic Inspections. FPIIB coordinated with the LMAs, the CVFPB, and the USACE and its contractors throughout the Periodic Inspection process, primarily in facilitating communication between these entities.
- FPIIB staff assisted during the activation of the FOC for the winter storm event of November-December 2012. Staff assisted in the FOC and in the field. Staff also acted as technical specialists in a flood fight on December 24 in the Bay Area.
- FPIIB staff provided information for the development of ongoing planning efforts derived from the 2012 Central Valley Flood Protection Plan.

DWR continues to improve its inspection program, undergo activities detailing the maintenance condition of features, and work with the LMAs to help ensure a functional flood protection system.

A copy of this annual report and other related reports have been published on-line at http://cdec.water.ca.gov/fsir.html, http://cdec.water.ca.gov/lma.html and http://cvfpb.ca.gov.

## *1.4 Highlights of LMA Reporting Program for 2012*

The LMA reporting program includes a compilation of information received from LMAs on the Project levees and certain non-Project levees they maintain in the Sacramento and San Joaquin river basins.

Appendices A and B include summary profiles of individual LMAs that maintain Project levees along the Sacramento River and San Joaquin River, respectively. Summary profiles for LMAs that do not maintain Project levees are provided in Appendix C. These profiles include maintenance activity summary reports (known as five-part reporting) as well as other program results like inspection, erosion, etc. DWR will use this information to evaluate levees, monitor levee conditions throughout the system, and provide threat assessments (if applicable) to individual LMAs. The information will also be used by the comprehensive FloodSAFE California initiative to improve public safety and manage residual flood risk. The highlights of the LMA Reporting Program for 2012 are:

- In this fifth year of required reporting, 91 percent of LMAs representing 93 percent area complied with the reporting requirement. This represents a slight increase of 1 percent over the last year of reporting. LMAs with at least a partial response were considered to have provided reports. Table 1-1 summarizes information LMAs submitted to DWR in 2012.

## Table 1-1: Summary of Information Reported by LMAs

| Reporting Categories | Reporting Measurement Type | Number of Occurrences |
|---|---|---|
| Reporting | LMAs subject to reporting requirements | 89 |
| | LMAs submitted reports | 78 |
| | Geographical areas subject to reporting requirements | 110 |
| | Reports received on geographical areas | 102 |
| | Areas reporting information relevant to condition or performance | 88 |
| | Areas reporting conditions that might compromise level of flood protection | 73 |
| | Areas reporting summary of activities during the previous fiscal year | 93 |
| | Areas reporting summary of activities for the current fiscal year | 90 |
| | Areas reporting an estimated budget for maintenance during the current fiscal year | 85 |
| | Areas reporting any other readily available information | 71 |
| Maintenance and Repair Activities Reported | Areas reporting routine annual vegetation maintenance | 86 |
| | Areas reporting rodent/animal control | 66 |
| | Areas reporting levee crown grading/access road maintenance | 49 |
| | Areas reporting encroachment control | 46 |
| | Areas reporting minor structure maintenance and repair (mile markers/gate/ barricades/miscellaneous signs) | 37 |
| | Areas reporting levee repairs (hole grouting/erosion repair/ revetment/rip-rap/slope repair) | 24 |
| | Areas reporting seepage control | 4 |
| Levee Conditions Reported | Areas reporting encroachment issues | 27 |
| | Areas reporting erosion, channel migration, or revetment issues | 19 |
| | Areas reporting in-channel and other vegetation issues | 17 |
| | Areas reporting seepage and sand boil issues | 11 |
| | Areas reporting levee compaction, settlement, or freeboard issues | 10 |
| | Areas reporting sedimentation issues | 5 |

- Although submission of annual reporting to DWR is required by law, several LMAs have not responded to this requirement. Table 1-2 lists the LMAs that did not submit a report in 2012.
- Only 1 out of 26 (3.8 percent) areas from the San Joaquin System and 7 out of 81 (8.6 percent) areas from the Sacramento System did not report in 2012. Further detail on reporting statistics is given in Figure 6-2.

**Table 1-2: Non-reporting LMAs**

| | |
|---|---|
| Levee District No. 3 | Reclamation District No. 556 (Upper Andrus) |
| Honcut Creek Eastern Area | Reclamation District No. 765 (Glide) |
| Yolo County Public Works | Reclamation District No. 2031 (Elliot) |
| Reclamation District No. 369 (Libby McNeil) | Reclamation District No. 2035 (Conaway) |

- Since 2008, DWR has been facilitating electronic submission and strongly encouraging LMAs to use the LMA Reporting Website. In 2012 about 68 percent of reporting LMAs reported electronically, which is a 16 percent increase over 2011. Details of DWR outreach activities for electronic submission and others are provided Figure 6-6.
- Ninety Areas from 78 LMAs reported their maintenance activities for the previous fiscal year, 2011-12. Key reported maintenance activities are vegetation control, rodent control, levee crown grading and access road maintenance, encroachment control, minor structure repair, levee repair, and seepage control.
- Eighty-eight Areas from 78 LMAs reported a summary of their maintenance activities for the current fiscal year, 2012-13. Key reported maintenance activities are vegetation control, rodent control, levee crown grading and access road maintenance, encroachment control, minor structure repair, levee repair, and seepage control.
- A number of LMAs provided information on the levee conditions. Key reported issues are encroachment, erosion, channel migration, and revetment; in-channel and other vegetation issues; seepage and sand boils; levee compaction, settlement, and freeboard; and sedimentation.
- To minimize LMAs' burden for reporting, DWR is continues to enhance and update the web application. The two programs, inspection and LMA reporting have been integrated for online users. The data entry for Part 3 of the LMA reporting application has been enhanced to not only allow LMAs to provide their information but also to report on individual inspection issues noted by DWR. DWR inspectors see this feedback during the next inspection cycle. Part 3 of individual summary profiles highlights the LMAs' corrected and ongoing corrective actions (wherever available).
- The level of compliance by the LMAs, submitting information for this report, is less than 100 percent. The quality of reporting for some LMAs is also unsatisfactory. DWR is tying the level of cost-share eligibility in grant programs administered by DWR to the quality of LMA reporting to provide further incentive for compliance.
- DWR is looking at different measures on how to improve the compliance and the quality of reporting. The LMA Reporting Program is being integrated with other programs in particular the grant programs administered by DWR to improve compliance with the reporting requirement. The grant programs may bring in cost share eligibility criteria that will depend on the performance of the LMAs with the quality of this report submission.
- RD2074 (Sargent-Barnhart Tract) continued to report on its non-Project levee in San Joaquin County. The summary of information reported in 2012 is provided in Appendix C.
- Honcut Creek Eastern Area: Due to the absence of a responsible agency, the maintenance of 1.5 miles of Project Levee is not currently assigned to any LMA pending a decision by the CVFPB.

# 2 2012 LEVEE MAINTENANCE INSPECTION RESULTS

The results of the 2012 levee maintenance inspections show that number of Areas whose ratings changed was small overall. More LMAs received worse ratings in 2012 than those who received better ratings. The length of deficiencies noted increased significantly compared to 2011 and 2010. This change may be attributable to the extended rainy season and financial challenges. FPIIB continues to improve the accuracy and usability of its tools and data to inspect and rate Areas. Each Area received one of three possible ratings based on the state of its levees:

- **Acceptable (A)** – No immediate work required, other than routine maintenance. The flood protection project will function as designed and intended with a high degree of reliability, and necessary cyclical maintenance is being performed adequately.
- **Minimally Acceptable (M)** – One or more deficient conditions exist in the flood protection project that needs to be improved or corrected. However, the project will essentially function as designed with a lesser degree of reliability than what the project could provide.
- **Unacceptable (U)** – One or more deficient conditions exist that may prevent the project from functioning as designed, intended, or required.

DWR rates individual items noted during inspections using similar ratings. Appendix F further describes the individual ratings, rating criteria, and methodology used for levees.

Table 2-1 and Figure 2-1 show the numbers of Areas receiving each rating for 2007 through 2012. The length of vegetation deficiencies increased significantly compared to 2011, most notably in the San Joaquin River system. There was a significant increase in crown surface issues and a moderate increase in animal control issues. Other categories did not change significantly. Many of the LMAs have expressed limitations due to financial and environmental issues. Some LMAs are severely limited in what money they have been able to collect from residents to perform maintenance. Weather patterns that are different than prior years may also play a factor in the increase in deficiencies.

**Table 2-1: Summary of Levee Maintenance Ratings for 2007 through 2012**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| **A=Acceptable** | 24 | 42 | 51 | 49 | 45 | 47 |
| **M=Minimally Acceptable** | 18 | 25 | 25 | 19 | 24 | 18 |
| **U=Unacceptable** | 64 | 39 | 30 | 38 | 37 | 41 |

Ratings for each Area are included in Table 2-2. The number of Areas receiving Unacceptable ratings increased by four, the number of Areas receiving Acceptable ratings increased by two, and the number of Areas receiving Minimally Acceptable ratings decreased by six.

Despite higher than normal water in some areas during the winter of 2011-12, the amount of erosion found throughout the system was similar to prior years. DWR is working to implement programs to help allow for and facilitate the repair of these types of issues. DWR also continues to develop and distribute information on how the Sutter and Sacramento Maintenance Yards are addressing rodent control. DWR and other agencies continue to conduct research into both the potential harm and usefulness of woody vegetation on the levees. Other research is also ongoing regarding various issues related to rodents in and near levees.

Figure 2-2 shows the number of agencies that received better, unchanged, or worse ratings in 2012 compared with 2011, 2010, 2009, 2008, and 2007. The number of Areas receiving Acceptable ratings increased by two; however, the number of Areas rated as Unacceptable increased by four. The number of Areas rated as Minimally Acceptable decreased by six. This is likely due to fluctuations in maintenance and funding. Despite these changes, Areas continue to generally receive better ratings than in 2007 and 2008. Levee Mile Reports (LMRs) contain more detailed information about each LMA. Appendix F provides more an explanation of threshold percentages and the determination of overall ratings.

Vegetation deficiencies make up the majority of deficient levee miles for 2012, followed by a significant amount of crown

surface issues. The remainder of deficient miles comes from animal control and other items. Appendix E provides supplemental figures showing further analysis for the two basins and types of deficiencies, including comparisons of the lengths of levee with deficiencies of each category for each year since 2007.

LMAs may not be able to address some encroachments due to limitations in resources and relationships with the landowners. Inspectors document some of these encroachments and assign an Issue Type of Enforcement to them. This has replaced the method of rating them as PO or CO used in the past. In 2012, 21.62 miles of Unacceptable and 135.27 miles of Minimally Acceptable issues typed as Enforcement were identified. The vast majority of these issues are encroachments with some vegetation. An Issue Type of Design/System Obsolescence may be assigned if an issue is the result of how the structure was originally designed and constructed or for other reasons beyond maintenance responsibilities. In 2012, 0.01 miles of Unacceptable issues and 19.56 miles of Minimally Acceptable issues typed as Design/System Obsolescence were noted. The vast majority of these issues were erosion, mostly along one channel. Issue Types are explained further in Appendix F.

In 2012 DWR brought back several inspection criteria used in the past. These include O&M Manuals, Emergency Supplies and Equipment, and Flood Preparedness and Training. LMAs are required to maintain copies of applicable O&M manuals. DWR has made a collection of these manuals and other applicable documents available to stakeholders at http://cdec4gov.water.ca.gov/public_systems_docs.html. LMAs may also access their O&M Manuals through the LMA Reporting web page at http://cdec.water.ca.gov/lma.html. This site has limited access; to request access, please contact webmaster@flood.water.ca.gov. LMAs are required to maintain a supply of materials to sustain the initial days of a flood fight. LMAs are encouraged to work with neighboring LMAs to maintain this supply in a central location that serves multiple agencies. LMAs are also required to have a written, specific flood response plan and know how to respond during a flood. DWR is working on tools to help LMAs create these response plans. LMA staff and local residents should also be training in Flood Fight Methods; DWR provides this training, which can be scheduled by contacting Rick Burnett at (916) 574-1203. More details on these criteria can be found in Appendix G.

A summary report showing the length of maintenance deficiencies noted in 2011 and 2012 for each Area can be found in Appendix H. This summary also shows the change in threshold percentage for each of these maintenance deficiency categories. Detailed reports showing the inspections for each Area, including photos, can be found at http://cdec.water.ca.gov/fsir.html.

**Figure 2-1: Summary of Area Maintenance Ratings for 2007 through 2012**

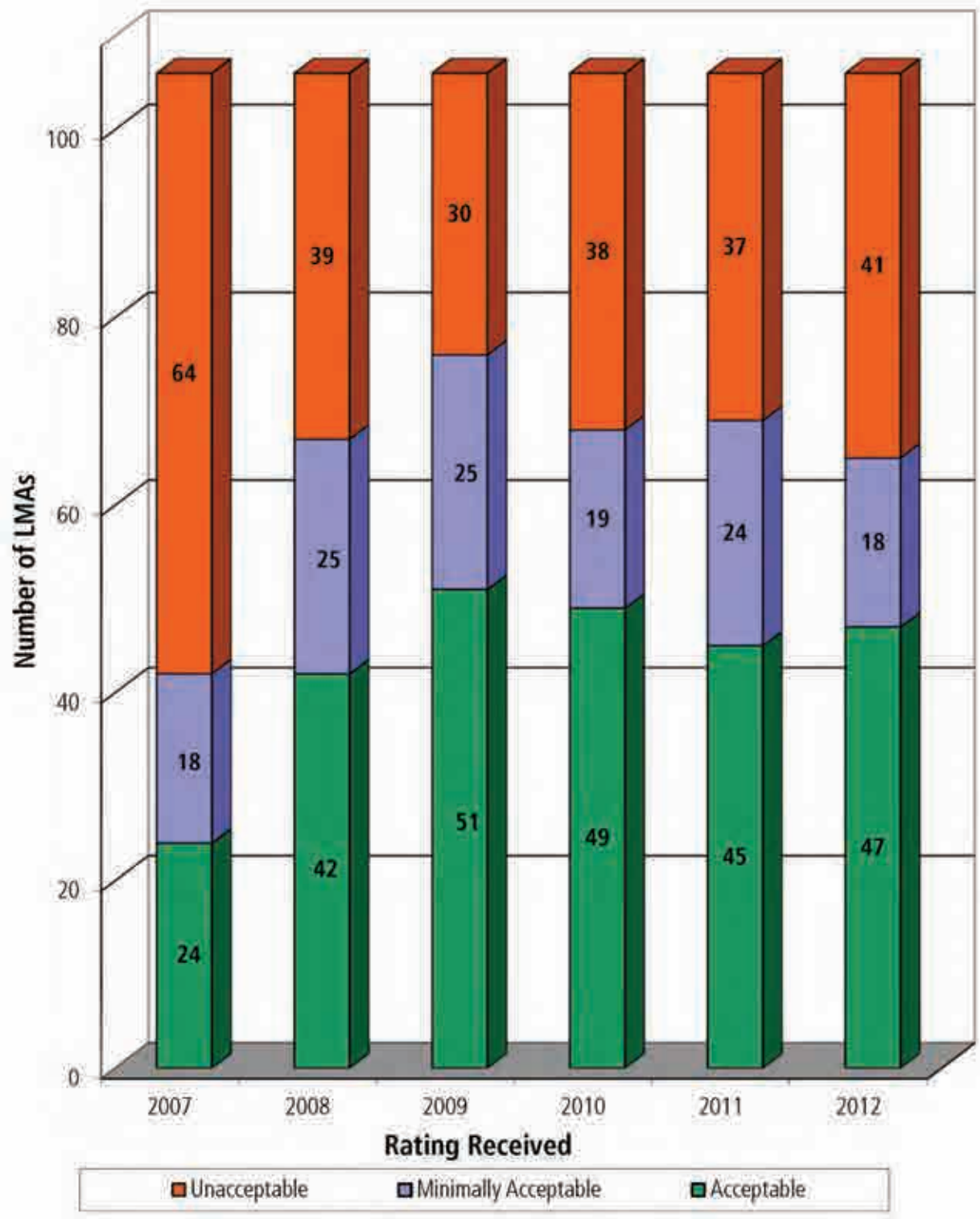


**Figure 2-2: Area Maintenance Rating Changes from Fall 2007 to Fall 2012**

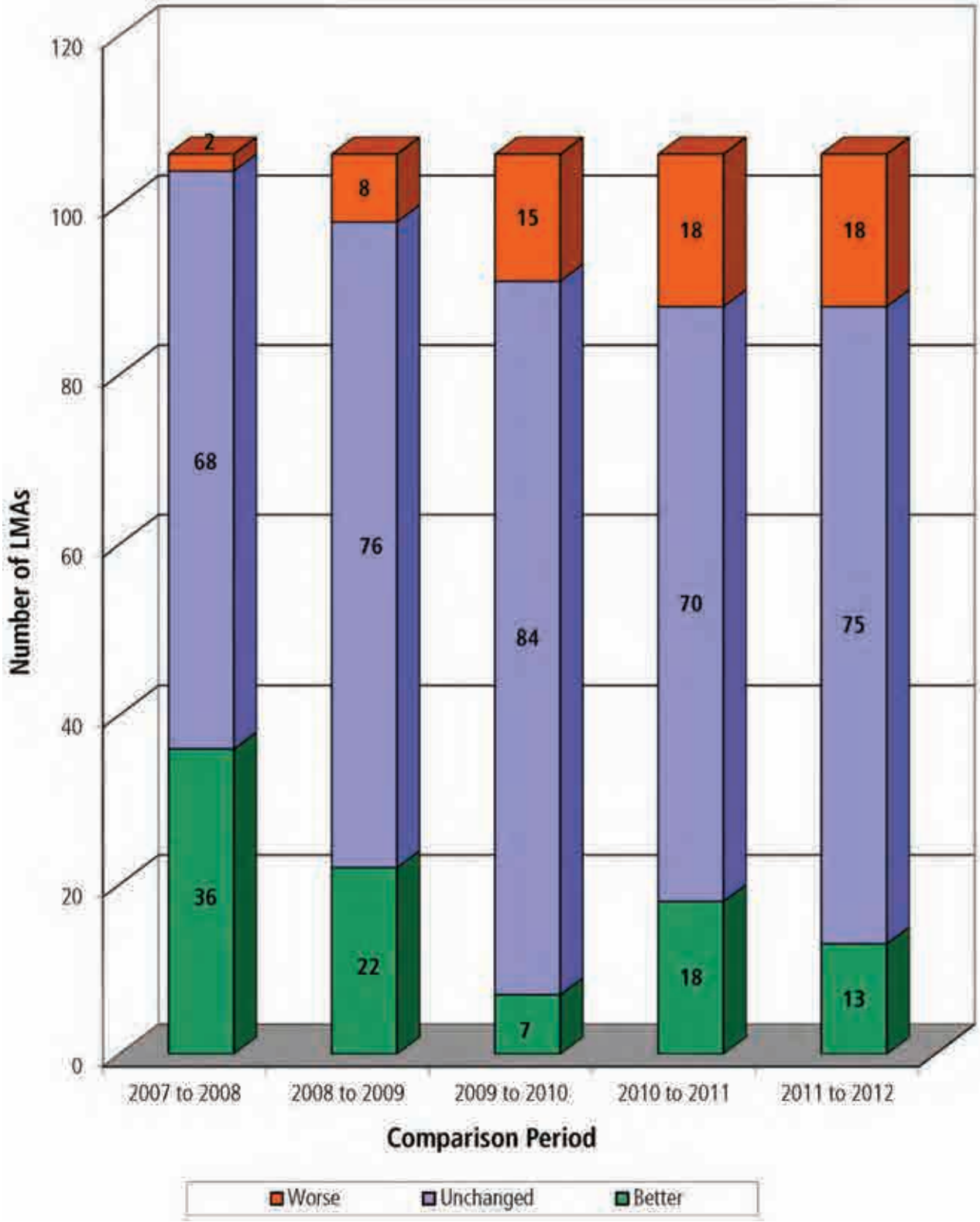


**Table 2-2: Overall Maintenance Rating by Area for 2007 through 2012**

| Area Short Name | Area Name | Overall Rating | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| LD0001G | Levee District No. 0001G (Glenn County) | U | M | M | U | M | A |
| LD0001S | Levee District No. 0001S (Sutter County) | M | A | A | M* | A | A |
| LD0002 | Levee District No. 0002 | A | A | A | A | A | A |
| LD0003 | Levee District No. 0003 | A | A | A | U | U | M |
| LD0009 | Levee District No. 0009 | A | A | U | A | A | A |
| MA0001 | Maintenance Area 0001 | M | M | A | A† | A | A |
| MA0003 | Maintenance Area 0003 | A | A | A | A | A | A |
| MA0004 | Maintenance Area 0004 | A | A | A | A | A | A |
| MA0005 | Maintenance Area 0005 | M | M* | M* | M* | A | A |
| MA0007 | Maintenance Area 0007 | U | A | A | A | A | A |
| MA0009 | Maintenance Area 0009 | M | M* | M | M | M | A |
| MA0012 | Maintenance Area 0012 | A | A | A | A† | A | A |
| MA0013 | Maintenance Area 0013 | A | M* | M* | M* | A | A |
| MA0016 | Maintenance Area 0016 | M | M | A | M | M* | A |
| MA0017 | Maintenance Area 0017 | U | U | U | U | U | U |
| NA0001 | American River Flood Control District | M | A | A | A | A | A |
| NA0002 | Brannan Andrus Levee Maintenance District | U | U | A | A† | M | M |
| NA0003 | Butte County Public Works | A | A | A | A† | A | A |
| NA0004 | Marysville Levee Commission | M | A | A | A | A | M |
| NA0005 | City of Sacramento | U | A | A | A | A | A |
| NA0006 | Eastern Honcut Creek | U | U | U | U | U | U |
| NA0008 | Knights Landing Ridge Drainage District | U | M | U | A | A | A |
| NA0009 | Lake County Watershed Protection District | M | A | A | A† | A | A |
| NA0010 | Lower San Joaquin Levee District | M | M* | M* | M* | M | U |
| NA0011 | Madera County FCWCA | U | U | U | U | U | U |
| NA0012 | Solano County Public Works (Mellin Levee) | U | U | M | U | A | A |
| NA0013 | Merced Streams Group | U | U | U | U | U | U |
| NA0014 | Murphy Slough at M&T Ranch | U | U | U | U | U | U |

**Table 2-2 Continued: Overall Maintenance Rating by Area for 2007 through 2012**

| Area Short Name | Area Name | Overall Rating | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| NA0015 | Plumas County | U | A | A | A† | U | U |
| NA0016 | Sacramento River West Side Levee District | U | M* | M* | M* | A | A |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | U | M* | M | U | M | M |
| NA0018 | California Department of Fish and Game | A | A | A | A† | U | U |
| NA0019 | Tehama County Flood Control and Water Conservation District | U | M | M | A | M | M |
| NA0020 | East-West Interceptor Canal | U | U | U | U | U | U |
| NA0021 | Yolo County Public Works | U | M | U | U | U | U |
| NA0022 | Yolo County Service Area 6 | U | M | A | A† | U | U |
| RD0001 | Reclamation District No. 0001 | M | A | M | U | A | M* |
| RD0003 | Reclamation District No. 0003 | U | U | M* | M* | M* | M* |
| RD0010 | Reclamation District No. 0010 | U | U | A | A† | U | M |
| RD0017 | Reclamation District No. 0017 | U | U | M* | A | A | M* |
| RD0070 | Reclamation District No. 0070 | M | A | A | A† | A | A |
| RD0108 | Reclamation District No. 0108 | A | A | A | A† | A | A |
| RD0150 | Reclamation District No. 0150 | U | M* | M | M* | A | A |
| RD0307 | Reclamation District No. 0307 | U | U | U | U | M | U |
| RD0341 | Reclamation District No. 0341 | U | U | A | A† | M* | U |
| RD0349 | Reclamation District No. 0349 | U | U | U | U | U | U |
| RD0369 | Reclamation District No. 0369 | U | U | A | A | M | U |
| RD0404 | Reclamation District No. 0404 | U | U | U | U | M | U |
| RD0501 | Reclamation District No. 0501 | U | U | U | U | U | U |
| RD0524 | Reclamation District No. 0524 | U | U | U | U | U | U |
| RD0536 | Reclamation District No. 0536 | U | U | U | U | U | U |
| RD0537 | Reclamation District No. 0537 | U | A | M | U | A | M* |
| RD0544 | Reclamation District No. 0544 | U | U | M | U | U | U |
| RD0551 | Reclamation District No. 0551 | U | U | A | A† | A | M* |
| RD0554 | Reclamation District No. 0554 | U | U | U | U | M | M |
| RD0556 | Reclamation District No. 0556 | U | U | U | U | U | U |
| RD0563 | Reclamation District No. 0563 | U | U | U | U | U | U |
| RD0755 | Reclamation District No. 0755 | U | U | A | U | U | U |

## Table 2-2 Continued: Overall Maintenance Rating by Area for 2007 through 2012

| Area Short Name | Area Name | Overall Rating | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| RD0765 | Reclamation District No. 0765 | U | U | U | U | U | U |
| RD0784 | Reclamation District No. 0784 | M | A | A | A† | A | M |
| RD0785 | Reclamation District No. 0785 | U | A | M | U | U | U |
| RD0787 | Reclamation District No. 0787 | A | A | A | A† | A | A |
| RD0817 | Reclamation District No. 0817 | U | A | A | A† | M | U |
| RD0827 | Reclamation District No. 0827 | U | M | A | U | U | A |
| RD0900 | Reclamation District No. 0900 | U | U | M | M | M | U |
| RD0999 | Reclamation District No. 0999 | U | U | U | U | U | U |
| RD1000 | Reclamation District No. 1000 | A | A | A | A | A | A |
| RD1001 | Reclamation District No. 1001 | U | M | M* | M* | M | U |
| RD1500 | Reclamation District No. 1500 | M | M* | M* | M* | A | M |
| RD1600 | Reclamation District No. 1600 | U | M | A | U | U | U |
| RD1601 | Reclamation District No. 1601 | A | A | A | A† | A | A |
| RD1602 | Reclamation District No. 1602 | U | U | U | M | U | U |
| RD1660 | Reclamation District No. 1660 | A | A | A | A† | A | A |
| RD2031 | Reclamation District No. 2031 | U | M* | M* | A | M* | M |
| RD2035 | Reclamation District No. 2035 | U | A | A | A† | U | M |
| RD2058 | Reclamation District No. 2058 | U | U | U | U | U | A |
| RD2060 | Reclamation District No. 2060 | U | M | A | A† | A | A |
| RD2062 | Reclamation District No. 2062 | U | M* | U | U | U | U |
| RD2063 | Reclamation District No. 2063 | U | U | U | U | U | U |
| RD2064 | Reclamation District No. 2064 | U | M | A | A | U | A |
| RD2068 | Reclamation District No. 2068 | A | A | A | A† | M | A |
| RD2075 | Reclamation District No. 2075 | U | U | M* | M* | M | U |
| RD2085 | Reclamation District No. 2085 | U | U | M | U | U | U |
| RD2089 | Reclamation District No. 2089 | U | U | U | U | U | U |
| RD2091 | Reclamation District No. 2091 | A | A | A | A† | M* | A |
| RD2092 | Reclamation District No. 2092 | A | A | A | A† | M* | A |
| RD2094 | Reclamation District No. 2094 | U | A | A | A | A | A |
| RD2095 | Reclamation District No. 2095 | U | U | M | M* | M* | M |
| RD2096 | Reclamation District No. 2096 | A | A | U | M | A | U |
| RD2098 | Reclamation District No. 2098 | M | A | A | A† | U | A |
| RD2101 | Reclamation District No. 2101 | U | U | U | U | U | U |

**Table 2-2 Continued: Overall Maintenance Rating by Area for 2007 through 2012**

| Area Short Name | Area Name | Overall Rating | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| RD2103 | Reclamation District No. 2103 | A | M* | A | A† | A | A |
| RD2104 | Reclamation District No. 2104 | U | U | U | U | U | U |
| RD2107 | Reclamation District No. 2107 | M | A | A | A | A | A |
| ST0001 | Cache Creek | M | M* | M* | M* | M* | M* |
| ST0002 | East Levee Sutter Bypass | M | A | A | A | A | A |
| ST0003 | East Levee Sacramento River | A | A | A | A† | A | A |
| ST0004 | East Levee Yolo Bypass | U | A | A | A† | A | A |
| ST0005 | Hamilton Bend | U | U | U | A | A | A |
| ST0006 | Nelson Bend | U | U | U | U | U | U |
| ST0007 | Putah Creek | M | A | A | A† | M | U |
| ST0008 | Sacramento Bypass | A | A | A | A | A | A |
| ST0009 | Tisdale Bypass | A | A | A | A† | A | A |
| ST0010 | Wadsworth Canal | A | A | A | A | A | A |
| ST0011 | West Levee Yolo Bypass | U | M* | M* | M* | A | A |
| ST0012 | Willow Slough Bypass | A | A | A | A† | A | A |

* Overall unit threshold percentage is less than 10%; however, U rated miles are present, so the overall unit rating is M instead of A.

† Due to resourcing challenges, this Area did not have inspections completed during fall 2010. The rating was assumed to be Acceptable based on the fall 2009 Inspection for the purposes of this report and comparisons to previous years.

# 3 2012 CHANNEL MAINTENANCE INSPECTION RESULTS

The annual channel maintenance inspections rely upon a qualitative rating system based on the USACE's O&M manuals. Channels are inspected at specific locations where there are restrictions to the channel like bridges. Excessive vegetation, shoaling, erosion, or other factors that may impact the capacity of the channel are noted. Existing channel capacities are not evaluated in this report. A single overall rating is assigned to each channel by DWR. The rating designations (A, M, and U) described in Section 2 are also used for channel ratings.

Appendix F details the method for determining overall ratings. Table 3-1 and Figure 3-1 show the numbers of each rating for the years 2007 through 2012.

**Table 3-1: Summary of Channel Maintenance Ratings for 2007 through 2012**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| **A=Acceptable** | 10 | 24 | 19 | 16 | 16 | 17 |
| **M=Minimally Acceptable** | 14 | 1 | 7 | 3 | 9 | 8 |
| **U=Unacceptable** | 1 | 0 | 0 | 1 | 1 | 1 |
| **Not Inspected** | 0 | 0 | 0 | 6 | 0 | 0 |

One channel was rated as Unacceptable n 2012, while the number of Minimally Acceptable channels was eight, which is similar to 2011. This shows the similarity of maintenance found during inspection in 2012 as prior years. Figure 3-1 shows the progression of maintenance ratings from 2007 through 2012.

Table 3-2 shows individual channel ratings for each LMA.

To see locations of the channels inspected, see Figure 7-1.

A summary of the ratings for each channel, grouped by LMA and including the rated categories for each, can be found in Appendix I. More detailed reports, including photos for each channel, can be found at http://cdec.water.ca.gov/fsir.html.

**Figure 3-1: Comparison of Overall Channel Ratings, 2007 through 2012**

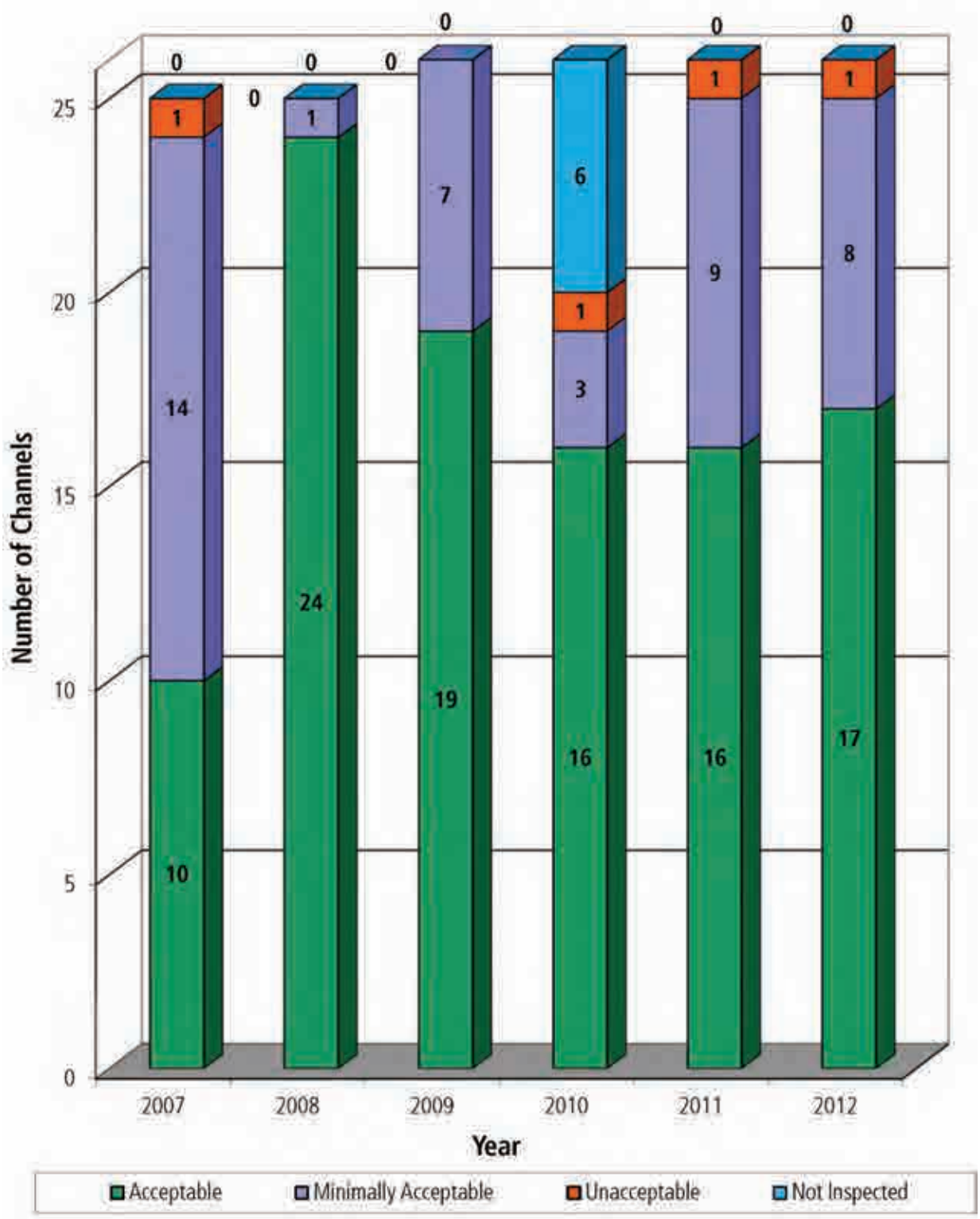


**Table 3-2: Overall Channel Maintenance Ratings for 2007 through 2012**

| Channel | LMA Name | Overall Rating | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| **Sacramento River Basin** | | | | | | | |
| Ash Creek | Adin Community Services District | A | A | A | A | A | A |
| Dry Creek | Adin Community Services District | A | A | A | A | A | A |
| McClure Creek | Tehama County | M | A | A | A | A | A |
| Salt Creek | Tehama County | U | A | M | A | A | A |
| Big Chico Creek | Sutter Maintenance Yard | M | A | M | M | M* | A |
| Lindo Channel and Sandy Gulch | Sutter Maintenance Yard | M | A | A | A | A | A |
| Little Chico Creek | Sutter Maintenance Yard | M | A | A | A | M* | A |
| **San Joaquin River Basin** | | | | | | | |
| Bear Creek | Merced Streams Group | M | M | M* | M* | M | M |
| Black Rascal Creek | Merced Streams Group | M | A | M* | M* | M | M |
| Burns Creek | Merced Streams Group | A | A | A | U | A | A |
| Mariposa Creek | Merced Streams Group | M | A | A | A | M | M |
| Miles Creek | Merced Streams Group | M | A | A | N† | A | A |
| Owens Creek | Merced Streams Group | M | A | A | N† | A | M |
| Ash Slough | Madera County FCWCA | M | A | M | N† | A | A |
| Berenda Slough | Madera County FCWCA | M | A | M | N† | U | U |
| Chowchilla River | Madera County FCWCA | M | A | M | N† | A | A |
| Fresno River | Madera County FCWCA | M | A | A | N† | M | M |
| North Littlejohn Creek | San Joaquin County Flood Control and Water Conservation District | M | A | A | A | A | M |
| Duck Creek Diversion | San Joaquin County Flood Control and Water Conservation District | A | A | A | A | A | A |

**Table 3-2 Continued: Overall Channel Maintenance Ratings for 2007 through 2012**

| Channel | LMA Name | Overall Rating | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| **San Joaquin River Basin** | | | | | | | |
| South Littlejohn Creek | San Joaquin County Flood Control and Water Conservation District | A | A | A | A | A | A |
| South Littlejohn Creek, North Branch | San Joaquin County Flood Control and Water Conservation District | A | A | A | A | A | A |
| **Miscellaneous Basins** | | | | | | | |
| Truckee River | Placer County | A | A | A | A | A | A |
| Ledgewood Creek | Fairfield-Suisun Sewer District | N/A | N/A | A | A | M* | M |
| McCoy Creek | Fairfield-Suisun Sewer District | A | A | A | A | M | M* |
| Laurel Creek | Fairfield-Suisun Sewer District | A | A | A | A | M | A |
| Union Avenue Diversion | Fairfield-Suisun Sewer District | A | A | A | A | A | A |

* Overall channel rating average is less than 0.2; however, U rated issues are present, so the overall rating is M instead of A.

† Due to resourcing challenges, this channel did not have inspections completed in 2010.

# 4 2012 STRUCTURE MAINTENANCE INSPECTION RESULTS

The types of project structures included in the inspections include fixed crest diversion weirs, controllable diversion structures, outfall structures, drop structures, and interior drainage pumping plants. The rating designations (A, M, and U) described in Section 2 are also used for structure ratings.

The method for determining overall ratings is similar to the one used for channel inspections and is described in Appendix F. Table 4-1 shows the numbers of each rating for 2007-2012 for all structures. Figure 4-1 and Table 4-2 show ratings for each structure, while Figure 4-2 and Table 4-3 show ratings for each pumping plant. The LMAs have generally improved structure maintenance since 2007. The El Camino Avenue Bridge over Steelhead Creek in Sacramento was added to structure inspections in 2009.

**Table 4-1: Overall Structure Maintenance Ratings for 2007 through 2012**

| | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
|---|---|---|---|---|---|---|
| **Structures Ratings** | | | | | | |
| A=Acceptable | 32 | 37 | 36 | 36 | 41 | 40 |
| M=Minimally Acceptable | 9 | 5 | 7 | 7 | 2 | 3 |
| U=Unacceptable | 1 | 0 | 0 | 0 | 0 | 0 |
| Not Inspected | 0 | 0 | 0 | 0 | 0 | 0 |
| **Pumping Plant Ratings** | | | | | | |
| A=Acceptable | 12 | 12 | 7 | 8 | 12 | 11 |
| M=Minimally Acceptable | 1 | 1 | 6 | 4 | 0 | 1 |
| U=Unacceptable | 0 | 0 | 0 | 0 | 1 | 1 |
| Not Inspected | 0 | 0 | 0 | 1 | 0 | 0 |

Most of the structures were found in a similar level of maintenance as in 2011 with only minor changes observed. One of the pumping plants received an Unacceptable rating largely because the pumping plant was not fully accessible for inspection in 2011 and 2012. The Sutter Bypass Pumping Plants are currently undergoing major improvements. The Knights Landing Outfall is also undergoing major repairs while Sutter Bypass (East Borrow Pit) Weir #2 is being replaced with a new structure.

Tables 4-2 and 4-3 show individual structure ratings for each LMA.

Locations of the structures inspected can be found in Figure 7-1.

A summary of the ratings for each structure, grouped by LMA and including the rated categories for each, can be found in Appendix J. A similar report for pumping plants can be found in Appendix K. More detailed reports, including photos for each structure, can be found at http://cdec.water.ca.gov/fsir.html.

**Figure 4-1: Comparison of Overall Structure Ratings from 2007 through 2012**

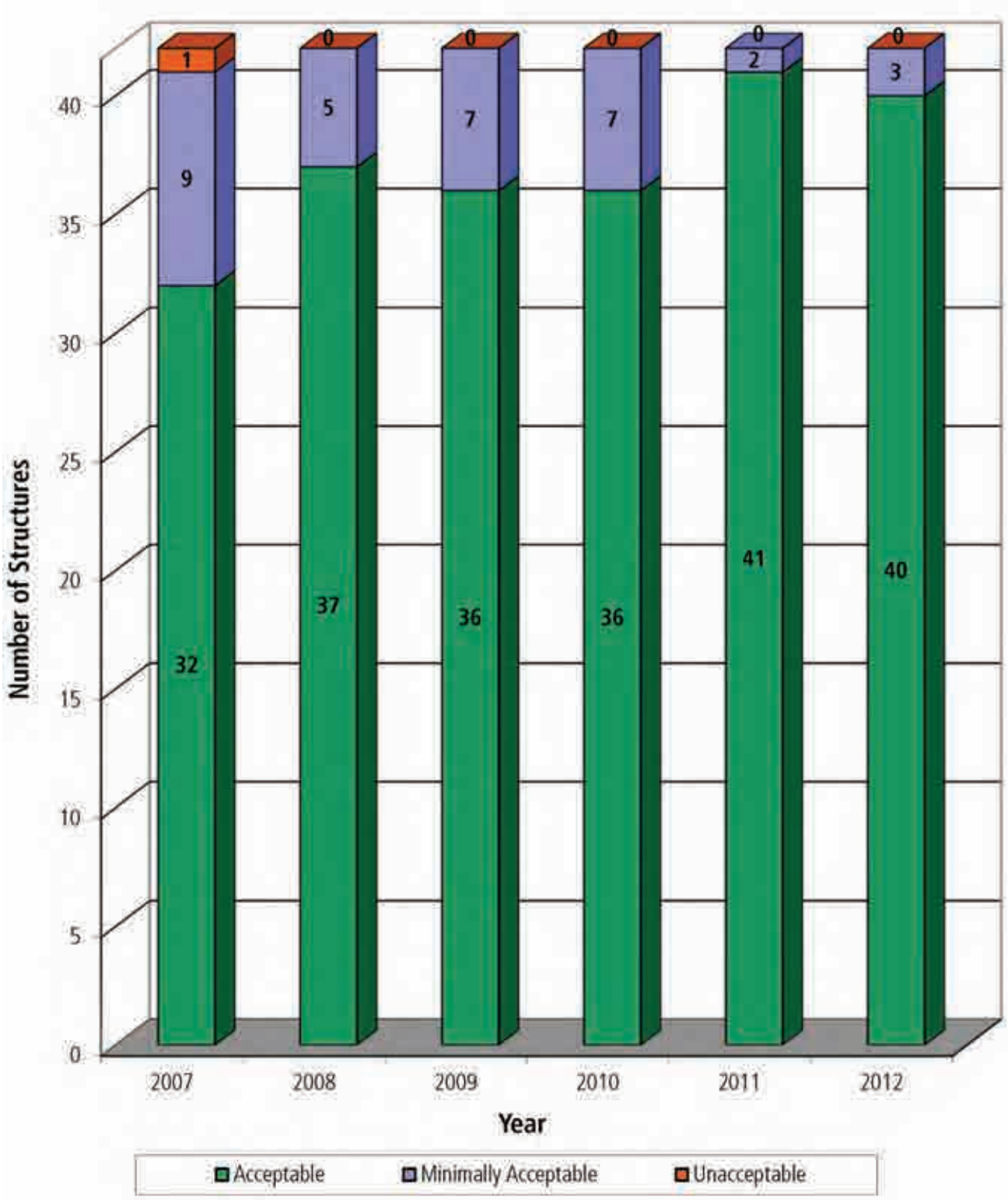


**Figure 4-2: Comparison of Overall Pumping Plant Ratings from 2007 through 2012**

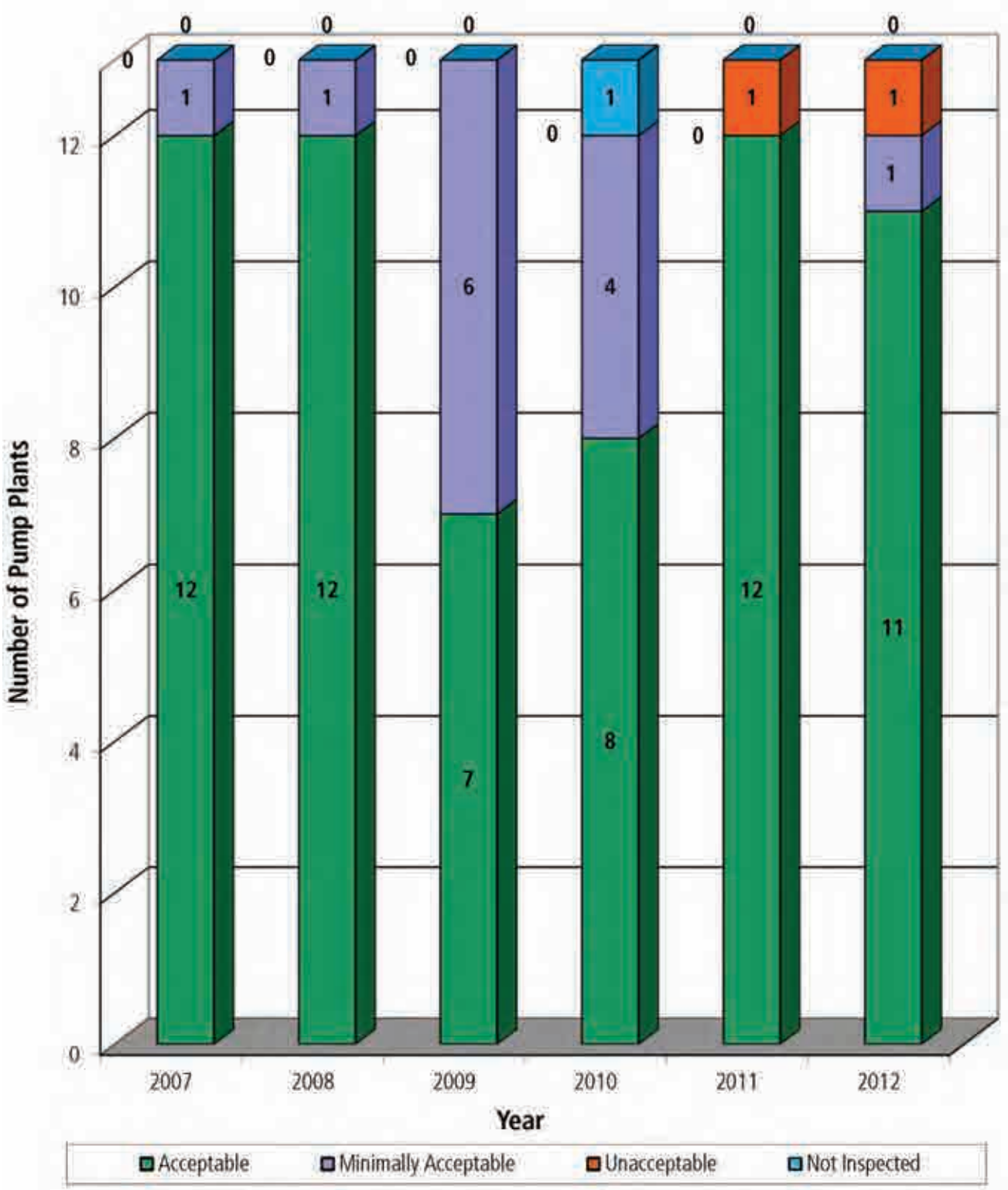


**Table 4-2: Overall Structure Ratings for 2007 through 2012**

| Structure | LMA Name | Overall Rating | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| **Sacramento River Basin** | | | | | | | |
| Big Chico Creek Control Structure | Butte County Public Works | A | A | A | A | A | A |
| Lindo Channel Control Structure | Sutter Maintenance Yard | M | A | A | A | A | A |
| Lindo Channel Diversion Weir | Sutter Maintenance Yard | M | A | A | A | A | A |
| El Camino Bridge | City of Sacramento | N/A | N/A | A | A | A | A |
| North Fork Feather River Diversion Channel Drop Structures (1 thru 7) | Plumas County | A | A | A | A | A | M |
| North Fork Feather River Diversion Structure | Plumas County | A | A | A | A | A | A |
| Elk Slough Inlet Structure | Reclamation District 999 | A | A | A | A | A | A |
| Cache Creek Settling Basin Weir & Drainage Structure | Sacramento Maintenance Yard | A | A | A | A | A | A |
| Fremont Weir | Sacramento Maintenance Yard | A | A | A | A | A | A |
| Knights Landing Outfall Structure | Sacramento Maintenance Yard | A | A | A | A | A | A |
| Sacramento Weir | Sacramento Maintenance Yard | A | A | A | A | A | A |
| Butte Slough Drainage Structure | Sutter Maintenance Yard | M | M | A | A | A | A |
| Butte Slough Outfall Structure | Sutter Maintenance Yard | A | A | A | A | A | A |
| Colusa Weir | Sutter Maintenance Yard | A | A | A | A | A | A |
| Little Chico Creek Control & Weir Structure | Sutter Maintenance Yard | A | A | A | A | A | A |
| Moulton Weir | Sutter Maintenance Yard | A | A | A | A | A | A |
| Nelson Bend (Rock Quarry Weir) | Sutter Maintenance Yard | A | A | A | A | A | A |
| Sutter Bypass (East Borrow Pit) Weir #2 | Sutter Maintenance Yard | A | A | A | A | A | A |

**Table 4-2 Continued: Overall Structure Ratings for 2007 through 2012**

| Structure | LMA Name | Overall Rating | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| **Sacramento River Basin** | | | | | | | |
| Tisdale Weir | Sutter Maintenance Yard | A | A | A | A | A | A |
| Wadsworth Canal Weir # 4 | Sutter Maintenance Yard | A | A | A | A | A | A |
| Clover Creek Diversion Structure | Lake County Watershed Protection District | U | M | M | M | M | A |
| Highland Canal Diversion Weir & Drainage Structure | Lake County Watershed Protection District | M | A | A | A | A | A |
| **San Joaquin River Basin** | | | | | | | |
| Ash Slough Drop Structure #1 | Lower San Joaquin Levee District | A | A | A | A | A | A |
| Ash Slough Drop Structure #2 | Lower San Joaquin Levee District | A | A | A | A | A | A |
| Ash Slough Drop Structure #3 | Lower San Joaquin Levee District | M | A | A | A | A | A |
| Ash Slough Drop Structure #4 | Lower San Joaquin Levee District | A | A | M | M | A | A |
| Bear Creek Diversion Structure | Lower San Joaquin Levee District | A | A | A | A | A | A |
| Eastside Bypass Control Structure | Lower San Joaquin Levee District | A | A | A | A | A | A |
| Eastside Bypass Drop Structure #1 | Lower San Joaquin Levee District | A | A | A | A | A | A |
| Eastside Bypass Drop Structure #2 | Lower San Joaquin Levee District | A | A | A | A | A | A |
| Fresno River Drainage Structure | Lower San Joaquin Levee District | M | A | A | A | A | A |
| Mariposa Bypass Control Structure | Lower San Joaquin Levee District | A | A | A | A | A | A |
| Mariposa Bypass Drop Structure | Lower San Joaquin Levee District | A | A | A | A | A | A |
| Owens Creek Control Structure | Lower San Joaquin Levee District | M | A | M | M | M | A |
| Owens Creek Overflow Structure | Lower San Joaquin Levee District | A | A | A | A | A | A |

**Table 4-2 Continued: Overall Structure Ratings for 2007 through 2012**

| Structure | LMA Name | 2007 Overall Rating | 2008 Overall Rating | 2009 Overall Rating | 2010 Overall Rating | 2011 Overall Rating | 2012 Overall Rating |
|---|---|---|---|---|---|---|---|
| **San Joaquin River Basin** | | | | | | | |
| San Joaquin River & Chowchilla Canal Bypass Control Structure | Lower San Joaquin Levee District | A | A | A | A | A | A |
| San Joaquin River Structure & Sand Slough Structure | Lower San Joaquin Levee District | A | A | M | M | A | A |
| Ash & Berenda Slough Control Structure | Madera County FCWCA | A | A | A | A | A | A |
| Fresno River Diversion Weir | Madera County FCWCA | A | M | A | A | A | A |
| Black Rascal Creek Drop Structure | Merced Streams Group | A | A | M | M | A | A |
| Owens Creek Siphon Structure | Merced Streams Group | M | M | M | M | M* | M |
| Paradise Dam | Sacramento Maintenance Yard | M | M | M | M | M | M |
| Duck Creek Diversion Weir & Control Structure | San Joaquin County Flood Control and Water Conservation District | A | A | A | A | A | A |

* Overall structure rating average is less than 0.2; however, U rated issues are present, so the overall rating is M instead of A.

**Table 4-3: Overall Pumping Plant Ratings for 2007 through 2012**

| Pumping Plant | LMA Name | Overall Rating | | | | | |
|---|---|---|---|---|---|---|---|
| | | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 |
| Magpie Creek | City of Sacramento | A | A | A | N† | A | A |
| Reclamation District 2063 Pumping Plant (Nelson Drain) | Reclamation District 2063 | M | A | M | M | U | U |
| Wetherbee Lake Pumping Plant & Navigation Gate | Reclamation District 2096 | A | A | M | A | A | M |
| American River Pumping Plant #1 | Sacramento County | A | A | A | A | A | A |
| American River Pumping Plant #2 | Sacramento County | A | A | A | A | A | A |
| Mormon Slough #1 | San Joaquin County Flood Control and Water Conservation District | A | A | A | A | A | A |
| Mormon Slough #2 | San Joaquin County Flood Control and Water Conservation District | A | A | A | A | A | A |
| Mormon Slough #3 | San Joaquin County Flood Control and Water Conservation District | A | A | A | A | A | A |
| Middle Creek | Sutter Maintenance Yard | A | M | M | A | A | A |
| Sutter Bypass #1 | Sutter Maintenance Yard | A | A | M | M | A | A |
| Sutter Bypass #2 | Sutter Maintenance Yard | A | A | M | M | A | A |
| Sutter Bypass #3 | Sutter Maintenance Yard | A | A | M | M | A | A |
| Gomes Lake | Turlock Irrigation District | A | A | A | A | A | A |

* Overall structure rating average is less than 0.2; however, U rated issues are present, so the overall rating is M instead of A.

† Due to resourcing challenges, this structure did not have an inspection completed in 2010.

# 5 SUPPLEMENTAL EROSION SURVEY OF THE SAN JOAQUIN RIVER SYSTEM

## *5.1 Purpose*

Since 2006, FPIIB has conducted the supplemental erosion survey of the San Joaquin River Flood Control System (SJRFCS) to document and monitor erosion sites. The specific purpose of the Supplemental Erosion Surveys of the SJRFCS is to: a) inspect the waterside levee for erosion activity, b) document and report new erosion sites, c) document and report current condition of previously identified erosion sites, and d) rank the severity of erosion sites based upon the findings from the field survey. For the purposes of the survey an erosion site is defined as a site where substantial ground loss associated with erosion has been observed and documented and where the integrity of the levee may be at risk of an erosion failure during floods or normal flow conditions.

## *5.2 Highlights*

- In 2012, supplemental erosion surveys show that 37 of the 52 previously identified erosion sites remain unchanged. Three of the existing sites—in RD 2101 at river mile 73.92, in RD2085 at river mile 66.50, and in RD404 at river mile 40.86—show significant development in erosion condition. Of the three, the erosion site in RD 2101 at river mile 73.92 is in critical condition.
- Among the 52 surveyed existing erosion sites, 6 sites were repaired prior to the survey in 2011 and their performance was evaluated. Seven sites were found to be repaired and they are being monitored.
- Forty-six new erosion sites were documented this year: 20 on the San Joaquin River, 23 on Mormon Slough, and 3 on Old River. None of these new sites appear to be in a critical condition. All the newly documented sites on Mormon Slough are on the left bank where only high ground exists and do not impact Project levees. These erosion sites appear to be old sites; they are reported in 2012 for continued monitoring of their impact to accessibility during other inspections. Most of new sites on San Joaquin River and Old River can be attributed to weakened levee slope stability or irrigation leaks, instead of being caused by the high flows in the past flooding season.
- FPIIB updated the erosion inventory database by adding survey details.
- FPIIB improved the ranking criteria and methodology for erosion sites to make them more consistent and comparable from one year to another. The new set of criteria and methodology is anticipated to be used in supplemental erosion report of 2013.

## *5.3 Results*

The results of the 2012 supplemental erosion survey continue to show that many local agencies have made significant improvements since 2006. Twenty-seven previously identified erosion sites have been repaired and a few more are in the planning stages of repair. Erosion sites unchanged from the previous year or newly documented sites were given one of two possible ratings based on the condition of the site:

- **Minimally Acceptable (M)** – A site that requires annual assessment and monitoring, as it may become a serious levee deficiency in the near future.
- **Unacceptable (U)** – A site that may require immediate attention and corrective action, as it may be a serious levee deficiency that can fail during normal flow or in the next high water event.

Appendix F contains information on the inspection criteria and rating methodology. Table 5-1 shows the numbers of erosion sites receiving each rating in 2012. A summary of the status and ratings, including photos for each erosion site, can be found in Appendix L.

**Table 5-1: Summary of Erosion Site Status and Rating for 2012**

| | Number of Erosion Sites |
|---|---|
| **M=Minimally Acceptable** | 39 |
| **U=Unacceptable** | 44 |
| **Sites Repaired Since 2011 Survey** | 13 |
| **Sites Not Rated** | 2 |

Table 5-2 shows individual ratings for each erosion site. Most of the erosion sites were in a similar condition as in previous years. Some of these sites are in the process of being addressed. While the number of erosion sites rated as U remains high, many of the previously identified sites have since been repaired by local agencies and DWR.

**Table 5-2: Erosion Site Ratings by LMA for 2012**

| LMA Short Name | LMA Name | Site ID | Normalized Score | Overall Rating |
|---|---|---|---|---|
| NA0011 | Madera County FCWCA | NA0011U01RM2.57 | 55 | M |
| NA0011 | Madera County FCWCA | NA0011U01RM3.8 | 55 | M |
| NA0013 | Merced Streams Group | NA0013U03RM1 | 58 | M |
| NA0013 | Merced Streams Group | NA0013U03RM1.25 | 51 | M |
| NA0013 | Merced Streams Group | NA0013U04RM0.21 | 48 | M |
| NA0013 | Merced Streams Group | NA0013U04RM0.42 | 48 | M |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U15RM0.86 | 65 | U |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM11.81 | 62 | U |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM12.95 | 62 | U |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM13.53 | 58 | M |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM13.72 | 62 | U |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM13.86 | 62 | U |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM14.48 | 46 | M |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM16.27 | 70 | U |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM17.99 | 58 | M |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM18.69 | 66 | U |

**Table 5-2 Continued: Erosion Site Ratings by LMA for 2012**

| LMA Short Name | LMA Name | Site ID | Normalized Score | Overall Rating |
|---|---|---|---|---|
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM19.18 | 53 | M |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM19.23 | 58 | M |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM19.28 | 60 | U |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM20 | 65 | U |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM20.62 | 62 | U |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM20.71 | 59 | U |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM21.05 | 62 | U |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM21.94 | 49 | M |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM21.95 | 57 | M |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM22.01 | 57 | M |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM22.15 | 46 | M |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM22.58 | 55 | M |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM22.74 | 62 | U |
| NA0017 | San Joaquin County Flood Control and Water Conservation District | NA0017U16RM23.35 | 74 | U |
| RD0001 | Reclamation District No. 0001 | RD0001U01RM31.4 | 67 | U |
| RD0017 | Reclamation District No. 0017 | RD0017U02RM44.32 | 67 | U |
| RD0017 | Reclamation District No. 0017 | RD0017U02RM45.97 | 53 | M |
| RD0017 | Reclamation District No. 0017 | RD0017U02RM46.73 | 59 | U |
| RD0404 | Reclamation District No. 0404 | RD0404U01RM40.86 | 59 | U |
| RD0404 | Reclamation District No. 0404 | RD0404U01RM41.11 | 64 | U |
| RD0404 | Reclamation District No. 0404 | RD0404U01RM41.22 | 66 | U |
| RD0404 | Reclamation District No. 0404 | RD0404U01RM41.23 | 64 | U |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM40.99 | 60 | U |

## Table 5-2 Continued: Erosion Site Ratings by LMA for 2012

| LMA Short Name | LMA Name | Site ID | Normalized Score | Overall Rating |
|---|---|---|---|---|
| RD0524 | Reclamation District No. 0524 | RD0524U01RM41.39 | 60 | U |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM41.5 | 57 | M |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM41.58 | 64 | U |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM41.79 | 74 | U |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM41.92 | 69 | U |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM42.03 | 62 | U |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM42.2 | 66 | U |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM42.79 | 58 | M |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM42.93 | 77 | U |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM43.23 | 55 | M |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM43.52 | 57 | M |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM44.13 | 71 | U |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM45.07 | 68 | U |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM45.27 | 57 | M |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM46.12 | 51 | M |
| RD0524 | Reclamation District No. 0524 | RD0524U01RM46.39 | 60 | U |
| RD0544 | Reclamation District No. 0544 | RD0544U01RM48.81 | 59 | U |
| RD0544 | Reclamation District No. 0544 | RD0544U01RM49.67 | 66 | U |
| RD0544 | Reclamation District No. 0544 | RD0544U02RM32.91 | 62 | U |
| RD0544 | Reclamation District No. 0544 | RD0544U02RM33.21 | 70 | U |
| RD2031 | Reclamation District No. 2031 | RD2031U01RM0.48 | 47 | M |
| RD2058 | Reclamation District No. 2058 | RD2058U01RM1.78 | 48 | M |
| RD2058 | Reclamation District No. 2058 | RD2058U01RM3.97 | 48 | M |
| RD2062 | Reclamation District No. 2062 | RD2062U01RM54.14 | 51 | M |
| RD2062 | Reclamation District No. 2062 | RD2062U02RM1.94 | 51 | M |
| RD2062 | Reclamation District No. 2062 | RD2062U02RM2.14 | 42 | M |
| RD2062 | Reclamation District No. 2062 | RD2062U03RM29.93 | 66 | U |
| RD2062 | Reclamation District No. 2062 | RD2062U03RM30.02 | 52 | M |
| RD2062 | Reclamation District No. 2062 | RD2062U03RM30.1 | 57 | M |
| RD2062 | Reclamation District No. 2062 | RD2062U03RM30.19 | 69 | U |
| RD2062 | Reclamation District No. 2062 | RD2062U03RM30.27 | 56 | M |

**Table 5-2 Continued: Erosion Site Ratings by LMA for 2012**

| LMA Short Name | LMA Name | Site ID | Normalized Score | Overall Rating |
|---|---|---|---|---|
| RD2062 | Reclamation District No. 2062 | RD2062U03RM30.43 | 60 | U |
| RD2062 | Reclamation District No. 2062 | RD2062U03RM31.12 | 52 | M |
| RD2062 | Reclamation District No. 2062 | RD2062U03RM31.28 | 47 | M |
| RD2075 | Reclamation District No. 2075 | RD2075U01RM64.34 | 57 | M |
| RD2085 | Reclamation District No. 2085 | RD2085U01RM66.50 | 59 | U |
| RD2089 | Reclamation District No. 2089 | RD2089U01RM29.61 | 63 | U |
| RD2089 | Reclamation District No. 2089 | RD2089U01RM29.8 | 53 | M |
| RD2089 | Reclamation District No. 2089 | RD2089U02RM28.35 | 59 | U |
| RD2095 | Reclamation District No. 2095 | RD2095U01RM6.74 | 55 | M |
| RD2095 | Reclamation District No. 2095 | RD2095U01RM6.88 | 59 | U |
| RD2095 | Reclamation District No. 2095 | RD2095U02RM60.62 | 58 | M |
| RD2095 | Reclamation District No. 2095 | RD2095U02RM60.69 | 58 | M |
| RD2101 | Reclamation District No. 2101 | RD2101U01RM73.92 | 65 | U |

# 6 LMA REPORTING REQUIREMENTS (CWC SECTIONS 9140-9141)

## 6.1 Background

California Assembly Bill (AB) 156 (Laird, 2007) Flood Control was introduced in the 2007-2008 Legislative Session. Governor Schwarzenegger signed the bill and Secretary of State Bowen chaptered it on October 10, 2007 (Chapter 368, Statutes of 2007). CWC Sections 9140-9141 include requirements for LMAs to submit an annual report on their operation and maintenance of a Project Levee and for DWR to submit an annual report to summarize the information received from LMAs. By establishing these requirements on LMAs CWC Sections 9140-9141 imposed a state-mandated local program effective July 1, 2008.

**Where were the AB 156 LMA Reporting requirements added to the CWC?**

AB 156 added Chapter 9, commencing with Section 9110, to Part 4 of Division 5 of the CWC. Water Code additions specific to the Local Maintaining Agency Reporting Program are outlined below:

| CWC Section | Topic |
|---|---|
| Chapter 9, Article 1, Section 9110 | Selected Definitions |
| Chapter 9, Article 1, Section 9140 | Local Reports |

### Local Maintaining Agency Reports

LMAs (including Sacramento and Sutter Maintenance Yards) are required to submit a report about the O&M of their levees to DWR by September 30 each year. According to CWC Section 9140, the information submitted to DWR shall include all of the following five items:

1. Information known to the LMA that is relevant to the condition or performance of the Project Levee.
2. Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee.
3. A summary of the maintenance performed by the LMA during the previous fiscal year.
4. A statement of work and estimated cost for operation and maintenance of the Project Levee for the current fiscal year, as approved by the LMA.
5. Any other readily available information contained in the records of the LMA relevant to the condition or performance of the Project Levee, as determined by the CVFPB or DWR.

**Selected CWC Definitions**

**"Local Agency"** means a local agency responsible for the maintenance of a project levee.

**"Maintenance"** has the same meaning as that set forth in subdivision (f) of Section 12878

**"Project Levee"** means any levee that is part of the facilities of the State Plan of Flood Control

**"State Plan of Flood Control"** means the state and federal flood control works, lands, programs, plans, policies, conditions, and mode of maintenance and operations of the Sacramento River Flood Control Project described in Section 8350, and of flood control projects in the Sacramento River and San Joaquin River watersheds authorized pursuant to Article 2 (commencing with Section 12648) of Chapter 2 of Part 6 of Division 6 for which the board or the department has provided assurances of nonfederal cooperation to the United States, and those facilities identified in Section 8361.

**"Fiscal year"** has the same meaning as set forth in Section 13290 of the Government Code. The fiscal year shall commence on the first day of July.

To aid LMAs with the reporting requirements, DWR developed electronic and hard copy reporting forms. Example of hard copy reporting forms are shown in Appendix D.

In some cases Project levees abut to non-Project levees; therefore some non-Project levees may also keep flood water out of areas protected by Project levees. In these cases, CWC Sections 9140-9141 requires that LMAs subject to these requirements include the same information for these non-Project levees. Other LMAs that maintain only non-Project levees may voluntarily submit their operation and maintenance information to DWR for inclusion in the annual report. Information received from a non-Project levee maintainer is included in Appendix C.

## *Summary Department Report*

According to CWC Section 9141, DWR is required to prepare and submit an annual report to the CVFPB on the Project levees and certain non-Project levees operated and maintained by LMAs. This report summarizes information received from LMAs, as well as relevant portions of any of the following documents as determined by DWR:

1. The SPFC Descriptive Document.
2. The Flood Control System Status Report (FCSSR).
3. The schedule for mapping described in CWC Section 8612.
4. Any correspondence, documentation, or information deemed relevant by DWR.

**CWC Sections 9140 - 9141 Reporting Timelines**

CWC changes became effective: ..... July 1, 2008

Local Maintaining Agency reports to DWR:..... Due September 30 each year

DWR Annual Report to CVFPB: ..... Due December 31 each year

The following sections provide a status update for the other documents, reports, and information mentioned above.

- **Annual Inspection Report:** The Annual Inspection Report on LMA maintenance is combined in this report.
- **The SPFC Descriptive Document:** The SPFC Descriptive Document was released in November, 2010. The document contains descriptions of flood management facilities, lands, programs, conditions, and mode of O&M for the State-federal flood protection system in the Sacramento River and San Joaquin River watersheds. The report describes the existing system, but it is not a plan for the future. The document is available for download from the Central Valley Flood Management Planning (CVFMP) website: http://www.water.ca.gov/cvfmp/documents.cfm.
- **The FCSSR:** The FCSSR was released in December, 2011. This document describes the current status (physical condition) of SPFC facilities at a system-wide level. DWR prepared the FCSSR to meet the legislative requirements of CWC Section 9120, and to contribute to development of the Central Valley Flood Protection Plan (CVFPP). The CVFPP will guide future State investments through projects to address identified problems in the SPFC. DWR will periodically, or following a formal request from the CVFPB, update the FCSSR. The document is available for download from the CVFMP website: http://www.water.ca.gov/cvfmp/documents.cfm.
- **The schedule for mapping:** The mapping initiative as described in CWC Section 8612 is part of DWR's Central Valley Floodplain Evaluation and Delineation Program (CVFED). The CVFED Program works to estimate the frequency, depth, and limits of potential flooding in the Central Valley by providing building blocks in terms of floodplain assessments, standards, methodologies, tools, and analyses that support multiple applications including FloodSAFE programs and projects and Federal Emergency Management Agency's (FEMA) National Flood Insurance Program. The CVFED Program consists of three interrelated projects: (1) Central Valley Topography Acquisition Project, (2) Central Valley Hydraulic Evaluation Project, and the (3) Central Valley Floodplain Delineation Project.

Regarding Central Valley Topography Acquisition Project, CVFED has finalized secondary post-processed LiDAR topography covering the Upper San Joaquin Basin (2,150 sq miles). This completes the final post-processing of LiDAR topography for the entire CVFED study area (5,800 sq miles). These datasets are now available for use by public agencies. Regarding Central Valley Hydraulic Evaluation Project, Reach and system riverine and overland flow hydraulic models are in development for areas at risk of flooding within the SPFC area of influence, and are expected to be complete in 2013. Regarding Central Valley Floodplain Delineation Project, the CVFED program is currently working to develop the models and tools necessary to produce these informational maps for the urban areas identified in the CVFPP's State Systemwide Investment Approach by the July 2, 2013. This deadline was established in Senate Bill 1278, (Chaptered September 25, 2012) which amended Section 9610 (d) (1) of the Water Code.

## 6.2 Agencies Subject to CWC Section 9140 Requirements

### Local Maintaining Agencies Subject to the Reporting Requirements

Most Project levees of the Sacramento and San Joaquin Flood Control Systems are maintained by LMAs and the maintenance activities are funded through assessment of landowner's properties within the LMAs' boundaries. These LMAs are comprised of Levee Districts (LD) and Reclamation Districts (RD). A variety of cities, counties, and other public agencies and municipalities also maintain Project levees; these agencies are identified in this report by the term Named Areas (NA).

### State-Maintained Levees

CWC Section 8361 identifies levees within the Sacramento River Flood Control System that are the State's responsibility. Maintenance of these State-maintained levees (ST) is performed by DWR through the Sacramento and Sutter Maintenance Yards. They are comprised mostly of levees made necessary by the discharge from weirs.

**More Information on LMAs from the CWC**

| Type of Agency Section | CWC |
|---|---|
| Levee Districts | 70000 |
| Reclamation Districts | 50000 |
| State Maintained Areas | 8361 |
| Maintenance Areas | 12878 |

### Maintenance Areas

Under Section 12878 of the CWC, DWR is authorized to create Maintenance Areas (MA) for Project levees with no identified LMA, or where the LMAs have failed or refused to perform maintenance or have chosen to relinquish maintenance responsibilities of their own volition. There are currently 10 active MAs in the state, all within the jurisdictional boundaries of the CVFPB. Based on their location, levees within MAs are maintained by either the Sacramento or Sutter Maintenance Yards.

## 6.3 Use of the LMA Reporting by DWR

The information collected for the LMA Report shares a local understanding of system performance, as well as operation and maintenance practices. This important information contributes to an annual assessment of vulnerability of the flood control system prior to flood season and can be shared with emergency response partners to make sure that appropriate steps are taken for resource monitoring efforts and emergency operations. Providing detailed information about the location and extent of critical levee distresses is essential to the flood preparedness activities that ensure timely and appropriate response for flood emergencies.

The information submitted in Parts 1 and 2 of the five-part reporting program provides critical information for emergency response before flood season to better prepare the first responders. Part 3 provides an opportunity for DWR to assess the current maintenance practices by LMAs throughout the year, in particular during summer and winter. Part 4 provides information on LMAs' planned budgets for the next fiscal year. This information particularly helps DWR to evaluate LMAs' operation and maintenance costs per levee mile. Part 5 deals with any other readily available information that LMA can submit regarding the condition and the performance of the structures.

Finally, the LMAs provide valuable information about the current conditions of the levees in flood control system. DWR uses this information to develop critical data to evaluate levees, monitor levee conditions, and provide input to emergency response programs to improve public safety.

## *Reporting Statistics*

There is an increasing trend (Figure 6-1) of reporting compliance by LMAs since the program started in 2008. A systemwide comparison of reporting compliance (Figure 6-2) shows at least 90% LMAs belonging to the Sacramento system and 96% belonging to the San Joaquin system have reported in last two years. Overall, about 93% of Areas submitted their report this year. An increasing trend of electronic reporting is apparent in Figure 6-3. This year about 68% Areas submitted reports through DWR's web-based LMA Reporting tool. This represents a 16% increase over last year's electronic reporting. This could be attributed to continuous outreach activities and enhancement of reporting infrastructure since the inception of the tool.

**Figure 6-1: Reporting Compliance for 2008-2012**

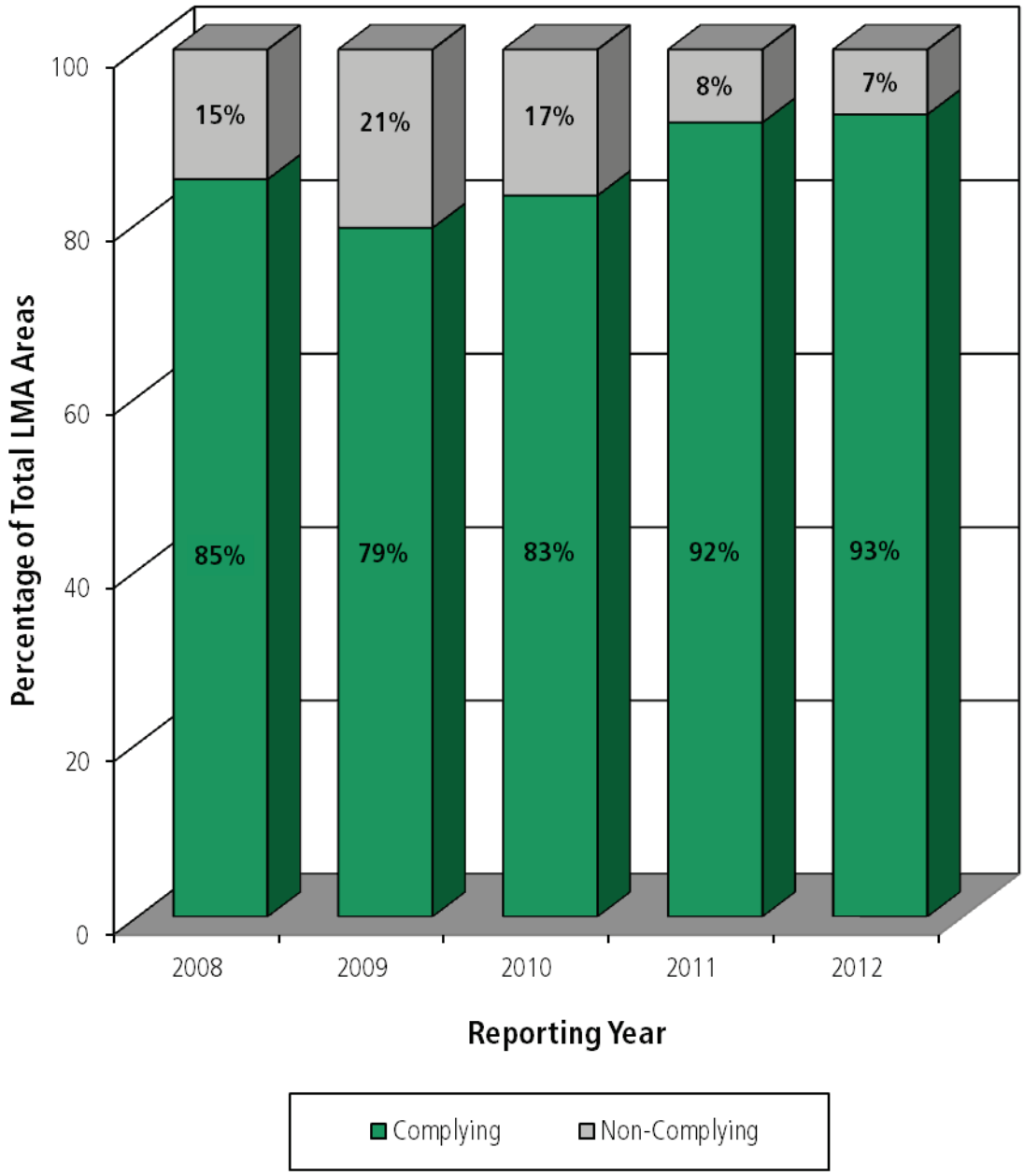


**Figure 6-2: Comparison of Reporting Compliance by LMAs for 2008-2012**

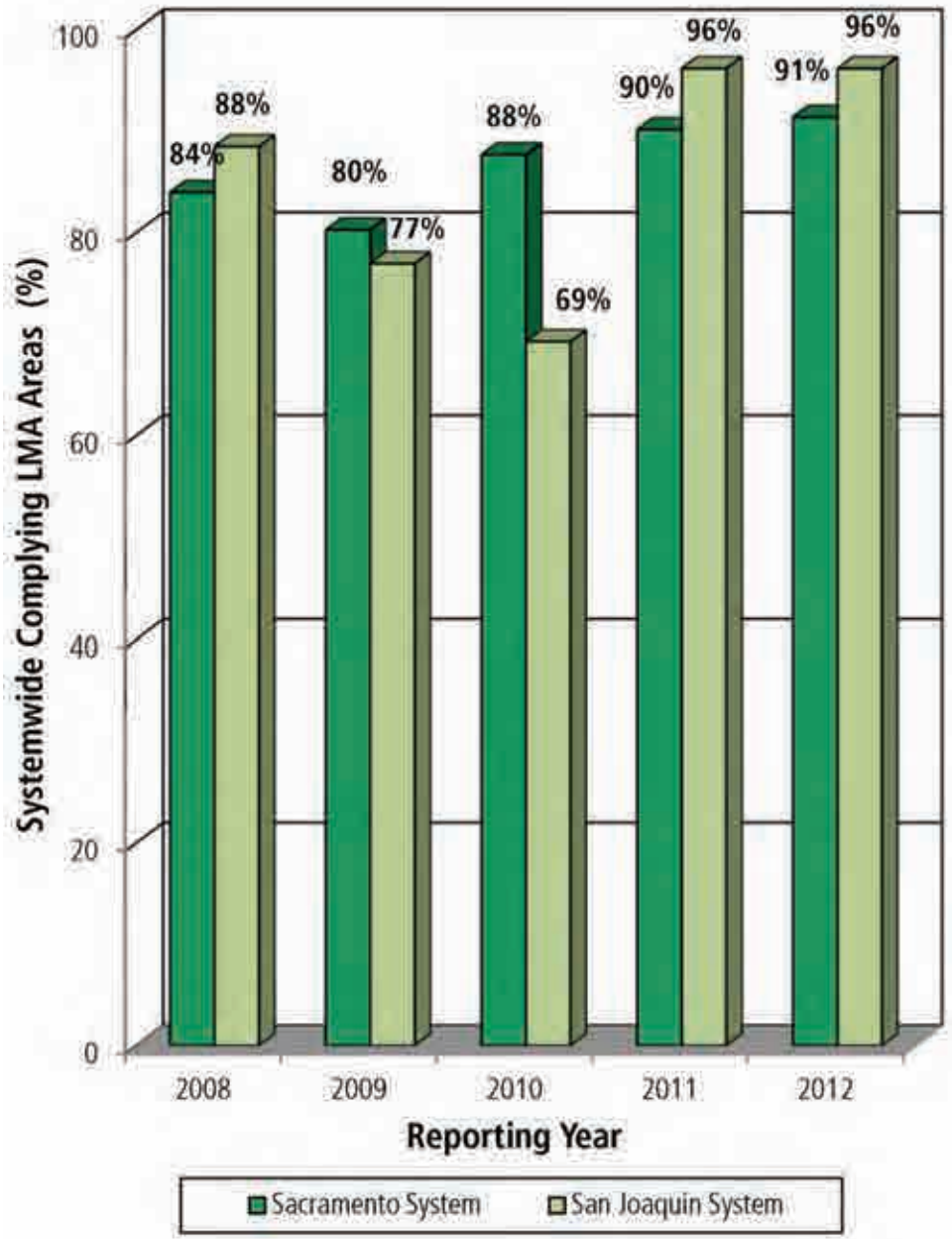
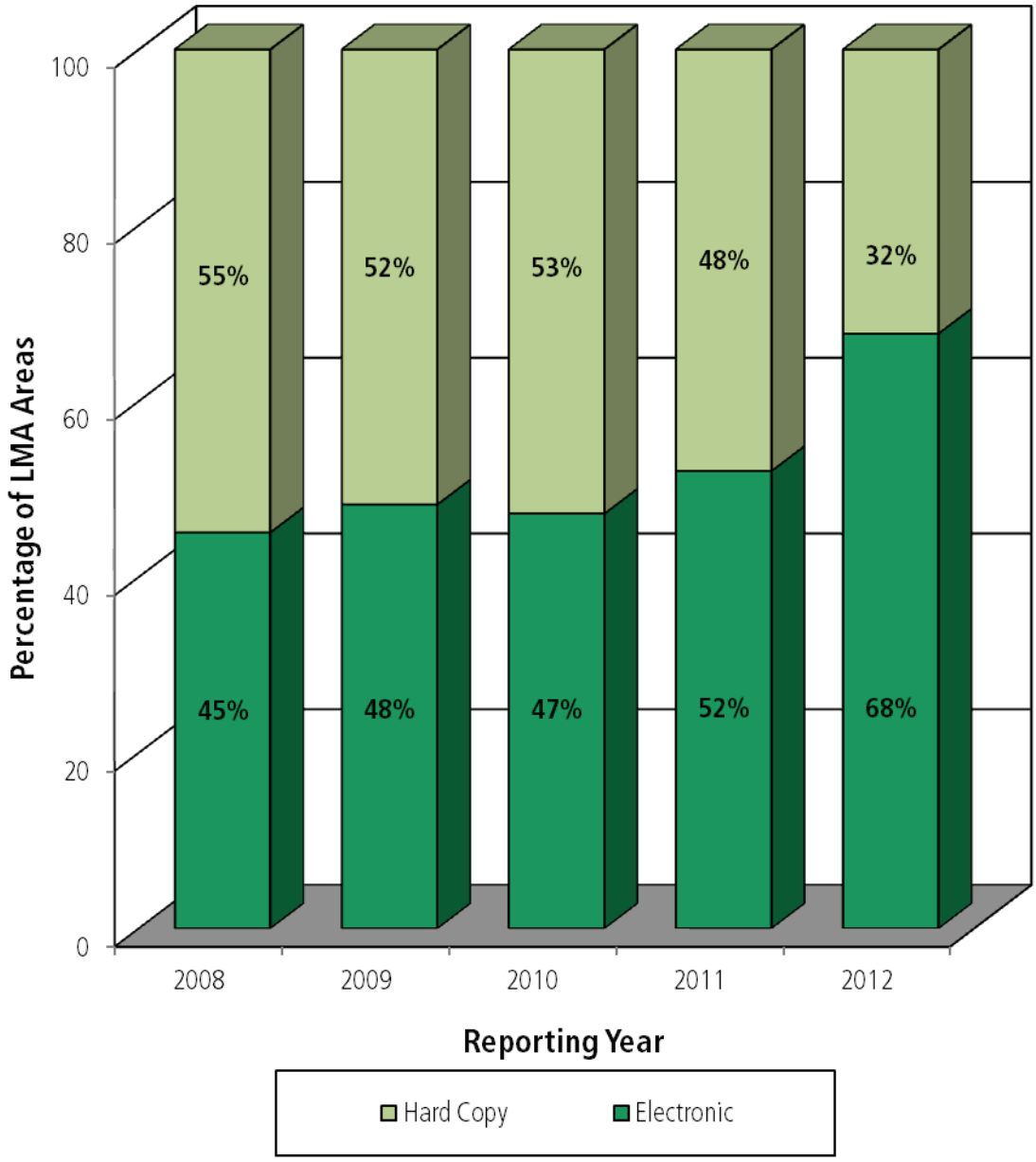


**Figure 6-3: Reporting Mode for 2008-2012**



## *Reported Key Maintenance Activities*

About 90% of reporting Areas provided information on the summary of maintenance activities. As in the previous years, routine vegetation maintenance activities (burning, slope dragging, cutting, trimming, spraying), rodent control, levee crown grading, roadway maintenance and encroachment dominated LMA maintenance activities for fiscal year 2011-12. Figure 6-4 shows the activities Areas reported as having performed as a percentage of the total number of Areas who reported information during that year. Other reported key activities include minor structural repairs (mile markers, gates, barricades, and miscellaneous signs maintenance and repair), and minor levee repairs (erosion repair, hole grouting, revetment, rip-rap and slope repair). Some LMAs also reported levee patrolling and other planning activities such as preparation of five year maintenance plans.

A similar percentage of reporting Areas also provided information on the planned maintenance activities for the current fiscal year 2012-13. The planned activities reflect similar maintenance priorities as performed maintenance activities in fiscal year 2011-12. Figure 6-5 shows planned activities that were reported by LMAs.

**Figure 6-4: Key Performed Activities Reported for 2008-2012**

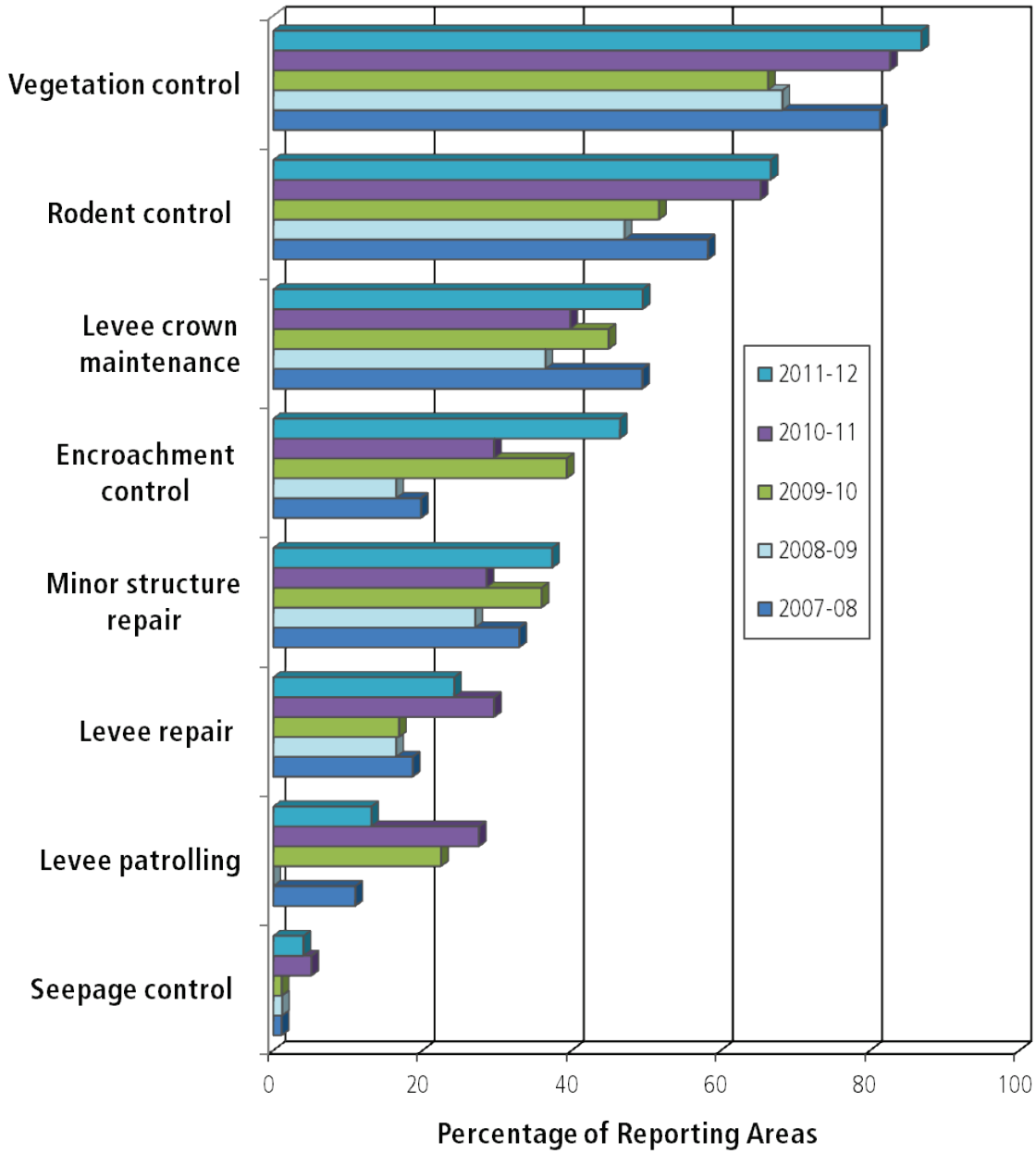
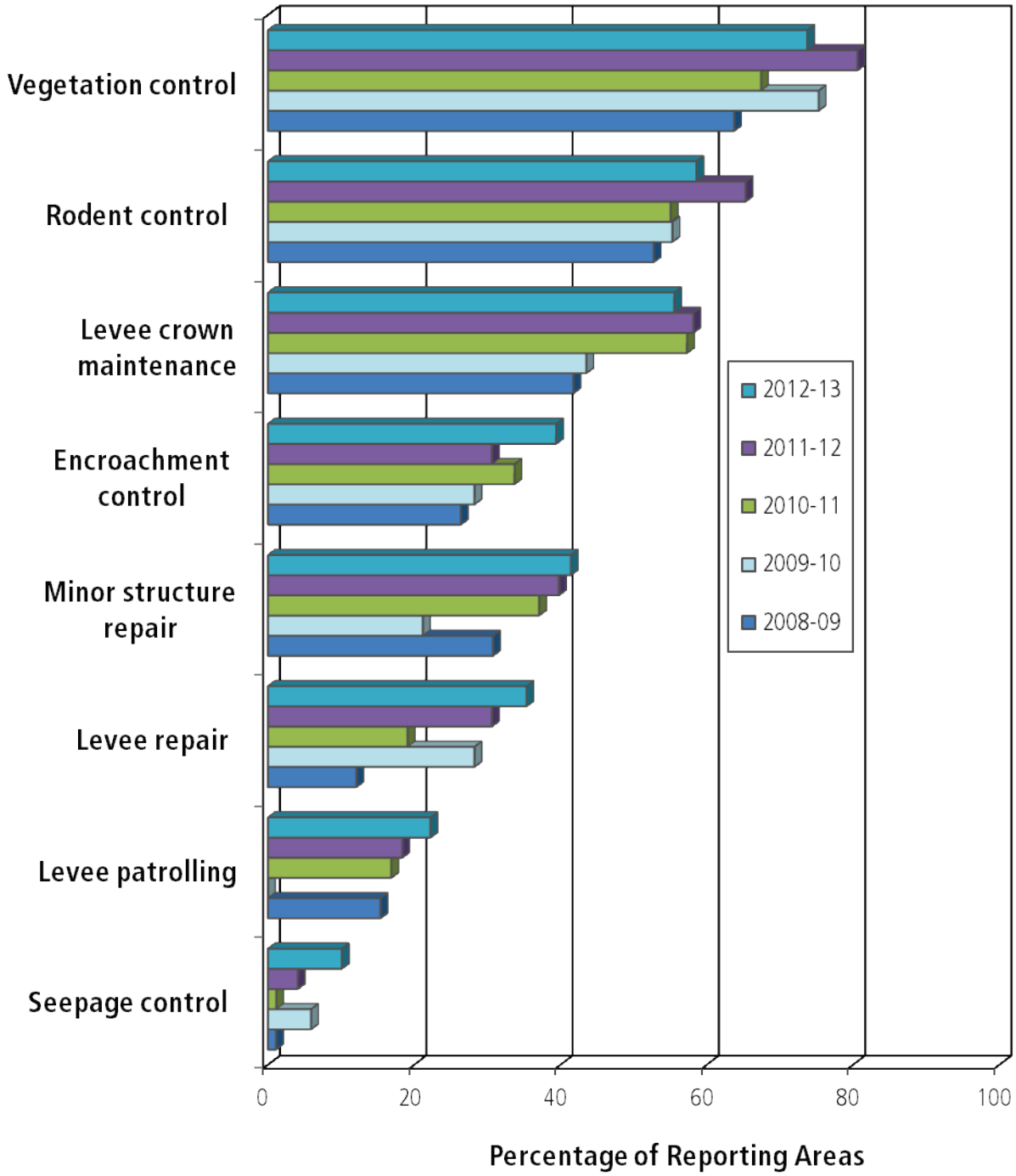


**Figure 6-5: Key Planned Activities Reported for 2009-2013**




## *Issues Reported*

Local Maintaining Agencies also reported issues and information critical for the integrity of the Project levees. Key issues pointed out by the LMAs this year include: encroachment, erosion and sedimentation, freeboard and other levee geometry deficiencies, in-channel and levee vegetation, seepage, and sand boils. Some LMAs also reported State and federal regulations are posing constraints on complying with vegetation maintenance criteria. All of this information is summarized as Part 1 and Part 2 in the summary reports in Appendices A through C.

## 6.4 Communication and Outreach

DWR recognizes that the requirements of CWC Section 9140 placed a new reporting burden on LMAs. To help make reporting easier, DWR developed an outreach program and a web-based reporting tool to assist LMAs. DWR notified LMAs of the new reporting requirements, developed electronic and hard copy reporting options, and held a series of presentations and workshops. The process continues today, with DWR soliciting feedback from LMAs to improve the program. The following subsections and Figure 6-6 describe the chronology of the outreach process for 2012.

### Local Maintaining Agency Reporting Workshops

A workshop announcement was distributed to LMAs in July 2012 to provide information on LMA reporting. Two half-day workshops were held on August 14 and 15, 2012, in DWR's Flood Operations Center. The workshops provided a forum for staff to demonstrate the electronic reporting web application, receive comments and suggestions for program improvement, and discuss reporting procedures. A copy of the workshop flyer is included in Appendix D.

### Web Application User Manual

A web application User Guide has been developed for the electronic users to facilitate reporting. The guide can be used to answer frequently asked questions. The guide will be subjected to change as functions and features are updated. The guide can be accessed from the LMA website:

http://cdec.water.ca.gov/cgi-progs/products/LMA_Web_Application_User_Guide.pdf

### Fact Sheet

A program fact sheet was revised in 2011 to describe changes to the program and reporting requirements. It is posted on the LMA website at http://cdec.water.ca.gov/lma.html. A copy of the fact sheet is Included in Appendix D.

### Local Maintaining Agency Meetings

As part of our outreach component, DWR staff met with three LMAs to discuss the reporting requirements and the web application on the following dates in 2012:

| Agency | Date |
|---|---|
| Reclamation District 10 | September 11, 2012 |
| Sutter Yard | September 20, 2012 |
| Reclamation District 827 | October 12, 2012 |

### Submittal to Libraries

DVDs of the 2011 Annual Reports were submitted to 49 libraries within the jurisdictional areas of the LMAs as directed by the code. A copy of the letter to the libraries is included in Appendix D.

### Submittal to Cities and Counties

DVDs of the 2011 Annual Reports were submitted to 17 cities and counties within the jurisdictional areas of the LMAs. This improvement was added to the program for the first time in 2011. The code requires distribution of the report to interested cities and counties. Of the 20 cities and counties within the jurisdictional area, seventeen requested a copy of the DVD. The counties included were Butte, Plumas, Glenn, Colusa, Tehama, Placer, Sutter, Yolo, Lake, Sacramento, Solano, San Joaquin, Stanislaus, Madera, Merced, and Fresno. A copy of the letter to the cities and counties is included in Appendix D.

### *Reporting Requirements Letter*

On August 30, 2012, a reporting requirements letter was mailed to all LMAs with instructions and the deadline. A copy of the letter is included in Appendix D.

### *Phone Calls*

DWR contacted all LMAs for updated contact information in September through November, 2012 to ensure the proper agency members received copies of the report.

### *Website and Electronic Reporting - Web Application Development*

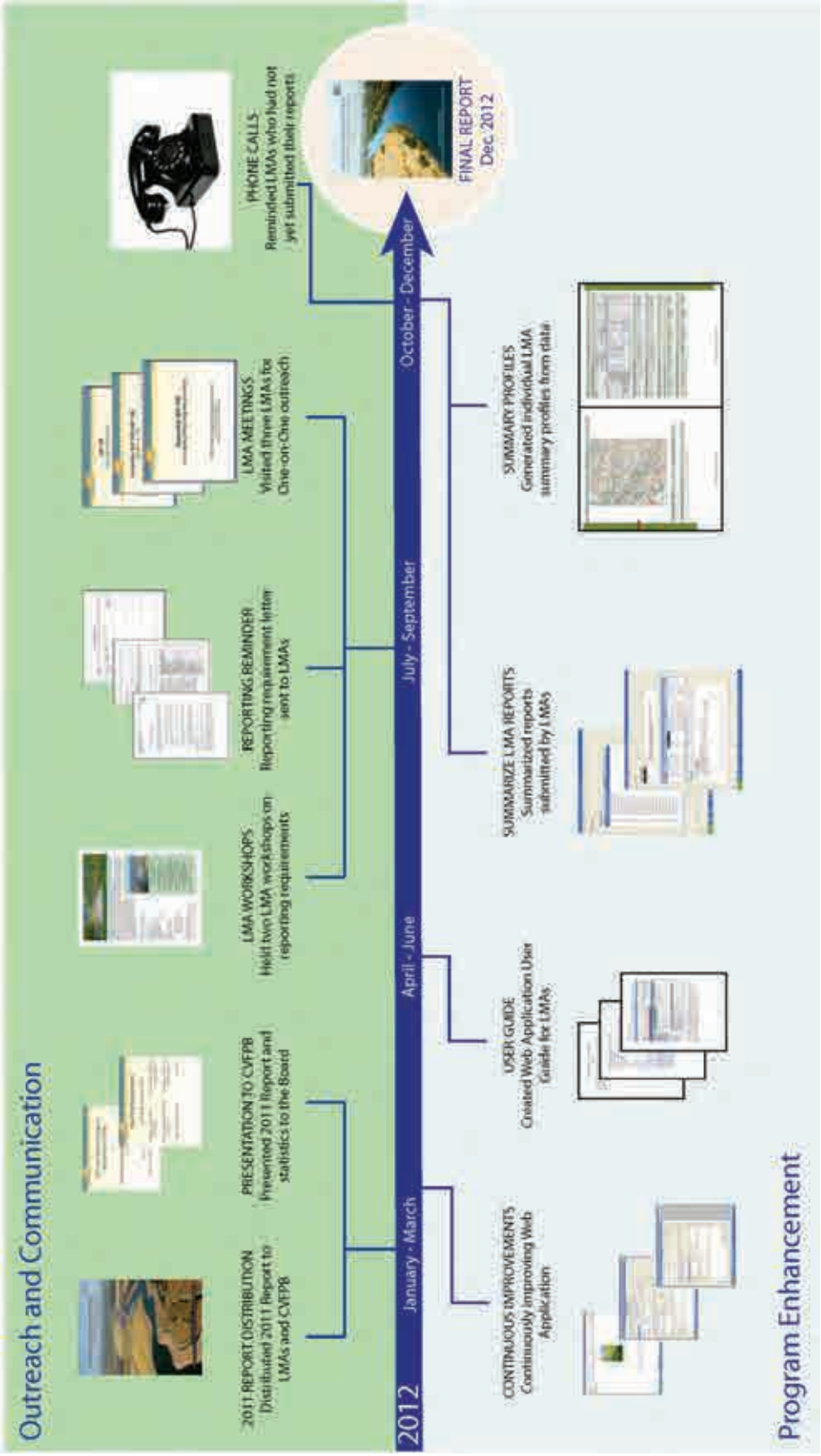
The graphical user interface for the webpage was developed in 2008 with assistance from the California Data Exchange Center (CDEC) staff to improve reporting and information sharing. Various documents regarding the LMA Reporting program can be accessed at http://cdec.water.ca.gov/lma.html. The web based reporting application can also be accessed at this location.

The application allows LMAs to establish an individual user account, access certain flood system information, and submit required information electronically.

This web application is continually improved and enhanced with features and functions to benefit LMAs in their reporting requirements. To aid LMAs with reporting requirements, two examples of good reporting were posted on our website. To access the examples, please click on the "Reporting Example" link under the Local Agency program website.

The integration between the Inspection and LMA reporting program through the web application has been improved. LMAs are highly encouraged to use the electronic program to submit information required from the Inspections and LMA Reporting programs at one place. The response has been positive to date; more agencies submitted their reports electronically in 2012 than by hard copy.

**Figure 6-6: Program Activities**



# 7 OTHER FPIIB ACTIVITIES AND ACCOMPLISHMENTS

The FPIIB supports flood operations by inspecting, evaluating and assessing the integrity of the Sacramento and San Joaquin Flood Control Project levee systems through a variety of activities. FPIIB is involved in collecting and managing flood control system information to assist in flood operations efforts. This information includes data on historical levee distress issues, as well as historical flood control system improvements, O&M agreements, O&M standards and practices, and general information related to flood control system facilities.

FPIIB inspects the maintenance of flood control facilities and notifies LMAs of system deficiencies, monitors levee and channel erosion, monitors use of designated floodways, conducts regulatory inspections of CVFPB authorized encroachments, conducts flood fight training, has first-response capability during high-water events, and conducts high-water staking.

The following sections provide more detail on key FIIB activities and accomplishments.

## *7.1 Inspection and Reporting for Project Facilities*

FPIIB conducts maintenance inspections for Project levees, channels, and structures–the main subject of this report. Improvements in 2012 inspections and reporting include:

- Continued inspector training and use of more consistent methodology to reduce subjectivity
- More timely reporting and communication of deficiencies to LMAs
- Continued refinements to the inspection database program, allowing efficient documentation of system conditions and compatibility with USACE National Levee Database reporting requirements

DWR expects to implement additional changes to the inspection program as existing USACE policies are clarified over time, new policies are developed, and other levee management issues arise.

## *7.2 High Water Staking*

FPIIB developed documentation for high water staking in Project levees. They are:

- High Water Staking Field Guidebook
- High Water Event Documentation Program Report

The field guidebook is designed to assist field crews with staking procedures. It provides a pre-staking checklist and describes how to stake, where to stake and what to stake. The High Water Event Documentation Program Report describes issues and concern about the current staking program and recommended improvements. An outreach flyer has been developed to identify partners and stakeholders for this program. DWR is planning to make these documents available to CDEC for public use. High water data gathered from this program will also be available in CDEC.

FPIIB coordinated a high water staking effort with the Floodplain Evaluation Branch, Hydrology Branch, Regional Projects Assessment Branch of DFM, and the Geodetic Branch of the Division of Engineering (DOE) in 2011. DWR collected 243 high water surface elevations over approximately 200 miles of the San Joaquin River Flood System. The data can be used to better understand the performance of the levees, characterize a historical high water event, guide future flood control system improvements, and improve hydraulic modeling of flood control systems.

## *7.3 Levee Waterside Erosion Surveys*

The USACE, with DWR sponsorship, has contracted for waterside erosion surveys of the Sacramento River system since 1998. FPIIB began conducting waterside erosion surveys of the San Joaquin River portion of the State-federal flood protection system Project levees in September of 2006. The primary purpose of these surveys is to: (a) monitor and document the condition of previously identified erosion sites; (b) inventory any new erosion sites; and (c) identify erosion sites that appear to be an imminent threat to the structural integrity of the State-federal flood protection system.

The results from DWR's Supplemental Erosion Survey of the San Joaquin River System are presented in this report in Section

5. Inspection criteria and rating methodology are described in Appendix F.

The USACE and its contractors generate the report on erosion found in the Sacramento River system; FPIIB staff supplements their reports with the USACE data as it becomes available. In 2012, the data was received in time to include the latest information on erosion sites from the USACE in this report and the LMRs.

DWR and other State, federal, and local entities are working to develop an erosion repair strategy that addresses environmental concerns about erosion maintenance and assigns responsibility for repair of different scales of erosion in the flood protection system.

Working together with USACE FPIIB has improved erosion site ranking criteria and methodology to be more consistent and comparable.

## *7.4 Utility Crossing Inventory Surveys*

Levee penetrations are recognized as hazardous elements that affect the integrity of Project levees. Heavily corroded, leaking, collapsed, or otherwise compromised pipes affect the structural integrity of levee embankment by creating mechanisms of internal erosion. Identification of the precise location of these crossings and documentation of their external conditions constitute important and relevant information used to assess levee vulnerability.

Currently, DWR does not have a complete inventory of all utility pipes crossing Project levees and as a result any potential threat is unknown. The main goal of the Utility Crossing Inventory Program (UCIP) is to develop an inventory of utility crossings penetrating State-federal flood Project levees. The inventory will include detailed desk studies to identify the location and characteristics of pipes documented crossing Project levees, as well as field surveys to document external conditions of the crossing structures and levee embankment.

While the majority of utilities penetrating Project levees are irrigation or drainage discharge pipes, many other types of utilities cross levees, such as pressurized gas pipelines, storm drains, sewer lines, and communication conduits.

The utility crossing inventory program will:

- Identify the location and characteristics of all pipes penetrating through levees by auditing historical information such as CVFPB encroachment permits, DWR Levee Logs, LMA's records, and USACE O&M Manuals.
- Perform field surveys to measure location and document existing conditions of the crossing and levee embankment based on observed external appearance.
- Document and update status of the crossing (found, indicators found, or not found).
- Assess utility crossing based on visual evidence of deterioration of the pipe, inlet or outlet structure and identify maintenance needs (Urgent, Non-Urgent, or No Action Needed).
- Share utility crossing information with LMAs to assist in the coordination of operation of public and private facilities during flood fighting.
- Promote the use of the Local Maintaining Agency Annual Report (Web Application) tool to log the operation and maintenance of the levee sections where utility crossings are present.
- Provide training to LMAs on how to update utility crossing information using the web application.

The information collected through this program will be used by inspectors to clarify maintenance issues with the different levee maintaining agencies, and by engineers for vulnerability assessments.

### *UCIP Online Application*

An online application has been developed that allows the LMAs keep a record of all utility crossings within their jurisdiction. This tool also allows the LMAs to record the actions taken to address the issues related to penetrations.

The UCIP online application will:

- Provide a tool that can list current inventories and conditions of all utility crossing penetrating through the flood project works by local maintaining agency.
- Provide an enhanced reporting method through the Local Maintaining Agency Annual Report (Web Application) for LMAs.
- Provide detailed summary sheets of utility crossings and information identifying known conditions that might impair or compromise the level of the Project levee.
- Help LMAs gather information needed for coordination of flood fights and operation of public and private facilities located within their jurisdiction.
- Provide an annual assessment of the utility crossing based on field surveys. This tool also allows for LMAs to document which utility crossings based on visual inspection pose a threat to the integrity of the flood control system.
- Allow LMAs to record all the steps taken to rectify unauthorized or non-compliant issues with regards to utility crossings.

## *7.5 Other Key Activities*

Additional FPIIB activities supporting the assessment of the integrity of the Sacramento and San Joaquin Flood Control Project levee system include:

- CVFPB Permit Inspection: FPIIB's team of flood project inspectors visually inspects the construction and installation of permitted encroachments for adherence to Board conditions. The number of permits requiring inspection continued to increase in 2012.
- Other CVFPB/FOC Inspections: In addition to the issuance of formal permits, the CVFPB authorizes activities on levees and structures in the system. During 2012, there were a high number of these activities requiring inspection, most notably in the repair and replacement of penetrations through levees and repairs resulting from issues noted in the USACE's inspections. FPIIB also conducted investigations into a variety of matters as requested by the CVFPB and the FOC.
- DWR and USACE Inspection Program Working Group: FPIIB, USACE's Sacramento District, CVFPB staff, and DWR meet monthly to coordinate ongoing DWR and USACE inspection program and maintenance activities. The primary focus is to establish a consistent understanding of inspection criteria and to establish consistent guidelines for developing system ratings.
- DWR also meets with a number of LMAs on a quarterly basis to discuss issues affecting them and to help them as much as possible.
- Internal and External Coordination: FPIIB participated in coordination with others groups within DWR as well as a variety of other agencies in the Interagency Flood Management Collaborative Program Management Group.
- Central Valley Flood Protection Plan: FPIIB participated in the preparation of the Central Valley Flood Protection Plan through the data that the Branch generates as well as reviewing and commenting on the draft documents.
- Periodic Inspections: The USACE and its contractors conducted multiple Periodic Inspections throughout 2012. FPIIB staff participated heavily in coordination with the LMAs, USACE, and CVFPB. These inspections are more detailed inspections intended to be conducted once every five years for each levee systems. FPIIB staff is helping to ensure that information is properly and completely exchanged between the entities to the greatest extent possible. As the LMAs complete maintenance on areas of concern noted in the Periodic Inspections, FPIIB inspectors work with the CVFPB to verify that the work is completed before the USACE is notified and a re-inspection is requested.
- Levee Log Update: FPIIB completed the digitization of historical levee logs and is working to field verify this data. FPIIB is coordinating these efforts with other agencies and consultants.

- Database Management: Compilation of known maintenance deficiencies and historical information into a geo-referenced database provides quick and detailed background information regarding distressed locations for initial analysis during high water events and in assessing system reliability. This database continues to be enhanced through CDEC programming.
- Flood Fight Training: Inspectors help the Flood Fight Specialist teach flood fight methods to over 1,000 people per year throughout the state. Inspectors also assisted in many of the Preseason Meetings held by the FOC.
- System Documentation: FPIIB is responsible for collecting, evaluating and summarizing historical and existing data in regard to flood emergency response. The data is being converted from hard copy to GIS-based data (geo-referenced) wherever possible. In 2012, FPIIB staff added more documentation to CDEC and made it available to stakeholders.
- Emergency Exercises: FPIIB assisted the FOC to prepare and conduct past and future emergency response exercises and will continue to do so. FPIIB staff participated in a simulation for the Forecast-Coordinated Operations (F-CO) group in October 2012 and an exercise with the California Conservation Corps in December 2012.
- Library of Models Project: FPIIB is assisting in the development of a Library of Models (LOM) to house models being developed under FloodSAFE programs. The LOM will be beneficial to other DWR offices and partner agencies. These models will be publically accessible.
- A pilot study is being conducted to evaluate the feasibility of an instrumentation network (fully-grouted piezometers) along the Project levees to obtain real-time data pertaining to levee behavior during a flood event. The real-time information will allow DWR to assess seepage conditions through the levee during high water events and enhance its Emergency Preparedness and Response Plan. The instruments have been placed and are being monitored. As part of this pilot study, an instrumentation network of piezometers and data logger system was installed to provide direct, real-time measurement of levee through seepage and under-seepage conditions during medium and high-water events. Data download from the piezometers began after the completion of installation in October, 2011. Of the 36 saturated piezometers, three appear to be providing values outside the expected range. Seepage models were constructed to represent subsurface conditions based on geotechnical borings. Piezometric data recorded from the site was used to calibrate the seepage models.
- A Field Investigation Reporting System is being developed that includes enhancements to the database that is used to gather, track, and manage information collected during field visits to the flood control system regarding integrity issues. The system will be flexible in reporting the type of investigation, and will have the capability to be integrated with CDEC systems and accessible to stakeholders.
- Scoring and Rating Methodology Development for San Joaquin River Erosion Sites: Working together with consultants, FPIIB is reviewing existing database and erosion severity methodology, developing improved ranking criteria and classification methodology. The outcomes of the project will make the evaluation of levee erosion more reasonable and effective. It will also provide more objective judgment and information for the flood preparedness and response.
- Levee Erosion Monitoring System Pilot Study: In order to evaluate the feasibility of a multi-site, large-scale instrumentation network, a pilot project is being evaluated. For the pilot study, an existing erosion site, where erosion will most likely occur during the following flood season, will be selected, and a cluster of instruments (beacon, a float-out device) will be installed. The pilot study will provide real-time information which will be used to assess the feasibility of the proposed levee erosion monitoring network and provide answers to critical questions related to costs, benefits, installation and maintenance

## *7.6 Central Valley Flood Management Planning*

The CVFMP Program is an effort to improve flood management for areas protected by facilities of the State-federal flood protection system in the Central Valley in an integrated and sustainable way. FPIIB staff participated in this effort in various ways including contributing data and reviewing the documents. The CVFMP Program is documenting and assessing current

performance of the State-federal flood protection system and providing assistance to locals to meet new planning requirements related to flood risk management through Program's development, and periodic update, of four important documents listed below.

- **Central Valley Flood Protection Plan (CVFPP):** This document describes a sustainable, integrated flood management plan that reflects a system-wide approach to areas of the Central Valley currently receiving protection from facilities of the SPFC. DWR was required to prepare the first public draft CVFPP by January 1, 2012, for adoption by the CVFPB by July 1, 2012. The Public Draft of the CVFPP was released on December 30, 2011. Legislation requires DWR to update the CVFPP every five years (years ending in 2 and 7).
- **SPFC Descriptive Document:** In November 2010, DWR released the final Descriptive Document, which contains descriptions of flood management facilities, lands, programs, conditions, and mode of O&M for the State-federal flood protection system in the Sacramento River and San Joaquin River watersheds. The report describes the existing system, but it is not a plan for the future. It is available for download from the CVFMP website: http://www.water.ca.gov/cvfmp/documents.cfm.
- **Flood Control System Status Report (FCSSR):** This document describes the current status (physical condition) of SPFC facilities at a system-wide level. DWR prepared the FCSSR to meet the legislative requirements of California Water Code Section 9120, and to contribute to development of the CVFPP. The CVFPP will guide future State investments through projects to address identified problems in the SPFC. The FCSSR was delivered to the CVFPB in December 2011. DWR will periodically update the FCSSR, or following formal request of the CVFPB. The document is available for download from the CVFMP website: http://www.water.ca.gov/cvfmp/documents.cfm.
- **CVFPP Program Environmental Impact Report:** The CVFPP Program Environmental Impact Report (PEIR) informs DWR and the CVFPB about potential program-level environmental effects and mitigation measures from implementation of some or all components of the CVFPP. A PEIR was produced because the CVFPP includes geographically related actions that may have similar environmental effects, but are not sufficiently well-defined regarding specific locations, project-level details, or implementation strategies to support a project-level EIR. DWR and the Board can use the PEIR for future planning and feasibility studies pursuant to California Environmental Quality Act Guidelines Section 15051(d)), DWR is the lead agency and the CVFPB is a responsible agency. The Draft PEIR was submitted to the CVFPB in March 2012.

# Channels and Flood Control Structures

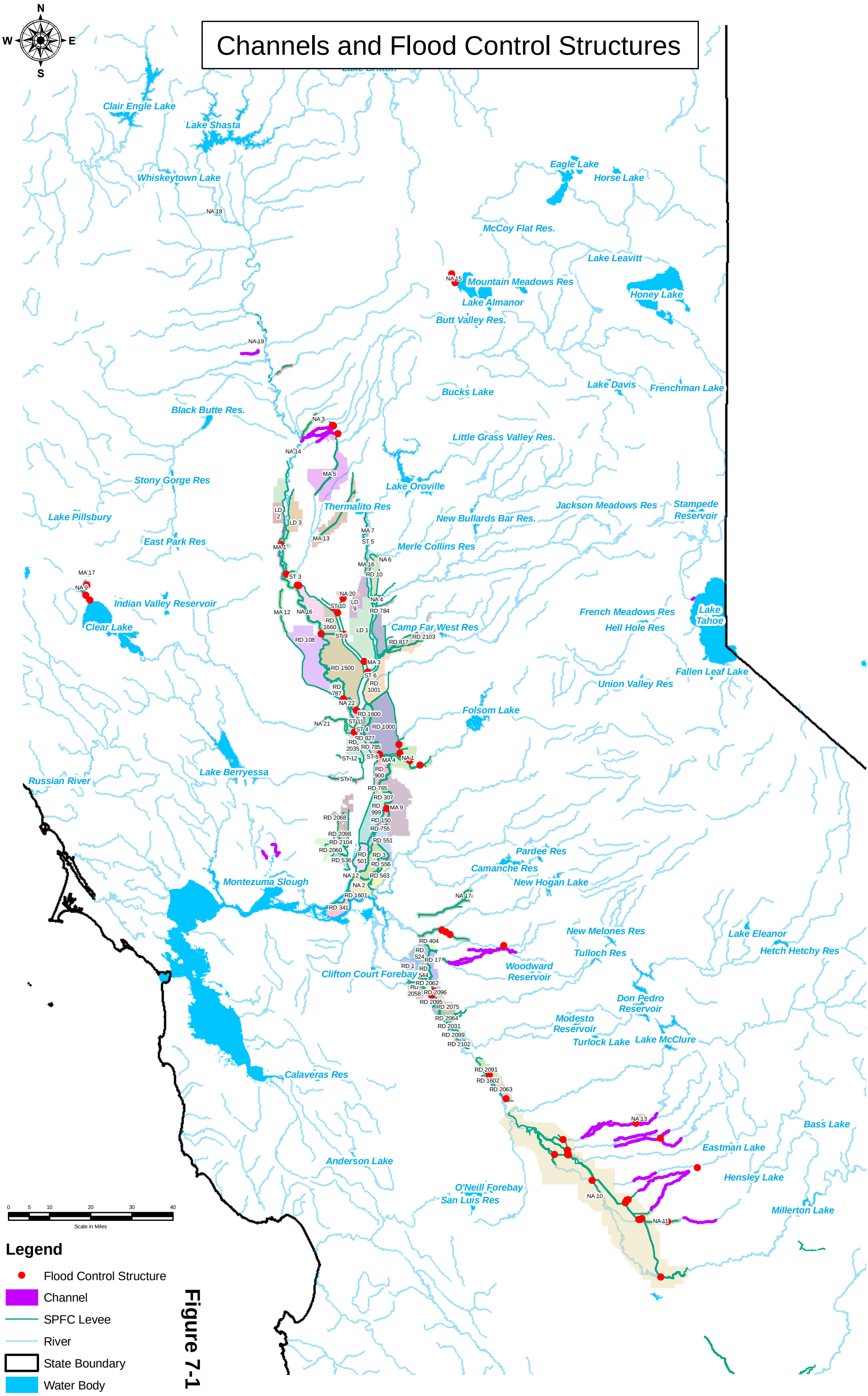



Figure 7-1

Appendix **A**

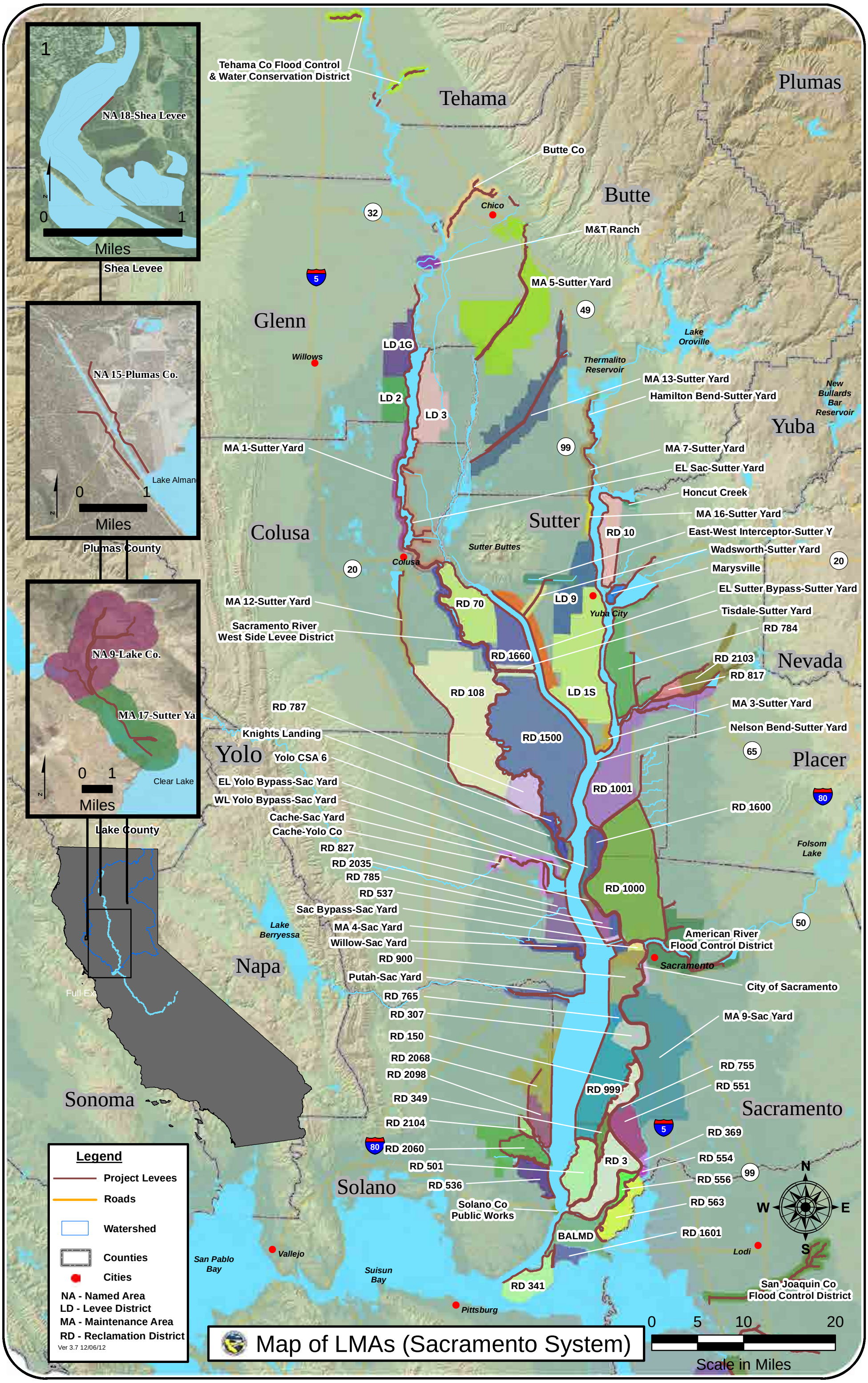
# Sacramento River Individual Agency Summary Reports

A total of 61 LMAs and 82 local reporting areas for Project Levees/Structures/Channels are included in the Sacramento River Flood Control Project. Appendix A includes an index to Sacramento River System LMAs, a map to show the locations of each reporting area, and individual LMA summary profiles. Appendix A includes:

- Sacramento River System LMA Index
- Sacramento River System Map
- Individual local area Summary Profiles, Sacramento System

| Local Agencies & Areas | County | Tab Name | Short Name | Page |
|---|---|---|---|---|
| **Levee Districts** | | | | |
| Levee District No. 0001 (Glenn County) | Glenn | LD 1G | LD0001G | 5 |
| Levee District No. 0001 (Sutter County) | Sutter | LD 1S | LD0001S | 9 |
| Levee District No. 0002 (Glenn County) | Glenn | LD 2 | LD0002 | 13 |
| Levee District No. 0003 (Glenn County) | Glenn | LD 3 | LD0003 | 17 |
| Levee District No. 0009 (Sutter County) | Sutter | LD 9 | LD0009 | 21 |
| **Reclamation Districts** | | | | |
| Reclamation District No. 0003 Grand Island | Sacramento | RD 3 | RD0003 | 25 |
| Reclamation District No. 0010 Honcut | Yuba | RD 10 | RD0010 | 29 |
| Reclamation District No. 0070 Meridian | Sutter | RD 70 | RD0070 | 33 |
| Reclamation District No. 0108 River Farms | Colusa | RD 108 | RD0108 | 37 |
| Reclamation District No. 0150 Merrit Island | Yolo | RD 150 | RD0150 | 41 |
| Reclamation District No. 0307 Lisbon | Yolo | RD 307 | RD0307 | 45 |
| Reclamation District No. 0341 Sherman Island | Sacramento | RD 341 | RD0341 | 49 |
| Reclamation District No. 0349 Sutter Island | Sutter | RD 349 | RD0349 | 53 |
| Reclamation District No. 0369 Libby McNeil | Sacramento | RD 369 | RD0369 | 57 |
| Reclamation District No. 0501 Ryer Island | Solano | RD 501 | RD0501 | 61 |
| Reclamation District No. 0536 Egbert | Solano | RD 536 | RD0536 | 65 |
| Reclamation District No. 0537 Lovdal | Yolo | RD 537 | RD0537 | 69 |
| Reclamation District No. 0551 Pearson | Sacramento | RD 551 | RD0551 | 73 |
| Reclamation District No. 0554 Walnut Grove | Sacramento | RD 554 | RD0554 | 77 |
| Reclamation District No. 0556 Upper Andrus | Sacramento | RD 556 | RD0556 | 81 |
| Reclamation District No. 0563 Tyler Island | Sacramento | RD 563 | RD0563 | 85 |
| Reclamation District No. 0755 Randall | Sacramento | RD 755 | RD0755 | 89 |
| Reclamation District No. 0765 Glide | Yolo | RD 765 | RD0765 | 93 |
| Reclamation District No. 0784 Plumas Lake | Yuba | RD 784 | RD0784 | 97 |
| Reclamation District No. 0785 Driver | Yolo | RD 785 | RD0785 | 101 |
| Reclamation District No. 0787 Fair | Yolo | RD 787 | RD0787 | 105 |
| Reclamation District No. 0817 Carlin | Yuba | RD 817 | RD0817 | 109 |
| Reclamation District No. 0827 Elkhorn | Yolo | RD 827 | RD0827 | 113 |
| Reclamation District No. 0900 West Sacramento | Yolo | RD 900 | RD0900 | 117 |
| Reclamation District No. 0999 Netherlands | Yolo | RD 999 | RD0999 | 121 |
| Reclamation District No. 1000 Natomas | Sacramento | RD 1000 | RD1000 | 127 |
| Reclamation District No. 1001 Nicolaus | Sutter | RD 1001 | RD1001 | 131 |
| Reclamation District No. 1500 Sutter Basin | Sutter | RD 1500 | RD1500 | 137 |
| Reclamation District No. 1600 Mull | Yolo | RD 1600 | RD1600 | 141 |
| Reclamation District No. 1601 Twitchell | Sacramento | RD 1601 | RD1601 | 145 |
| Reclamation District No. 1660 Tisdale | Sutter | RD 1660 | RD1660 | 149 |
| Reclamation District No. 2035 Conaway | Yolo | RD 2035 | RD2035 | 153 |
| Reclamation District No. 2060 Hastings | Solano | RD 2060 | RD2060 | 157 |
| Reclamation District No. 2068 Yolano | Solano | RD 2068 | RD2068 | 161 |
| Reclamation District No. 2098 Cache and Haas Slough | Solano | RD 2098 | RD2098 | 165 |
| Reclamation District No. 2103 Wheatland Vicinity | Placer | RD 2103 | RD2103 | 169 |
| Reclamation District No. 2104 Peters Pocket Tract | Solano | RD 2104 | RD2104 | 173 |

| Local Agencies & Areas | County | Tab Name | Short Name | Page |
|---|---|---|---|---|
| **Named Areas** | | | | |
| American River Flood Control District | Sacramento | ARFCD | NA0001 | 177 |
| Brannan Andrus Levee Maintenance District | Solano | BALMD | NA0002 | 181 |
| Butte County Public Works | Butte | Butte County | NA0003 | 185 |
| California Department of Fish and Game Shea Levee | Shasta | Shea Levee | NA0018 | 189 |
| City of Sacramento | Sacramento | City of Sacramento | NA0005 | 193 |
| Eastern Honcut Creek | Yuba | Honcut Creek | NA0006 | 197 |
| Knights Landing Ridge Drainage District | Yolo | Knights Landing | NA0008 | 201 |
| Lake County Watershed Protection District | Lake | Lake County | NA0009 | 205 |
| Marysville Levee Commission | Yuba | Marysville Levee | NA0004 | 209 |
| Murphy Slough at M&T Ranch | Butte | M&T Ranch | NA0014 | 213 |
| Plumas County | Plumas | Plumas County | NA0015 | 217 |
| Sacramento County | Sacramento | Sacramento County | NA0050 | 221 |
| Sacramento River West Side Levee District | Sacramento | WSLD | NA0016 | 225 |
| Solano County Public Works Mellin Levee | Solano | Solano County | NA0012 | 229 |
| Tehama County Flood Control and Water Conservation District | Tehama | Tehama County | NA0019 | 233 |
| Yolo County Planning Resources and Public Works | Yolo | Cache - Yolo County | NA0021 | 237 |
| Yolo County Service Area 6 | Yolo | Yolo County SA 6 | NA0022 | 241 |
| **Sacramento Maintenance Yard** | | | | |
| Cache Creek | Yolo | Cache Creek | ST0001 | 245 |
| East Levee Yolo Bypass | Yolo | East Levee Yolo | ST0004 | 253 |
| Maintenance Area 0004 | Yolo | MA 4 | MA0004 | 257 |
| Maintenance Area 0009 | Sacramento | MA 9 | MA0009 | 261 |
| Putah Creek | Yolo | Putah Creek | ST0007 | 265 |
| Sacramento Bypass | Yolo | Sacramento Bypass | ST0008 | 269 |
| West Levee Yolo Bypass | Yolo | West Levee Yolo Bypass | ST0011 | 273 |
| Willow Slough Bypass | Yolo | Willow Slough | ST0012 | 277 |
| **Sutter Maintenance Yard** | | | | |
| East Levee Sacramento River | Colusa | East Levee Sacramento | ST0003 | 285 |
| East Levee Sutter Bypass | Sutter | East Levee Sutter | ST0002 | 289 |
| East-West Interceptor | Sutter | East - West Interceptor | NA0020 | 293 |
| Hamilton Bend | Butte | Hamilton Bend | ST0005 | 297 |
| Maintenance Area 0001 | Colusa | MA 1 | MA0001 | 301 |
| Maintenance Area 0003 | Sutter | MA 3 | MA0003 | 305 |
| Maintenance Area 0005 | Butte | MA 5 | MA0005 | 309 |
| Maintenance Area 0007 | Butte | MA 7 | MA0007 | 313 |
| Maintenance Area 0012 | Colusa | MA 12 | MA0012 | 317 |
| Maintenance Area 0013 | Butte | MA 13 | MA0013 | 321 |
| Maintenance Area 0016 | Sutter | MA 16 | MA0016 | 325 |
| Maintenance Area 0017 | Lake | MA 17 | MA0017 | 329 |
| Nelson Bend | Sutter | Nelson Bend | ST0006 | 333 |
| Tisdale Bypass | Sutter | Tisdale Bypass | ST0009 | 337 |
| Wadsworth Canal | Sutter | Wadsworth Canal | ST0010 | 341 |


Map of LMAs (Sacramento System)
Legend
Project Levees
Roads
Watershed
Counties
Cities
NA - Named Area
LD - Levee District
MA - Maintenance Area
RD - Reclamation District
Ver 3.7 12/06/12
Scale in Miles
0 5 10 20
N
S
E
W
Tehama
Plumas
Butte
Glenn
Yuba
Colusa
Sutter
Nevada
Placer
Yolo
Napa
Sonoma
Solano
Sacramento
Tehama Co Flood Control & Water Conservation District
Butte Co
Chico
M&T Ranch
MA 5-Sutter Yard
Willows
LD 1G
LD 2
LD 3
Lake Oroville
Thermalito Reservoir
MA 13-Sutter Yard
Hamilton Bend-Sutter Yard
New Bullards Bar Reservoir
MA 1-Sutter Yard
MA 7-Sutter Yard
EL Sac-Sutter Yard
Honcut Creek
MA 16-Sutter Yard
East-West Interceptor-Sutter Y
Wadsworth-Sutter Yard
Marysville
EL Sutter Bypass-Sutter Yard
Tisdale-Sutter Yard
RD 784
RD 2103
RD 817
MA 3-Sutter Yard
Nelson Bend-Sutter Yard
RD 10
Sutter Buttes
Colusa
RD 70
LD 9
Yuba City
MA 12-Sutter Yard
Sacramento River West Side Levee District
RD 1660
RD 108
LD 1S
RD 787
Knights Landing
Yolo CSA 6
RD 1500
EL Yolo Bypass-Sac Yard
WL Yolo Bypass-Sac Yard
Cache-Sac Yard
Cache-Yolo Co
RD 827
RD 2035
RD 785
RD 537
Sac Bypass-Sac Yard
MA 4-Sac Yard
Willow-Sac Yard
RD 900
Putah-Sac Yard
RD 765
RD 307
RD 150
RD 2068
RD 2098
RD 349
RD 2104
RD 2060
RD 501
RD 536
Solano Co Public Works
BALMD
RD 341
RD 1001
RD 1600
RD 1000
American River Flood Control District
Sacramento
City of Sacramento
MA 9-Sac Yard
RD 755
RD 551
RD 999
RD 369
RD 554
RD 556
RD 563
RD 1601
RD 3
Lodi
San Joaquin Co Flood Control District
Lake Berryessa
Folsom Lake
Vallejo
San Pablo Bay
Suisun Bay
Pittsburg
Lake Alman
Clear Lake
NA 18-Shea Levee
Shea Levee
NA 15-Plumas Co.
Plumas County
NA 9-Lake Co.
MA 17-Sutter Ya
Lake County
Full Ex
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5
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80
50

# Levee District No. 0001 (Glenn County)

## Glenn County

**Contact**
Bill Carriere
Board Chairman
1640 Highway 45
Glenn CA 95943
Phone: (530) 934-7454

| Levee Short Name : LD0001G | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | RB | 12.45 |

## Threat Assessment & Recommendations

- The LMA should focus more on backfilling rodent holes.

## DWR Levee Inspection Summary

| LD0001G | Total LMA Miles | 12.45 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.45 | | 0.45 | **3.61** | 0.06 | | 0.06 | **0.48** | -0.39 | | -0.39 | **-3.13** |
| Trim / Thin Trees | 0.11 | | 0.11 | **0.88** | 0.11 | | 0.11 | **0.88** | | | | **0.00** |
| Encroachments | 0.31 | | 0.31 | **2.49** | 0.05 | | 0.05 | **0.40** | -0.26 | | -0.26 | **-2.09** |
| Animal Control | 0.34 | | 0.34 | **2.73** | 0.23 | | 0.23 | **1.85** | -0.11 | | -0.11 | **-0.88** |
| Erosion / Bank Caving | | 0.01 | 0.04 | **0.32** | | | | | | -0.01 | -0.04 | **-0.32** |
| *LMA Totals:* | 1.21 | 0.01 | 1.25 | **10.04** | 0.45 | 0.00 | 0.45 | **3.61** | -0.76 | -0.01 | -0.80 | **-6.43** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Sacramento River west bank | 119.72 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency provided information about a pipe repaired/replaced at LM 8.98 in 2011 at a cost of $81,627. The Agency mentioned having a limited annual budget and its inability to do a major levee repair in future.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported that burrowing holes are present at various sites along the entire levee reach. The Agency also mentioned its efforts on continuously monitoring and controlling them.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished and the locations of these activities. Activities included encroachment control, levee crown grading, rodent control, slope dragging, and vegetation control. The Agency also reported corrected or ongoing corrective actions in response to DWR insepction comments. The corrected actions included encroachment control, rodent control, and tree pruning.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses for planned maintenance activities for all levee units. Expenses include costs of administrative expenses, interest and loan repayment, salaries and benefits, services and supplies, and structure maintenance and improvement. The reported total estimated cost for the current fiscal year is $18,040.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that the Agency has promptly corrected issues identified in USACE Periodic Inspection and reported no significant change in the performance of the levee over the past several years. The Agency also reported lack of funding to address any major structural issues if they arise in future.

# Levee District No. 0001 (Sutter County)

## Sutter County

**Contact**
Bill Hampton
General Manager
District Office
243 Second Street
Yuba City CA 95991
Phone: (530) 673-2454

## SACRAMENTO SYSTEM : Levee District No. 0001 (Sutter County)

| Levee Short Name : LD0001S | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Feather River | RB | 16.65 |

### Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.

## DWR Levee Inspection Summary

| LD0001S | Total LMA Miles | 16.65 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Encroachments | 0.01 | | 0.01 | **0.06** | | | | | -0.01 | | -0.01 | **-0.06** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Metal Pipes | 0.01 | | 0.01 | **0.06** | 0.01 | | 0.01 | **0.06** | | | | **0.00** |
| *LMA Totals:* | 0.02 | 0.00 | 0.02 | **0.12** | 0.01 | 0.00 | 0.01 | **0.06** | -0.01 | 0.00 | -0.01 | **-0.06** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Feather River right bank - Sutter Bypass east bank | 66.72 | Inactive | 09/10/2010 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the vegetation issues in 2012 Spring Inspection Report and stated that those issues have been taken care of.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported that 25 relief wells failed to operate at LM 5.36. The Agency also reported that a slurry wall to be installed in 2013-2014, however, would make those wells obsolete.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units and the location of these activities. Activities included gate painting, levee crown and roadway grading, rodent control, slope dragging, and vegetation burning and spraying.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency mentioned a plan for regular maintenance activities for all levee units. The reported total estimated cost for the current fiscal year is $337,993. The Agency also reported testing of 20 relief wells at Levee Unit 1, LM 10.91 with an estimated cost of $50,000.

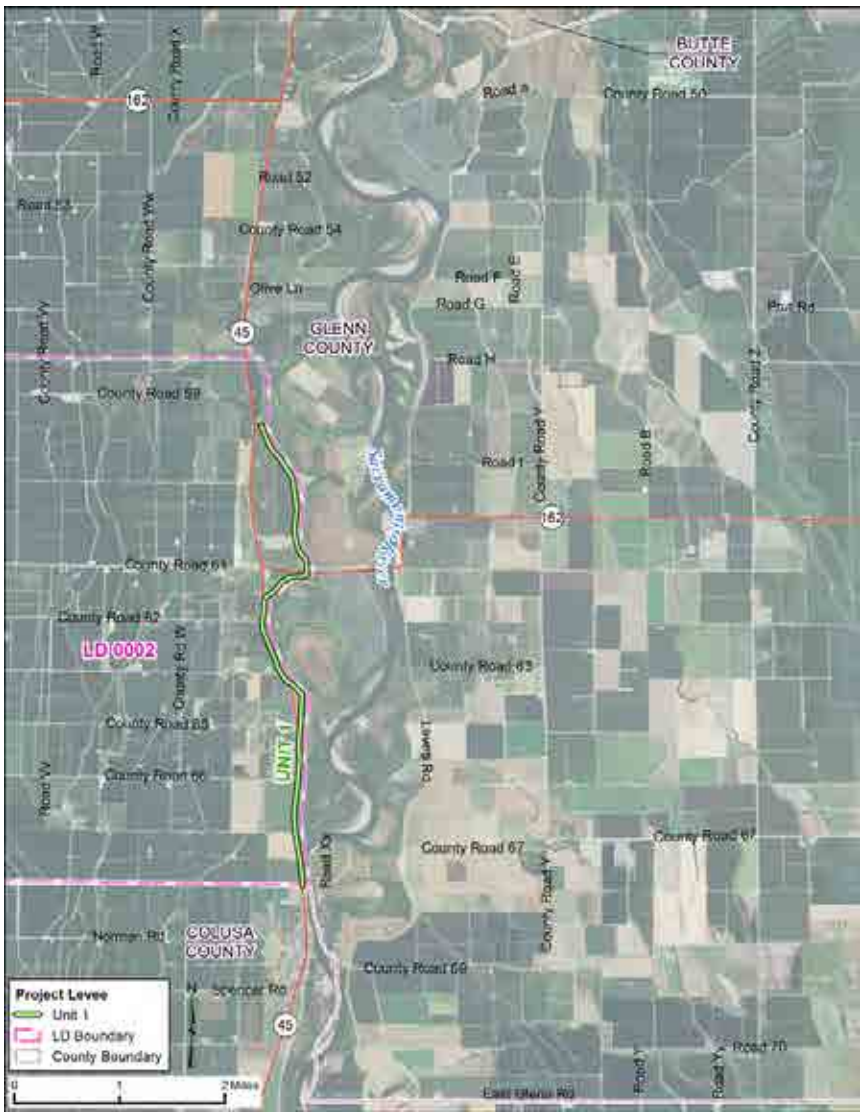
**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Levee District No. 0002 (Glenn County)

## Glenn County

**Contact**
Dennis Clark
President
District Office
7817 County Road 66
Princeton CA 95970
Phone: (530) 518-2549




| Levee Short Name : LD0002 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Glenn County Sacramento River | RB | 4.89 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should enhance its rodent control program.

## DWR Levee Inspection Summary

| LD0002 | Total LMA Miles | 4.89 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.01 | | 0.01 | **0.20** | | | | | -0.01 | | -0.01 | **-0.20** |
| Animal Control | 0.16 | | 0.16 | **3.27** | 0.25 | | 0.25 | **5.11** | 0.09 | | 0.09 | **1.84** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.20** | 0.01 | | 0.01 | **0.20** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.20** | 0.01 | | 0.01 | **0.20** | | | | **0.00** |
| *LMA Totals:* | 0.18 | 0.00 | 0.18 | **3.68** | 0.27 | 0.00 | 0.27 | **5.52** | 0.09 | 0.00 | 0.09 | **1.84** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Glenn County Sacramento River, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_164-7_R | 164.70 | 0.08 | 0.08 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Sacramento River west bank | 119.72 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

LD 2

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the USACE Periodic Inspection Report and Geotechnical Assessment Report, North NULE Study Area for the relevant information. DWR's 2012 Spring Inspection Report provided minimally acceptable to acceptable rating for all inspected items of all levee units.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the USACE Periodic Inspection Report and Geotechnical Assessment Report, North NULE Study Area for the relevant information. DWR's 2012 Spring Inspection Report provided minimally acceptable to acceptable rating for all inspected items of all levee units.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units. Activities included rodent control, slope dragging, tree clearing, and vegetation burning and spraying. The Agency also reported erosion repair by the California Department of Transportation.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of vegetation burning and spraying. The reported total estimated cost for the current fiscal year is $4,293.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

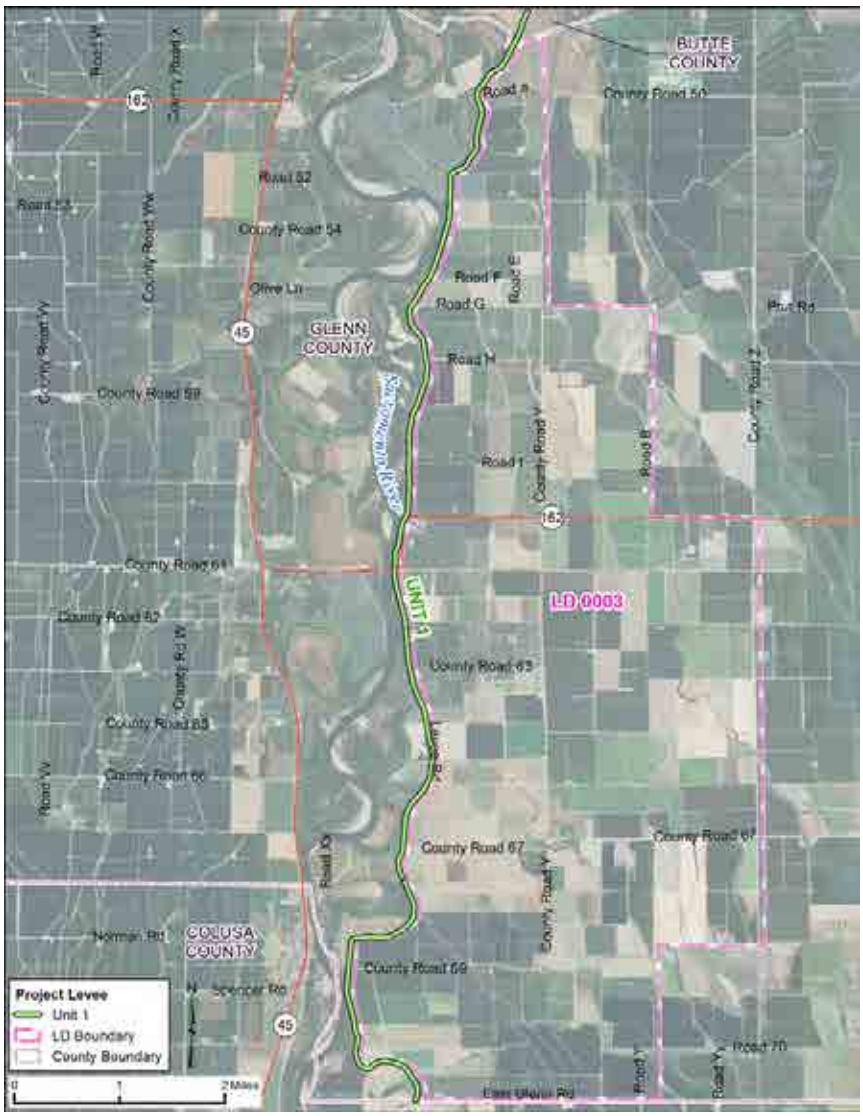
The Agency referred to Geotechnical Assessment Report, North NULE Study Area for other information.

# Levee District No. 0003 (Glenn County)

## Glenn County

**Contact**
Eric Larabee
President
District Office
PO Box 172
Butte City CA 95920
Phone: (530) 809-0475

## SACRAMENTO SYSTEM : Levee District No. 0003 (Glenn County)




| Levee Short Name : LD0003 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Glenn County Sacramento River | LB | 12.24 |

### Threat Assessment & Recommendations

- There is significant rodent activity in this Area.
- The LMA should enhance its rodent control program.

## DWR Levee Inspection Summary

| LD0003 | Total LMA Miles | 12.24 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Trim / Thin Trees | 0.32 | | 0.32 | **2.61** | 0.19 | | 0.19 | **1.55** | -0.13 | | -0.13 | **-1.06** |
| Encroachments | 0.24 | | 0.24 | **1.96** | 0.20 | | 0.20 | **1.63** | -0.04 | | -0.04 | **-0.33** |
| Animal Control | 2.17 | | 2.17 | **17.73** | 1.79 | | 1.79 | **14.62** | -0.38 | | -0.38 | **-3.11** |
| Slope Stability | 0.04 | | 0.04 | **0.33** | 0.06 | | 0.06 | **0.49** | 0.02 | | 0.02 | **0.16** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.08** | | | | | -0.01 | | -0.01 | **-0.08** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.54 | | 0.54 | **4.41** | 0.03 | | 0.03 | **0.25** | -0.51 | | -0.51 | **-4.17** |
| *LMA Totals:* | 3.32 | 0.00 | 3.32 | **27.12** | 2.27 | 0.00 | 2.27 | **18.55** | -1.05 | 0.00 | -1.05 | **-8.58** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Glenn County Sacramento River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_163-0_L | 163.00 | 1.35 | 1.35 | eroding | M |
| SAC_168-3_L | 168.30 | 5.96 | 5.96 | eroding | M |
| SAC_172-0_L | 172.00 | 9.60 | 9.60 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Sacramento River East Levee - LD 3 Glenn County | 38.36 | Inactive | 10/01/2007 | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

No information was provided by the Agency for Part 3.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

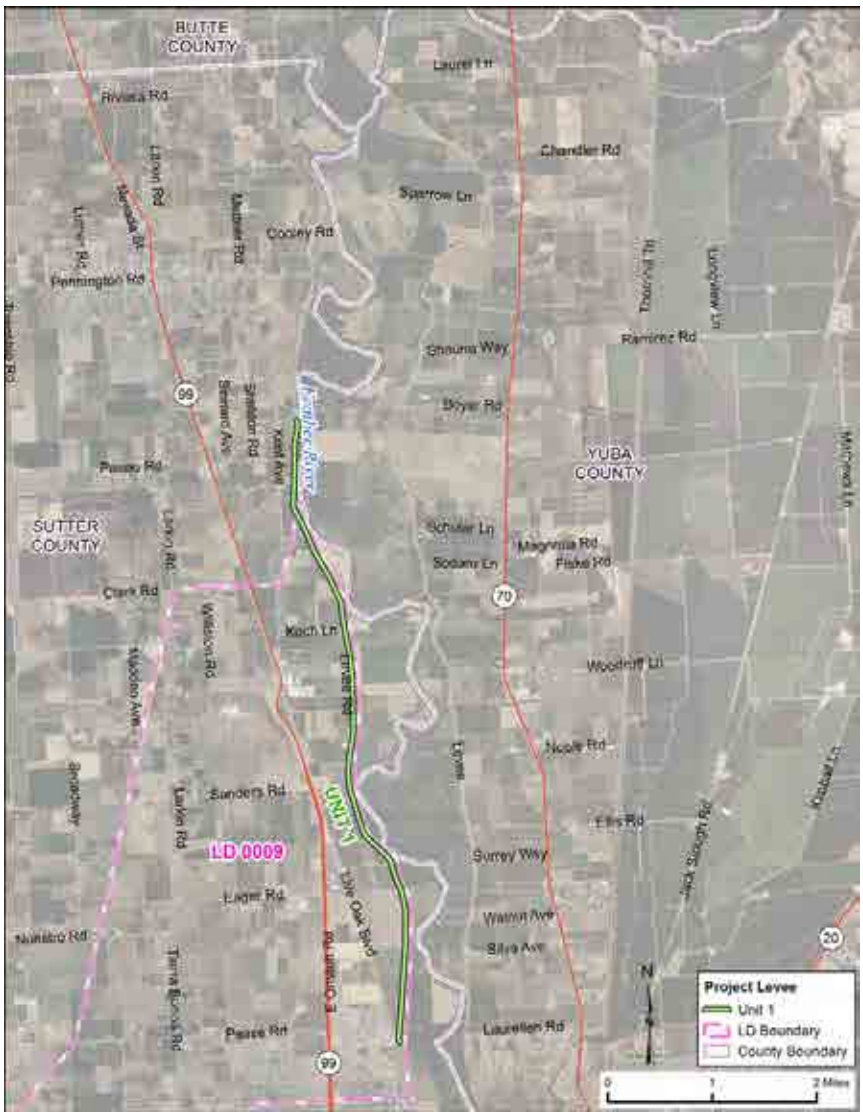
**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Levee District No. 0009 (Sutter County)

## Sutter County

**Contact**
David Laman
Director
1471 Coats Drive
Yuba City CA 95993
Phone: (530) 749-3902




| Levee Short Name : LD0009 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sutter County, Feather River | RB | 6.24 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should work with landowners and the CVFPB to ensure that penetrations do not endanger the integrity of the levee.

## DWR Levee Inspection Summary

| LD0009 | Total LMA Miles | 6.24 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Encroachments | 0.01 | | 0.01 | **0.16** | 0.02 | | 0.02 | **0.32** | 0.01 | | 0.01 | **0.16** |
| Animal Control | 0.01 | | 0.01 | **0.16** | | | | | -0.01 | | -0.01 | **-0.16** |
| *LMA Totals:* | 0.02 | 0.00 | 0.02 | **0.32** | 0.02 | 0.00 | 0.02 | **0.32** | 0.00 | 0.00 | 0.00 | **0.00** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated no new information to report. The Agency further reported that information from Urban Levee Evaluation Program/DWR along with other information are being used by the Sutter-Butte Flood Control Agency to design the Feather River Levee project to correct identified deficiencies in the Project Levees.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported agricultural ditches at LM 2.96 and 5.68.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished. Activities included slope dragging, and vegetation burning and spraying. The Agency also reported corrected or ongoing corrective actions in response to DWR inspection comments. The corrected action included vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of gate repair and access control, minor erosion repair, patrolling, rodent control, slope dragging, and vegetation burning and spraying. The reported total estimated cost for the current fiscal year is $31,850.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 0003
# Grand Island

## Sacramento County

**Contact**
Buddy Fonseca
Chairman
District Office
PO Box 1011
Walnut Grove CA 95690
Phone: (916) 776-1945

| Levee Short Name : RD0003 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Left Bank Steamboat Slough | LB | 11.03 |
| Unit No. 02 Right Bank Sacramento River | RB | 17.62 |
| Unit No. 03 New Unit for RD0003 | | 0.43 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD0003 | Total LMA Miles | 29.08 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M * | Overall LMA Rating | | | M * | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.03 | 0.01 | 0.07 | **0.24** | 0.92 | 0.01 | 0.96 | **3.30** | 0.89 | | 0.89 | **3.06** |
| Trim / Thin Trees | 0.33 | 0.02 | 0.41 | **1.43** | 0.41 | | 0.41 | **1.41** | 0.08 | -0.02 | | **-0.02** |
| Encroachments | 0.06 | | 0.06 | **0.21** | 0.06 | | 0.06 | **0.21** | | | | **0.00** |
| Slope Stability | 0.01 | | 0.01 | **0.04** | | | | | -0.01 | | -0.01 | **-0.04** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.04** | | | | | -0.01 | | -0.01 | **-0.04** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.39 | 0.01 | 0.43 | **1.50** | 0.31 | | 0.31 | **1.07** | -0.08 | -0.01 | -0.12 | **-0.43** |
| *LMA Totals:* | 0.83 | 0.04 | 0.99 | **3.46*** | 1.70 | 0.01 | 1.74 | **5.98*** | 0.87 | -0.03 | 0.75 | **2.53** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Left Bank Steamboat Slough, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| STM_26-0_L | 26.00 | 0.18 | 0.23 | eroding | M |
| STM_25-0_L | 25.00 | 0.92 | 1.01 | eroding | M |
| STM_24-8_L | 24.80 | 1.03 | 1.18 | eroding | M |
| STM_23-8_L | 23.80 | 2.15 | 2.17 | repaired | C |

### Unit No. 02 Right Bank Sacramento River, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_26-3_R | 26.30 | 11.33 | 11.33 | eroding | M |
| SAC_31-6_R | 31.60 | 16.54 | 16.54 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0003 - Grand Island | 28.74 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported seepage zone along landside levee toe at Levee Unit 1, LM 6.3 to 6.5. The Agency mentioned that the seepage location has been repaired in the past with drain rock and a seepage ditch and further informed about an additional repair plan for 2012 or 2013 depending on design and plan completion dates. The Agency also reported historical active and easily visible sinkholes and seepage zone along the landside levee toe at Levee Unit 1, LM 4.73 to 4.88.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units. Activities included encroachment control, inspection, rodent control, surveying and engineering, thinning and trimming of trees, and vegetation burning, mowing and spraying. The Agency also reported waterside erosion repair at Levee Unit 1, LM 2.16 and LM 2.18.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of encroachment control, inspections, rodent baiting and trapping, rodent hole compaction, seepage control, surveying and engineering, and vegetation burning, mowing, spraying, and thinning and trimming. The reported total estimated cost for the current fiscal year is $357,500. The Agency also informed about a repair plan (estimated cost $8,000,000) for seepage zone control at Levee Unit 1, LM 6.3 to 6.5 pending completion of design and CVFPB permit.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported studies related to the preparation of a Five Year Plan including identifying projects, taking District photographs, and developing cross-sections and maps.

# Reclamation District No. 0010
# Honcut

## Yuba County

**Contact**
Tom Schultz
President
District Office
10204-A Highway 70
Marysville CA 95901
Phone: (530) 743-6422

| Levee Short Name : RD0010 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Simmerly Slough | RB | 7.68 |
| Unit No. 02 Feather River | LB | 11.24 |
| Unit No. 03 Honcut Creek | LB | 3.01 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD0010 | Total LMA Miles | 21.93 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 35.94 | | 35.94 | **163.89** | 3.51 | 0.11 | 3.95 | **18.01** | -32.43 | 0.11 | -31.99 | **-145.87** |
| Encroachments | 0.12 | | 0.12 | **0.55** | 0.01 | | 0.01 | **0.05** | -0.11 | | -0.11 | **-0.50** |
| Animal Control | 0.11 | | 0.11 | **0.50** | 0.03 | | 0.03 | **0.14** | -0.08 | | -0.08 | **-0.37** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.05** | | | | | -0.01 | | -0.01 | **-0.05** |
| Crown Surface / Depressions / Rutting | 3.75 | | 3.75 | **17.10** | | | | | -3.75 | | -3.75 | **-17.10** |
| *LMA Totals:* | 39.93 | 0.00 | 39.93 | **182.08** | 3.55 | 0.11 | 3.99 | **18.19** | -36.38 | 0.11 | -35.94 | **-163.88** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0010 - Honcut Drainage Basin | 24.75 | Active | | |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported that a new metal stairway was built in 2012 at Unit 1 on landside of the levee. The stairway leads to a pump meant for pumping surface runoff flowing towards the Simmerly Slough levee. The Agency also reported ongoing vegetation burning activities at both units at various locations.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency provided information on repair works at Levee Unit 1, LM 1 by DWR/USACE over past 10 years for stopping sloughing and protecting levees against erosion. The Agency also informed the presence of a 12 inch metal drain pipe at Levee Unit 1, LM 1 and old wooden power poles on landside slope at LM 1 to 1.3.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency reported corrected and ongoing corrective actions in response to DWR inspection comments. The corrected actions included encroachment, rodent, and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency reported mowing and levee crown grading activities on Levee Unit 2 planned for the current fiscal year.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 0070
# Meridian

## Sutter County

**Contact**
Andy Duffey
General Manager
PO Box 129
Meridian CA 95957
Phone: (530) 696-2569

## SACRAMENTO SYSTEM : Reclamation District No. 0070 Meridian

| Levee Short Name : RD0070 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sutter Bypass | RB | 8.00 |
| Unit No. 02 Sacramento River | LB | 15.57 |

### Threat Assessment & Recommendations

- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| RD0070 | Total LMA Miles | 23.57 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Encroachments | 0.05 | | 0.05 | **0.21** | 0.06 | | 0.06 | **0.26** | 0.01 | | 0.01 | **0.04** |
| Animal Control | 0.26 | | 0.26 | **1.10** | | | | | -0.26 | | -0.26 | **-1.10** |
| Slope Stability | | | | | 0.03 | | 0.03 | **0.13** | 0.03 | | 0.03 | **0.13** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 1.16 | | 1.16 | **4.92** | 0.83 | | 0.83 | **3.52** | -0.33 | | -0.33 | **-1.40** |
| *LMA Totals:* | 1.47 | 0.00 | 1.47 | **6.24** | 0.92 | 0.00 | 0.92 | **3.90** | -0.55 | 0.00 | -0.55 | **-2.33** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 02 Sacramento River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_138-1_L | 138.10 | 0.04 | 0.33 | eroding | M |
| SAC_136-6_L | 136.60 | 1.78 | 1.91 | eroding | M |
| SAC_133-8_L | 133.80 | 4.44 | 4.48 | removed | A/W |
| SAC_133-0_L | 133.00 | 5.30 | 5.52 | removed | A/W |
| SAC_131-8_L | 131.80 | 6.50 | 6.60 | eroding | M |
| SAC_130-0_L | 130.00 | 8.16 | 8.32 | eroding | M |
| SAC_125-8_L | 125.80 | 11.64 | 11.66 | eroding | M |
| SAC_123-3_L | 123.30 | 14.09 | 14.22 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0070 and RD 1660 - Sutter Basin North | 39.90 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported that a pipeline on Levee Unit 2, LM 7.6 located 3.7 feet below the crown of Sutter Bypass is leaking and needs to be replaced. The Agency stated that they are waiting for the replacement permit filed two years ago.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for Levee Unit 1. Activities included levee slope dragging, levee crown grading, patrolling, rodent control, thinning and pruning trees, and vegetation burning and spraying.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided estimated cost for all apsects of planned operations of the District for all levee units. The reported total estimated cost for all units for the current fiscal year is $250,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 0108
## River Farms

### Colusa County

**Contact**
Lewis Bair
Manager
PO Box 50
Grimes CA 95950
Phone: (530) 437-2221

| Levee Short Name : RD0108 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Colusa Basin Drain | LB | 20.59 |
| Unit No. 02 Castle Properties | RB | 0.28 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should enhance its rodent control program.

## DWR Levee Inspection Summary

| RD0108 | Total LMA Miles | 20.87 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.01 | | 0.01 | **0.05** | | | | | -0.01 | | -0.01 | **-0.05** |
| Animal Control | 0.01 | | 0.01 | **0.05** | 0.02 | | 0.02 | **0.10** | 0.01 | | 0.01 | **0.05** |
| Cracking | 0.07 | | 0.07 | **0.34** | 0.01 | | 0.01 | **0.05** | -0.06 | | -0.06 | **-0.29** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.05** | 0.01 | | 0.01 | **0.05** | | | | **0.00** |
| *LMA Totals:* | 0.10 | 0.00 | 0.10 | **0.49** | 0.04 | 0.00 | 0.04 | **0.19** | -0.06 | 0.00 | -0.06 | **-0.29** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Colusa Basin Drain, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| CBD_19-2_L | 0.00 | 19.29 | 19.29 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Knights Landing U2 - Yolo Bypass - Service Area 6 | 15.19 | Inactive | 11/21/2011 | U |
| Sacramento River west bank | 119.72 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that present conditions do not differ from the previous reporting. In 2011, the Agency had reported repair of a slope crack greater than 1/2-inch at LM 14 and an 80-foot long section of landside slope slipping at LM 13.74 .

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units. Activities included roadway grading and gravel placement, rodent control, and vegetation burning, dragging, spraying, and trimming. The reported total maintenance expenses for the previous fiscal year was $40,034.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided total estimated cost for the general levee maintenance planned for all levee units. The reported total cost for the current fiscal year is $45,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 0150
# Merrit Island

## Yolo County

**Contact**
Warren Bogle
President
49762 Hamilton Road
Clarksburg CA 95612
Phone: (916) 744-1139

| Levee Short Name : RD0150 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sutter Slough | LB | 0.54 |
| Unit No. 02 Sacramento River | RB | 7.95 |
| Unit No. 03 Elk Slough | LB | 9.58 |

## Threat Assessment & Recommendations

- The LMA should focus more on controlling woody vegetation.
- The LMA should work with landowners and the CVFPB to control unauthorized encroachments.

## DWR Levee Inspection Summary

| RD0150 | Total LMA Miles | 18.07 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.11 | | 0.11 | **0.61** | 0.21 | | 0.21 | **1.16** | 0.10 | | 0.10 | **0.55** |
| Trim / Thin Trees | 0.28 | | 0.28 | **1.55** | 0.46 | | 0.46 | **2.55** | 0.18 | | 0.18 | **1.00** |
| Encroachments | 0.27 | | 0.27 | **1.49** | 0.15 | | 0.15 | **0.83** | -0.12 | | -0.12 | **-0.66** |
| Animal Control | 0.03 | | 0.03 | **0.17** | 0.02 | | 0.02 | **0.11** | -0.01 | | -0.01 | **-0.06** |
| Slope Stability | 0.09 | | 0.09 | **0.50** | 0.08 | | 0.08 | **0.44** | -0.01 | | -0.01 | **-0.06** |
| Erosion / Bank Caving | 0.07 | | 0.07 | **0.39** | 0.06 | | 0.06 | **0.33** | -0.01 | | -0.01 | **-0.06** |
| Crown Surface / Depressions / Rutting | 0.07 | | 0.07 | **0.39** | 0.04 | | 0.04 | **0.22** | -0.03 | | -0.03 | **-0.17** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.06** | 0.01 | | 0.01 | **0.06** | | | | **0.00** |
| *LMA Totals:* | 0.93 | 0.00 | 0.93 | **5.15** | 1.03 | 0.00 | 1.03 | **5.70** | 0.10 | 0.00 | 0.10 | **0.55** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 02 Sacramento River, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_38-5_R | 38.50 | 4.50 | 4.50 | eroding | M |

### Unit No. 03 Elk Slough, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| ELK_0-2_L | 0.20 | 0.00 | 9.40 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0150 - Merrit Island | 17.73 | Inactive | 10/15/2009 | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the DWR Spring and Fall Inspection Reports for the latest information. The 2012 Spring Levee Inspection Report provided unacceptable ratings for vegetation at various levee miles at Levee Unit 2.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units and the locations of these activities. Activities included gate maintenance and access control, inspections, rodent control, tree trimming, and vegetation spraying and mowing.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of erosion repair, gate maintenance and access control, inspections, roadway grading and maintenance, rodent control, surveying and engineering, tree trimming and pruning, and vegetation mowing and spraying. The reported total estimated cost for the current fiscal year is $91,500.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency sated that the a Five Year Plan outlining potential projects and on-going maintenance activities has been prepared.

# Reclamation District No. 0307
# Lisbon

## Yolo County

**Contact**
Pete Dwyer
Manager
PO Box 518
Clarksburg CA 95612
Phone: (916) 371-2351

| Levee Short Name : RD0307 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | RB | 6.65 |

## Threat Assessment & Recommendations

- There is significant rodent activity in this Area.
- The LMA should enhance its rodent control program.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD0307 | Total LMA Miles | 6.65 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.21 | | 0.21 | **3.16** | 0.51 | | 0.51 | **7.67** | 0.30 | | 0.30 | **4.51** |
| Trim / Thin Trees | 0.09 | | 0.09 | **1.35** | 0.07 | | 0.07 | **1.05** | -0.02 | | -0.02 | **-0.30** |
| Encroachments | 0.01 | | 0.01 | **0.15** | 0.09 | | 0.09 | **1.35** | 0.08 | | 0.08 | **1.20** |
| Animal Control | 0.08 | | 0.08 | **1.20** | 1.99 | | 1.99 | **29.93** | 1.91 | | 1.91 | **28.72** |
| Erosion / Bank Caving | | 0.02 | 0.08 | **1.20** | | 0.02 | 0.08 | **1.20** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.37 | | 0.37 | **5.56** | 0.44 | | 0.44 | **6.62** | 0.07 | | 0.07 | **1.05** |
| *LMA Totals:* | 0.76 | 0.02 | 0.84 | **12.63** | 3.10 | 0.02 | 3.18 | **47.82** | 2.34 | 0.00 | 2.34 | **35.19** |

RD 307

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Sacramento River, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_48-6_R | 48.60 | 1.20 | 1.31 | eroding new | M |
| SAC_43-2_R | 43.20 | 6.19 | 6.39 | eroding | M |
| SAC_43-1_R | 43.10 | 6.43 | 6.56 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| West Sacramento - SacYolo South | 60.45 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report



**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided unacceptable ratings for erosion at Levee Unit 1, LM 2.43 to 2.45, encroachments at LM 3.71 to 3.75, 4.43 to 4.44, and 4.64 to 4.68, and vegetation at LM 5.21 to 5.23 and 5.71 to 5.74.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided unacceptable ratings for erosion at Levee Unit 1, LM 2.43 to 2.45, encroachments at LM 3.71 to 3.75, 4.43 to 4.44, and 4.64 to 4.68, and vegetation at LM 5.21 to 5.23 and 5.71 to 5.74.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency referred to the Inspection Items/Corrective Actions submitted for Summer 2012 Levee Inspection Report for a summary of its maintenance activities. The Agency also reported ongoing corrective actions performed in response to DWR inspection comments. The corrective actions included encroachment, rodent, and vegetation control. The reported total routine maintenance cost for the previous fiscal year was $65,952.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency referred to the fiscal year 2012-2013 application to the Delta Levee Subventions Program for a summary of planned maintenance activities for 6.59 miles of Project Levees. Expenses include costs of encroachment control, erosion repair, flood emergency planning, inspection, levee drainage control, levee profile and cross sections, program management, roadway grading and repair, seepage control, vegetation control, and waterside slope protection. The reported anticipated budget for the current fiscal year is $70,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 0341
# Sherman Island

## Sacramento County

**Contact**
Juan Mercado Jr
President
District Office
18419 State Highway 160
Rio Vista CA 94571
Phone: (916) 777-4244

| Levee Short Name : RD0341 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Threemile Slough | RB | 3.34 |
| Unit No. 02 Sacramento River | LB | 6.28 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| RD0341 | Total LMA Miles | 9.62 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M * | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | 1.87 | | 1.87 | **19.44** | 1.87 | | 1.87 | **19.44** |
| Trim / Thin Trees | 0.03 | | 0.03 | **0.31** | | | | | -0.03 | | -0.03 | **-0.31** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.28 | 0.05 | 0.48 | **4.99** | 0.04 | 0.29 | 1.20 | **12.47** | -0.24 | 0.24 | 0.72 | **7.48** |
| *LMA Totals:* | 0.31 | 0.05 | 0.51 | **5.30*** | 1.91 | 0.29 | 3.07 | **31.91** | 1.60 | 0.24 | 2.56 | **26.61** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

RD 341

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 02 Sacramento River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_8-2_L | 8.20 | 4.15 | 4.19 | eroding | M |
| SAC_8-0_L | 8.00 | 4.52 | 4.60 | critical | U |
| SAC_7-9_L | 7.90 | 4.73 | 4.81 | critical | U |
| SAC_7-3_L | 7.30 | 5.96 | 6.09 | critical | U |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0341 - Sherman Island | 9.63 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to DWR's Inspection Reports for the relevant information. The Spring 2012 Levee Inspection Report provided unacceptable ratings for erosion at Levee Unit 2, LM 5.98 to 6.03 and vegetation at LM 6.21 to 6.31.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to DWR's Inspection Reports for relevant information on Levee Unit 1. The Spring 2012 Inspection Report provides minimally acceptable to acceptable ratings for all inspected items of Levee Unit 1. The Agency reported the levee is in a need of riprap slope protection repair at Levee Unit 2 between station 692+00 and 850+00. The Agency reported seepage at Levee Unit 2 between station 870+00 and 940+00 and mentioned a need for levee improvement at Levee Unit 2 between station 698+00 and 700+00 to meet USACE PL 84-99 standards.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units and the location of these activities. Activities included cleaning of drain and toe ditches, debris removal, erosion repair, inspections, repair of station markers, roadway maintenance, rodent control, and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units and the location of these activities. Expenses include costs of debris removal, drain and toe ditch cleaning, encroachment control, erosion repair, flood emergency planning, habitat assessment, levee profiles and cross-sections, rodent control, routine levee inspections, vegetation control, and waterside slope protection repair. The reported total estimated cost for the current fiscal year is $600,000.

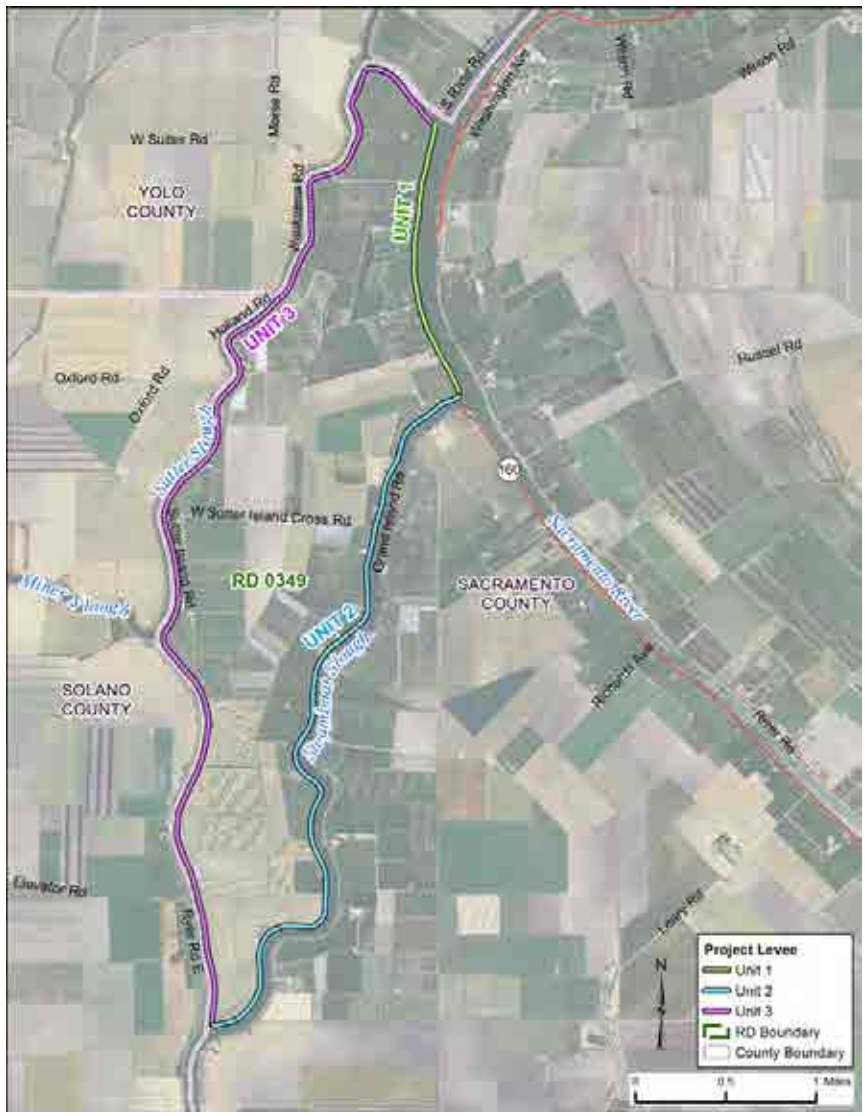
**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 0349
# Sutter Island

## Sutter County

**Contact**
Richard Elliot
President
DCC Engineering
PO Box 929
Walnut Grove CA 95690
Phone: (916) 776-9122




| Levee Short Name : RD0349 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | RB | 1.59 |
| Unit No. 02 Steamboat Slough | RB | 4.35 |
| Unit No. 03 Sutter Slough | LB | 6.55 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should ensure that the levee crown and access roads are able to be driven in all weather conditions.

## DWR Levee Inspection Summary

| RD0349 | Total LMA Miles | 12.49 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 3.21 | 0.20 | 4.01 | **32.11** | 5.89 | 0.13 | 6.41 | **51.32** | 2.68 | -0.07 | 2.40 | **19.22** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.08** | 0.26 | | 0.26 | **2.08** | 0.25 | | 0.25 | **2.00** |
| Encroachments | 0.53 | 0.04 | 0.69 | **5.52** | 0.11 | 0.01 | 0.15 | **1.20** | -0.42 | -0.03 | -0.54 | **-4.32** |
| Crown Surface / Depressions / Rutting | | | | | 1.81 | 1.01 | 5.85 | **46.84** | 1.81 | 1.01 | 5.85 | **46.84** |
| Operations & Maintenance Manuals | | | | | 0.12 | | 0.12 | **0.96** | 0.12 | | 0.12 | **0.96** |
| Emergency Supplies & Equipment | | | | | 0.12 | | 0.12 | **0.96** | 0.12 | | 0.12 | **0.96** |
| Flood Preparedness & Training | | | | | 0.12 | | 0.12 | **0.96** | 0.12 | | 0.12 | **0.96** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.65 | 0.01 | 0.69 | **5.52** | 0.59 | 0.18 | 1.31 | **10.49** | -0.06 | 0.17 | 0.62 | **4.96** |
| *LMA Totals:* | 4.40 | 0.25 | 5.40 | **43.23** | 9.03 | 1.33 | 14.35 | **114.89** | 4.63 | 1.08 | 8.94 | **71.66** |

RD 349

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 02 Steamboat Slough, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| STM_25-8_R | 25.80 | 0.34 | 0.39 | eroding | M |
| STM_25-5_R | 25.50 | 0.60 | 0.71 | eroding | M |
| STM_24-7_R | 24.70 | 1.33 | 1.51 | critical | U |
| STM_24-1_R | 24.10 | 2.04 | 2.05 | eroding | M |
| STM_23-9_R | 23.90 | 2.11 | 2.15 | eroding | M |
| STM_23-6_R | 23.60 | 2.56 | 2.70 | eroding | M |
| STM_22-8_R | 22.80 | 3.37 | 3.49 | eroding | M |

### Unit No. 03 Sutter Slough, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| STR_26-5_L | 26.50 | 4.59 | 4.71 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0349 - Sutter Island | 12.40 | Inactive | 07/28/2008 | N/A |

## DWR Summary of Local Maintaining Agency Report



**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported long standing issues of steep bank and erosion at LM 1.57 and a water side erosion at LM 2.44.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported long standing issues of steep bank and erosion at LM 1.57 and water side erosion at LM 2.44.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units and the locations of these activities. Activities included vegetation brushing, grazing and trimming.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of planned vegetation control activities for all levee units and stated that budget information was unavailable at the reporting time. The reported planned maintenance activities for the current fiscal year include vegetation brushing, grazing and trimming.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

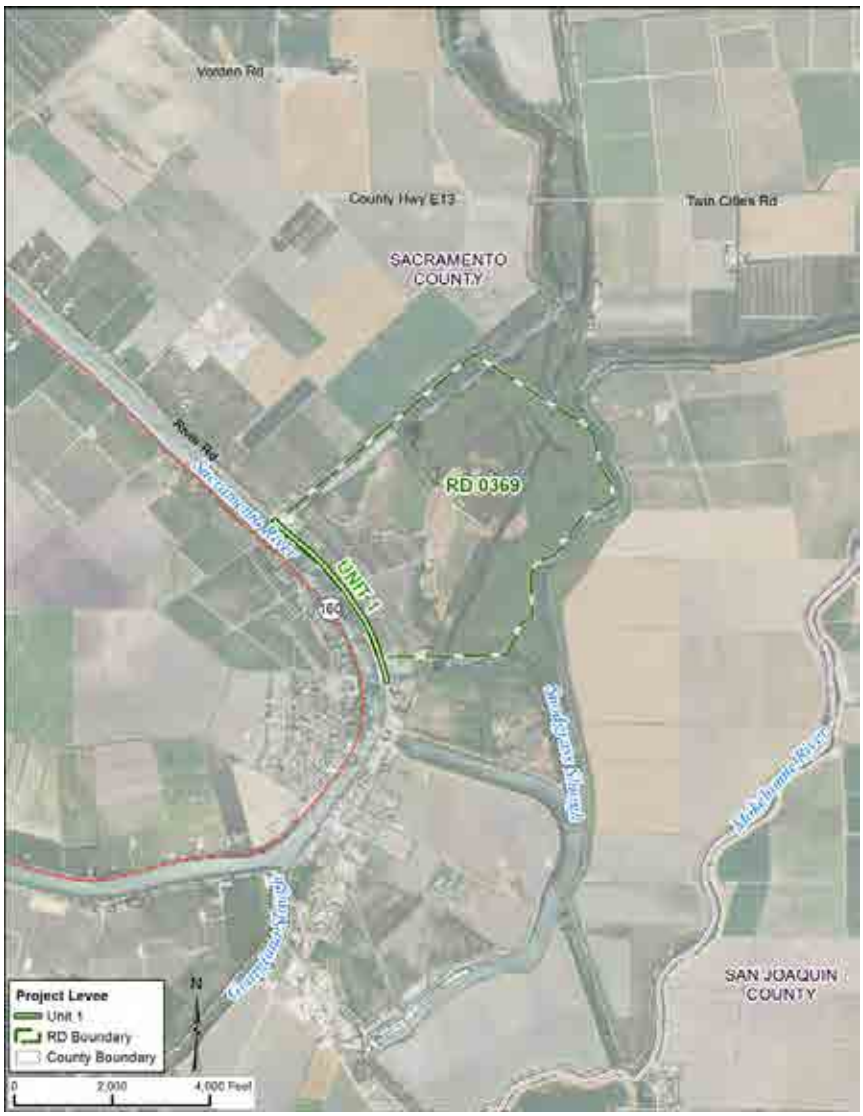
The Agency reported about the 2012 USACE Erosion Survey.

# Reclamation District No. 0369
# Libby McNeil



## Sacramento County

**Contact**
Clarence Chu
Manager
District Office
PO Box 987
Walnut Grove CA 95690
Phone: (916) 776-1661




| Levee Short Name : RD0369 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Steamboat Slough | LB | 0.80 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD0369 | Total LMA Miles | 0.80 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | M | | Overall LMA Rating | | U | | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.14 | | 0.14 | **17.50** | 0.67 | | 0.67 | **83.75** | 0.53 | | 0.53 | **66.25** |
| Trim / Thin Trees | 0.01 | | 0.01 | **1.25** | 0.01 | | 0.01 | **1.25** | | | | **0.00** |
| Operations & Maintenance Manuals | | | | | 0.01 | | 0.01 | **1.25** | 0.01 | | 0.01 | **1.25** |
| Emergency Supplies & Equipment | | | | | 0.01 | | 0.01 | **1.25** | 0.01 | | 0.01 | **1.25** |
| Flood Preparedness & Training | | | | | 0.01 | | 0.01 | **1.25** | 0.01 | | 0.01 | **1.25** |
| *LMA Totals:* | 0.15 | 0.00 | 0.15 | **18.75** | 0.70 | 0.00 | 0.70 | **87.50** | 0.55 | 0.00 | 0.56 | **68.75** |

RD 369

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report



**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

No information was provided by the Agency for Part 3.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

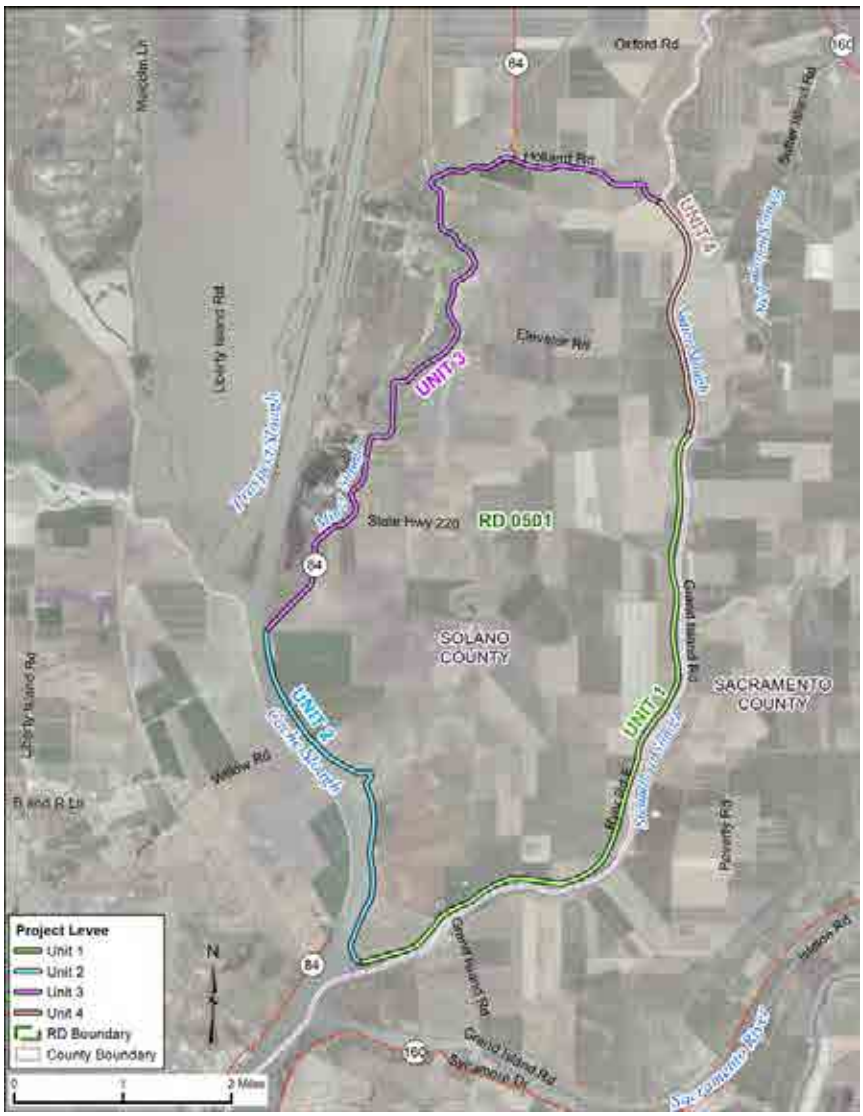
No information was provided by the Agency for Part 5.

# Reclamation District No. 0501
## Ryer Island



### Solano County

**Contact**
Neil Hamilton
President
District Office
3554 State Highway 84
Walnut Grove CA 95690
Phone: (916) 775-1411




| Levee Short Name : RD0501 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Steamboat Slough | RB | 6.76 |
| Unit No. 02 Cache Slough | LB | 3.57 |
| Unit No. 03 Miner Slough | LB | 7.82 |
| Unit No. 04 Sutter Slough | RB | 2.33 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD0501 | Total LMA Miles | 20.48 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 11.30 | 1.77 | 18.38 | **89.75** | 20.95 | 1.08 | 25.27 | **123.39** | 9.65 | -0.69 | 6.89 | **33.64** |
| Trim / Thin Trees | 3.58 | 0.20 | 4.38 | **21.39** | 1.62 | 0.07 | 1.90 | **9.28** | -1.96 | -0.13 | -2.48 | **-12.11** |
| Encroachments | 0.02 | 0.01 | 0.06 | **0.29** | 0.02 | 0.02 | 0.10 | **0.49** | | 0.01 | 0.04 | **0.20** |
| Animal Control | 0.52 | | 0.52 | **2.54** | 0.53 | | 0.53 | **2.59** | 0.01 | | 0.01 | **0.05** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.05** | 0.01 | | 0.01 | **0.05** |
| Erosion / Bank Caving | 0.06 | 0.01 | 0.10 | **0.49** | 0.07 | 0.01 | 0.11 | **0.54** | 0.01 | | 0.01 | **0.05** |
| Operations & Maintenance Manuals | | | | | 0.20 | | 0.20 | **0.98** | 0.20 | | 0.20 | **0.98** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.14 | | 0.14 | **0.68** | 0.23 | | 0.23 | **1.12** | 0.09 | | 0.09 | **0.44** |
| *LMA Totals:* | 15.62 | 1.99 | 23.58 | **115.14** | 23.63 | 1.18 | 28.35 | **138.43** | 8.01 | -0.81 | 4.77 | **23.29** |

RD 501

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Steamboat Slough, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| STM_18-9_R | 18.90 | 2.85 | 2.93 | eroding | M |
| STM_18-8_R | 18.80 | 3.02 | 3.09 | eroding | M |
| STM_15-7_R | 15.70 | 5.75 | 5.82 | eroding | M |

### Unit No. 02 Cache Slough, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| CHS_15-9_L | 15.90 | 1.12 | 1.13 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0501 - Ryer Island | 20.25 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided unacceptable ratings for vegetation at Levee Unit 1, 3 and 4 at various locations, for encroachment at Levee Unit 1 at LM 5.93, and for erosion at Levee Unit 3 at LM 5.5.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided unacceptable rating for vegetation at Levee Unit 1, 3 and 4 at various locations, for encroachment at Levee Unit 1 at LM 5.93, and for erosion at Levee Unit 3 at LM 5.5.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**



The Agency referred to the Inspection Items/Corrective Action submitted for Summer 2012 Levee Inspection Report. The Agency also reported corrected and ongoing corrective actions in response to DWR inspection comments. The corrected actions included encroachment control, erosion site monitoring, and vegetation control. The Agency also provided total routine maintenance cost for the previous fiscal year as $73,611.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency referred to the fiscal year 2012-2013 application to the Delta Subventions Program for a summary of estimated cost and maintenance activities planned for 20.6 miles of Project Levees. Expenses include costs of encroachment control, erosion repair, flood emergency planning, inspection, levee drainage control, levee profile and cross sections, management and accounting, program management, roadway grading and repair, rodent control, seepage control, vegetation control, and waterside slope protection. The reported anticipated budget for the current fiscal year is $80,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 0536
# Egbert



## Solano County

**Contact**
Page Baldwin, Jr
Manager
District Office
PO Box 785
Rio Vista CA 94571
Phone: (707) 374-5478

| Levee Short Name : RD0536 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Lindsey Slough | RB | 5.66 |
| Unit No. 02 Yolo Bypass | RB | 4.97 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should ensure that the levee crown and access roads are able to be driven in all weather conditions.

## DWR Levee Inspection Summary

| RD0536 | Total LMA Miles | 10.63 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 9.86 | 5.71 | 32.70 | **307.62** | 14.27 | 12.97 | 66.15 | **622.30** | 4.41 | 7.26 | 33.45 | **314.68** |
| Trim / Thin Trees | | | | | 0.01 | | 0.01 | **0.09** | 0.01 | | 0.01 | **0.09** |
| Encroachments | 0.12 | | 0.12 | **1.13** | 0.06 | | 0.06 | **0.56** | -0.06 | | -0.06 | **-0.57** |
| Erosion / Bank Caving | 0.02 | | 0.02 | **0.19** | 0.01 | 0.01 | 0.05 | **0.47** | -0.01 | 0.01 | 0.03 | **0.28** |
| Cracking | 0.62 | | 0.62 | **5.83** | 0.62 | | 0.62 | **5.83** | 0.00 | | | **0.00** |
| Crown Surface / Depressions / Rutting | 2.24 | | 2.24 | **21.07** | 6.61 | 2.66 | 17.25 | **162.28** | 4.37 | 2.66 | 15.01 | **141.20** |
| Repair Gates | | | | | | 0.01 | 0.04 | **0.38** | | 0.01 | 0.04 | **0.38** |
| Operations & Maintenance Manuals | | | | | 0.11 | | 0.11 | **1.04** | 0.11 | | 0.11 | **1.04** |
| Emergency Supplies & Equipment | | | | | 0.11 | | 0.11 | **1.04** | 0.11 | | 0.11 | **1.04** |
| Flood Preparedness & Training | | | | | 0.11 | | 0.11 | **1.04** | 0.11 | | 0.11 | **1.04** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.52 | | 0.52 | **4.89** | 0.38 | | 0.38 | **3.58** | -0.14 | | -0.14 | **-1.32** |
| *LMA Totals:* | 13.38 | 5.71 | 36.22 | **340.73** | 22.28 | 15.65 | 84.88 | **798.49** | 8.90 | 9.94 | 48.67 | **457.76** |

RD 536

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Lindsey Slough, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| LDS_0-6_R | 0.00 | 0.67 | 0.98 | eroding | M |
| LDS_0-8_R | 0.80 | 4.94 | 4.96 | eroding | M |
| LDS_0-7_R | 0.70 | 4.99 | 5.04 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0536 - Egbert tract | 10.58 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to DWR's Inspection Reports for the relevant information. The Spring 2012 Levee Inspection Report provided unacceptable ratings for uncontrolled grass and weeds on levee slopes and easements, and wild growth on levee slopes at both units at various locations. Additionally, the Spring Report mentions cracking at Unit 1, LM 1.72 to 1.76 and 2.68.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to DWR's Inspection Reports for the relevant information. The Spring 2012 Levee Inspection Report provided unacceptable rating for uncontrolled grass and weeds on levee slopes and easements, and wild growth on levee slopes at both units at various LMs. Additionally, the Spring Report mentions cracking at Unit 1, LM 1.72 to 1.76 and 2.68.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units and the location of these activities. Activities included inspections, placing 3/4" Aggregate Base on the levee roadway, and vegetation burning and spraying.



**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units and the location of these activities. Expenses include costs of inspections, minor repairs of gates and markers, surveying and engineering, and vegetation burning and spraying. The reported total estimated cost for the current fiscal year is $11,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 0537
# Lovdal



## Yolo County

**Contact**
Kristen Pigman
President
District Office
PO Box 822
West Sacramento CA 95691
Phone: (916) 371-1483

| Levee Short Name : RD0537 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | RB | 4.76 |
| Unit No. 02 Yolo Bypass | LB | 1.19 |

## Threat Assessment & Recommendations

- There is significant rodent activity in this Area.
- The LMA should enhance its rodent control program.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| RD0537 | Total LMA Miles | 5.95 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | M * | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Trim / Thin Trees | | | | | 0.01 | | 0.01 | **0.17** | 0.01 | | 0.01 | **0.17** |
| Encroachments | 0.02 | | 0.02 | **0.34** | | | | | -0.02 | | -0.02 | **-0.34** |
| Animal Control | 0.03 | | 0.03 | **0.50** | 0.02 | 0.01 | 0.06 | **1.01** | -0.01 | 0.01 | 0.03 | **0.50** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.17** | 0.01 | | 0.01 | **0.17** |
| Erosion / Bank Caving | 0.03 | | 0.03 | **0.50** | 0.04 | | 0.04 | **0.67** | 0.01 | | 0.01 | **0.17** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.06 | | 0.06 | **1.01** | 0.07 | | 0.07 | **1.18** | 0.01 | | 0.01 | **0.17** |
| *LMA Totals:* | 0.14 | 0.00 | 0.14 | **2.35** | 0.15 | 0.01 | 0.19 | **3.19*** | 0.01 | 0.01 | 0.05 | **0.84** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

## DWR Structure Inspection Summary

RD 537

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Sacramento River, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_63-0_R | 63.00 | 4.22 | 4.25 | eroding | M |
| SAC_62-9_R | 62.90 | 4.28 | 4.32 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 1600, 0827, 0785, and 0537 - SacYolo North | 32.06 | Partial Inactive | 10/01/2007 | U |
| West Sacramento - SacYolo South | 60.45 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported that the northern point of Monument Bend at Levee Unit 1 has steep grade due to erosion.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported the northern point of Monument Bend at Levee Unit 1 has steep grade due to erosion.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units and the location of these activities. Activities included rodent and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided an estimated total cost for the planned maintenance activities and other related expenses for the current fiscal year. The reported total estimated cost is $259,750.



**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 0551
# Pearson

## Sacramento County



**Contact**
Topper Van Loben Sels
President
District Office
PO Box 7
Walnut Grove CA 95690
Phone: (916) 439-3291

| Levee Short Name : RD0551 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | LB | 6.84 |

## Threat Assessment & Recommendations

- There is erosion occurring in this Area that should be monitored.
- The LMA should focus on repairing erosion sites.
- The LMA should enhance its rodent control program.

## DWR Levee Inspection Summary

| RD0551 | Total LMA Miles | 6.84 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | M * | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Encroachments | 0.04 | | 0.04 | **0.59** | | | | | -0.04 | | -0.04 | **-0.59** |
| Animal Control | 0.02 | | 0.02 | **0.29** | 0.02 | | 0.02 | **0.29** | | | | **0.00** |
| Erosion / Bank Caving | | | | | | 0.01 | 0.04 | **0.58** | | 0.01 | 0.04 | **0.58** |
| *LMA Totals:* | 0.06 | 0.00 | 0.06 | **0.88** | 0.02 | 0.01 | 0.06 | **0.88*** | -0.04 | 0.01 | 0.00 | **0.00** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0551 and RD 0755 - Pierson District | 9.58 | Partial Inactive | 07/28/2008 | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units and the location of these activities. Activities included encroachment control, inspections, removal of dead trees from levee slopes, rodent control, tree trimming and pruning, and vegetation control through herbicide spraying, livestock grazing, and mowing.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of costs and maintenance activities planned for all levee units and the location of these activities. Expenses include costs of encroachment control, inspections, removal of dead trees from the levee slope, rodent control, surveying and engineering, tree trimming and pruning, and vegetation control through livestock grazing, herbicide spraying and mowing. The reported total estimated cost for the current fiscal year is $47,500.



**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported that a Five Year Plan outlining potential projects and on-going maintenance activities has been prepared.

# Reclamation District No. 0554
## Walnut Grove

### Sacramento County



**Contact**
Jeff Tranum
Chairman
PO Box 984
Walnut Grove CA 95690
Phone: (916) 776-1945

| Levee Short Name : RD0554 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | LB | 1.09 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD0554 | Total LMA Miles | 1.09 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | 0.05 | | 0.05 | **4.59** | 0.05 | | 0.05 | **4.59** |
| Encroachments | | | | | 0.01 | | 0.01 | **0.92** | 0.01 | | 0.01 | **0.92** |
| Emergency Supplies & Equipment | | | | | 0.01 | | 0.01 | **0.92** | 0.01 | | 0.01 | **0.92** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.11 | | 0.11 | **10.09** | 0.09 | | 0.09 | **8.26** | -0.02 | | -0.02 | **-1.84** |
| *LMA Totals:* | 0.11 | 0.00 | 0.11 | **10.09** | 0.16 | 0.00 | 0.16 | **14.68** | 0.05 | 0.00 | 0.05 | **4.59** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

RD 554

## USACE Sacramento River Erosion Summary

### Unit No. 01 Sacramento River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_27-0_L | 27.00 | 0.25 | 0.34 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that landside back slope at Levee Unit 1 does not meet 3:1 standard for urban levees at Snodgrass Slough STA 80+00 to 147+50.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that landside back slope at Levee Unit 1 does not meet 3:1 standard for urban levees at Snodgrass Slough STA 80+00 to 147+50.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units and the location of these activities. Activities included vegetation thinning and trimming along Sacramento River left bank Station 0+00 to 45+50, and vegetation spraying at all levee units.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency referred to the fiscal year 2012-2013 application to the Delta Levee Subventions Program for a summary of estimated cost and maintenance activities planned for 3.4 mile of Project and Non-Project Levees. Expenses include costs of encroachment control, engineering services, environmental compliance, rodent control, underwater surveys, vegetation control, and waterside slope repair. The reported total estimated cost for the current fiscal year is $48,300.



**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 0556
## Upper Andrus

### Sacramento County



**Contact**
Kevin P Steward
President
District Office
PO Box 1046
Walnut Grove CA 95690
Phone: (916) 776-2092

| Levee Short Name : RD0556 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Georgiana Slough | RB | 5.47 |
| Unit No. 02 Sacramento River | LB | 5.72 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should enhance its rodent control program.

## DWR Levee Inspection Summary

| RD0556 | Total LMA Miles | 11.19 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 4.07 | 0.03 | 4.19 | **37.44** | 21.96 | 1.40 | 27.56 | **246.29** | 17.89 | 1.37 | 23.37 | **208.85** |
| Trim / Thin Trees | 3.27 | 0.02 | 3.35 | **29.94** | 4.55 | 0.03 | 4.67 | **41.73** | 1.28 | 0.01 | 1.32 | **11.80** |
| Encroachments | 0.02 | 0.22 | 0.90 | **8.04** | 0.01 | 0.09 | 0.37 | **3.31** | -0.01 | -0.13 | -0.53 | **-4.74** |
| Animal Control | 0.27 | | 0.27 | **2.41** | 3.58 | | 3.58 | **31.99** | 3.31 | | 3.31 | **29.58** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.09** | 0.06 | | 0.06 | **0.54** | 0.05 | | 0.05 | **0.45** |
| Closure Structures | | | | | 0.30 | | 0.30 | **2.68** | 0.30 | | 0.30 | **2.68** |
| Operations & Maintenance Manuals | | | | | 0.11 | | 0.11 | **0.98** | 0.11 | | 0.11 | **0.98** |
| Emergency Supplies & Equipment | | | | | 0.11 | | 0.11 | **0.98** | 0.11 | | 0.11 | **0.98** |
| Flood Preparedness & Training | | | | | 0.11 | | 0.11 | **0.98** | 0.11 | | 0.11 | **0.98** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 1.19 | | 1.19 | **10.63** | 1.15 | | 1.15 | **10.28** | -0.04 | | -0.04 | **-0.36** |
| *LMA Totals:* | 8.83 | 0.27 | 9.91 | **88.56** | 31.95 | 1.52 | 38.03 | **339.86** | 23.12 | 1.25 | 28.11 | **251.30** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

RD 556

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Georgiana Slough, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| GEO_7-0_R | 7.00 | 5.11 | 5.26 | eroding | M |

### Unit No. 02 Sacramento River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_26-0_L | 26.00 | 0.31 | 0.60 | eroding | M |
| SAC_25-2_L | 25.20 | 1.08 | 1.16 | eroding | M |
| SAC_24-8_L | 24.80 | 1.45 | 1.59 | eroding | M |
| SAC_23-3_L | 23.30 | 2.93 | 3.05 | eroding | M |
| SAC_23-2_L | 23.20 | 3.16 | 3.28 | eroding | M |
| SAC_22-7_L | 22.70 | 3.58 | 3.63 | eroding | M |
| SAC_22-5_L | 22.50 | 3.95 | 4.12 | eroding | M |
| SAC_21-5_L | 21.50 | 4.85 | 4.88 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

**Part 1** **Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2** **Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3** **A summary of maintenance performed by the Local Agency during the previous fiscal year**

No information was provided by the Agency for Part 3.

**Part 4** **A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.



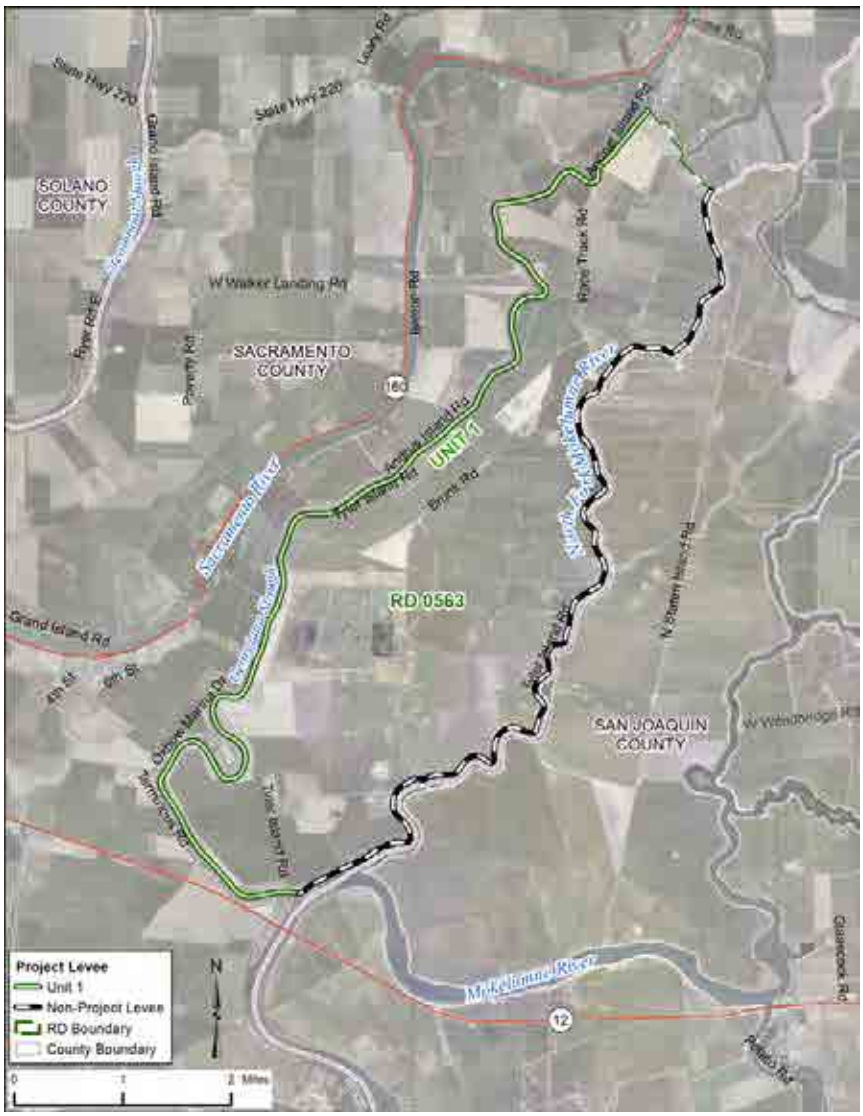
**Part 5** **Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 0563
# Tyler Island

## Sacramento County

**Contact**
Steven Mello
President
District Office
PO Box 470
Walnut Grove CA 95690-0470
Phone: (916) 776-2544




| Levee Short Name : RD0563 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Georgiana Slough (Tyler Island) | LB | 12.38 |

## Threat Assessment & Recommendations

- There is a significant erosion site in this Area that should be monitored.
- The LMA should focus on repairing erosion sites.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD0563 | Total LMA Miles | 12.38 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.43 | 0.25 | 1.43 | **11.55** | 0.61 | 0.23 | 1.53 | **12.36** | 0.18 | -0.02 | 0.10 | **0.81** |
| Trim / Thin Trees | 0.22 | 0.04 | 0.38 | **3.07** | 0.28 | 0.05 | 0.48 | **3.88** | 0.06 | 0.01 | 0.10 | **0.81** |
| Encroachments | 0.25 | 0.01 | 0.29 | **2.34** | 0.22 | | 0.22 | **1.78** | -0.03 | -0.01 | -0.07 | **-0.57** |
| Animal Control | 0.05 | 0.04 | 0.21 | **1.70** | 0.16 | | 0.16 | **1.29** | 0.11 | -0.04 | -0.05 | **-0.40** |
| Slope Stability | 0.02 | 0.01 | 0.06 | **0.48** | 0.02 | 0.01 | 0.06 | **0.48** | | | | **0.00** |
| Erosion / Bank Caving | | | | | 0.01 | | 0.01 | **0.08** | 0.01 | | 0.01 | **0.08** |
| Crown Surface / Depressions / Rutting | | | | | 0.07 | | 0.07 | **0.57** | 0.07 | | 0.07 | **0.57** |
| Operations & Maintenance Manuals | | | | | 0.12 | | 0.12 | **0.97** | 0.12 | | 0.12 | **0.97** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 2.26 | 1.37 | 7.74 | **62.52** | 2.92 | 1.10 | 7.32 | **59.13** | 0.66 | -0.27 | -0.42 | **-3.39** |
| *LMA Totals:* | 3.23 | 1.72 | 10.11 | **81.66** | 4.41 | 1.39 | 9.97 | **80.53** | 1.18 | -0.33 | -0.14 | **-1.13** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Georgiana Slough (Tyler Island), LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| GEO_11-0_L | 11.00 | 1.04 | 1.13 | eroding | M |
| GEO_9-3_L | 9.30 | 2.67 | 2.87 | eroding | M |
| GEO_8-3_L | 8.30 | 4.00 | 4.10 | eroding | M |
| GEO_7-2_L | 7.20 | 5.00 | 5.06 | eroding | M |
| GEO_6-8_L | 6.80 | 5.17 | 5.41 | critical | U |
| GEO_6-3_L | 6.30 | 5.51 | 6.29 | eroding | M |
| GEO_5-3_L | 5.30 | 6.78 | 7.44 | eroding | M |
| GEO_4-5_L | 4.50 | 7.56 | 7.82 | critical | U |
| GEO_4-3_L | 4.30 | 7.87 | 8.07 | eroding | M |
| GEO_3-8_L | 3.80 | 8.28 | 8.76 | critical | U |
| GEO_2-5_L | 2.50 | 9.74 | 9.92 | eroding | M |
| GEO_2-0_L | 2.00 | 10.17 | 10.29 | critical | U |
| GEO_1-7_L | 1.70 | 10.46 | 10.76 | eroding | M |
| GEO_0-3_L | 0.30 | 11.69 | 12.04 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0563 - Tyler Island | 13.00 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The 2012 Spring Inspection Report provided unacceptable ratings for encroachment, erosion, rodent control, slope stability and vegetation issues at various locations.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The 2012 Spring Inspection Report provided unacceptable rating for encroachment, erosion, rodent control, slope stability and vegetation issues at various locations.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency referred to Inspection Items/Corrective Action submitted for Summer 2012 Levee Inspection Report. The Agency reported ongoing corrective actions in response to DWR inspection comments. The corrective actions included encroachment control, erosion repair, roadway maintenance, rodent control, slope repair, tree thinning and trimming, and vegetation control. The Agency also provided total routine maintenance cost for the previous fiscal year as $153,998.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency referred to the fiscal year 2012-2013 application to the Delta Levee Subventions Program for a summary of estimated cost and maintenance activities planned for 10.7 miles of Non-Project Levees and 12.2 miles of Project Levees. Expenses include costs of encroachment control, erosion repair, flood emergency planning, inspection, levee drainage control, levee profile and cross sections, program management, roadway grading and repair, rodent control, seepage and boil control, vegetation control, and waterside slope protection. The reported anticipated budget for the current fiscal year is $160,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 0755
# Randall

## Sacramento County

**Contact**
Douglas Hemly
Trustee
District Office
11275 State Highway 160
Courtland CA 95615
Phone: (916) 775-1379

| Levee Short Name : RD0755 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | LB | 1.86 |

## Threat Assessment & Recommendations

- There is significant rodent activity in this Area.
- The LMA should enhance its rodent control program.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD0755 | Total LMA Miles | 1.86 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.01 | | 0.01 | **0.54** | 1.94 | | 1.94 | **104.30** | 1.93 | | 1.93 | **103.76** |
| Animal Control | 1.23 | | 1.23 | **66.13** | 2.40 | | 2.40 | **129.03** | 1.17 | | 1.17 | **62.90** |
| Operations & Maintenance Manuals | | | | | 0.02 | | 0.02 | **1.08** | 0.02 | | 0.02 | **1.08** |
| Emergency Supplies & Equipment | | | | | 0.02 | | 0.02 | **1.08** | 0.02 | | 0.02 | **1.08** |
| Flood Preparedness & Training | | | | | 0.02 | | 0.02 | **1.08** | 0.02 | | 0.02 | **1.08** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.09 | | 0.09 | **4.84** | 0.08 | | 0.08 | **4.30** | -0.01 | | -0.01 | **-0.54** |
| *LMA Totals:* | 1.33 | 0.00 | 1.33 | **71.51** | 4.48 | 0.00 | 4.48 | **240.86** | 3.15 | 0.00 | 3.15 | **169.36** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Sacramento River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_35-4_L | 35.40 | 1.26 | 1.34 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0551 and RD 0755 - Pierson District | 9.58 | Partial Inactive | 07/28/2008 | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that seepage occurs during high water saturating levee toes.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units. Activities included encroachment control, inspections, dead tree removal, vegetation spraying, thinning and trimming, and rodent control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of maintenance activities planned for all levee units. Activities included inspections, rodent control, surveying and engineering, and vegetation control.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 0765
# Glide

## Yolo County

**Contact**
Albert Martinelli
President
PO Box 795
West Sacramento CA 95691
Phone: (916) 761-8033

## SACRAMENTO SYSTEM : Reclamation District No. 0765 Glide

| Levee Short Name : RD0765 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | RB | 1.74 |

### Threat Assessment & Recommendations

- There is woody vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling woody vegetation.

## DWR Levee Inspection Summary

| RD0765 | Total LMA Miles | 1.74 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.03 | 0.04 | 0.19 | **10.92** | 0.03 | 0.37 | 1.51 | **86.78** | | 0.33 | 1.32 | **75.86** |
| Trim / Thin Trees | 0.84 | 0.21 | 1.68 | **96.55** | 0.91 | 0.19 | 1.67 | **95.98** | 0.07 | -0.02 | -0.01 | **-0.57** |
| Encroachments | 0.01 | | 0.01 | **0.58** | 0.01 | | 0.01 | **0.58** | | | | **0.00** |
| Operations & Maintenance Manuals | | | | | 0.02 | | 0.02 | **1.15** | 0.02 | | 0.02 | **1.15** |
| Flood Preparedness & Training | | | | | 0.02 | | 0.02 | **1.15** | 0.02 | | 0.02 | **1.15** |
| *LMA Totals:* | 0.88 | 0.25 | 1.88 | **108.05** | 0.98 | 0.56 | 3.22 | **185.06** | 0.10 | 0.31 | 1.35 | **77.01** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| West Sacramento - SacYolo South | 60.45 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

No information was provided by the Agency for Part 3.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

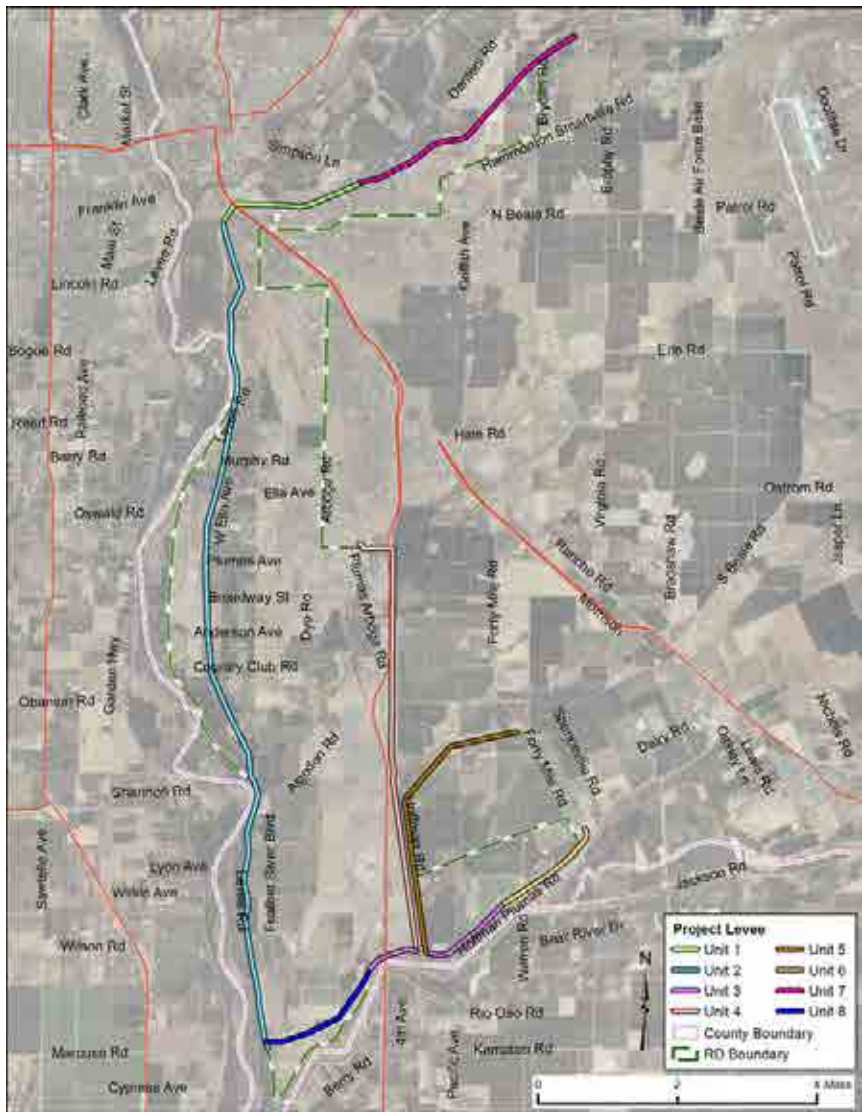
**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 0784
# Plumas Lake

## Yuba County

**Contact**
Steven Fordice
General Manager
District Office
1594 Broadway
Arboga CA 95961
Phone: (530) 742-0520


Project Levee
Unit 1
Unit 2
Unit 3
Unit 4
Unit 5
Unit 6
Unit 7
Unit 8
County Boundary
RD Boundary
N
Simpson Ln
N Beale Rd
Erle Rd
Hale Rd
Ostrom Rd
Lincoln Rd
Bogue Rd
Kearl Rd
Barry Rd
Oswald Rd
Murphy Rd
Ella Ave
Plumas Ave
Broadway St
Anderson Ave
Calvary Club Rd
Obannon Rd
Shannon Rd
Lyon Ave
Wilson Rd
Marysville Rd
Cypress Ave
Feather River Blvd
Algodon Rd
Dry Rd
Forty Mile Rd
Dairy Rd
Jackson Rd
Rio Oso Rd
Kanaston Rd
Bear River Dr
Hoffman Ranch Rd
Vulmer Rd
Virginia Rd
Brosnaw Rd
S Beale Rd
Pierce Rd
Franklin Ave
Clark Ave
Market St
Maui St
Levee Rd
Palermo Ave
Gordon Hwy
Swartzle Ave
4th Ave
Pierce Ave
Nicolas Rd
Lewis Rd
Osprey Ln
Jasper Ln
Cooper Dr
Bridge Rd
Cultivation Ave
Plumas Arboga Rd
Arboga Rd
Ellis Ave
W Ellis Ave
Pierce Rd
Plumas Arboga Rd
Hoffman Ranch Rd
Forty Mile Rd
Dairy Rd
Jackson Rd
Rio Oso Rd
Kanaston Rd
Barry Rd
Pierce Ave
4th Ave
Vulmer Rd
Bear River Dr
Hoffman Ranch Rd
Feather River Blvd
Levee Rd
Wilson Rd
Lyon Ave
Shannon Rd
Obannon Rd
Calvary Club Rd
Anderson Ave
Broadway St
Plumas Ave
W Ellis Ave
Ellis Ave
Murphy Rd
Oswald Rd
Barry Rd
Kearl Rd
Bogue Rd
Lincoln Rd
Franklin Ave
Simpson Ln
Plumas Arboga Rd
Pierce Rd
Pierce Rd
Beale Air Force Base
Bridge Rd
N Beale Rd
Cultivation Ave
Erle Rd
Hale Rd
Ostrom Rd
Virginia Rd
Brosnaw Rd
S Beale Rd
Jasper Ln
Cooper Dr
Nicolas Rd
Lewis Rd
Osprey Ln
Dairy Rd
Forty Mile Rd
Jackson Rd
Hoffman Ranch Rd
Bear River Dr
Vulmer Rd
Rio Oso Rd
Kanaston Rd
Pierce Ave
4th Ave
Barry Rd
Cypress Ave
Marysville Rd
Wilson Rd
Lyon Ave
Shannon Rd
Obannon Rd
Gordon Hwy
Swartzle Ave
Algodon Rd
Feather River Blvd
Levee Rd
Dry Rd
Plumas Arboga Rd
Forty Mile Rd
Anderson Ave
Calvary Club Rd
Broadway St
Plumas Ave
W Ellis Ave
Ellis Ave
Arboga Rd
Murphy Rd
Oswald Rd
Barry Rd
Palermo Ave
Kearl Rd
Bogue Rd
Lincoln Rd
Levee Rd
Maui St
Market St
Clark Ave
Franklin Ave
Simpson Ln
Plumbago Rd
Simpson Rd
Bridge Rd
Beale Air Force Base
Pierce Rd
N Beale Rd
Cooper Dr
Cultivation Ave
Erle Rd
Hale Rd
Ostrom Rd
Virginia Rd
Brosnaw Rd
S Beale Rd
Jasper Ln
Pierce Rd
Hoffman Ranch Rd
Forty Mile Rd
Nicolas Rd
Dairy Rd
Lewis Rd
Osprey Ln
Jackson

## DWR Levee Inspection Summary

| RD0784 | Total LMA Miles | 44.16 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.93 | | 0.93 | **2.11** | 2.68 | 1.03 | 6.80 | **15.40** | 1.75 | 1.03 | 5.87 | **13.29** |
| Erosion / Bank Caving | | | | | 0.01 | | 0.01 | **0.02** | 0.01 | | 0.01 | **0.02** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Culverts: Inlets / Outlets | | | | | 0.07 | | 0.07 | **0.16** | 0.07 | | 0.07 | **0.16** |
| Culverts: Breaks / Holes / Cracks | | | | | | 0.02 | 0.08 | **0.18** | | 0.02 | 0.08 | **0.18** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.35 | | 0.35 | **0.79** | 0.43 | | 0.43 | **0.97** | 0.08 | | 0.08 | **0.18** |
| *LMA Totals:* | 1.28 | 0.00 | 1.28 | **2.90** | 3.19 | 1.05 | 7.39 | **16.73** | 1.91 | 1.05 | 6.11 | **13.84** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 02 Feather River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| FHR_17-8_L | 17.80 | 8.72 | 9.14 | eroding | M |

### Unit No. 03 Bear River, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| BER_4-9_R | 4.90 | 4.30 | 4.31 | eroding | M |

### Unit No. 07 Yuba River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| YUB_2-3_L | 0.00 | 2.23 | 2.23 | repaired | C |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0784 - Best Slough and Dry Creek | 7.25 | Active | | Pending |
| RD 0784 - Plumas Lakes Basin | 27.27 | Active | | Pending |
| Sacramento River west bank | 119.72 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported rodent holes were discovered on landside part of Levee Unit 1, LM 0.0 to 1.0, and appraised of continuing rodent baiting and grouting as part of regular maintenance. The Agency further reported an encroachment on landside part of Levee Unit 2 at LM 9.4.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported grouting of burrowing holes at some locations at Levee Units 1, 2, and 3. The Agency also reported surface crack on crown at Levee Unit 4, LM 4.41 to 4.43 and stated that there was no new information to report for Levee Units 5 and 6.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units and the location of these activities. Activities included encroachment control, erosion repair, reconstruction of a levee reach as per work plans and project specifications as approved by DWR and CVFBP, and vegetation control. The Agency also reported corrected and ongoing corrective actions in response to DWR inspection comments. The corrected actions included vegetation and encroachment control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of ditch and canal maintenance and repairs, pump station maintenance and repairs, professional fees, salaries, fringe, and insurance expenses, urban and rural levee maintenance and repairs, and others. The reported total estimated cost for the current fiscal year is $1,676,573. Reported expenses for the urban and rural levee maintenance activities for the current fiscal year include costs of key activities such as emergency repair, flood fighting, rodent control, and vegetation control.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported that the regional flood flight planning and acquisition of flood flight materials are pending. The Agency also stated two radio frequencies were allocated by FCC to establish a flood flight communication system.

# Reclamation District No. 0785
# Driver

## Yolo County

**Contact**
Ross Peabody
President
20040 Old River Road
West Sacramento CA 95694
Phone: (916) 257-9826

| Levee Short Name : RD0785 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | RB | 2.31 |
| Unit No. 02 Yolo Bypass | LB | 3.30 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD0785 | Total LMA Miles | 5.61 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | 1.16 | 4.64 | **82.71** | | 1.16 | 4.64 | **82.71** |
| Trim / Thin Trees | | | | | 0.01 | | 0.01 | **0.18** | 0.01 | | 0.01 | **0.18** |
| Encroachments | 0.02 | | 0.02 | **0.36** | | | | | -0.02 | | -0.02 | **-0.36** |
| Animal Control | | | | | 0.02 | 0.02 | 0.10 | **1.78** | 0.02 | 0.02 | 0.10 | **1.78** |
| Slope Stability | | | | | 0.02 | | 0.02 | **0.36** | 0.02 | | 0.02 | **0.36** |
| Erosion / Bank Caving | | | | | 0.01 | | 0.01 | **0.18** | 0.01 | | 0.01 | **0.18** |
| Crown Surface / Depressions / Rutting | 2.29 | | 2.29 | **40.82** | | | | | -2.29 | | -2.29 | **-40.82** |
| Operations & Maintenance Manuals | | | | | 0.06 | | 0.06 | **1.07** | 0.06 | | 0.06 | **1.07** |
| *LMA Totals:* | 2.31 | 0.00 | 2.31 | **41.18** | 0.12 | 1.18 | 4.84 | **86.27** | -2.19 | 1.18 | 2.53 | **45.10** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 1600, 0827, 0785, and 0537 - SacYolo North | 32.06 | Partial Inactive | 10/01/2007 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated ruts at Levee Unit 2 between the access gates need to be fixed.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported that burrowing holes in landside levee of Levee Unit 2 are slated for filling and or regrading in spring 2013.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units. Activities included inspections, levee crown regrading, rodent baiting and trapping, and surveying and engineering. The Agency also reported corrected and ongoing corrective actions in response to DWR inspection comments. The corrected actions included encroachment control, erosion and bank caving control, and rodent control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency reported a plan for landside levee slope repair in spring 2013 at Levee Unit 2. The reported estimated cost of repair is $5,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported that Unit 2 levee regrading and rock placement plans have been developed and construction drawings have been produced for bidding and construction. The Agency further stated that the project is currently underway and the work is scheduled to be completed by 15th November.

# Reclamation District No. 0787
# Fair

## Yolo County

**Contact**
Marty Stripling
President
District Office
41758 County Road # 112
Knights Landing CA 95645
Phone: (530) 735-6274

| Levee Short Name : RD0787 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Colusa Basin Drain | LB | 4.40 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should enhance its rodent control program.

## DWR Levee Inspection Summary

| RD0787 | Total LMA Miles | 4.40 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.05 | | 0.05 | **1.14** | | | | | -0.05 | | -0.05 | **-1.14** |
| Animal Control | 0.02 | | 0.02 | **0.46** | 0.02 | | 0.02 | **0.46** | | | | **0.00** |
| Flood Preparedness & Training | | | | | 0.04 | | 0.04 | **0.91** | 0.04 | | 0.04 | **0.91** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.02 | | 0.02 | **0.46** | 0.13 | | 0.13 | **2.96** | 0.11 | | 0.11 | **2.50** |
| *LMA Totals:* | 0.09 | 0.00 | 0.09 | **2.05** | 0.19 | 0.00 | 0.19 | **4.32** | 0.10 | 0.00 | 0.10 | **2.27** |

RD 787

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Colusa Basin Drain, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| CBD_0-5_L | 0.00 | 0.39 | 0.51 | eroding | M |
| CBD_0-9_L | 0.00 | 0.67 | 0.67 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency reported corrected and ongoing corrective actions in response to DWR inspection comments. The corrected actions included slope repair and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 0817
## Carlin

### Yuba County

**Contact**
Joe Conant
Director
District Office
PO Box 261
Wheatland CA 95692-0261
Phone: (530) 633-4319

| Levee Short Name : RD0817 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 South Dry Creek | LB | 3.82 |
| Unit No. 02 Bear River | RB | 3.87 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should repair locations where the levee slope may be unstable.

## DWR Levee Inspection Summary

| RD0817 | Total LMA Miles | 9.19 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.07 | | 0.07 | **0.76** | 5.20 | 1.06 | 9.44 | **102.72** | 5.13 | 1.06 | 9.37 | **101.96** |
| Slope Stability | 1.11 | | 1.11 | **12.08** | 1.11 | | 1.11 | **12.08** | | | | **0.00** |
| Flood Preparedness & Training | | | | | 0.09 | | 0.09 | **0.98** | 0.09 | | 0.09 | **0.98** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Culverts: Inlets / Outlets | | | | | 0.07 | | 0.07 | **0.76** | 0.07 | | 0.07 | **0.76** |
| Culverts: Breaks / Holes / Cracks | | | | | | 0.01 | 0.04 | **0.44** | | 0.01 | 0.04 | **0.44** |
| Metal Pipes | | 0.01 | 0.04 | **0.44** | | 0.01 | 0.04 | **0.44** | | | | **0.00** |
| Flap Gates | | 0.01 | 0.04 | **0.44** | | 0.01 | 0.04 | **0.44** | | | | **0.00** |
| *LMA Totals:* | 1.18 | 0.02 | 1.26 | **13.71** | 6.47 | 1.09 | 10.83 | **117.85** | 5.29 | 1.07 | 9.57 | **104.13** |

RD 817

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0817 and RD 2103 - City of Wheatland | 16.06 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report



**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency provided a summary of levee condition or performance issues for all levee units. Issues for Levee Unit 1 include beaver dams, deteriorating or substandard pipes/crossings and a narrow bridge crossing at LM 1.2, excess channel and levee vegetation, levee geometry deficiencies, and sediment accumulation. Issues for Levee Unit 2 include landscaping at LM 1.8 and 2.08, excess channel vegetation, narrow levee crown, sediment accumulation, and waterway migration. Issues for Levee Unit 3 include beaver dams, deteriorating drainage culverts, excess channel and levee vegetation, narrow bridge crossing, sediment accumulation, and waterway migration.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported burrowing holes and freeboard deficiencies at Levee Unit 1 and noted burrowing holes and levee geometry deficiencies at Levee Unit 2. The Agency also identified burrowing holes and freeboard deficiencies, and visibility issues due to vegetation in Levee Unit 3.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units and the locations of these activities. Activities included highwater monitoring, roadway grading, rodent control, and vegetation burning, grazing, mowing and trimming.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of pipe crossing, roadway and levee crown grading, rodent baiting and trapping, tree thinning and trimming, and vegetation grazing, mowing and spraying. The reported total estimated cost for the current fiscal year is $61,600.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 0827
# Elkhorn

## Yolo County

**Contact**
Daniel Ramos
President
District Office
PO Box 781
West Sacramento CA 95691
Phone: (916) 372-6170

| Levee Short Name : RD0827 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | RB | 1.35 |
| Unit No. 02 Yolo Bypass | LB | 2.84 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should enhance its rodent control program.

## DWR Levee Inspection Summary

| RD0827 | Total LMA Miles | 4.19 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Encroachments | 0.02 | | 0.02 | **0.48** | 0.02 | | 0.02 | **0.48** | | | | **0.00** |
| Animal Control | 0.01 | | 0.01 | **0.24** | 0.03 | | 0.03 | **0.72** | 0.02 | | 0.02 | **0.48** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.24** | 0.01 | | 0.01 | **0.24** |
| Erosion / Bank Caving | 0.02 | | 0.02 | **0.48** | 0.02 | | 0.02 | **0.48** | | | | **0.00** |
| Cracking | | | | | 0.01 | | 0.01 | **0.24** | 0.01 | | 0.01 | **0.24** |
| Crown Surface / Depressions / Rutting | 1.61 | | 1.61 | **38.43** | | | | | -1.61 | | -1.61 | **-38.43** |
| *LMA Totals:* | 1.66 | 0.00 | 1.66 | **39.62** | 0.09 | 0.00 | 0.09 | **2.15** | -1.57 | 0.00 | -1.57 | **-37.47** |

RD 827

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 1600, 0827, 0785, and 0537 - SacYolo North | 32.06 | Partial Inactive | 10/01/2007 | U |

## DWR Summary of Local Maintaining Agency Report



**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency mentioned that there was no change from the previous condition. The Spring 2012 Levee Inspection Report provided minimally acceptable to acceptable ratings for all inspected items.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency mentioned that there was no change from the previous condition. The Spring 2012 Levee Inspection Report provided minimally acceptable to acceptable ratings for all inspected items.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency reported corrected and ongoing corrective actions in response to DWR inspection comments. The corrected actions included encroachment control, erosion repairs, tree thinning and trimming, and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency stated a contract for levee crown grading was to be completed by October, 2012. The reported contract amount for the activity was $24,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported that it follows the Yolo County Emergency Response Guidelines and participates in regularly scheduled briefings conducted by the Yolo County officials.

# Reclamation District No. 0900
## West Sacramento



### Yolo County

**Contact**
Ken Ruzich
Manager
District Office
PO Box 673
West Sacramento CA 95691
Phone: (916) 371-1483

| Levee Short Name : RD0900 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | RB | 7.84 |
| Unit No. 02 Yolo Bypass | LB | 5.73 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| RD0900 | Total LMA Miles | 13.57 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 1.83 | | 1.83 | **13.49** | 7.94 | | 7.94 | **58.51** | 6.11 | | 6.11 | **45.03** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.07** | 0.90 | | 0.90 | **6.63** | 0.89 | | 0.89 | **6.56** |
| Encroachments | 0.17 | | 0.17 | **1.25** | 0.09 | | 0.09 | **0.66** | -0.08 | | -0.08 | **-0.59** |
| Animal Control | 0.06 | | 0.06 | **0.44** | 0.06 | | 0.06 | **0.44** | | | | **0.00** |
| Slope Stability | 0.09 | | 0.09 | **0.66** | 0.05 | | 0.05 | **0.37** | -0.04 | | -0.04 | **-0.30** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.43 | | 0.43 | **3.17** | 0.44 | | 0.44 | **3.24** | 0.01 | | 0.01 | **0.07** |
| *LMA Totals:* | 2.59 | 0.00 | 2.59 | **19.09** | 9.48 | 0.00 | 9.48 | **69.86** | 6.89 | 0.00 | 6.89 | **50.77** |

RD 900

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Sacramento River, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_57-2_R | 57.20 | 1.91 | 2.03 | under construction | C |
| SAC_57-0_R | 57.00 | 2.07 | 2.11 | under construction | C |
| SAC_56-7_R | 56.70 | 2.35 | 2.49 | eroding | M |
| SAC_56-5_R | 56.50 | 2.56 | 2.65 | eroding | M |
| SAC_55-7_R | 55.70 | 3.28 | 3.49 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| West Sacramento - SacYolo South | 60.45 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency provided information about the State-federal new setback levee construction project at Levee Unit 1 and USACE West Sacramento Project for deficiency repairs at Levee Unit 2, LM 0.2 to 2.0

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**



The Agency provided a summary of maintenance activities performed for all levee units and the location of these activities. Activities included encroachment control, erosion repair, gate repairs, inspections, patrolling, restoration/habitat enhancement, roadway maintenance, rodent control, toe drain maintenance, and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of encroachment control, erosion repair, gate repairs, inspections, insurance and dues, legal management services, minor structure repairs, mobile equipments, office overhead, patrolling, permitting, restoration/habitat enhancement, roadway grading and maintenance, rodent control, and vegetation control. The reported total estimated cost for the current fiscal year is $344,500.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

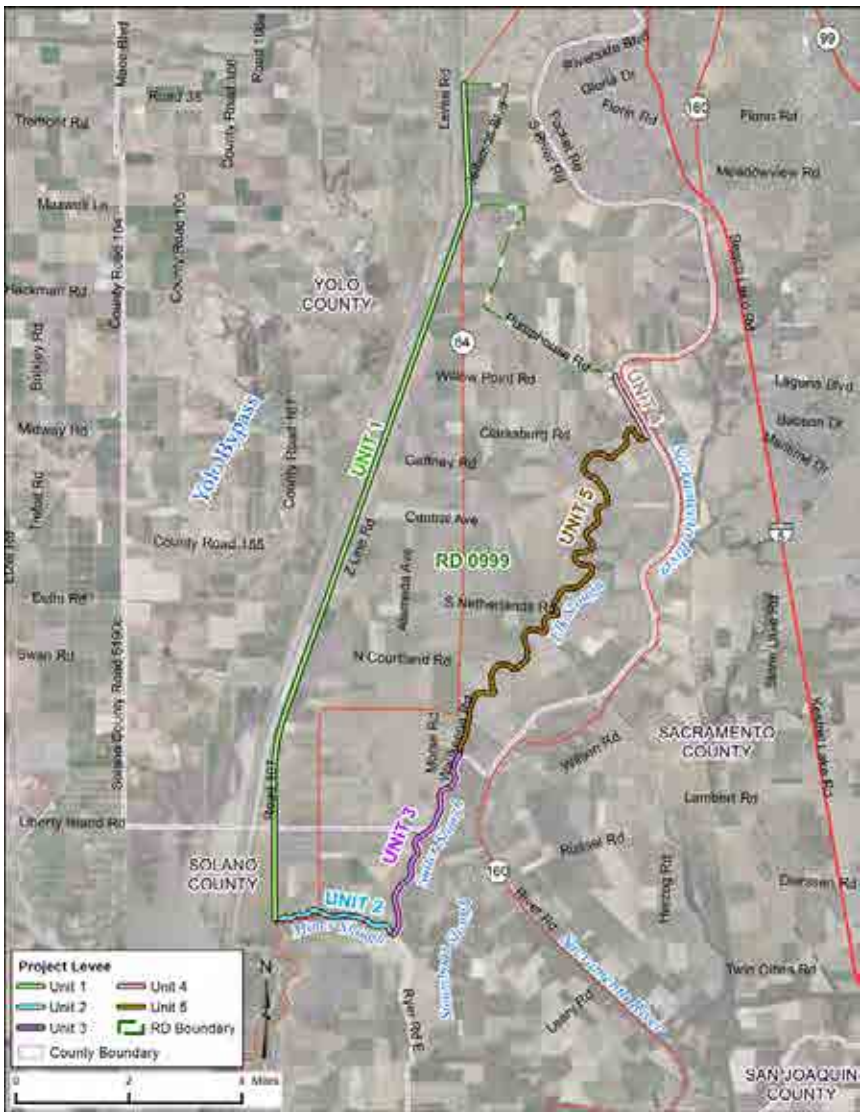
The Agency informed about Southport Sacramento River Early Implementation Project with a construction plan of adjacent levee and setback levee between RM 2.4 and 7.84.

# Reclamation District No. 0999
# Netherlands



## Yolo County

**Contact**
Stephen Heringer
President
District Office
38563 Netherlands Road
Clarksburg CA 95612-5003
Phone: (916) 775-2144




| Levee Short Name : RD0999 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Yolo Bypass | LB | 15.43 |
| Unit No. 02 Miner Slough | RB | 2.32 |
| Unit No. 03 Sutter Slough | RB | 3.74 |
| Unit No. 04 Sacramento River | RB | 1.22 |
| Unit No. 05 Elk Slough | RB | 9.66 |

## Threat Assessment & Recommendations

- The crown roadway in this Area may not be able to be driven in all types of weather.
- The LMA should ensure that the levee crown and access roads are able to be driven in all weather conditions.
- The LMA should enhance its rodent control program.
- The LMA should continue to maintain the area at the high level seen during the last Structure inspection.

## DWR Levee Inspection Summary

| RD0999 | Total LMA Miles | 32.37 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.54 | 0.05 | 0.74 | **2.29** | 0.46 | 0.06 | 0.70 | **2.16** | -0.08 | 0.01 | -0.04 | **-0.12** |
| Trim / Thin Trees | 2.64 | 0.17 | 3.32 | **10.26** | 1.37 | 0.02 | 1.45 | **4.48** | -1.27 | -0.15 | -1.87 | **-5.78** |
| Encroachments | 0.38 | 0.29 | 1.54 | **4.76** | 0.52 | | 0.52 | **1.61** | 0.14 | -0.29 | -1.02 | **-3.15** |
| Animal Control | 1.43 | | 1.43 | **4.42** | 1.44 | | 1.44 | **4.45** | 0.01 | | 0.01 | **0.03** |
| Slope Stability | | 0.03 | 0.12 | **0.37** | 0.03 | | 0.03 | **0.09** | 0.03 | -0.03 | -0.09 | **-0.28** |
| Erosion / Bank Caving | | | | | 0.01 | | 0.01 | **0.03** | 0.01 | | 0.01 | **0.03** |
| Crown Surface / Depressions / Rutting | 3.12 | 0.07 | 3.40 | **10.50** | 5.54 | | 5.54 | **17.12** | 2.42 | -0.07 | 2.14 | **6.61** |
| Repair Gates | 0.01 | | 0.01 | **0.03** | 0.01 | | 0.01 | **0.03** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.29 | | 0.29 | **0.90** | 0.07 | | 0.07 | **0.22** | -0.22 | | -0.22 | **-0.68** |
| *LMA Totals:* | 8.41 | 0.61 | 10.85 | **33.52** | 9.45 | 0.08 | 9.77 | **30.18** | 1.04 | -0.53 | -1.08 | **-3.34** |

RD 999

## DWR Structure Inspection Summary

| Structure Name | Overall Rating |
|---|---|
| Elk Slough Inlet Structure | A |

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Yolo Bypass, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| DWS_5-0_L | 0.00 | 4.85 | 4.86 | eroding | M |

### Unit No. 03 Sutter Slough, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| STR_24-7_R | 24.70 | 0.21 | 0.21 | eroding | M |
| STR_25-2_R | 25.20 | 0.96 | 0.96 | eroding | M |
| STR_25-7_R | 25.70 | 1.41 | 1.41 | eroding | M |
| STR_27-1_R | 27.10 | 2.85 | 2.85 | eroding new | M |
| STR_27-3_R | 27.30 | 3.03 | 3.03 | eroding | M |



### Unit No. 04 Sacramento River, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_41-9_R | 41.90 | 0.01 | 0.01 | eroding | M |

### Unit No. 05 Elk Slough, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| ELK_0-2_R | 0.20 | 0.02 | 9.47 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| West Sacramento - SacYolo South | 60.45 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report. The Agency also reported that past survey data is being used to locate and assess the pipes passing through the levees.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported large landside sloughing and cracks alongside crown road at Levee Unit 1, LM 3.63.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency reported a summary of maintenance activities for Levee Unit 1. The activities included encroachment control, inspection, patrolling, rodent baiting and trapping, seepage control, surveying and engineering, tree trimming, and vegetation mowing and spraying. The Agency reported additional inspections and patrols were conducted for all units on an as needed basis. The Agency also reported corrected and ongoing corrective actions in response to DWR inspection comments. The corrected actions included encroachment control, tree thinning and trimming, and vegetation control.



**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of clearing and shaping of landside and waterside slopes, encroachment control, environmental assessment, erosion repair, gate maintenance, inspection, office overhead, removal of drift deposits, debris and litter from the levees and berms, reestablishment of lost or vandalized levee station markers, roadway maintenance, rodent control, seepage control, surveying and engineering, and vegetation control. The reported total estimated cost for the current fiscal year is $415,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

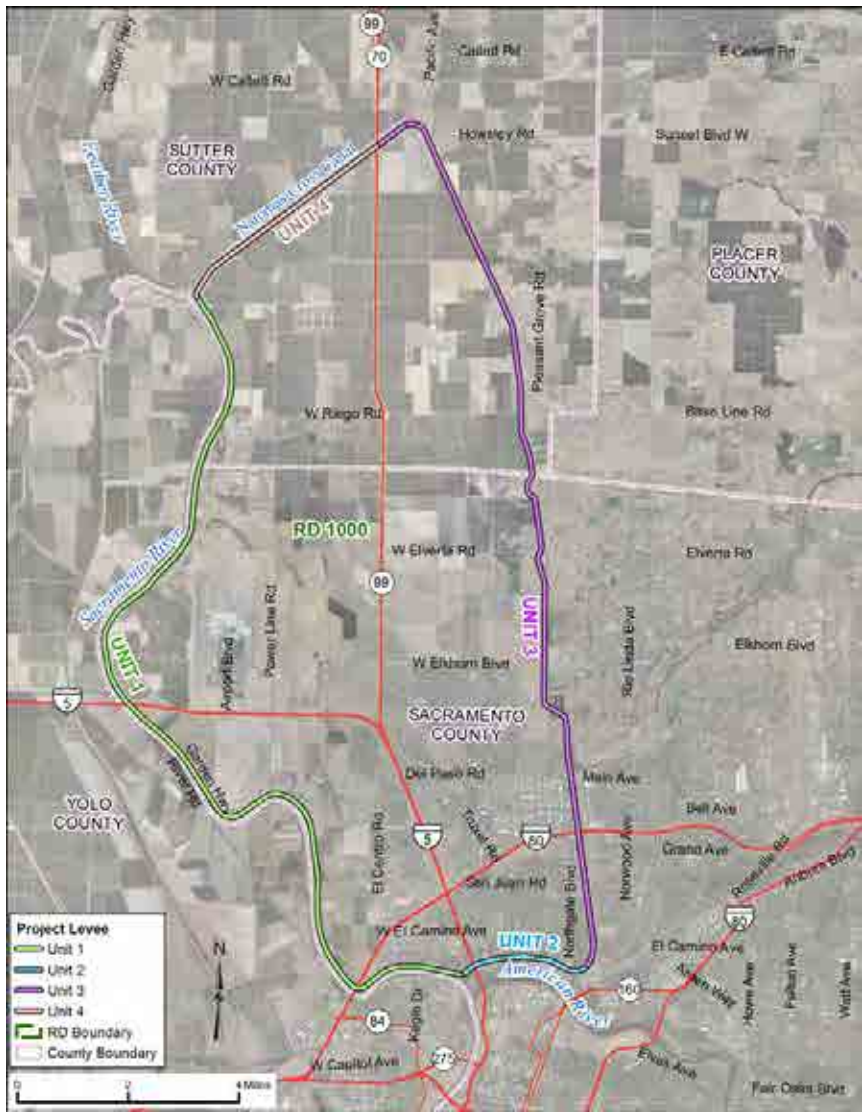
The Agency reported preparation of a Flood Safety Plan and a Five Year Maintenance Plan for Project Levees is in the process. The Agency also mentioned the renewal of a routine levee maintenance agreement with the California Department of Fish and Game.

# Reclamation District No. 1000
## Natomas



**Sacramento County**
**Sutter County**

**Contact**
Paul Devereux
General Manager
District Office
1633 Garden Highway
Sacramento CA 95833
Phone: (916) 922-1449




| Levee Short Name : RD1000 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | LB | 18.60 |
| Unit No. 02 American River | RB | 2.33 |
| Unit No. 03 Natomas East Canal | RB | 17.17 |
| Unit No. 04 Natomas Cross Canal | LB | 4.38 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| RD1000 | Total LMA Miles | 42.48 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.13 | | 0.13 | **0.31** | 0.01 | | 0.01 | **0.02** | -0.12 | | -0.12 | **-0.28** |
| Trim / Thin Trees | 0.02 | | 0.02 | **0.05** | | | | | -0.02 | | -0.02 | **-0.05** |
| Encroachments | 0.01 | | 0.01 | **0.02** | 0.01 | | 0.01 | **0.02** | | | | **0.00** |
| Slope Stability | 0.01 | | 0.01 | **0.02** | 0.01 | | 0.01 | **0.02** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.25 | | 0.25 | **0.59** | 0.10 | | 0.10 | **0.24** | -0.15 | | -0.15 | **-0.35** |
| *LMA Totals:* | 0.42 | 0.00 | 0.42 | **0.99** | 0.13 | 0.00 | 0.13 | **0.31** | -0.29 | 0.00 | -0.29 | **-0.68** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Sacramento River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_78-3_L | 78.30 | 0.51 | 0.61 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 1000 - Natomas | 41.71 | Inactive | 08/21/2012 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported berm erosion at Levee Unit 1, LM 16.2 to 16.4. The Agency identified historic seepage locations during high water at Levee Unit 1, LM 16.2 to 16.4 and at Levee Unit 2, LM 1.5 to 2. The Agency reported that a seepage berm would be placed at seepage location at Levee Unit 1 in 2013 by the District and Sacramento Area Flood Control Agency (SAFCA) as interim measure until Natomas Levee Improvement Project (NLIP) is completed. The Agency also reported that the observed seepage at Levee Unit 2 was flowing clear. The Agency mentioned encroachments limiting access and visibility on Levee Unit 1 at various locations.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported seepage at various locations at all Levee Units except portions of Units 1 and 4 and referred to a Geotechnical report that documents the underseepage problem for the area. The Agency also reported completion of levee improvements including construction of cutoff walls and seepage berms at portions of Units 1 and 4. The Agency noted a gap in the levee at Levee Unit 3 at Sankey Road crossing leading to a freeboard deficiency under 200-year flood. The Agency also identified insufficient freeboard for 200-year flood on Unit 1 under I-5 highway at various locations of Unit 3 as identified in a hydraulic study for SAFCA, and on Unit 4 at Natomas Mutual Water Company water intake facilities at Bennett and Northern pumping plants. The Agency also stated existing plans and desired solutions to get these freeboard deficiencies addressed in future through USACE.



**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units and the locations of these activities. Activities included encroachment control, erosion repair, gate repair, inspection, patrolling, roadway maintenance, rodent baiting and trapping, and vegetation grazing, mowing, spraying, and thinning and trimming. The Agency also reported removal of beaver dam on a regular basis along NEMDC at Unit 3. The Agency also reported corrected actions in response to DWR inspection comments. The corrected actions included encroachment control, levee slope repair, tree thinning and trimming, and vegetation control. The Agency reported the approximate total costs for operation and maintenance of the Project Levees for the previous fiscal year as $1,300,000.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided an estimate of total O&M cost and summary of maintenance activities for all levee units. Activities include encroachment control, erosion repair, gate repair, inspections, patrolling, roadway maintenance, removal of beaver dams, rodent baiting and trapping, and vegetation grazing, mowing, spraying, and thinning and trimming. The Agency referred to the approximate expenses of $1,300,000 for the previous fiscal year and stated that the expenses for the current fiscal year are likely to increase in future years as O&M of the NLIP improved levees also become District's responsibility.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency provided status of the NLIP that is being constructed by SAFCA with financial support from the State. The Purpose of NLIP is to provide 200-year flood protection to the Natomas basin. The Agency reported the plan and progress of ongoing works on Unit 1 and also reported plans for new construction of Units 2 and 3 pending authorization from the U.S. Congress.

# Reclamation District No. 1001
## Nicolaus



### Sutter County

**Contact**
Robert Scheiber
President
District Office
1959 Cornelius Avenue
Rio Oso CA 95674
Phone: (530) 656-2318

| Levee Short Name : RD1001 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Yankee Slough | RB | 4.17 |
| Unit No. 02 Yankee Slough | LB | 3.66 |
| Unit No. 03 Bear River | LB | 12.60 |
| Unit No. 04 Feather River | LB | 13.36 |
| Unit No. 05 Natomas Cross Canal | RB | 5.44 |
| Unit No. 06 East Side Canal | RB | 4.80 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD1001 | Total LMA Miles | 44.03 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 4.71 | | 4.71 | **10.70** | 20.66 | | 20.66 | **46.92** | 15.95 | | 15.95 | **36.23** |
| Trim / Thin Trees | | | | | 0.17 | | 0.17 | **0.39** | 0.17 | | 0.17 | **0.39** |
| Encroachments | 0.14 | 0.20 | 0.94 | **2.13** | 0.02 | | 0.02 | **0.05** | -0.12 | -0.20 | -0.92 | **-2.09** |
| Animal Control | 0.01 | | 0.01 | **0.02** | | | | | -0.01 | | -0.01 | **-0.02** |
| Slope Stability | 0.06 | | 0.06 | **0.14** | 0.05 | | 0.05 | **0.11** | -0.01 | | -0.01 | **-0.02** |
| Erosion / Bank Caving | | | | | 0.01 | | 0.01 | **0.02** | 0.01 | | 0.01 | **0.02** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 1.71 | | 1.71 | **3.88** | 1.94 | | 1.94 | **4.41** | 0.23 | | 0.23 | **0.52** |
| *LMA Totals:* | 6.63 | 0.20 | 7.43 | **16.87** | 22.85 | 0.00 | 22.85 | **51.90** | 16.22 | -0.20 | 15.42 | **35.02** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 02 Yankee Slough, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| YAS_1-7_L | 0.00 | 1.36 | 1.39 | eroding | M |

### Unit No. 03 Bear River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| BER_5-7_L | 5.70 | 7.21 | 7.30 | eroding | M |
| BER_2-5_L | 2.50 | 10.37 | 10.41 | eroding | M |
| BER_1-9_L | 1.90 | 11.09 | 11.17 | eroding | M |
| BER_0-8_L | 0.80 | 12.13 | 12.22 | eroding | M |

### Unit No. 04 Feather River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| FHR_6-6_L | 6.60 | 5.84 | 5.97 | eroding | M |
| FHR_6-0_L | 6.00 | 6.47 | 6.57 | eroding | M |
| FHR_5-8_L | 5.80 | 6.63 | 6.88 | eroding | M |
| FHR_5-0_L | 5.00 | 7.54 | 7.86 | eroding | M |
| FHR_3-8_L | 3.80 | 8.61 | 9.01 | eroding | M |
| FHR_1-0_L | 1.00 | 11.21 | 11.44 | eroding | M |
| FHR_0-6_L | 0.60 | 11.68 | 11.85 | eroding | M |

### Unit No. 05 Natomas Cross Canal, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| NCC_3-0_R | 0.00 | 2.31 | 2.31 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 1001 - Bear River and Yankee Slough | 13.47 | Active | | Pending |
| RD 1001 - Nicolaus, Feather River | 30.21 | Inactive | 04/13/2012 | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that elderberry bushes on Levee Units 1, 3, and 4 are partially blocking visibility at various locations. The Agency also mentioned that Endangered Species Act prevented elderberry bush control.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported waterside erosion caving near small pipe on upper slope portion at Unit 2, LM 1.34. The Agency also noted a landside levee slope and toe erosion at Levee Unit 4, LM 6.87 and a waterside levee erosion approximately 10' wide and 3' deep near toe of Levee Unit 4 at LM 9.65. The Agency reported that these issues are scheduled for repair prior to flood season.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units and the location of these activities. Activities included vegetation control at Levee Units 1, 2, 5, and 6 at the cost of $122,000 in the previous fiscal year. The Agency reported 415 feet Sacramento River Bank Protection Project at Levee Unit 4 for waterside erosion repair and another at Levee Unit 5, LM 1.5 at a cost of $517,000 for crack/slump repair on landside slopes.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**



The Agency provided a summary of expenses and maintenance activities planned for Levee Units 2 and 4 and the locations of these activities. Expenses include costs of roadway maintenance and erosion repair. The reported total estimated cost for the current fiscal year is $26,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported about the USACE Periodic Inspection, eligibility studies for Units 2-6, as-builts for repairs, and construction drawings for a completed project at Levee Unit 5.

# Reclamation District No. 1500
## Sutter Basin

### Sutter County



**Contact**
Scott Tucker
President
District Office
PO Box 96
Robbins CA 95676
Phone: (530) 738-4423

| Levee Short Name : RD1500 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | LB | 33.58 |
| Unit No. 02 Sutter Bypass | RB | 20.77 |

## Threat Assessment & Recommendations

- The crown roadway in this Area may not be able to be driven in all types of weather.
- The LMA should ensure that the levee crown and access roads are able to be driven in all weather conditions.
- The LMA should enhance its rodent control program.

## DWR Levee Inspection Summary

| RD1500 | Total LMA Miles | 54.35 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Trim / Thin Trees | 0.46 | | 0.46 | **0.85** | 0.01 | 0.01 | 0.05 | **0.09** | -0.45 | 0.01 | -0.41 | **-0.75** |
| Encroachments | 0.15 | | 0.15 | **0.28** | 0.10 | | 0.10 | **0.18** | -0.05 | | -0.05 | **-0.09** |
| Animal Control | 0.11 | | 0.11 | **0.20** | 0.54 | 0.02 | 0.62 | **1.14** | 0.43 | 0.02 | 0.51 | **0.94** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.02** | 0.04 | | 0.04 | **0.07** | 0.03 | | 0.03 | **0.06** |
| Cracking | | | | | 0.01 | | 0.01 | **0.02** | 0.01 | | 0.01 | **0.02** |
| Crown Surface / Depressions / Rutting | 0.02 | | 0.02 | **0.04** | 5.70 | | 5.70 | **10.49** | 5.68 | | 5.68 | **10.45** |
| Underseepage Relief Wells | | | | | | 0.01 | 0.04 | **0.07** | | 0.01 | 0.04 | **0.07** |
| *Concrete Floodwalls* | | | | | | | | | | | | |
| Underseepage Relief Wells | 0.01 | | 0.01 | **0.02** | | | | | -0.01 | | -0.01 | **-0.02** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.40 | | 0.40 | **0.74** | 0.10 | | 0.10 | **0.18** | -0.30 | | -0.30 | **-0.55** |
| *LMA Totals:* | 1.16 | 0.00 | 1.16 | **2.13** | 6.50 | 0.04 | 6.66 | **12.25** | 5.34 | 0.04 | 5.50 | **10.12** |

RD 1500

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Sacramento River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_86-3_L | 86.30 | 1.34 | 1.34 | eroding | M |
| SAC_87-1_L | 87.10 | 2.31 | 2.31 | eroding | M |
| SAC_92-8_L | 92.80 | 8.26 | 8.26 | eroding | M |
| SAC_95-8_L | 95.80 | 11.79 | 11.79 | eroding | M |
| SAC_96-2_L | 96.20 | 11.98 | 11.98 | eroding | M |
| SAC_99-0_L | 99.00 | 13.98 | 13.98 | eroding | M |
| SAC_103-4_L | 103.40 | 18.28 | 18.28 | removed | A/W |
| SAC_104-0_L | 104.00 | 18.38 | 18.38 | eroding | M |
| SAC_104-5_L | 104.50 | 19.16 | 19.16 | eroding | M |
| SAC_116-0_L | 116.00 | 30.60 | 30.60 | eroding | M |
| SAC_116-5_L | 116.50 | 30.94 | 30.94 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 1500 and Tisdale Bypass - Sutter Basin South | 59.22 | Inactive | 05/14/2012 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency provided a summary of integrity issues and their locations with corresponding suggestions and cost estimates of needed repair works. Integrity issues for Levee Unit 1 include boils at LM 13 and 18.25, dip in levee crown on paved road LM 9.18, erosion or sloughing at LM 2.37, 2.50, 8.75, 12.30, 12.64, 18.5, 31.6 to 32.2, and heavy seepage at LM 12.5 to 14.35 and 29.88. Integrity issues for Levee Unit 2 include sloughing at LM 1.50 to 1.55, boils at LM 10 to 10.7, 15.8 to 16, 18.5 to 19, and heavy seepage at LM 7.35 to 7.70 and 19.88 to 20.75.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency provided a summary of integrity issues and their locations with corresponding suggestions and cost estimates of needed repair works. Integrity issues for Levee Unit 1 include boils at LM 13 and 18.25, dip in levee crown on paved road LM 9.18, erosion or sloughing at LM 2.37, 2.50, 8.75, 12.30, 12.64, 18.5, 31.6 to 32.2, and heavy seepage at LM 12.5 to 14.35 and 29.88. Integrity issues for Levee Unit 2 include sloughing at LM 1.50 to 1.55, boils at LM 10 to 10.7, 15.8 to 16, 18.5 to 19 and heavy seepage at LM 7.35 to 7.70 and 19.88 to 20.75.



**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency reported that additional maintenance activities were conducted on Levee Unit 2 in addition to the regular annual maintenance. The reported additional activities included sinkhole repair at LM 0.85, and repair of damage from the root balls of blown over trees at LM 7, 8, 9, 10, and 12.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 1600
# Mull

## Yolo County



**Contact**
Kent Lang
President
District Office
21548 Old River Road
West Sacramento CA 95691
Phone: (916) 372-3884

| Levee Short Name : RD1600 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | RB | 10.51 |
| Unit No. 02 Yolo Bypass | LB | 4.22 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| RD1600 | Total LMA Miles | 14.73 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.85 | | 0.85 | **5.77** | 11.79 | | 11.79 | **80.04** | 10.94 | | 10.94 | **74.27** |
| Trim / Thin Trees | 0.01 | 0.01 | 0.05 | **0.34** | 0.01 | | 0.01 | **0.07** | | -0.01 | -0.04 | **-0.27** |
| Encroachments | 0.02 | | 0.02 | **0.14** | | | | | -0.02 | | -0.02 | **-0.14** |
| Erosion / Bank Caving | 0.73 | | 0.73 | **4.96** | 0.73 | 0.02 | 0.81 | **5.50** | | 0.02 | 0.08 | **0.54** |
| Crown Surface / Depressions / Rutting | 1.74 | | 1.74 | **11.81** | 0.01 | | 0.01 | **0.07** | -1.73 | | -1.73 | **-11.75** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.05 | | 0.05 | **0.34** | 0.05 | | 0.05 | **0.34** | | | | **0.00** |
| *LMA Totals:* | 3.40 | 0.01 | 3.44 | **23.35** | 12.59 | 0.02 | 12.67 | **86.01** | 9.19 | 0.01 | 9.23 | **62.66** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Sacramento River, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_71-3_R | 71.30 | 0.57 | 0.57 | eroding | M |
| SAC_74-4_R | 74.40 | 3.60 | 3.60 | eroding | M |
| SAC_75-3_R | 75.30 | 4.35 | 4.35 | eroding | M |
| SAC_77-0_R | 77.00 | 6.31 | 6.31 | eroding | M |
| SAC_77-7_R | 77.70 | 6.96 | 6.96 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 1600, 0827, 0785, and 0537 - SacYolo North | 32.06 | Partial Inactive | 10/01/2007 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported unauthorized encroachments at Levee Unit 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported giant erosion holes moving from river into levee at Levee Unit 1, LM 7.0, 7.13, and 7.27 and warned of a levee failure in next large flood event if unrepaired. The Agency also reported encroachments at Levee Unit 1. Additionally, the Agency stated that elderberry bushes exist at multiple locations at Levee Units 1 and 2 but cannot be removed due to California Fish and Game's regulations.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units and the location of these activities. Activities included pump maintenance, rodent baiting, and vegetation grazing and spraying.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of applications, contributions to other agencies, ditch cleaning, gate maintenance, insurance, legal, engineering and planning services, membership and office overhead, pump maintenance, roadway and levee repairs, and utilities. The reported total estimated cost for the current fiscal year is $83,600.



**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 1601
# Twitchell

## Sacramento County



**Contact**
Juan Mercado Jr
President
District Office
2360 West Twitchell Island Road
Rio Vista CA 94571
Phone: (916) 777-6992

| Levee Short Name : RD1601 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Threemile Slough | LB | 2.47 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.

## DWR Levee Inspection Summary

| RD1601 | Total LMA Miles | 2.47 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| No Items | | | | | | | | | | | | **0.00** |
| *LMA Totals:* | 0.00 | 0.00 | 0.00 | **0.00** | 0.00 | 0.00 | 0.00 | **0.00** | 0.00 | 0.00 | 0.00 | **0.00** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

RD 1601

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 1601 - Twitchell Island | 2.51 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided minimally acceptable to acceptable ratings for all inspected items.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided minimally acceptable to acceptable ratings for all inspected items.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency referred to Inspection Items/Corrective Action submitted for Summer 2012 Levee inspection report for a summary of maintenance activities. The Agency also reported corrected and ongoing corrective actions in response to DWR inspection comments. The corrective actions included crown surface depressions or rut repair, and vegetation control by chopping, pruning and spraying. The reported total annual routine maintenance cost for the previous fiscal year was $183,045.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency referred to the fiscal year 2012-2013 application to the Delta Levee Subventions Program for a summary of maintenance activities planned for 9.4 miles of Non-Project Levees and 2.5 miles of Project Levees. Activities include drain and toe ditch cleaning, encroachment control, erosion and subsidence repair, flood emergency planning, inspection, levee drainage control, levee profile and cross sections, management and accounting, program management, removal of drift deposits and debris, roadway grading and repair, rodent control, survey, vegetation control, and waterside slope protection. The reported anticipated maintenance budget for the current fiscal year is $190,000.



**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 1660
# Tisdale

## Sutter County

**Contact**
Andy Duffey
General Manager
District Office
PO Box 35
Meridian CA 95957
Phone: (530) 696-2569

| Levee Short Name : RD1660 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | LB | 3.00 |
| Unit No. 02 Sutter Bypass | RB | 9.14 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should repair locations where the levee slope may be unstable.

## DWR Levee Inspection Summary

| RD1660 | Total LMA Miles | 12.14 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Encroachments | 0.01 | | 0.01 | **0.08** | 0.01 | | 0.01 | **0.08** | | | | **0.00** |
| Animal Control | 0.13 | | 0.13 | **1.07** | | | | | -0.13 | | -0.13 | **-1.07** |
| Slope Stability | 0.05 | | 0.05 | **0.41** | 0.05 | | 0.05 | **0.41** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.08** | 0.03 | | 0.03 | **0.25** | 0.02 | | 0.02 | **0.17** |
| *LMA Totals:* | 0.20 | 0.00 | 0.20 | **1.65** | 0.09 | 0.00 | 0.09 | **0.74** | -0.11 | 0.00 | -0.11 | **-0.91** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Sacramento River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_120-6_L | 120.60 | 1.32 | 1.35 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0070 and RD 1660 - Sutter Basin North | 39.90 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units and the location of these activities. Activities included burning and dragging levee slopes, levee crown grading, patrolling, rodent control, thinning and trimming trees, and vegetation spraying.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided an estimated cost for all aspects of operation of the District for the current fiscal year as $250,000.

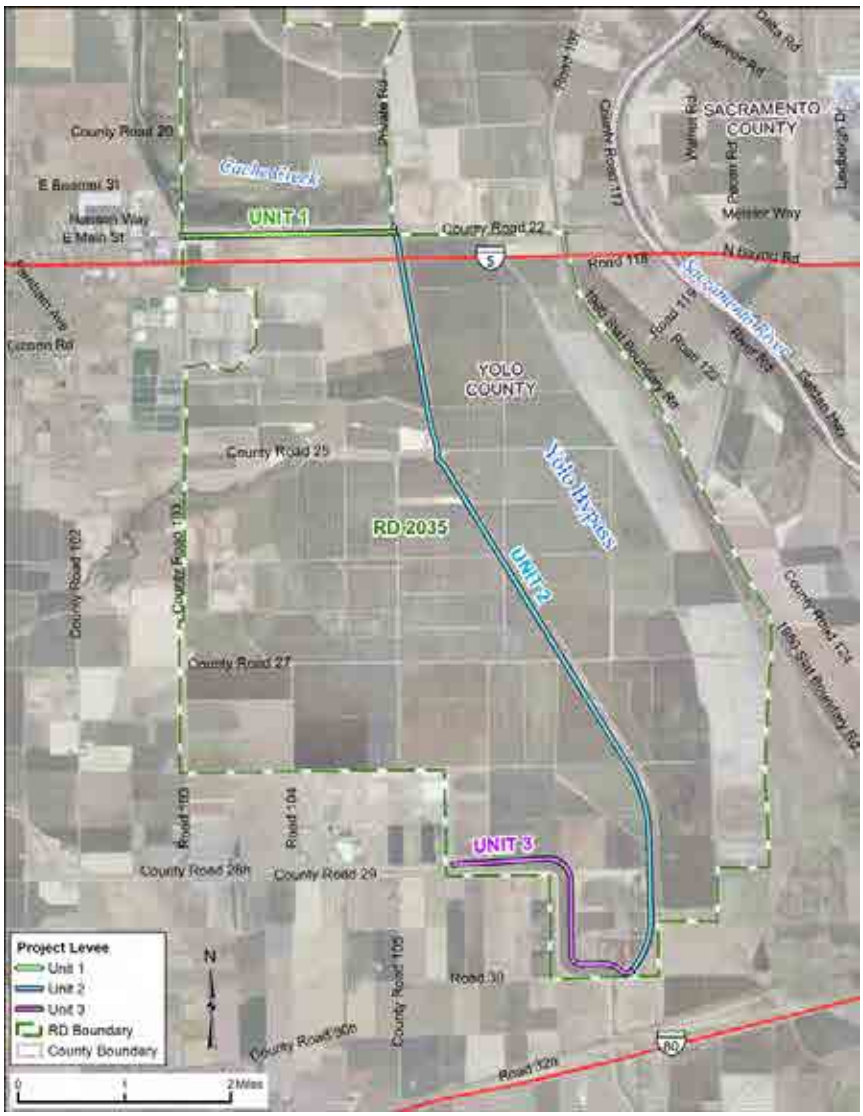
**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 2035
## Conaway

### Yolo County

**Contact**
Regina Cherovsky
President
District Office
45332 County Road 25
Woodland CA 95776
Phone: (530) 662-6200




| Levee Short Name : RD2035 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Cache Creek Settling Basin | RB | 2.01 |
| Unit No. 02 Yolo Bypass | RB | 7.57 |
| Unit No. 03 Willow Slough Bypass | LB | 2.51 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| RD2035 | Total LMA Miles | 12.09 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 2.54 | | 2.54 | **21.01** | | | | | -2.54 | | -2.54 | **-21.01** |
| Crown Surface / Depressions / Rutting | 0.01 | | 0.01 | **0.08** | | | | | -0.01 | | -0.01 | **-0.08** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.39 | | 0.39 | **3.23** | 1.27 | | 1.27 | **10.51** | 0.88 | | 0.88 | **7.28** |
| *LMA Totals:* | 2.94 | 0.00 | 2.94 | **24.32** | 1.27 | 0.00 | 1.27 | **10.51** | -1.67 | 0.00 | -1.67 | **-13.81** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 02 Yolo Bypass, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| YOL_0-1_R | 0.00 | 0.28 | 0.36 | eroding | M |
| YOL_1-2_R | 0.00 | 1.19 | 1.23 | eroding | M |
| YOL_2-0_R | 0.00 | 1.97 | 2.01 | eroding | M |
| YOL_2-3_R | 0.00 | 2.25 | 2.58 | eroding | M |
| YOL_2-8_R | 0.00 | 2.76 | 3.23 | eroding | M |
| YOL_4-2_R | 0.00 | 4.06 | 4.37 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Cache Creek - RD 2035 - Willow Bypass | 29.21 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

No information was provided by the Agency for Part 3.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 2060
## Hastings

### Solano County

**Contact**
Henry Kuechler III
President
District Office
1143 Crane Street # 200
Menlo Park CA 94025
Phone: (650) 328-0820

## SACRAMENTO SYSTEM : Reclamation District No. 2060 Hastings

| Levee Short Name : RD2060 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Lindsey Slough | LB | 6.94 |
| Unit No. 02 Ulatis Creek | RB | 3.70 |
| Unit No. 03 Cache Slough | RB | 5.03 |

### Threat Assessment & Recommendations

- There is erosion occurring in this Area that should be monitored.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| RD2060 | Total LMA Miles | 15.67 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | 0.11 | | 0.11 | **0.70** | 0.11 | | 0.11 | **0.70** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.06** | 0.01 | | 0.01 | **0.06** | | | | **0.00** |
| Cracking | | | | | | | | | | | | **0.00** |
| Repair Gates | 0.01 | | 0.01 | **0.06** | 0.01 | | 0.01 | **0.06** | | | | **0.00** |
| Operations & Maintenance Manuals | | | | | 0.16 | | 0.16 | **1.02** | 0.16 | | 0.16 | **1.02** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.63 | | 0.63 | **4.02** | 0.66 | | 0.66 | **4.21** | 0.03 | | 0.03 | **0.19** |
| *LMA Totals:* | 0.65 | 0.00 | 0.65 | **4.15** | 0.95 | 0.00 | 0.95 | **6.06** | 0.30 | 0.00 | 0.30 | **1.92** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Lindsey Slough, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| LDS_1-9_L | 1.90 | 1.86 | 1.86 | eroding | M |
| LDS_2-4_L | 2.40 | 2.44 | 2.44 | eroding | M |

### Unit No. 03 Cache Slough, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| CHS_23-6_R | 23.60 | 1.55 | 1.70 | eroding | M |
| CHS_23-0_R | 23.00 | 2.02 | 2.08 | eroding | M |
| CHS_22-8_R | 22.80 | 2.18 | 2.23 | eroding | M |
| CHS_22-6_R | 22.60 | 2.38 | 2.54 | eroding | M |
| CHS_21-1_R | 21.10 | 3.78 | 4.00 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2060 - Hastings Tract | 15.62 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the DWR Spring and Fall Inspection Reports for the latest information. The Spring 2012 Levee Inspection Report provided minimally acceptable to acceptable ratings for all inspected items for all levee units.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported seepage sites at Levee Unit 1, LM 0.6 to 0.75, 0.75 to 1.1, 2.2 to 2.25, 2.25 to 2.65, 3.6 to 3.65, and 3.67 and at Levee Unit 3, LM 2.83, 3.79 to 3.88, 4.50 to 4.60, and 5.09. The Agency also reported four erosion sites at Levee Unit 1, between LM 0.40 and 1.85 with larger erosion scallops located along the waterside berm at LM 1.45 to 1.55.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units and the locations of these activities. Activities included gates and signage maintenance and upkeep, levee crown roadway maintenance, livestock grazing, slope dragging, and vegetation burning. The Agency also reported corrected and ongoing corrective actions in response to DWR inspection comments. The corrected actions included grass and weed control along a reach on Unit 3.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of maintenance activities planned for all levee units. Activities include erosion repair, gate maintenance, inspection, roadway maintenance, slope dragging, and vegetation burning, grazing and mowing.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported that a Five Year Plan that includes project plans, district photographs, cross-sections, and maps has been prepared. The Agency also informed about the USACE Draft Periodic Inspection Report of Hastings Tract.

# Reclamation District No. 2068
# Yolano

## Solano County

**Contact**
Cliff Detar
President
District Office
7178 Yolano Road
Dixon CA 95620
Phone: (707) 678-5412

| Levee Short Name : RD2068 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Yolo Bypass | RB | 5.50 |
| Unit No. 02 Back Levee | LB | 3.23 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.

## DWR Levee Inspection Summary

| RD2068 | Total LMA Miles | 8.73 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.02 | | 0.02 | **0.23** | | | | | -0.02 | | -0.02 | **-0.23** |
| Animal Control | 0.99 | | 0.99 | **11.34** | | | | | -0.99 | | -0.99 | **-11.34** |
| *LMA Totals:* | 1.01 | 0.00 | 1.01 | **11.57** | 0.00 | 0.00 | 0.00 | **0.00** | -1.01 | 0.00 | -1.01 | **-11.57** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2068 and RD 2098 - Yolano-Cache Slough | 19.68 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that no impairments or compromising conditions to the flood protection or integrity of the levees were known to the Agency at the time of reporting.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that no impairments or compromising conditions to the flood protection or integrity of the levees were known to the Agency at the time of reporting.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units and the locations of these activities. Activities included gate and signage maintenance, inspection, levee crown maintenance, maintenance supervision, administration and services, and vegetation burning and spraying.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of erosion repair, gate and signage maintenance, inspections, maintenance supervision, administration and services, roadway maintenance, and vegetation burning and spraying. The reported total estimated cost for the current fiscal year is $49,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported that a Five Year Plan for District's maintenance activities has been prepared. The Agency also informed about the USACE Draft Periodic Inspection Report.

# Reclamation District No. 2098
## Cache and Haas Slough

### Solano County

**Contact**
Gregory Schmid
President
District Office
7178 Yolano Road
Dixon CA 95620
Phone: (707) 678-5412

| Levee Short Name : RD2098 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Yolo Bypass | RB | 3.58 |
| Unit No. 01A Cross Levee | RB | 0.55 |
| Unit No. 02 Cache Slough | LB | 2.01 |
| Unit No. 03 Haas Slough | RB | 1.89 |
| Unit No. 04 Back Levee | LB | 2.93 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should ensure that the capacity of the channel as designed and constructed is maintained.

## DWR Levee Inspection Summary

| RD2098 | Total LMA Miles | 10.96 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 3.29 | | 3.29 | **30.02** | 0.01 | | 0.01 | **0.09** | -3.28 | | -3.28 | **-29.93** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.09** | | | | | -0.01 | | -0.01 | **-0.09** |
| Erosion / Bank Caving | | | | | 0.04 | | 0.04 | **0.37** | 0.04 | | 0.04 | **0.37** |
| *Channels* | | | | | | | | | | | | |
| Shoaling / Sedimentation | | | | | 0.23 | | 0.23 | **2.10** | 0.23 | | 0.23 | **2.10** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.02 | | 0.02 | **0.18** | 0.02 | | 0.02 | **0.18** | | | | **0.00** |
| *LMA Totals:* | 3.32 | 0.00 | 3.32 | **30.29** | 0.30 | 0.00 | 0.30 | **2.74** | -3.02 | 0.00 | -3.02 | **-27.56** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 03 Haas Slough, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| HAS_7-9_L | 0.00 | 7.33 | 7.33 | eroding | M |

### Unit No. 04 Back Levee, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| HAS_9-7_L | 0.00 | 9.44 | 9.44 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2068 and RD 2098 - Yolano-Cache Slough | 19.68 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units and the locations of these activities. Activities included erosion repair, road improvements and maintenance, and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include the cost of erosion repair, gate and signage maintenance, inspections and patrols, road improvement and maintenance, and vegetation control. The reported total estimated cost for the current fiscal year is $59,500.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported that the Agency prepared a Five Year Plan that included maintenance planning and long-term operations of the levees maintained by the Agency. The Agency also informed about the USACE Periodic Inspection Report.

# Reclamation District No. 2103
## Wheatland Vicinity

**Placer County**
**Yuba County**

**Contact**
Dean Webb
President
1758 Oakley Lane
Wheatland CA 95692
Phone: (530) 633-4072

| Levee Short Name : RD2103 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 South Dry Creek | LB | 4.77 |
| Unit No. 02 Bear River | RB | 5.00 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD2103 | Total LMA Miles | 9.77 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Animal Control | 0.01 | | 0.01 | **0.10** | | | | | -0.01 | | -0.01 | **-0.10** |
| Flood Preparedness & Training | | | | | 0.10 | | 0.10 | **1.02** | 0.10 | | 0.10 | **1.02** |
| *LMA Totals:* | 0.01 | 0.00 | 0.01 | **0.10** | 0.10 | 0.00 | 0.10 | **1.02** | 0.09 | 0.00 | 0.09 | **0.92** |

RD 2103

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0817 and RD 2103 - City of Wheatland | 16.06 | Active | | N/A |
| RD 2103 - Grasshopper Slough | 1.07 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency identified beaver dams at Levee Unit 1. The Agency also reported excess channel vegetation and sediment accumulation for entire reach of Levee Unit 1 and 2 and noted roads and ramps need additional rock at Levee Unit 1 from LM 0.5 to 2. The Agency stated that DWR repaired a critical erosion site at Levee Unit 2 while the Agency repaired two areas of erosion concerns as part of the Bear River North Levee project in 2009 at Levee Unit 2, LM 0.6 to 0.8. The Agency also stated that the Bear River Levee Rehabilitation Project was completed in 2009 and the CVFPB accepted the project as complete in October 2010.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported presence of beaver and squirrel activities and insufficient freeboard throughout Levee Unit 1. The Agency identified beaver dams at Levee Unit 1. The Agency stated that DWR repaired a critical erosion site at Levee Unit 2 and the Agency repaired two areas of erosion concerns as part of the Bear River North Levee project in 2009 at Levee Unit 2, LM 0.6 to 0.8. The Agency also stated that the Bear River Levee Rehabilitation Project completed in 2009 has corrected all known deficiencies at Levee Unit 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of expenses and maintenance activities accomplished for all levee units. Activities included gate maintenance, rodent control, and vegetation control. The reported total expenses in the previous fiscal year was $13,900.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of roadway grading, rodent control, and vegetation control. The reported total estimated cost for the current fiscal year is $31,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported that Proposition 218 was passed in July 2010 which provides increased local funding for OMRR&R of the improved levee by up to $64,000 per year. The Agency also reported submitting Construction Documentation Report, Addendum to Supplemental Operation and Maintenance Manual, and Project Completion Reports to DWR and CVFPB on June, 2010.

# Reclamation District No. 2104
# Peters Pocket Tract

## Solano County

**Contact**
Ken Machado
President
33 North San Pedro Street
San Jose CA 95110
Phone: (408) 280-7577

| Levee Short Name : RD2104 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Cache Slough | LB | 7.40 |

## Threat Assessment & Recommendations

- The crown roadway in this Area may not be able to be driven in all types of weather.
- The LMA should ensure that the levee crown and access roads are able to be driven in all weather conditions.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD2104 | Total LMA Miles | 7.40 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 15.86 | 1.64 | 22.42 | **302.97** | 15.85 | 1.60 | 22.25 | **300.68** | -0.01 | -0.04 | -0.17 | **-2.30** |
| Trim / Thin Trees | 0.05 | 0.05 | 0.25 | **3.38** | 0.05 | | 0.05 | **0.68** | | -0.05 | -0.20 | **-2.70** |
| Encroachments | 0.01 | | 0.01 | **0.14** | 0.01 | | 0.01 | **0.14** | | | | **0.00** |
| Erosion / Bank Caving | 0.05 | | 0.05 | **0.68** | 0.06 | | 0.06 | **0.81** | 0.01 | | 0.01 | **0.14** |
| Crown Surface / Depressions / Rutting | 2.19 | | 2.19 | **29.60** | 10.35 | 6.00 | 34.35 | **464.19** | 8.16 | 6.00 | 32.16 | **434.59** |
| Operations & Maintenance Manuals | | | | | 0.07 | | 0.07 | **0.95** | 0.07 | | 0.07 | **0.95** |
| Emergency Supplies & Equipment | | | | | 0.07 | | 0.07 | **0.95** | 0.07 | | 0.07 | **0.95** |
| Flood Preparedness & Training | | | | | 0.07 | | 0.07 | **0.95** | 0.07 | | 0.07 | **0.95** |
| *LMA Totals:* | 18.16 | 1.69 | 24.92 | **336.76** | 26.54 | 7.60 | 56.94 | **769.46** | 8.38 | 5.91 | 32.01 | **432.70** |

RD 2104

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2104 - Peters Pocket | 6.83 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that no new conditions were noted other than what is stated in the Spring 2012 Levee Inspection Report. The Spring 2012 Inspection Report provided an unacceptable rating for vegetation on levee slopes and crown.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that no new conditions were noted other than what is stated in the Spring 2012 Levee Inspection Report. The Spring 2012 Inspection Report provided an unacceptable rating for vegetation on levee slopes and crown.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units. Activities included cleaning, grazing, and mowing of levees, tree trimming, and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of grazing and mowing of levees, rodent control, and vegetation control. The reported total estimated cost for the current fiscal year is $500.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# American River Flood Control District

## Sacramento County

**Contact**
Karolyn Simon
President
165 Commerce Circle Suite D
Sacramento CA 95815
Phone: (916) 929-4006

UNIT 11
UNIT 8
UNIT 1
UNIT 2
UNIT 3
UNIT 4
UNIT 5
UNIT 6
UNIT 7
AMERICAN RIVER FLOOD CONTROL DISTRICT
SACRAMENTO COUNTY
Project Levee
Unit 1
Unit 2
Unit 3
Unit 4
Unit 5
Unit 6
Unit 7
Unit 8
Unit 11
FCD Boundary
County Boundary

AMERICAN RIVER FLOOD CONTROL DISTRICT
SACRAMENTO COUNTY
UNIT 8
Structure
Project Levee
Unit 8
FCD Boundary
County Boundary

AMERICAN RIVER FLOOD CONTROL DISTRICT
SACRAMENTO COUNTY
UNIT 10
American River Pumping Plant No. 2
Structure
Project Levee
Unit 10
FCD Boundary
County Boundary

## Levee Short Name : NA0001

| | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Arcade Creek | LB | 2.10 |
| Unit No. 02 Natomas E Canal | LB | 3.95 |
| Unit No. 03 American River | RB | 2.78 |
| Unit No. 04 American River | LB | 10.97 |
| Unit No. 05 Sacramento River | LB | 0.40 |
| Unit No. 06 Linda Creek | LB | 1.30 |
| Unit No. 07 Arcade Creek | RB | 1.92 |
| Unit No. 08 Magpie Creek Diversion | LB | 1.43 |
| Unit No. 09 American River | RB | 4.32 |
| Unit No. 10 American River | RB | 3.34 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should work with landowners and the CVFPB to control unauthorized encroachments.

## DWR Levee Inspection Summary

| NA0001 | Total LMA Miles | 32.51 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.04 | | 0.04 | **0.12** | 0.06 | | 0.06 | **0.19** | 0.02 | | 0.02 | **0.06** |
| Encroachments | 0.31 | | 0.31 | **0.95** | 0.20 | | 0.20 | **0.62** | -0.11 | | -0.11 | **-0.34** |
| Animal Control | 0.27 | | 0.27 | **0.83** | 0.20 | | 0.20 | **0.62** | -0.07 | | -0.07 | **-0.22** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.03** | 0.01 | | 0.01 | **0.03** |
| Erosion / Bank Caving | 0.06 | | 0.06 | **0.19** | 0.03 | | 0.03 | **0.09** | -0.03 | | -0.03 | **-0.09** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.02 | | 0.02 | **0.06** | 0.01 | | 0.01 | **0.03** | -0.01 | | -0.01 | **-0.03** |
| *LMA Totals:* | 0.70 | 0.00 | 0.70 | **2.15** | 0.51 | 0.00 | 0.51 | **1.57** | -0.19 | 0.00 | -0.19 | **-0.58** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 04 American River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| LAR_1-8_L | 1.80 | 1.62 | 1.62 | eroding new | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| American River FCD - American R right bank, NEMDC | 14.09 | Active | 09/10/2010 | M |
| American River FCD - Dry Cr, NEMDC, Arcade Cr | 7.08 | Active | 09/10/2010 | M |
| American River FCD - Dry Creek right bank, Unit 11 | 1.59 | Active | 09/10/2010 | M |
| MA 09 - City of Sacramento - American R left bank | 35.27 | Inactive | 08/21/2012 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for Levee Units 1, 3A, 3B, 5, 6, 7, 8, 9, 10 and 11. Activities included gate maintenance and repair, minor erosion areas identification and repair, rodent control, routine levee inspections, and vegetation control. The Agency also reported corrected or ongoing corrective actions for all levee units in response to DWR inspection comments. The corrected actions included encroachment, rodent and vegetation controls. Reported total expenditure for the levee units was $1,231,000 in fiscal year 2011-2012.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and planned maintenance activities for all levee units. Expenses include costs of encroachment control, gate maintenance and repair, minor erosion identification and repair, rodent control, weekly routine levee inspections, and vegetation control. The reported total estimated cost for the current fiscal year for all levee units is $1,611,850.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported USACE's bank protection work at Levee Unit 4, LM 9.74. The Agency also mentioned about the City of Sacramento Bridge rebuilt at Norwood Ave and associated CVFPB Permit.

# Brannan Andrus Levee Maintenance District

## Solano County

**Contact**
Larry L Gardiner
President
District Office
PO Box 338
Walnut Grove CA 95690
Phone: (916) 425-1571

| Levee Short Name : NA0002 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Georgiana Slough | RB | 6.02 |
| Unit No. 02 Sacramento River | LB | 13.30 |

## Threat Assessment & Recommendations

- There is erosion occurring in this Area that should be monitored.
- The LMA should focus on repairing erosion sites.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| NA0002 | Total LMA Miles | 19.32 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.36 | 0.01 | 0.40 | **2.07** | 0.41 | | 0.41 | **2.12** | 0.05 | -0.01 | 0.01 | **0.05** |
| Trim / Thin Trees | 1.04 | | 1.04 | **5.38** | 0.61 | | 0.61 | **3.16** | -0.43 | | -0.43 | **-2.23** |
| Encroachments | 0.04 | | 0.04 | **0.21** | 0.03 | | 0.03 | **0.16** | -0.01 | | -0.01 | **-0.05** |
| Animal Control | 0.01 | | 0.01 | **0.05** | 0.01 | | 0.01 | **0.05** | | | | **0.00** |
| Flood Preparedness & Training | | | | | 0.19 | | 0.19 | **0.98** | 0.19 | | 0.19 | **0.98** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 1.08 | 0.25 | 2.08 | **10.77** | 0.60 | 0.50 | 2.60 | **13.46** | -0.48 | 0.25 | 0.52 | **2.69** |
| *LMA Totals:* | 2.53 | 0.26 | 3.57 | **18.48** | 1.85 | 0.50 | 3.85 | **19.93** | -0.68 | 0.24 | 0.28 | **1.45** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 02 Sacramento River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_18-1_L | 18.10 | 2.59 | 2.63 | eroding | M |
| SAC_18-0_L | 18.00 | 2.66 | 2.74 | eroding | M |
| SAC_17-2_L | 17.20 | 3.40 | 3.57 | critical | U |
| SAC_16-8_L | 16.80 | 3.61 | 3.72 | critical | U |
| SAC_15-0_L | 15.00 | 5.68 | 5.73 | eroding | M |
| SAC_13-6_L | 13.60 | 6.97 | 7.03 | eroding | M |
| SAC_12-1_L | 12.10 | 8.26 | 8.50 | eroding | M |
| SAC_11-2_L | 11.20 | 8.95 | 9.17 | critical | U |
| SAC_10-8_L | 10.80 | 9.85 | 9.98 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Brannan-Andrus LMD - RD 0556 | 27.48 | Inactive | 01/18/2008 | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported waterside erosions at Levee Unit 2, LM 2.91, 3.43, 3.64, and 4.48 and pointed out a need for revetment repairs. The Agency also reported revetment settlement and loss at Levee Unit 2 at LM 2.81 and 6.05.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported minor crown subsidence and PL 84-99 crown elevation deficiency at various locations at Mokelumne River Station 114+00 to 150+00.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency referred to fiscal year 2011-2012 application to the Delta Subventions Program for the information. The 2011-2012 application provided a summary of estimated cost and maintenance activities for all levee units. Activities included costs of administration, cleaning ditches, engineering and geotechnical studies, erosion repairs, removal of berm deposits, slope protection, roadway maintenance, rodent repairs, seepage control, underwater surveys, and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency referred to the fiscal year 2012-2013 application to the Delta Subventions Program for a summary of planned maintenance activities for 10.08 miles of Non-Project Levees and 19.32 miles of Project Levees. Expenses include costs of administration, cleaning ditches, engineering and geotechnical services, encroachment control, erosion repairs, levee profile and cross sections, rodent repairs, seepage and boils control, shaping levee crown to drain, underwater surveys, vegetation control, and waterside slope protection. The reported total estimated cost for the planned routine maintenance for the current fiscal year is $1,064,500.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

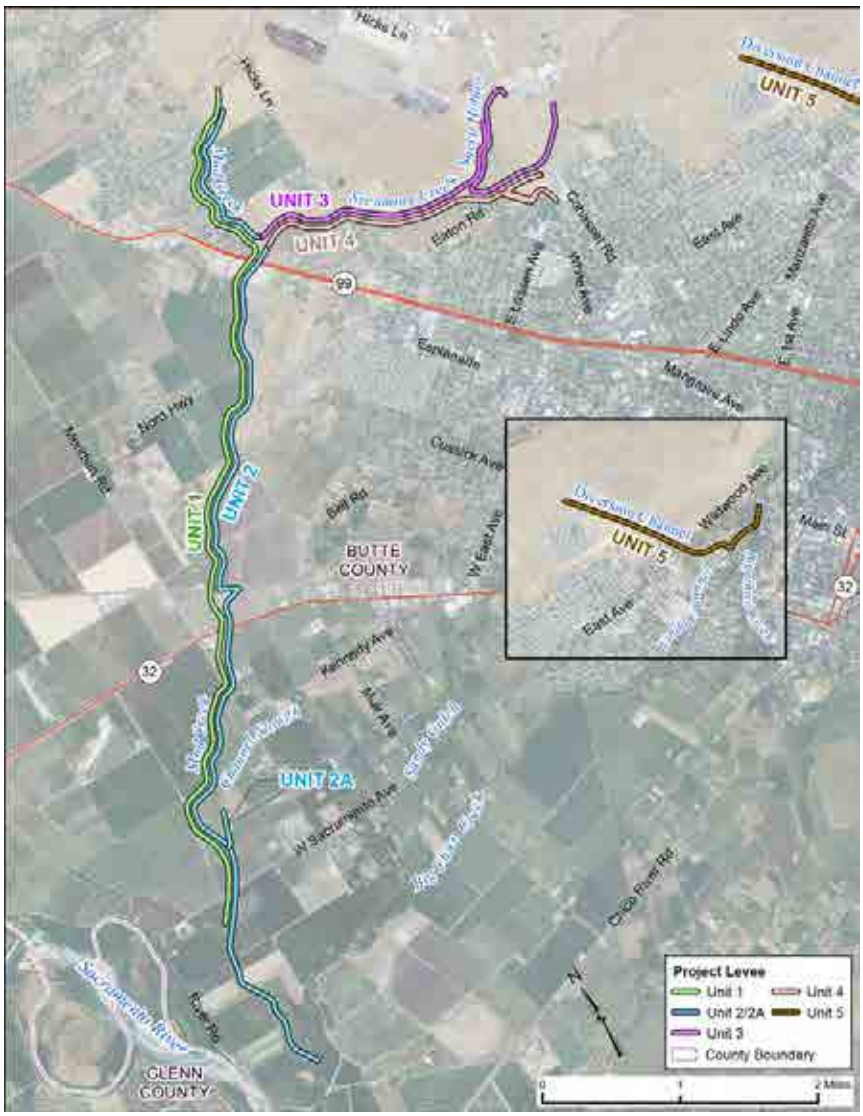
The Agency referred to the USACE Periodic Inspection Report for information.

# Butte County Public Works Department

## Butte County

**Contact**
Mike Crump
Director
Agency Office
7 County Center Drive
Oroville CA 95965-3397
Phone: (530) 538-7681

## SACRAMENTO SYSTEM : Butte County Public Works Department




| Levee Short Name : NA0003 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Mud Creek | RB | 7.29 |
| Unit No. 02 Mud Creek | LB | 8.20 |
| Unit No. 02A Channel Slough | LB | 0.30 |
| Unit No. 03 Sycamore and Sheep Hollow Creeks | RB | 4.13 |
| Unit No. 04 Sycamore and Dry Creeks | RB | 2.94 |
| Unit No. 05 Big Chico Diversion | LB | 1.85 |

### Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should focus on repairing erosion sites.
- The LMA should continue to maintain the area at the high level seen during the last Structure inspection.

## DWR Levee Inspection Summary

| NA0003 | Total LMA Miles | 24.71 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Encroachments | 0.05 | | 0.05 | **0.20** | 0.05 | | 0.05 | **0.20** | | | | **0.00** |
| Animal Control | 0.04 | | 0.04 | **0.16** | | | | | -0.04 | | -0.04 | **-0.16** |
| Slope Stability | 0.01 | | 0.01 | **0.04** | 0.01 | | 0.01 | **0.04** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.04** | 0.05 | | 0.05 | **0.20** | 0.04 | | 0.04 | **0.16** |
| *LMA Totals:* | 0.11 | 0.00 | 0.11 | **0.45** | 0.11 | 0.00 | 0.11 | **0.45** | 0.00 | 0.00 | 0.00 | **0.00** |

## DWR Structure Inspection Summary

| Structure Name | Overall Rating |
|---|---|
| Big Chico Creek Diversion Structure | A |
| Lindo Channel Control Structure | A |
| Lindo Channel Diversion Weir | A |

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Mud Creek, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| MUD_4-4_R | 0.00 | 4.32 | 4.37 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Chico Creek-Mud Creek - Unit 1 | 6.80 | Active | | U |
| Chico Creek-Mud Creek - Unit 3 east, Sycamore rt | 1.87 | Active | | U |
| Chico Creek-Mud Creek - Unit 4 east, Sycamore left | 0.71 | Active | | U |
| Chico Creek-Mud Creek - Unit 5, diversion levee | 1.80 | Active | | U |
| Chico Creek-Mud Creek - Units 2 north and 3 | 3.35 | Active | | U |
| Chico Creek-Mud Creek - Units 2 south and 4 | 9.23 | Active | | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported normal levee maintenance operations and timely repair of any damaged areas by the County and stated that there was no new information to report. The Agency also reported that ongoing sediment accumulation is reducing system capacity.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported normal levee maintenance operations and timely repair of any damaged areas by the County and stated that there was no new information to report. The Agency also reported that ongoing sediment accumulation is reducing system capacity.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

No information was provided by the Agency for Part 3.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency reported normal O&M activities planned for the levees and structures in compliance with O&M manual for Chico Creek, Mud Creek, and Sandy Gulch for the current fiscal year. The reported total estimated O&M cost for the current fiscal year is $150,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

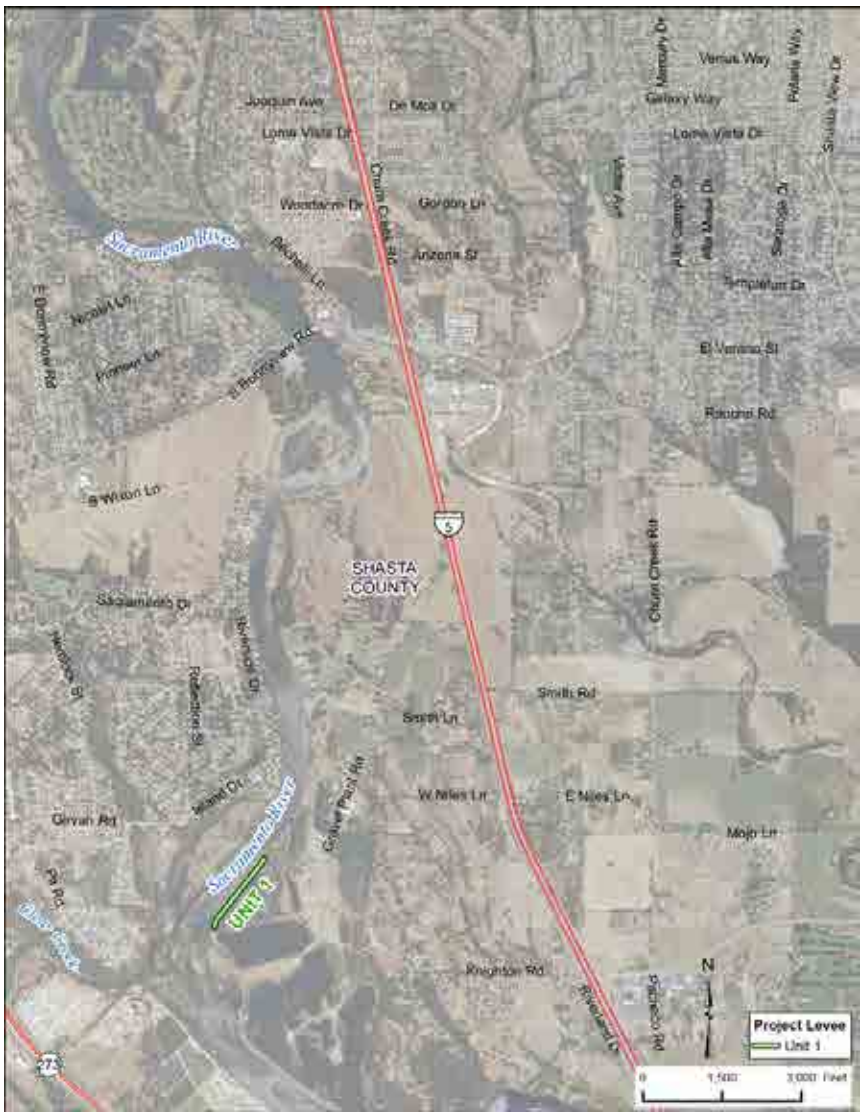
The Agency reported construction plans, Design Memorandum Number 5, and O&M manual for the system are on file with the Butte County Public Works.

# California Department of Fish and Game
# Shea Levee

## Shasta County

**Contact**
Tony Roblaz
Fish Habitat Supervisor
1760 Bidwell Street
Red Bluff CA 96080
Phone: (530) 528-9406

## SACRAMENTO SYSTEM : California Department of Fish and Game Shea Levee




| Levee Short Name : NA0018 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | LB | 0.30 |

### Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| NA0018 | Total LMA Miles | 0.30 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.09 | | 0.09 | **30.00** | 0.22 | | 0.22 | **73.33** | 0.13 | | 0.13 | **43.33** |
| Trim / Thin Trees | | | | | 0.14 | | 0.14 | **46.67** | 0.14 | | 0.14 | **46.67** |
| Flood Preparedness & Training | | | | | 0.00 | | | | 0.00 | | | **0.00** |
| *LMA Totals:* | 0.09 | 0.00 | 0.09 | **30.00** | 0.36 | 0.00 | 0.36 | **120.00** | 0.27 | 0.00 | 0.27 | **90.00** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency stated no activities at the time of reporting.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported that there was no new information to report.

# City of Sacramento

## Sacramento County

**Contact**
Dave Brent
Director
Department Of Utilities
5730 24th Street
Sacramento CA 95822
Phone: (916) 808-6955

| Levee Short Name : NA0005 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 City of Sacramento | LB | 3.63 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should focus on repairing erosion sites.
- The LMA should continue to maintain the area at the high level seen during the last Structure inspection.
- The LMA should ensure that the SPFC structure is able to perform as designed and constructed.

## DWR Levee Inspection Summary

| NA0005 | Total LMA Miles | 3.63 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.15 | | 0.15 | **4.13** | 0.12 | | 0.12 | **3.31** | -0.03 | | -0.03 | **-0.83** |
| *LMA Totals:* | 0.15 | 0.00 | 0.15 | **4.13** | 0.12 | 0.00 | 0.12 | **3.31** | -0.03 | 0.00 | -0.03 | **-0.83** |

## DWR Structure Inspection Summary

| Structure Name | Overall Rating |
|---|---|
| El Camino Avenue Bridge | A |
| Magpie Creek Pumping Plant | A |

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 City of Sacramento, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_58-5_L | 58.50 | 1.32 | 1.39 | eroding | M |
| SAC_56-6_L | 56.60 | 2.84 | 2.89 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| MA 09 - City of Sacramento - American R left bank | 35.27 | Inactive | 08/21/2012 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported availability of as-built drawings of Sacramento River slurry wall, revetment, relief wells, piezometers, and Old Sacramento floodwalls. The Agency informed that relief wells were installed by USACE. The Agency reported on the existing miscellaneous facilities such as buildings, landscaping, and museum at Levee Unit 1 and provided their locations. The Agency also reported erosion near the toe of Levee Unit 1, LM 1.71.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that no known conditions exist that might impair or compromise level of flood protection.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency reported corrected and ongoing corrective actions in response to DWR inspection comments for all levee units. The corrected actions included encroachment control, tree thinning and trimming, and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of minor structure repairs, roadway maintenance, rodent control, and vegetation control. The reported total estimated cost for the current fiscal year is $357,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that USACE has decertified MA 09- City of Sacramento, American Levee Left Bank Levee System on two infractions. The Agency referred to the acceptable status of the maintained Levee Unit in DWR's Annual Inspection Report and suggested that the Unit should be eligible for PL84-99 rehabilitation assistance.

# Eastern Honcut Creek

## Yuba County

**Contact**
No Contact Information Available

| Levee Short Name : NA0006 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Van Tress | LB | 1.50 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| NA0006 | Total LMA Miles | 1.50 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 2.94 | | 2.94 | **196.00** | 2.94 | | 2.94 | **196.00** | | | | **0.00** |
| Crown Surface / Depressions / Rutting | 0.67 | | 0.67 | **44.67** | | | | | -0.67 | | -0.67 | **-44.67** |
| Operations & Maintenance Manuals | | | | | 0.02 | | 0.02 | **1.33** | 0.02 | | 0.02 | **1.33** |
| Flood Preparedness & Training | | | | | 0.02 | | 0.02 | **1.33** | 0.02 | | 0.02 | **1.33** |
| *LMA Totals:* | 3.61 | 0.00 | 3.61 | **240.67** | 2.97 | 0.00 | 2.97 | **198.00** | -0.64 | 0.00 | -0.63 | **-42.67** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Honcut Creek Area - Eastern | 1.45 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

No information was provided by the Agency for Part 3.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Knights Landing Ridge Drainage District

## Yolo County

**Contact**
Lewis Bair
Manager
PO Box 50
Grimes CA 95950
Phone: (530) 437-2221

| Levee Short Name : NA0008 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Knights Landing Ridge Cut | RB | 6.43 |
| Unit No. 02 Knights Landing Ridge Cut | LB | 6.14 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should work with landowners and the CVFPB to control unauthorized encroachments.

## DWR Levee Inspection Summary

| NA0008 | Total LMA Miles | 12.57 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | 0.01 | | 0.01 | **0.08** | 0.01 | | 0.01 | **0.08** |
| Encroachments | 0.24 | | 0.24 | **1.91** | 0.24 | | 0.24 | **1.91** | | | | **0.00** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.08** | 0.01 | | 0.01 | **0.08** |
| Cracking | 0.01 | | 0.01 | **0.08** | 0.01 | | 0.01 | **0.08** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.07 | | 0.07 | **0.56** | 0.07 | | 0.07 | **0.56** | | | | **0.00** |
| *LMA Totals:* | 0.32 | 0.00 | 0.32 | **2.55** | 0.34 | 0.00 | 0.34 | **2.71** | 0.02 | 0.00 | 0.02 | **0.16** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Knights Landing Ridge Cut, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| KLR_3-5_R | 0.00 | 3.36 | 3.36 | eroding | M |
| KLR_3-9_R | 0.00 | 3.88 | 3.88 | eroding | M |

### Unit No. 02 Knights Landing Ridge Cut, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| KLR_3-0_L | 0.00 | 2.72 | 2.72 | eroding | M |
| KLR_3-1_L | 0.00 | 3.01 | 3.01 | eroding | M |
| KLR_3-7_L | 0.00 | 3.61 | 3.61 | eroding | M |
| KLR_4-7_L | 0.00 | 4.35 | 4.35 | eroding | M |
| KLR_5-8_L | 0.00 | 5.37 | 5.37 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Cache Crk U1 - Yolo Bypass U2 - Knights Landing U1 | 19.49 | Active | | N/A |
| Knights Landing U2 - Yolo Bypass - Service Area 6 | 15.19 | Inactive | 11/21/2011 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that the conditions did not vary from the previous inspections. The 2012 Spring Inspection Report provided unacceptable rating for encroachment at Levee Unit 2, LM 6.05 to 6.12.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that the conditions did not vary from the previous inspections. The 2012 Spring Inspection Report provided unacceptable rating for encroachment at Levee Unit 2, LM 6.05 to 6.12.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all the levee units. Activities included patrolling, roadway maintenance, rodent baiting and monitoring, slope dragging, vegetation burning, clearing, and spraying. The Agency also provided the total maintenance cost for the previous fiscal year as $23,841.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of patrolling, roadway maintenance, rodent control, and vegetation control. The reported total estimated cost for the current fiscal year is $44,000.

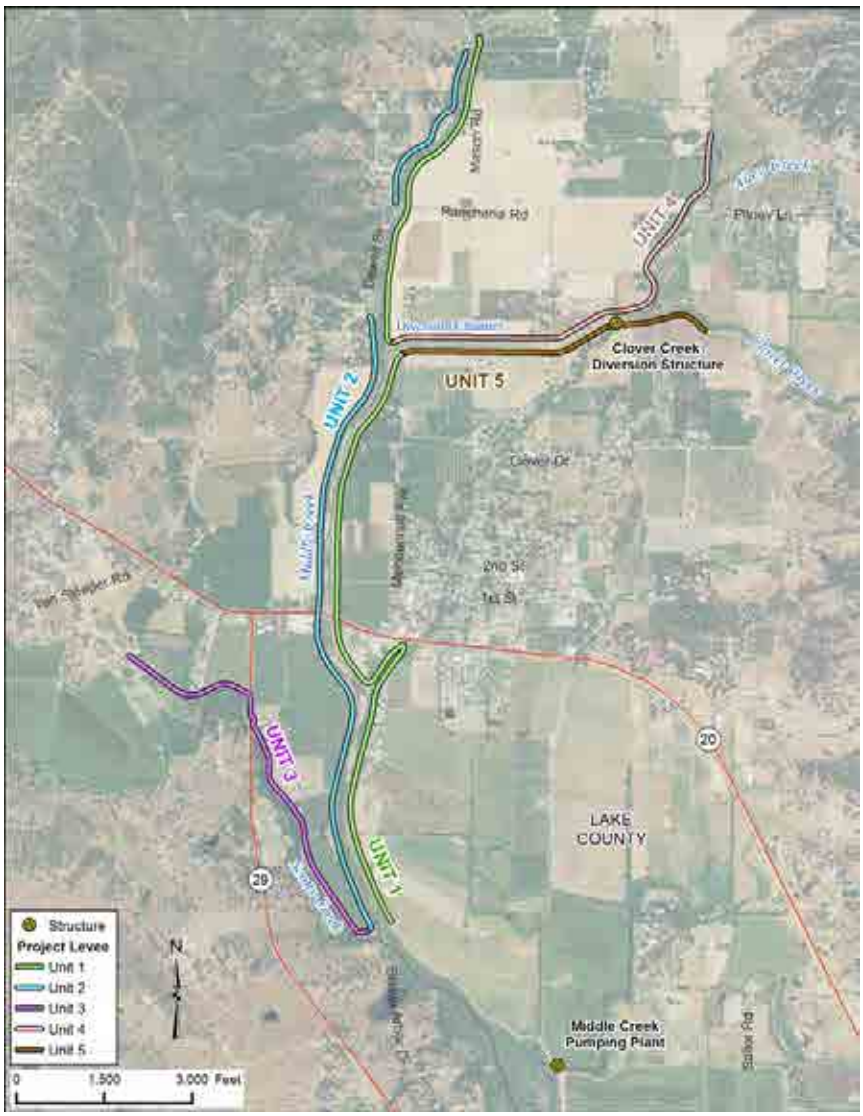
**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Lake County Watershed Protection District

## Lake County

**Contact**
Scott De Leon
Director
Lake County Water Resources Department
255 North Forbes Street # 309
Lakeport CA 95453
Phone: (707) 263-2344




| Levee Short Name : NA0009 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Middle Creek | LB | 3.42 |
| Unit No. 02 Middle Creek | RB | 3.13 |
| Unit No. 03 Scotts Creek | LB | 1.35 |
| Unit No. 04 Poge, Alley and Clover Creek Diversion | RB | 1.53 |
| Unit No. 05 Clover Creek and Clover Creek Diversion | LB | 1.04 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- A SPFC structure in this Area has conditions that may significantly impact its performance.
- The LMA should ensure that the SPFC structure is able to perform as designed and constructed.

## DWR Levee Inspection Summary

| NA0009 | Total LMA Miles | 10.47 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.20 | | 0.20 | **1.91** | 0.27 | | 0.27 | **2.58** | 0.07 | | 0.07 | **0.67** |
| Trim / Thin Trees | 0.13 | | 0.13 | **1.24** | 0.13 | | 0.13 | **1.24** | | | | **0.00** |
| Encroachments | 0.04 | | 0.04 | **0.38** | 0.01 | | 0.01 | **0.10** | -0.03 | | -0.03 | **-0.29** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.10** | 0.01 | | 0.01 | **0.10** |
| *LMA Totals:* | 0.37 | 0.00 | 0.37 | **3.53** | 0.42 | 0.00 | 0.42 | **4.01** | 0.05 | 0.00 | 0.05 | **0.48** |

Lake County

## DWR Structure Inspection Summary

| Structure Name | Overall Rating |
|---|---|
| Clover Creek Diversion Structure | M |
| Highland Canal Diversion Weir And Drainage Structure | A |

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Middle Creek left bank - Unit 1 north | 2.56 | Active | | Pending |
| Middle Creek left bank - Unit 1 south | 3.51 | Active | | Pending |
| Middle Creek left bank - Unit 5 and part of 1 | 2.34 | Active | | Pending |
| Middle Creek right bank - Unit 2 | 3.44 | Active | | Pending |
| Middle Creek right bank - Unit 2 north | 0.58 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report



**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported excess channel vegetation at Levee Unit 1, LM 3.0 to 3.5 and at Levee Unit 4, LM 0.8 to 1.33; sediment accumulation at Levee Unit 1, LM 2.0 to 3.5 and at Levee Unit 4, LM 0.5 to 1.33; and an encroachment from landslide at Levee Unit 2, LM 1.05.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported inadequate freeboards at Levee Unit 2, LM 2.6, Levee Unit 3, LM 1.3, and Levee Unit 5, LM 0.5.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units and the locations of these activities. Activities included gate repair, sediment removal and vegetation control. The reported total maintenance cost for selected activities in the previous fiscal year was $36,419.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units and the locations of these activities. Expenses include costs of channel vegetation removal, inspections, and vegetation mowing and spraying. The reported total estimated cost for the current fiscal year is $40,619.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported availability of the following items: two-foot interval aerial topographic mapping, DFG, CVRWQCB, CVFPB and USACE 404 permits for channel maintenance from 2006 to 2012, 1958 design plans and as-builts for Unit 1, 2, 4 and 5.

# Marysville Levee Commission



## Yuba County

**Contact**
Pat Ajuira
President
PO Box 150
Marysville CA 95901
Phone: (530) 742-3734

| Levee Short Name : NA0004 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Simmerly Slough | LB | 3.25 |
| Unit No. 02 Feather River | LB | 1.27 |
| Unit No. 03 Yuba River | RB | 6.86 |

## Threat Assessment & Recommendations

- There are one or more encroachments that may significantly impact the integrity of the levee in this Area.
- The LMA should work with landowners and the CVFPB to control unauthorized encroachments.

## DWR Levee Inspection Summary

| NA0004 | Total LMA Miles | 11.38 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Encroachments | | | | | 1.29 | | 1.29 | **11.34** | 1.29 | | 1.29 | **11.34** |
| Slope Stability | 0.01 | | 0.01 | **0.09** | | | | | -0.01 | | -0.01 | **-0.09** |
| *LMA Totals:* | 0.01 | 0.00 | 0.01 | **0.09** | 1.29 | 0.00 | 1.29 | **11.34** | 1.28 | 0.00 | 1.28 | **11.25** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| City of Marysville - Unit 3, NE extension | 1.83 | Inactive | 09/10/2010 | U |
| City of Marysville - Units 1, 2, and 3 | 7.43 | Active | 12/17/2010 | M |

## DWR Summary of Local Maintaining Agency Report



**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported no known issues at the time of reporting. The Agency also stated that the Yuba Sutter Basin Study identified areas needing reinforcement to achieve the original design flood protection level. The Agency mentioned that Phase 1 is under construction with a completion date of November 1, 2012.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported no known issues at the time of reporting. The Agency also stated that the Yuba Sutter Basin Study identified areas needing reinforcement to achieve the original design flood protection level. The Agency mentioned that Phase 1 is under construction with a completion date of November 1, 2012.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units. Activities included equipment and gate maintenance, inspection, roadway maintenance, rodent control, slope dragging, trash removal, and vegetation burning, disking, mowing, removal and spraying.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of access road and gate repair, levee burning and mowing, rodent control, slope dragging, vegetation control, and other needed necessary maintenance. The reported total estimated cost for the current fiscal year is $461,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported no known levee issues at the time of reporting. The Agency noted that issues may be identified by DWR upon completion of the Urban Levee Evaluation. The Agency also stated that the Yuba Sutter Basin Study identified areas needing reinforcement to achieve the design flood protection level. The Agency mentioned that Phase 1 is under construction while Phases 2 and 4 are under design stage.

# Murphy Slough at M&T Ranch



## Butte County

**Contact**
No Contact Information Available

| Levee Short Name : NA0014 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Murphy Slough at M&T Ranch | LB | 0.78 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| NA0014 | Total LMA Miles | 0.78 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.70 | | 0.70 | **89.74** | 0.49 | | 0.49 | **62.82** | -0.21 | | -0.21 | **-26.92** |
| *LMA Totals:* | 0.70 | 0.00 | 0.70 | **89.74** | 0.49 | 0.00 | 0.49 | **62.82** | -0.21 | 0.00 | -0.21 | **-26.92** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

M&T Ranch

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of total cost and maintenance activities accomplished for all levee units. Activities included vegetation mowing with the total reported cost for the previous fiscal year as $25,665.



**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of vegetation mowing with the reported total estimated cost for the current fiscal year as $20,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Plumas County



## Plumas County

**Contact**
Robert Perreault
Public Works Director
1834 East Main Street
Quincy CA 95971
Phone: (530) 283-6268

| Levee Short Name : NA0015 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 North Fork Feather River | LB | 1.89 |
| Unit No. 02 North Fork Feather River | RB | 1.33 |

## Threat Assessment & Recommendations

- There are one or more locations of unstable slopes and/or cracking in this Area.
- The LMA should repair locations where the levee slope may be unstable.
- The LMA should continue to maintain the area at the high level seen during the last Structure inspection.
- The LMA should ensure that the SPFC structure is able to perform as designed and constructed.

## DWR Levee Inspection Summary

| NA0015 | Total LMA Miles | 3.22 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | 1.20 | | 1.20 | **37.27** | 1.20 | | 1.20 | **37.27** |
| Encroachments | 0.01 | | 0.01 | **0.31** | | | | | -0.01 | | -0.01 | **-0.31** |
| Slope Stability | 0.04 | 0.16 | 0.68 | **21.12** | 0.04 | 0.16 | 0.68 | **21.12** | | | | **0.00** |
| *LMA Totals:* | 0.05 | 0.16 | 0.69 | **21.43** | 1.24 | 0.16 | 1.88 | **58.39** | 1.19 | 0.00 | 1.19 | **36.96** |

## DWR Structure Inspection Summary

| Structure Name | Overall Rating |
|---|---|
| North Fork Feather River Diversion Channel Drop Structure No. 1 Through 7 | A |
| North Fork Feather River Diversion Structure | A |

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| North Fork Feather River at Chester - east levee | 1.88 | Inactive | 08/21/2012 | U |
| North Fork Feather River at Chester - west levee | 1.36 | Active | 09/12/2011 | M |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported there was no new information or issues to report.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency reported that vegetation control activities were performed for all levee units during the previous fiscal year.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of vegetation control. The reported total estimated cost for the current fiscal year is $2,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Sacramento County



## Sacramento County

**Contact**
Michael L. Peterson
Director
Department of Water Resources
827 7th Street Room 301
Sacramento CA 95814
Phone: (916) 874-8913

## *No Map Available*

| Levee Short Name : NA0050 | Bank | Unit Length (Miles) |
|---|---|---|
| No Units Associated with this District. | | |

### Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last Structure inspection.
- The LMA should ensure that the SPFC structure is able to perform as designed and constructed.

## DWR Levee Inspection Summary

Levees in this District are not Inspected.

## DWR Structure Inspection Summary

| Structure Name | Overall Rating |
|---|---|
| American River Pumping Plant No. 1 Howe Avenue Storm Drain D - 05 | A |
| American River Pumping Plant No. 2 Willhaggin Storm Drain D - 43 | A |

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.



## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

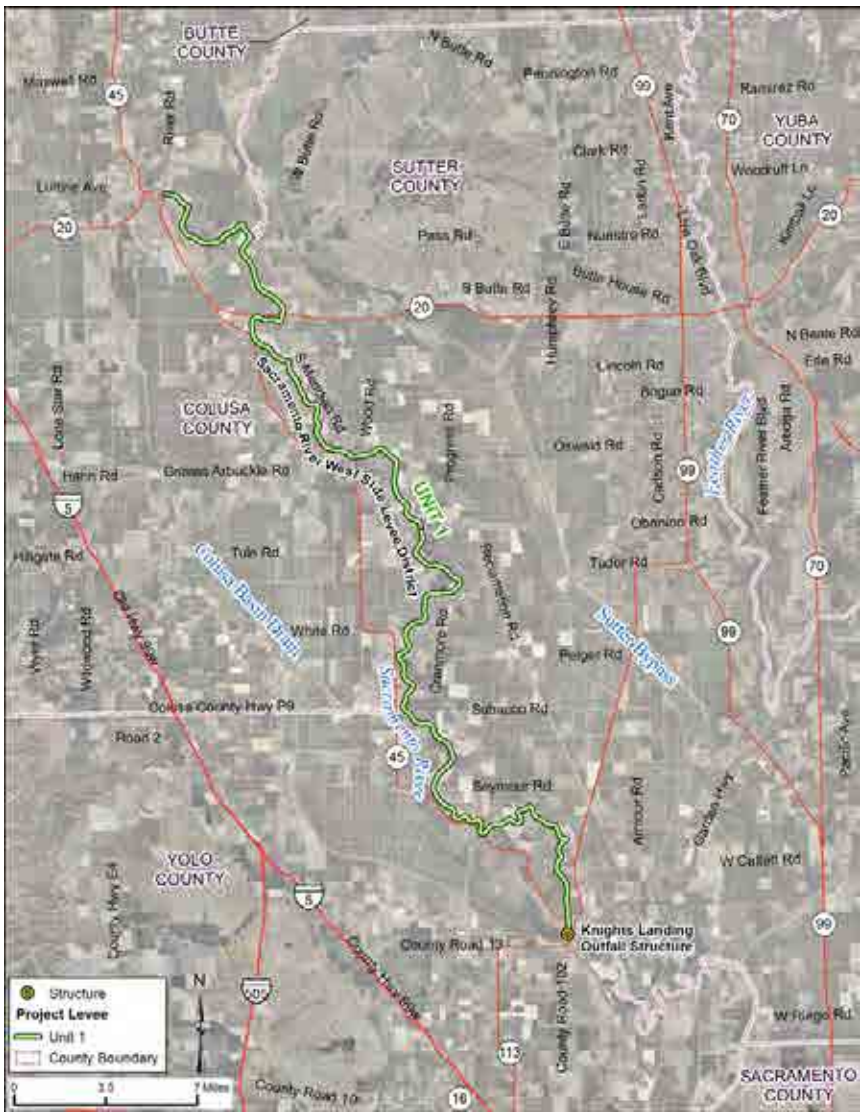
No Reporting by this District.

# Sacramento River West Side Levee District

## Sacramento County

WSLD

**Contact**
Lewis Bair
Manager
PO Box 50
Grimes CA 95950
Phone: (530) 437-2221




| Levee Short Name : NA0016 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | RB | 50.21 |

## Threat Assessment & Recommendations

- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| NA0016 | Total LMA Miles | 50.21 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.21 | | 0.21 | **0.42** | | | | | -0.21 | | -0.21 | **-0.42** |
| Trim / Thin Trees | 0.02 | | 0.02 | **0.04** | 0.01 | | 0.01 | **0.02** | -0.01 | | -0.01 | **-0.02** |
| Encroachments | 0.06 | | 0.06 | **0.12** | 0.02 | | 0.02 | **0.04** | -0.04 | | -0.04 | **-0.08** |
| Animal Control | 0.04 | | 0.04 | **0.08** | | | | | -0.04 | | -0.04 | **-0.08** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 1.60 | | 1.60 | **3.19** | 0.26 | | 0.26 | **0.52** | -1.34 | | -1.34 | **-2.67** |
| *LMA Totals:* | 1.93 | 0.00 | 1.93 | **3.84** | 0.29 | 0.00 | 0.29 | **0.58** | -1.64 | 0.00 | -1.64 | **-3.27** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Sacramento River, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_101-3_R | 101.30 | 11.48 | 11.48 | eroding | M |
| SAC_111-0_R | 111.00 | 18.74 | 18.74 | eroding | M |
| SAC_115-9_R | 115.90 | 23.54 | 23.54 | eroding | M |
| SAC_118-0_R | 118.00 | 25.90 | 26.05 | eroding | M |
| SAC_122-0_R | 122.00 | 29.67 | 29.67 | eroding | M |
| SAC_122-3_R | 122.30 | 29.93 | 29.93 | eroding | M |
| SAC_123-7_R | 123.70 | 31.42 | 31.42 | eroding | M |
| SAC_125-6_R | 125.60 | 33.27 | 33.27 | eroding | M |
| SAC_127-9_R | 127.90 | 35.21 | 35.21 | eroding | M |
| SAC_136-6_R | 136.60 | 42.93 | 42.93 | eroding | M |
| SAC_141-5_R | 141.50 | 47.61 | 47.61 | eroding | M |
| SAC_143-5_R | 143.50 | 49.44 | 49.44 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Sacramento River west bank | 119.72 | Active | | Pending |

WSLD

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported that present conditions do not vary from previous inspections. The Spring 2012 Levee Inspection Report provided acceptable to minimally acceptable rating for all inspected items.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported that present conditions do not vary from previous inspections. The Agency reported that present conditions do not vary from previous inspections. The Spring 2012 Levee Inspection Report provided minimally acceptable to acceptable rating for all inspected items.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of expenses and maintenance activities accomplished. Activities included patrolling, roadway maintenance, rodent baiting, and vegetation burning and spraying. The reported total maintenance cost for the previous fiscal year was $108,230.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**



The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of office overhead, patrolling, roadway maintenance, rodent control, and vegetation control. The reported total estimated cost for the current fiscal year is $151,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Solano County Public Works
# Mellin Levee

## Solano County



**Contact**
Bill Emlen
Director of Resource Office
675 Texas Street Suite 5500
Fairfield CA 94533
Phone: (707) 784-6765

| Levee Short Name : NA0012 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Mellin Levee | RB | 0.59 |

## Threat Assessment & Recommendations

- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| NA0012 | Total LMA Miles | 0.59 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.01 | | 0.01 | **1.70** | 0.01 | | 0.01 | **1.70** | | | | **0.00** |
| Encroachments | 0.01 | | 0.01 | **1.70** | | | | | -0.01 | | -0.01 | **-1.70** |
| *LMA Totals:* | 0.02 | 0.00 | 0.02 | **3.39** | 0.01 | 0.00 | 0.01 | **1.70** | -0.01 | 0.00 | -0.01 | **-1.70** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency reported vegetation control activities accomplished during previous fiscal year. The Agency also reported corrected and pending corrective actions in response to DWR insepction comments. The corrected action included vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of roadway maintenance, and vegetation mowing and spraying. The reported total estimated cost for the current fiscal year is $4,500.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Tehama County Flood Control and Water Conservation District

## Tehama County



**Contact**
Gary Antone
Public Works Director
Agency Office
9380 San Benito Avenue
Gerber CA 96035
Phone: (530) 385-1462

| Levee Short Name : NA0019 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Deer Creek | LB | 4.11 |
| Unit No. 02 Deer Creek | RB | 1.50 |
| Unit No. 04 Elder Creek | LB | 4.07 |
| Unit No. 05 Elder Creek | RB | 3.96 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should focus on repairing erosion sites.
- The LMA should continue to maintain the area at the high level seen during the last Channel inspection.
- The LMA should ensure that the capacity of the channel as designed and constructed is maintained.

## DWR Levee Inspection Summary

| NA0019 | Total LMA Miles | 13.64 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.67 | | 0.67 | **4.91** | 1.40 | | 1.40 | **10.26** | 0.73 | | 0.73 | **5.35** |
| Encroachments | 0.18 | | 0.18 | **1.32** | 0.09 | | 0.09 | **0.66** | -0.09 | | -0.09 | **-0.66** |
| Animal Control | 0.03 | | 0.03 | **0.22** | 0.03 | | 0.03 | **0.22** | | | | **0.00** |
| Slope Stability | 0.30 | | 0.30 | **2.20** | 0.31 | | 0.31 | **2.27** | 0.01 | | 0.01 | **0.07** |
| Erosion / Bank Caving | 0.02 | | 0.02 | **0.15** | 0.01 | | 0.01 | **0.07** | -0.01 | | -0.01 | **-0.07** |
| Crown Surface / Depressions / Rutting | 0.22 | | 0.22 | **1.61** | | | | | -0.22 | | -0.22 | **-1.61** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.32 | | 0.32 | **2.35** | 0.16 | | 0.16 | **1.17** | -0.16 | | -0.16 | **-1.17** |
| *LMA Totals:* | 1.74 | 0.00 | 1.74 | **12.76** | 2.00 | 0.00 | 2.00 | **14.66** | 0.26 | 0.00 | 0.26 | **1.91** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

| Channel Name | Overall Rating |
|---|---|
| McClure Creek | A |
| Salt Creek | A |

## USACE Sacramento River Erosion Summary

### Unit No. 01 Deer Creek, LB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Status | Rating |
|---|---|---|---|---|---|
| DEC_2-4_L | 0.00 | 2.98 | 3.00 | eroding | M |

### Unit No. 02 Deer Creek, RB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Status | Rating |
|---|---|---|---|---|---|
| DEC_0-9_R | 0.00 | 0.86 | 0.91 | eroding | M |

### Unit No. 04 Elder Creek, LB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Status | Rating |
|---|---|---|---|---|---|
| ELC_1-4_L | 0.00 | 1.44 | 1.51 | eroding | M |

### Unit No. 05 Elder Creek, RB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Status | Rating |
|---|---|---|---|---|---|
| ELC_3-0_R | 0.00 | 3.08 | 3.10 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Deer Creek left bank, Unit 1 east - Tehama County | 3.09 | Active | 09/15/2010 | N/A |
| Deer Creek left bank, Unit 1 west - Tehama County | 1.14 | Active | | N/A |
| Deer Creek right bank, Unit 2 - Tehama County | 1.45 | Active | | N/A |
| Deer Creek right bank, Unit 3 - Tehama County | 0.44 | Active | | N/A |
| Elder Creek left bank, Unit 4 - Gerber levee | 4.64 | Inactive | 10/07/2009 | Pending |
| Elder Creek left bank, Unit 4 east | 0.83 | Active | | Pending |
| Elder Creek right bank, Unit 5 | 3.86 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units. Activities included rodent hole grouting and vegetation burning and clearing.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of gravel dumping on the levee crown, rodent hole grouting, and vegetation clearing and burning. The reported total estimated cost for the current fiscal year is $50,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Yolo County Planning Resources and Public Works

## Yolo County

**Contact**
John Bencomo
Director of Planning and Public Works
Agency Office
292 West Beamer Street
Woodland CA 95695
Phone: (530) 666-8775

| Levee Short Name : NA0021 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Right Bank Cache Creek | RB | 0.29 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should work with landowners and the CVFPB to control unauthorized encroachments.

## DWR Levee Inspection Summary

| NA0021 | Total LMA Miles | 0.29 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | 0.51 | 2.04 | **703.45** | | 0.43 | 1.72 | **593.10** | | -0.08 | -0.32 | **-110.34** |
| Trim / Thin Trees | 0.09 | | 0.09 | **31.03** | 0.09 | | 0.09 | **31.03** | | | | **0.00** |
| Encroachments | 0.02 | | 0.02 | **6.90** | 0.01 | | 0.01 | **3.45** | -0.01 | | -0.01 | **-3.45** |
| Crown Surface / Depressions / Rutting | 0.23 | | 0.23 | **79.31** | | | | | -0.23 | | -0.23 | **-79.31** |
| Operations & Maintenance Manuals | | | | | 0.00 | | | | 0.00 | | | **0.00** |
| Emergency Supplies & Equipment | | | | | 0.00 | | | | 0.00 | | | **0.00** |
| Flood Preparedness & Training | | | | | 0.00 | | | | 0.00 | | | **0.00** |
| *LMA Totals:* | 0.34 | 0.51 | 2.38 | **820.69** | 0.11 | 0.43 | 1.83 | **631.03** | -0.23 | -0.08 | -0.56 | **-189.66** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Cache Creek - RD 2035 - Willow Bypass | 29.21 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

No information was provided by the Agency for Part 3.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

Yolo County Board of Supervisors have asked CVFBP for the transfer of the maintenance duties from the County to the State.

# Yolo County Service Area 6

## Yolo County

**Contact**
John Bencomo
Director of Planning and Public Works
Agency Office
292 West Beamer Street
Woodland CA 95695
Phone: (530) 666-8775

| Levee Short Name : NA0022 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Right Bank of Sacramento River at Knights Landing | RB | 5.97 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should work with landowners and the CVFPB to control unauthorized encroachments.

## DWR Levee Inspection Summary

| NA0022 | Total LMA Miles | 5.97 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.88 | | 0.88 | **14.74** | 0.54 | | 0.54 | **9.05** | -0.34 | | -0.34 | **-5.70** |
| Trim / Thin Trees | 0.03 | 0.01 | 0.07 | **1.17** | 0.03 | 0.01 | 0.07 | **1.17** | | | | **0.00** |
| Encroachments | 0.07 | | 0.07 | **1.17** | 0.30 | | 0.30 | **5.03** | 0.23 | | 0.23 | **3.85** |
| Animal Control | 0.07 | | 0.07 | **1.17** | 0.06 | | 0.06 | **1.01** | -0.01 | | -0.01 | **-0.17** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.17** | 0.01 | | 0.01 | **0.17** | | | | **0.00** |
| Emergency Supplies & Equipment | | | | | 0.06 | | 0.06 | **1.01** | 0.06 | | 0.06 | **1.01** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.45 | | 0.45 | **7.54** | 0.39 | | 0.39 | **6.53** | -0.06 | | -0.06 | **-1.01** |
| *LMA Totals:* | 1.51 | 0.01 | 1.55 | **25.96** | 1.39 | 0.01 | 1.43 | **23.95** | -0.12 | 0.00 | -0.12 | **-2.01** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Right Bank of Sacramento River at Knights Landing, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_86-9_R | 86.90 | 3.18 | 3.28 | eroding | M |
| SAC_85-4_R | 85.40 | 4.66 | 4.86 | eroding | M |
| SAC_83-9_R | 83.90 | 5.77 | 5.86 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Knights Landing U2 - Yolo Bypass - Service Area 6 | 15.19 | Inactive | 11/21/2011 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency reported corrected and ongoing corrective actions in response to DWR insepction comments. The corrective actions include animal control, encroachment control, tree thinning and trimming, and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

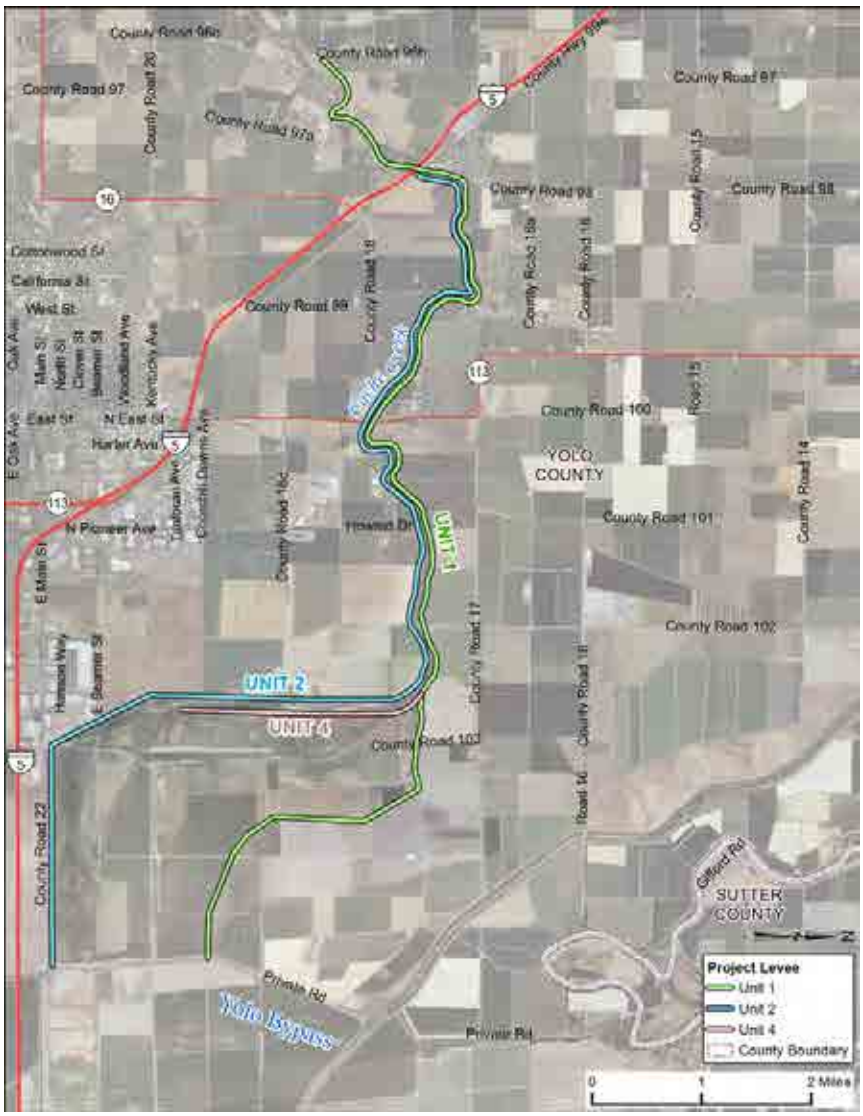
**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Sacramento Maintenance Yard
# Cache Creek

## Yolo County

**Contact**
Russ Eckman
Utility Craftsworker Superintendent
1450 River Bank Road
West Sacramento CA 95605
Phone: (916) 375-6004




| Levee Short Name : ST0001 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 North Levee | LB | 11.81 |
| Unit No. 02 South Levee | RB | 11.43 |
| Unit No. 04 East Training Levee of Cache Creek Settling Basin | LB | 2.28 |
| Unit No. 05 Cache Creek Settling Basin Extension Levee | | 3.17 |

## Threat Assessment & Recommendations

- There is erosion occurring in this Area that should be monitored.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| ST0001 | Total LMA Miles | 25.52 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M * | Overall LMA Rating | | | M * | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Trim / Thin Trees | | | | | 0.01 | | 0.01 | **0.04** | 0.01 | | 0.01 | **0.04** |
| Encroachments | 0.26 | | 0.26 | **1.02** | 0.09 | | 0.09 | **0.35** | -0.17 | | -0.17 | **-0.67** |
| Animal Control | 0.01 | | 0.01 | **0.04** | 0.02 | | 0.02 | **0.08** | 0.01 | | 0.01 | **0.04** |
| Erosion / Bank Caving | | | | | 0.01 | | 0.01 | **0.04** | 0.01 | | 0.01 | **0.04** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.29 | 0.19 | 1.05 | **4.11** | 0.21 | 0.32 | 1.49 | **5.84** | -0.08 | 0.13 | 0.44 | **1.72** |
| *LMA Totals:* | 0.56 | 0.19 | 1.32 | **5.17*** | 0.34 | 0.32 | 1.62 | **6.35*** | -0.22 | 0.13 | 0.30 | **1.18** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 North Levee, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| CHC_2-4_L | 0.00 | 2.42 | 2.51 | critical | U |
| CHC_2-8_L | 0.00 | 2.79 | 2.83 | eroding | M |
| CHC_3-4_L | 0.00 | 3.48 | 3.56 | eroding | M |
| CHC_3-9_L | 0.00 | 3.87 | 3.96 | critical | U |
| CHC_4-2_L | 0.00 | 4.14 | 4.28 | critical | U |

### Unit No. 02 South Levee, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| CHC_3-5_R | 0.00 | 3.53 | 3.61 | eroding | M |
| CHC_5-4_L | 0.00 | 3.58 | 3.59 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Cache Creek - RD 2035 - Willow Bypass | 29.21 | Active | | N/A |
| Cache Crk U1 - Yolo Bypass U2 - Knights Landing U1 | 19.49 | Active | | N/A |
| Yolo Bypass West Levee - Cache Creek Unit 4 | 3.41 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported berm erosion at Levee Unit 1, LM 3.9 and 4.2. The Agency also reported on an ongoing plan for the construction of a bowl levee.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported berm erosion at Levee Unit 1, LM 2.68, 2.78, 3.5 and 5.35 and at Levee Unit 2, LM 3.53 to 3.61.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units. Activities included encroachment control, gate and minor structure maintenance, inspection, roadway grading, rodent control, tree trimming, and vegetation control. The Agency also reported corrected or ongoing corrective actions in response to DWR inspection comments. The corrected actions included encroachment and vegetation controls.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of encroachment removal, gate and minor structure maintenance, inspection, roadway grading, rodent control, tree trimming, and vegetation control. The reported total estimated cost for the current fiscal year is $650,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# DWR Sacramento Maintenance Yard

## San Joaquin County
## Yolo County

**Contact**
Russ Eckman
Utility Craftsworker Superintendent
1450 River Bank Road
West Sacramento CA 95605
Phone: (916) 375-6004

## *No Map Available*

| Levee Short Name : NA0055 | Bank | Unit Length (Miles) |
|---|---|---|
| No Units Associated with this District. | | |

### Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last Structure inspection.

## DWR Levee Inspection Summary

Levees in this District are not Inspected.

## DWR Structure Inspection Summary

| Structure Name | Overall Rating |
|---|---|
| Cache Creek Setting Basin Weir And Drainage Structure | A |
| Fremont Weir | A |
| Knights Landing Outfall Structure | A |
| Paradise Dam | M |
| Sacramento Weir | A |

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

No Reporting by this District.

# Sacramento Maintenance Yard
# East Levee Yolo Bypass

## Yolo County

**Contact**
Russ Eckman
Utility Craftsworker Superintendent
1450 River Bank Road
West Sacramento CA 95605
Phone: (916) 375-6004

## SACRAMENTO SYSTEM : Sacramento Maintenance Yard East Levee Yolo Bypass

| Levee Short Name : ST0004 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Yolo Bypass | LB | 2.00 |

### Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| ST0004 | Total LMA Miles | 2.00 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Erosion / Bank Caving | | | | | 0.06 | | 0.06 | **3.00** | 0.06 | | 0.06 | **3.00** |
| *LMA Totals:* | 0.00 | 0.00 | 0.00 | **0.00** | 0.06 | 0.00 | 0.06 | **3.00** | 0.06 | 0.00 | 0.06 | **3.00** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 1600, 0827, 0785, and 0537 - SacYolo North | 32.06 | Partial Inactive | 10/01/2007 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported waterside bank erosion at Levee Unit 1, LM 1.79 to 1.85.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units. Activities included encroachment control, gate and minor structure maintenance, inspection, roadway grading, rodent control, tree trimming, and vegetation control. The Agency also reported corrected or ongoing corrective actions in response to DWR inspection comments. The corrected actions included vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of encroachment removal, gate and minor structure maintenance, inspection, roadway grading, rodent control, tree trimming, and vegetation control. The reported total estimated cost for the current fiscal year is $40,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Sacramento Maintenance Yard
# Maintenance Area 0004

## Yolo County

**Contact**
Russ Eckman
Utility Craftsworker Superintendent
1450 River Bank Road
West Sacramento CA 95605
Phone: (916) 375-6004

## SACRAMENTO SYSTEM : Sacramento Maintenance Yard Maintenance Area 0004

| Levee Short Name : MA0004 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | RB | 3.40 |

### Threat Assessment & Recommendations

- There is erosion occurring in this Area that should be monitored.
- The LMA should focus on repairing erosion sites.
- The LMA should focus more on controlling woody vegetation.

## DWR Levee Inspection Summary

| MA0004 | Total LMA Miles | 3.40 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.01 | | 0.01 | **0.29** | 0.01 | | 0.01 | **0.29** | | | | **0.00** |
| Trim / Thin Trees | 0.16 | | 0.16 | **4.71** | 0.16 | | 0.16 | **4.71** | | | | **0.00** |
| Animal Control | 0.04 | | 0.04 | **1.18** | 0.02 | | 0.02 | **0.59** | -0.02 | | -0.02 | **-0.59** |
| *LMA Totals:* | 0.21 | 0.00 | 0.21 | **6.18** | 0.19 | 0.00 | 0.19 | **5.59** | -0.02 | 0.00 | -0.02 | **-0.59** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| West Sacramento - SacYolo South | 60.45 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported that the West Sacramento Area Flood Control Agency has constructed a slurry wall at Levee Unit 1, LM 0.68 to 1.31.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units. Activities included encroachment control, gate and minor structure maintenance, inspection, roadway grading, rodent control, tree trimming, and vegetation control. The Agency also reported corrected or ongoing corrective actions in response to DWR inspection comments. The corrected actions included encroachment control, rodent control, and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of encroachment removal, gate and minor structure maintenance, inspection, roadway grading, rodent control, tree trimming, and vegetation control. The reported total estimated cost for the current fiscal year is $70,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

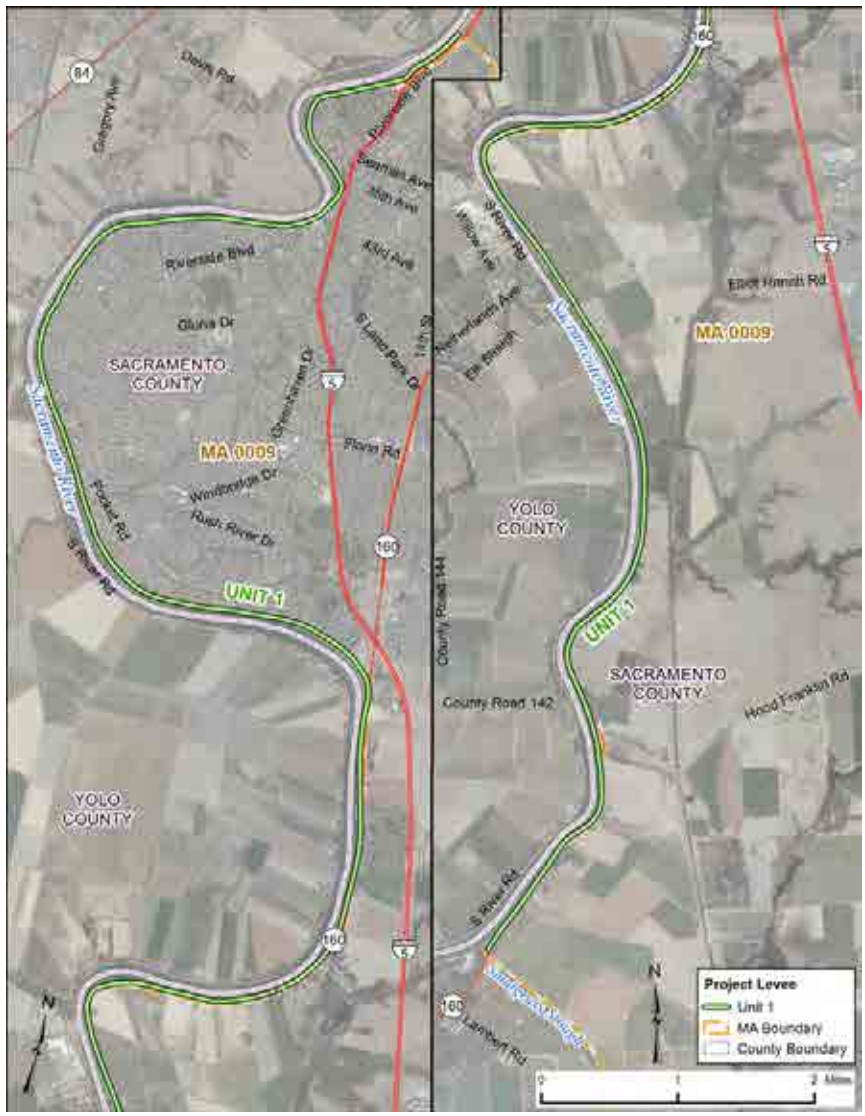
The Agency stated that there was no new information to report.

# Sacramento Maintenance Yard
# Maintenance Area 0009

## Sacramento County

**Contact**
Russ Eckman
Utility Craftsworker Superintendent
1450 River Bank Road
West Sacramento CA 95605
Phone: (916) 375-6004

## SACRAMENTO SYSTEM : Sacramento Maintenance Yard Maintenance Area 0009




| Levee Short Name : MA0009 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | LB | 19.61 |

## Threat Assessment & Recommendations

- The LMA should work with landowners and the CVFPB to ensure that penetrations do not endanger the integrity of the levee.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| MA0009 | Total LMA Miles | 19.61 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.76 | | 0.76 | **3.88** | 0.01 | | 0.01 | **0.05** | -0.75 | | -0.75 | **-3.83** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.05** | 0.01 | | 0.01 | **0.05** | | | | **0.00** |
| Encroachments | 1.82 | | 1.82 | **9.28** | 0.01 | | 0.01 | **0.05** | -1.81 | | -1.81 | **-9.23** |
| Animal Control | 0.01 | | 0.01 | **0.05** | | | | | -0.01 | | -0.01 | **-0.05** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.59 | | 0.59 | **3.01** | 0.30 | | 0.30 | **1.53** | -0.29 | | -0.29 | **-1.48** |
| *LMA Totals:* | 3.19 | 0.00 | 3.19 | **16.27** | 0.33 | 0.00 | 0.33 | **1.68** | -2.86 | 0.00 | -2.86 | **-14.58** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Sacramento River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_55-5_L | 55.50 | 0.40 | 0.46 | eroding | M |
| SAC_55-2_L | 55.20 | 0.75 | 0.88 | eroding | M |
| SAC_54-8_L | 54.80 | 1.13 | 1.14 | eroding | M |
| SAC_53-8_L | 53.80 | 2.03 | 2.05 | eroding | M |
| SAC_52-7_L | 52.70 | 3.09 | 3.13 | eroding | M |
| SAC_52-4_L | 52.40 | 3.27 | 3.29 | eroding | M |
| SAC_50-3_L | 50.30 | 5.41 | 5.43 | eroding | M |
| SAC_46-7_L | 46.70 | 9.11 | 9.14 | under construction | C |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| MA 09 - City of Sacramento - American R left bank | 35.27 | Inactive | 08/21/2012 | U |

## DWR Summary of Local Maintaining Agency Report



**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency informed that USACE was evaluating several sites for future repair and reported that none of the sites were critical at the reporting time. The Agency reported minor to moderate erosions at Levee Unit 1, LM 0.35, 0.7, 1.06, 1.9, 3.3, and 5.3.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units. Activities included encroachment control, gate and minor structure maintenance, inspection, roadway grading, rodent control, tree trimming, and vegetation control. The Agency also reported corrected or ongoing corrective actions in response to DWR inspection comments. The corrected action included vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Sacramento Maintenance Yard
# Putah Creek

## Yolo County

**Contact**
Russ Eckman
Utility Craftsworker Superintendent
1450 River Bank Road
West Sacramento CA 95605
Phone: (916) 375-6004

## SACRAMENTO SYSTEM : Sacramento Maintenance Yard Putah Creek

| Levee Short Name : ST0007 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Putah Creek or North Levee | LB | 8.99 |
| Unit No. 02 Putah Creek or South Levee | RB | 7.30 |

### Threat Assessment & Recommendations

- There is significant rodent activity in this Area.
- The LMA should enhance its rodent control program.

## DWR Levee Inspection Summary

| ST0007 | Total LMA Miles | 16.29 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 1.68 | | 1.68 | **10.31** | 0.13 | | 0.13 | **0.80** | -1.55 | | -1.55 | **-9.52** |
| Trim / Thin Trees | 0.04 | | 0.04 | **0.25** | 0.08 | | 0.08 | **0.49** | 0.04 | | 0.04 | **0.25** |
| Encroachments | 0.19 | | 0.19 | **1.17** | 0.18 | | 0.18 | **1.11** | -0.01 | | -0.01 | **-0.06** |
| Animal Control | 0.06 | | 0.06 | **0.37** | 3.07 | | 3.07 | **18.85** | 3.01 | | 3.01 | **18.48** |
| Erosion / Bank Caving | 0.02 | | 0.02 | **0.12** | 0.01 | | 0.01 | **0.06** | -0.01 | | -0.01 | **-0.06** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.02 | | 0.02 | **0.12** | 0.02 | | 0.02 | **0.12** | | | | **0.00** |
| *LMA Totals:* | 2.01 | 0.00 | 2.01 | **12.34** | 3.49 | 0.00 | 3.49 | **21.42** | 1.48 | 0.00 | 1.48 | **9.09** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Putah Creek or North Levee, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| PUC_0-1_L | 0.00 | 0.04 | 0.04 | eroding | M |
| PUC_7-2_L | 0.00 | 6.87 | 6.87 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Putah Cr Unit 1 - Yolo Bypass - Willow Slgh Unit 2 | 19.74 | Active | | Pending |
| Putah Creek right bank - Unit 2 | 7.15 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units. Activities included encroachment control, gate and minor structure maintenance, inspection, roadway grading, rodent control, tree trimming, and vegetation control. The Agency also reported corrected or ongoing corrective actions in response to DWR inspection comments. The corrected actions included encroachment control, rodent control, and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of encroachment removal, gate and minor structure maintenance, inspection, roadway grading, rodent control, tree trimming, and vegetation control. The reported total estimated cost for the current fiscal year is $250,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Sacramento Maintenance Yard
# Sacramento Bypass

## Yolo County

**Contact**
Russ Eckman
Utility Craftsworker Superintendent
1450 River Bank Road
West Sacramento CA 95605
Phone: (916) 375-6004

| Levee Short Name : ST0008 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento Bypass or North Levee | RB | 1.73 |
| Unit No. 02 Sacramento Bypass or South Levee | LB | 1.78 |

## Threat Assessment & Recommendations

- The LMA should repair locations where the levee slope may be unstable.

## DWR Levee Inspection Summary

| ST0008 | Total LMA Miles | 3.51 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.29** | 0.01 | | 0.01 | **0.29** |
| *LMA Totals:* | 0.00 | 0.00 | 0.00 | **0.00** | 0.01 | 0.00 | 0.01 | **0.29** | 0.01 | 0.00 | 0.01 | **0.29** |

Sacramento Bypass

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 1600, 0827, 0785, and 0537 - SacYolo North | 32.06 | Partial Inactive | 10/01/2007 | U |
| West Sacramento - SacYolo South | 60.45 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported a slurry wall was constructed by The West Sacramento Area Flood Control Agency at Levee Unit 2, LM 0.0 to 0.8.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported a slope stability issue at Levee Unit 1, LM 0.46.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units. Activities included encroachment control, gate and minor structure maintenance, inspection, roadway grading, rodent control, tree trimming, and vegetation control. The Agency also reported corrected or ongoing corrective actions in response to DWR inspection comments. The corrected action included vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of encroachment removal, gate and minor structure maintenance, inspection, roadway grading, rodent control, tree trimming, and vegetation control. The reported total estimated cost for the current fiscal year is $125,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported that there was no new information to report.

# Sacramento Maintenance Yard
# West Levee Yolo Bypass



## Yolo County

**Contact**
Russ Eckman
Utility Craftsworker Superintendent
1450 River Bank Road
West Sacramento CA 95605
Phone: (916) 375-6004

| Levee Short Name : ST0011 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 West Levee | RB | 2.72 |
| Unit No. 02 West Levee | RB | 1.52 |
| Unit No. 03 West Levee | RB | 1.48 |
| Unit No. 04 West Levee | RB | 3.61 |

## Threat Assessment & Recommendations

- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| ST0011 | Total LMA Miles | 9.33 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Animal Control | 0.01 | | 0.01 | **0.11** | | | | | -0.01 | | -0.01 | **-0.11** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.15 | | 0.15 | **1.61** | 0.15 | | 0.15 | **1.61** | | | | **0.00** |
| *LMA Totals:* | 0.16 | 0.00 | 0.16 | **1.72** | 0.15 | 0.00 | 0.15 | **1.61** | -0.01 | 0.00 | -0.01 | **-0.11** |

West Levee
Yolo Bypass

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 West Levee, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| YOL_2-6_R | 0.00 | 2.53 | 2.68 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Cache Crk U1 - Yolo Bypass U2 - Knights Landing U1 | 19.49 | Active | | N/A |
| Knights Landing U2 - Yolo Bypass - Service Area 6 | 15.19 | Inactive | 11/21/2011 | U |
| Putah Cr Unit 1 - Yolo Bypass - Willow Slgh Unit 2 | 19.74 | Active | | Pending |
| Yolo Bypass West Levee - Cache Creek Unit 4 | 3.41 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported minor wave wash erosion at Levee Unit 1, LM 2.53 to 2.68.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**



The Agency provided a summary of maintenance activities performed for all levee units. Activities included encroachment control, gate and minor structure maintenance, inspection, roadway grading, rodent control, tree trimming, and vegetation control. The Agency also reported corrected or ongoing corrective actions in response to DWR insepction comments. The corrected action included vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of encroachment removal, gate and minor structure maintenance, inspection, roadway grading, rodent control, tree trimming, and vegetation control. The reported total estimated cost for the current fiscal year is $96,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Sacramento Maintenance Yard
# Willow Slough Bypass



## Yolo County

**Contact**
Russ Eckman
Utility Craftsworker Superintendent
1450 River Bank Road
West Sacramento CA 95605
Phone: (916) 375-6004

| Levee Short Name : ST0012 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Willow Slough Bypass or North Levee | LB | 5.09 |
| Unit No. 02 Willow Slough Bypass or South Levee | RB | 7.37 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| ST0012 | Total LMA Miles | 12.46 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Erosion / Bank Caving | 0.05 | | 0.05 | **0.40** | 0.05 | | 0.05 | **0.40** | | | | **0.00** |
| Cracking | | | | | 0.02 | | 0.02 | **0.16** | 0.02 | | 0.02 | **0.16** |
| *LMA Totals:* | 0.05 | 0.00 | 0.05 | **0.40** | 0.07 | 0.00 | 0.07 | **0.56** | 0.02 | 0.00 | 0.02 | **0.16** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Putah Cr Unit 1 - Yolo Bypass - Willow Slgh Unit 2 | 19.74 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported that the pavement is cracking on crown and falling away at shoulders at Levee Unit 1, LM 0.34 to 0.36. The Agency reported of looking into this issue.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**



The Agency provided a summary of maintenance activities performed for all levee units. Activities included encroachment control, gate and minor structure maintenance, inspection, roadway grading, rodent control, tree trimming, and vegetation control. The Agency also reported corrected or ongoing corrective actions in response to DWR inspection comments. The corrected action included vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities for all levee units. Expenses include costs of encroachment removal, gate and minor structure maintenance, inspection, roadway grading, rodent control, tree trimming, and vegetation control. The reported total estimated cost for the current fiscal year is $200,000.

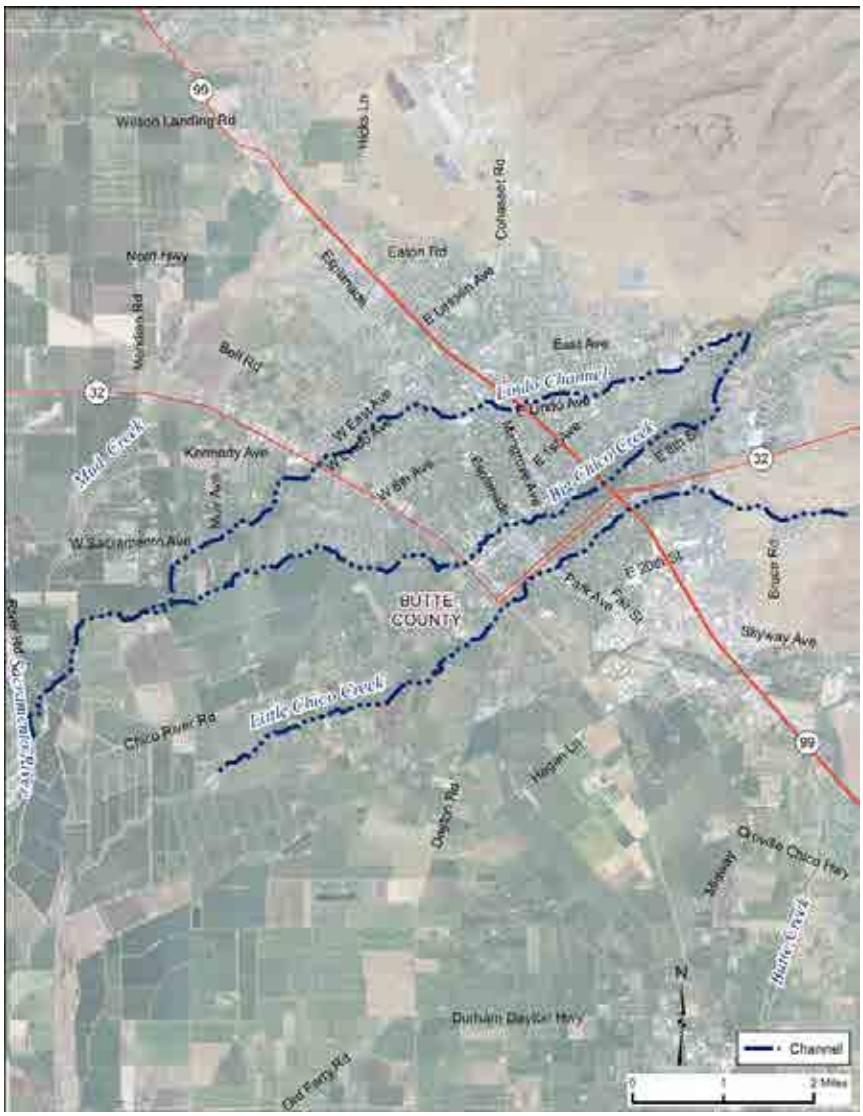
**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated there was no new information to report.

# DWR Sutter Maintenance Yard

**Butte County**
**Colusa County**
**Lake County**
**Sutter County**

**Contact**
Karen Hull
Utility Craftsworker Superintendent
PO Box 40
Sutter CA 95982
Phone: (530) 755-0071




| Levee Short Name : NA0060 | Bank | Unit Length (Miles) |
|---|---|---|
| No Units Associated with this District. | | |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last Structure inspection.
- The LMA should ensure that the SPFC structure is able to perform as designed and constructed.
- The LMA should continue to maintain the area at the high level seen during the last Channel inspection.

## DWR Levee Inspection Summary

Levees in this District are not Inspected.

## DWR Structure Inspection Summary

| Structure Name | Overall Rating |
|---|---|
| Butte Slough Drainage Structure | A |
| Butte Slough Outfall Structure | A |
| Colusa Weir | A |
| Little Chico Creek Control And Weir Structures | A |
| Middle Creek Pumping Plant | A |
| Moulton Weir | A |
| Nelson Bend | A |
| Sutter Bypass Pumping Plant No. 1 | A |
| Sutter Bypass Pumping Plant No. 2 | A |
| Sutter Bypass Pumping Plant No. 3 | A |
| Sutter Bypass Weir No. 2 | A |
| Tisdale Weir | A |
| Wadsworth Canal Weir No. 4 | A |

## DWR Channel Inspection Summary

| Channel Name | Overall Rating |
|---|---|
| Big Chico Creek | A |
| Lindo Channel & Sandy Gulch | A |
| Little Chico Creek | A |

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

No Reporting by this District.

# Sutter Maintenance Yard
# East Levee Sacramento River

## Colusa County

**Contact**
Karen Hull
Utility Craftsworker Superintendent
PO Box 40
Sutter CA 95982
Phone: (530) 755-0071

## SACRAMENTO SYSTEM : Sutter Maintenance Yard East Levee Sacramento River

| Levee Short Name : ST0003 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | LB | 20.39 |
| Unit No. 02 Colusa Bypass | RB | 2.20 |
| Unit No. 03 Colusa Bypass | LB | 2.28 |
| Unit No. 04 Moulton Bypass | RB | 0.30 |
| Unit No. 05 Moulton Bypass | LB | 2.00 |

### Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| ST0003 | Total LMA Miles | 27.17 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.05 | | 0.05 | **0.18** | 0.05 | | 0.05 | **0.18** | | | | **0.00** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.04** | 0.01 | | 0.01 | **0.04** | | | | **0.00** |
| Encroachments | 0.25 | | 0.25 | **0.92** | 0.25 | | 0.25 | **0.92** | 0.00 | | | **0.00** |
| Animal Control | 0.95 | | 0.95 | **3.50** | 0.08 | | 0.08 | **0.29** | -0.87 | | -0.87 | **-3.20** |
| Erosion / Bank Caving | 0.19 | | 0.19 | **0.70** | 0.19 | | 0.19 | **0.70** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.45 | | 0.45 | **1.66** | 0.07 | | 0.07 | **0.26** | -0.38 | | -0.38 | **-1.40** |
| *LMA Totals:* | 1.90 | 0.00 | 1.90 | **6.99** | 0.65 | 0.00 | 0.65 | **2.39** | -1.25 | 0.00 | -1.25 | **-4.60** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Sacramento River, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_150-2_L | 150.20 | 10.46 | 10.46 | removed | A/W |
| SAC_152-6_L | 152.60 | 11.51 | 11.51 | eroding | M |
| SAC_152-8_L | 152.80 | 11.83 | 11.89 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Sacramento River East Levee - LD 3 Glenn County | 38.36 | Inactive | 10/01/2007 | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the Spring 2012 Levee Inspection Report for the relevant information. The 2012 Spring Inspection Report provided unacceptable rating for encroachment at Levee Unit 1 at various locations.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of expenses and maintenance activities accomplished. Activities included encroachment removal, inspection, minor structure maintenance, patrolling, restoration/habitat enhancement, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total maintenance cost for the previous fiscal year was $195,910.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities for all levee units. Expenses include costs of encroachment control, inspection, minor structure maintenance, patrolling, restoration/habitat enhancement, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total estimated cost for the current fiscal year is $340,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported encroachments at Levee Unit 1, LM 0.08, 4.66, 4.81, and 8.76.

# Sutter Maintenance Yard
# East Levee Sutter Bypass

## Sutter County

**Contact**
Karen Hull
Utility Craftsworker Superintendent
PO Box 40
Sutter CA 95982
Phone: (530) 755-0071

## SACRAMENTO SYSTEM : Sutter Maintenance Yard East Levee Sutter Bypass

| Levee Short Name : ST0002 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sutter Bypass Levee | LB | 22.12 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| ST0002 | Total LMA Miles | 22.12 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Animal Control | 0.04 | | 0.04 | **0.18** | 0.05 | | 0.05 | **0.23** | 0.01 | | 0.01 | **0.05** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.07 | | 0.07 | **0.32** | 0.03 | | 0.03 | **0.14** | -0.04 | | -0.04 | **-0.18** |
| *LMA Totals:* | 0.11 | 0.00 | 0.11 | **0.50** | 0.08 | 0.00 | 0.08 | **0.36** | -0.03 | 0.00 | -0.03 | **-0.14** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Sutter Bypass Levee, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SBP_11-1_L | 0.00 | 10.89 | 10.92 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Wadsworth Canal right bank - Sutter Bypass East | 8.84 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the Spring 2012 Levee Inspection Report for the relevant information. The 2012 Spring Inspection Report provided unacceptable rating for an encroachment at Levee Unit 1, LM 20.64.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of expenses and maintenance activities accomplished. Activities included encroachment removal, inspection, minor structure maintenance, patrolling, restoration/habitat enhancements, roadway maintenance, rodent control, slope dragging, and vegetation burning and mowing. The reported total maintenance cost for the previous fiscal year was $259,461.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of encroachment removal, inspection, minor structure maintenance, patrolling, restoration/habitat enhancements, roadway maintenance, rodent control, sinkhole repairs, slope dragging, and vegetation burning and mowing. The reported total estimated cost for the current fiscal year is $315,200.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Sutter Maintenance Yard
# East-West Interceptor

## Sutter County

**Contact**
Karen Hull
Utility Craftsworker Superintendent
PO Box 40
Sutter CA 95982
Phone: (530) 755-0071

## SACRAMENTO SYSTEM : Sutter Maintenance Yard East-West Interceptor

| Levee Short Name : NA0020 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 West Levee | RB | 1.75 |
| Unit No. 02 East Levee | LB | 3.01 |

### Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| NA0020 | Total LMA Miles | 4.76 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 3.17 | | 3.17 | **66.60** | 3.88 | | 3.88 | **81.51** | 0.71 | | 0.71 | **14.92** |
| Encroachments | 0.27 | | 0.27 | **5.67** | 0.26 | | 0.26 | **5.46** | -0.01 | | -0.01 | **-0.21** |
| Erosion / Bank Caving | 0.43 | 0.03 | 0.55 | **11.55** | 0.61 | 0.03 | 0.73 | **15.34** | 0.18 | | 0.18 | **3.78** |
| *Channels* | | | | | | | | | | | | |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.21** | 0.01 | | 0.01 | **0.21** | | | | **0.00** |
| *LMA Totals:* | 3.88 | 0.03 | 4.00 | **84.03** | 4.76 | 0.03 | 4.88 | **102.52** | 0.88 | 0.00 | 0.88 | **18.49** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the Spring 2012 Levee Inspection Report for the relevant information. The 2012 Spring Inspection Report provided unacceptable rating for erosion at Levee Unit 1, LM 0.62 to 0.65.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of expenses and maintenance activities accomplished for the East Interceptor (Unit 2). Activities included encroachment removal, inspection, minor structure maintenance, patrolling, restoration, roadway maintenance, rodent control, slope dragging, vegetation control. The reported total maintenance cost for the previous fiscal year was $28,626.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of encroachment removal, minor structure maintenance, restoration/habitat enhancements, roadway maintenance, rodent control, and vegetation mowing. The reported total estimated cost for the current fiscal year is $26,000. The Agency additionally reported a total estimated cost of $13,000 for vegetation control for Unit 2.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Sutter Maintenance Yard
# Hamilton Bend

## Butte County

**Contact**
Karen Hull
Utility Craftsworker Superintendent
PO Box 40
Sutter CA 95982
Phone: (530) 755-0071

| Levee Short Name : ST0005 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Feather River Hamilton Bend | RB | 3.22 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.

## DWR Levee Inspection Summary

| ST0005 | Total LMA Miles | 3.22 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| No Items | | | | | | | | | | | | **0.00** |
| *LMA Totals:* | 0.00 | 0.00 | 0.00 | **0.00** | 0.00 | 0.00 | 0.00 | **0.00** | 0.00 | 0.00 | 0.00 | **0.00** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Feather River - Hamilton - northeast of Afterbay | 2.10 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the Spring 2012 Levee Inspection Report for the relevant information. The 2012 Spring Inspection Report provided acceptable rating for all inspected items.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

No information was provided by the Agency for Part 3.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Sutter Maintenance Yard
# Maintenance Area 0001

## Colusa County

**Contact**
Karen Hull
Utility Craftsworker Superintendent
PO Box 40
Sutter CA 95982
Phone: (530) 755-0071

| Levee Short Name : MA0001 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Sacramento River | RB | 17.12 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.

## DWR Levee Inspection Summary

| MA0001 | Total LMA Miles | 17.12 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.04 | | 0.04 | **0.23** | 0.04 | | 0.04 | **0.23** | | | | **0.00** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.06** | | | | | -0.01 | | -0.01 | **-0.06** |
| Encroachments | 0.01 | | 0.01 | **0.06** | | | | | -0.01 | | -0.01 | **-0.06** |
| Animal Control | 0.23 | | 0.23 | **1.34** | 0.08 | | 0.08 | **0.47** | -0.15 | | -0.15 | **-0.88** |
| Slope Stability | 0.01 | | 0.01 | **0.06** | | | | | -0.01 | | -0.01 | **-0.06** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.39 | | 0.39 | **2.28** | 0.66 | | 0.66 | **3.86** | 0.27 | | 0.27 | **1.58** |
| *LMA Totals:* | 0.69 | 0.00 | 0.69 | **4.03** | 0.78 | 0.00 | 0.78 | **4.56** | 0.09 | 0.00 | 0.09 | **0.53** |

MA 1

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Sacramento River, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SAC_151-0_R | 151.00 | 5.00 | 5.38 | eroding | M |
| SAC_154-0_R | 154.00 | 7.42 | 7.43 | repaired | C |
| SAC_157-7_R | 157.70 | 10.30 | 10.38 | eroding | M |
| SAC_164-3_R | 164.30 | 16.49 | 16.69 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Sacramento River west bank | 119.72 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report



**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of expenses and maintenance activities accomplished. Activities included encroachment removal, inspection, minor structure maintenance, patrolling, restoration/habitat enhancements, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total maintenance cost for the previous fiscal year was $204,720.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of encroachment removal, minor structure maintenance, mobile equipments, patrolling, restoration/habitat enhancements, roadway maintenance, rodent control, slope dragging, telemetry maintenance, and vegetation control. The reported total estimated cost for the current fiscal year is $254,500.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported encroachments at Levee Unit 1, LM 1.21, 5.42, and 9.79.

# Sutter Maintenance Yard
# Maintenance Area 0003

## Sutter County

**Contact**
Karen Hull
Utility Craftsworker Superintendent
PO Box 40
Sutter CA 95982
Phone: (530) 755-0071

| Levee Short Name : MA0003 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Feather River | RB | 5.19 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.

## DWR Levee Inspection Summary

| MA0003 | Total LMA Miles | 5.19 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Slope Stability | 0.13 | | 0.13 | **2.51** | | | | | -0.13 | | -0.13 | **-2.51** |
| Crown Surface / Depressions / Rutting | 0.13 | | 0.13 | **2.51** | | | | | -0.13 | | -0.13 | **-2.51** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Sluice / Slide Gates | 0.01 | | 0.01 | **0.19** | 0.01 | | 0.01 | **0.19** | | | | **0.00** |
| *LMA Totals:* | 0.27 | 0.00 | 0.27 | **5.20** | 0.01 | 0.00 | 0.01 | **0.19** | -0.26 | 0.00 | -0.26 | **-5.01** |

MA 3

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Feather River right bank - Sutter Bypass east bank | 66.72 | Inactive | 09/10/2010 | U |

## DWR Summary of Local Maintaining Agency Report



**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the Spring 2012 Levee Inspection Report for the relevant information. The 2012 Spring Inspection Report provided minimally acceptable to acceptable rating for all inspected items of all levee units.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of expenses and maintenance activities accomplished. Activities included inspection, minor structure maintenance, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total maintenance cost for the previous fiscal year was $107,620.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of encroachment removal, minor structure maintenance, mobile equipments, patrolling, restoration/habitat enhancements, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total estimated cost for the current fiscal year is $63,500.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

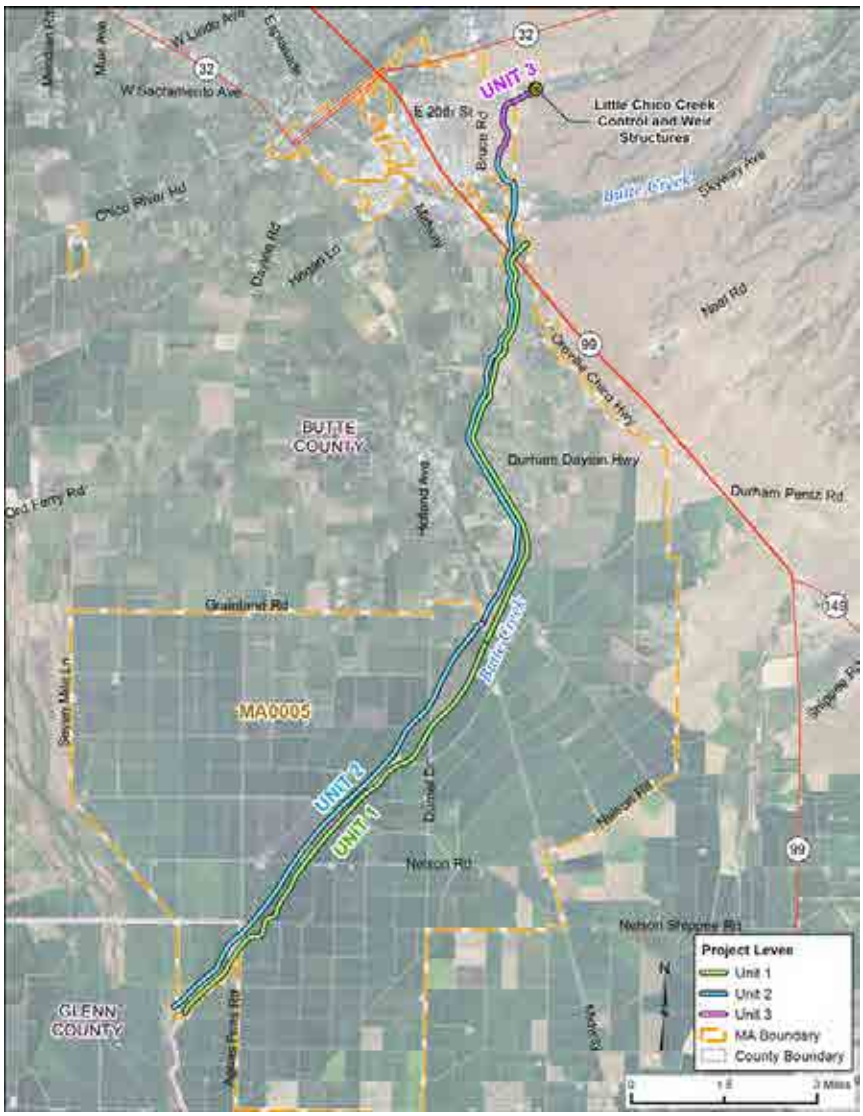
No information was provided by the Agency for Part 5.

# Sutter Maintenance Yard
## Maintenance Area 0005

MA 5

**Butte County**
**Glenn County**

**Contact**
Karen Hull
Utility Craftsworker Superintendent
PO Box 40
Sutter CA 95982
Phone: (530) 755-0071




| Levee Short Name : MA0005 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Butte Creek 1 | LB | 15.29 |
| Unit No. 02 Butte Creek 1 | RB | 16.53 |
| Unit No. 03 Little Chico Creek Diversion 1 | LB | 1.50 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should work with landowners and the CVFPB to control unauthorized encroachments.

## DWR Levee Inspection Summary

| MA0005 | Total LMA Miles | 33.32 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.02 | | 0.02 | **0.06** | 0.02 | | 0.02 | **0.06** | | | | **0.00** |
| Encroachments | 0.10 | | 0.10 | **0.30** | 0.09 | | 0.09 | **0.27** | -0.01 | | -0.01 | **-0.03** |
| Animal Control | 0.01 | | 0.01 | **0.03** | 0.01 | | 0.01 | **0.03** | | | | **0.00** |
| Slope Stability | 0.01 | | 0.01 | **0.03** | 0.05 | | 0.05 | **0.15** | 0.04 | | 0.04 | **0.12** |
| Repair Gates | 0.02 | | 0.02 | **0.06** | 0.02 | | 0.02 | **0.06** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.03** | | | | | -0.01 | | -0.01 | **-0.03** |
| *LMA Totals:* | 0.17 | 0.00 | 0.17 | **0.51** | 0.19 | 0.00 | 0.19 | **0.57** | 0.02 | 0.00 | 0.02 | **0.06** |

MA 5

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 02 Butte Creek 1, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| BTC_2-5_R | 0.00 | 2.50 | 2.51 | removed | A/W |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| MA 05 Unit 1 - Butte Creek left bank | 15.08 | Active | | Pending |
| MA 05 Unit 2 - Butte Creek right bank | 16.71 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report



**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the Spring 2012 Levee Inspection Report for the relevant information. The 2012 Spring Inspection Report provided unacceptable rating for Levee Unit 2 at LM 14.54 for encroachment due to buildings.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of expenses and maintenance activities accomplished. Activities included encroachment removal, inspection, Little Chico Diversion Structure, minor structure maintenance, restoration/habitat enhancements, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total maintenance cost for the previous fiscal year was $334,378.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of encroachment removal, diversion structure, minor structure maintenance, mobile equipments, patrolling, restoration/habitat enhancements, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total estimated cost for the current fiscal year is $374,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Sutter Maintenance Yard
# Maintenance Area 0007



## Butte County

**Contact**
Karen Hull
Utility Craftsworker Superintendent
PO Box 40
Sutter CA 95982
Phone: (530) 755-0071

| Levee Short Name : MA0007 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Feather River | RB | 12.07 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should repair locations where the levee slope may be unstable.

## DWR Levee Inspection Summary

| MA0007 | Total LMA Miles | 12.07 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Encroachments | 0.04 | | 0.04 | **0.33** | | | | | -0.04 | | -0.04 | **-0.33** |
| Slope Stability | 0.38 | | 0.38 | **3.15** | 0.36 | | 0.36 | **2.98** | -0.02 | | -0.02 | **-0.17** |
| Erosion / Bank Caving | 0.04 | | 0.04 | **0.33** | | | | | -0.04 | | -0.04 | **-0.33** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.08** | 0.02 | | 0.02 | **0.17** | 0.01 | | 0.01 | **0.08** |
| *LMA Totals:* | 0.47 | 0.00 | 0.47 | **3.89** | 0.38 | 0.00 | 0.38 | **3.15** | -0.09 | 0.00 | -0.09 | **-0.75** |

MA 7

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Feather River, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| FHR_47-5_R | 47.50 | 1.55 | 1.55 | eroding | M |
| FHR_50-9_R | 50.90 | 4.37 | 4.37 | eroding new | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Feather River right bank - Sutter Bypass east bank | 66.72 | Inactive | 09/10/2010 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the Spring 2012 Levee Inspection Report for the relevant information. The 2012 Spring Inspection Report provided unacceptable rating for encroachments at various locations at Levee Unit 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**



The Agency provided a summary of expenses and maintenance activities accomplished. Activities included encroachment removal, inspection, minor structure maintenance, restoration/habitat enhancements, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total maintenance cost for the previous fiscal year was $81,234.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of administrative overhead, encroachment removal, minor structure maintenance, mobile equipments, patrolling, restoration/habitat enhancements, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total estimated cost for the current fiscal year is $117,300.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Sutter Maintenance Yard
# Maintenance Area 0012



## Colusa County

**Contact**
Karen Hull
Utility Craftsworker Superintendent
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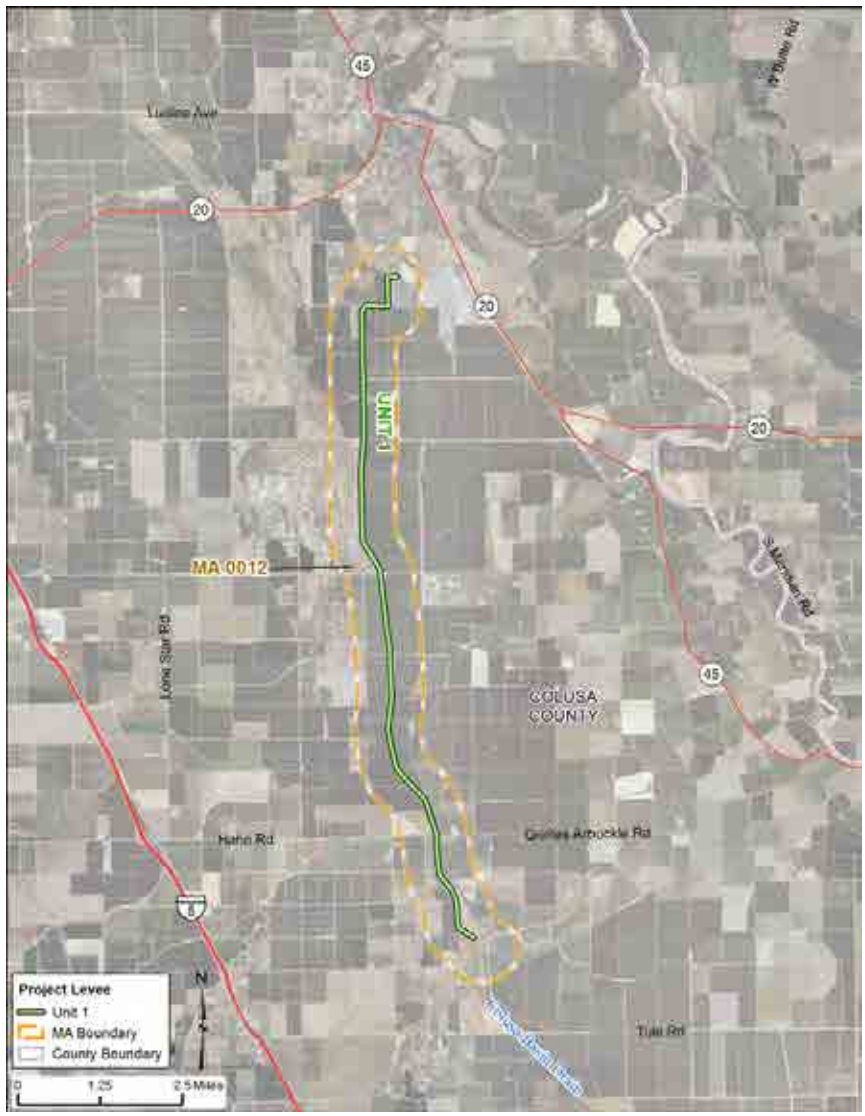


| Levee Short Name : MA0012 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Colusa Drain | LB | 11.31 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| MA0012 | Total LMA Miles | 11.31 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Animal Control | 0.02 | | 0.02 | **0.18** | | | | | -0.02 | | -0.02 | **-0.18** |
| Slope Stability | 0.01 | | 0.01 | **0.09** | | | | | -0.01 | | -0.01 | **-0.09** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.09** | 0.01 | | 0.01 | **0.09** | | | | **0.00** |
| *LMA Totals:* | 0.04 | 0.00 | 0.04 | **0.35** | 0.01 | 0.00 | 0.01 | **0.09** | -0.03 | 0.00 | -0.03 | **-0.27** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Colusa Drain, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| SYC_9-3_L | 0.00 | 9.02 | 9.02 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Sacramento River west bank | 119.72 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the Spring 2012 Levee Inspection Report for the relevant information. The 2012 Spring Inspection Report provided minimally acceptable to acceptable ratings for all inspected items of all levee units.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of expenses and maintenance activities accomplished. Activities included costs of encroachment removal, inspection, minor structure maintenance, restoration/habitat enhancements, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total maintenance cost for the previous fiscal year was $76,419.



**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of administrative overhead, encroachment removal, minor structure maintenance, mobile equipments, patrolling, restoration/habitat enhancements, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total estimated cost for the current fiscal year is $93,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Sutter Maintenance Yard
# Maintenance Area 0013



## Butte County

**Contact**
Karen Hull
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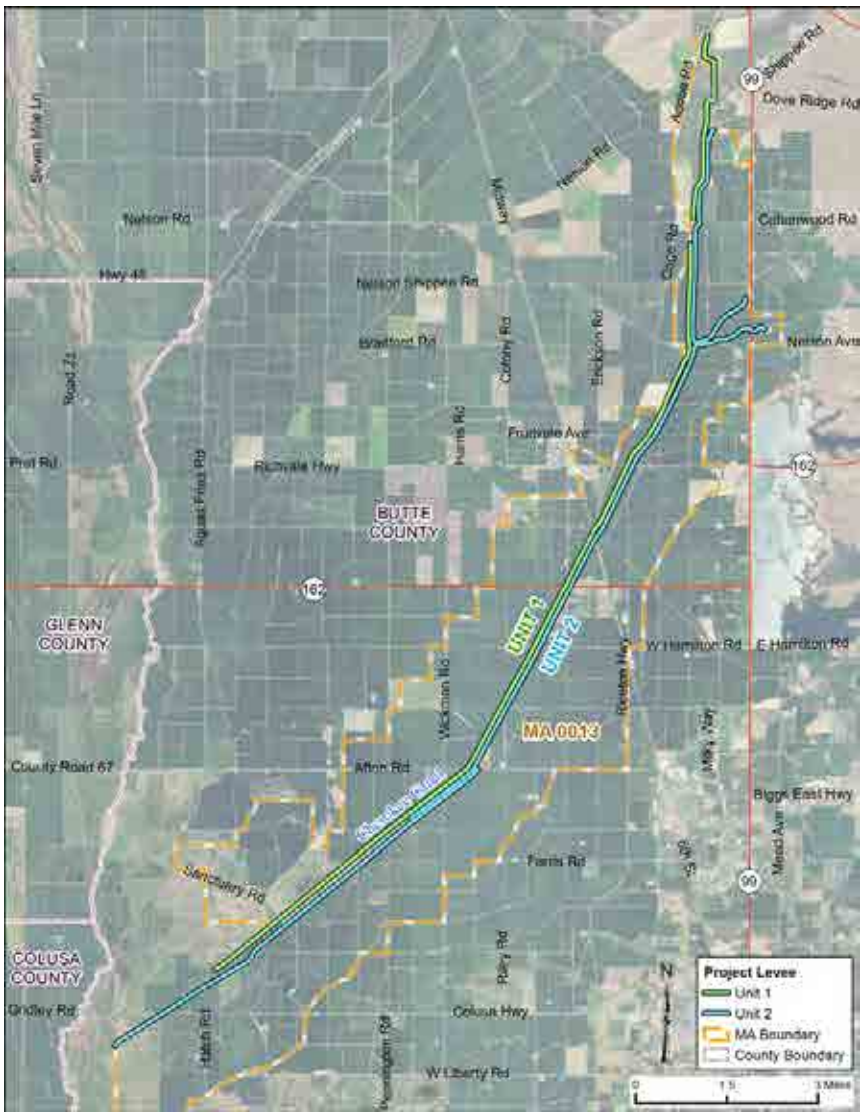


| Levee Short Name : MA0013 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Cherokee Canal | RB | 18.87 |
| Unit No. 02 Cherokee Canal | LB | 23.10 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| MA0013 | Total LMA Miles | 41.97 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Trim / Thin Trees | 0.03 | | 0.03 | **0.07** | 0.03 | | 0.03 | **0.07** | | | | **0.00** |
| Encroachments | 0.59 | | 0.59 | **1.41** | 0.59 | | 0.59 | **1.41** | | | | **0.00** |
| Animal Control | 0.03 | | 0.03 | **0.07** | | | | | -0.03 | | -0.03 | **-0.07** |
| Erosion / Bank Caving | 0.02 | | 0.02 | **0.05** | 0.02 | | 0.02 | **0.05** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.02** | 0.01 | | 0.01 | **0.02** | | | | **0.00** |
| *LMA Totals:* | 0.68 | 0.00 | 0.68 | **1.62** | 0.65 | 0.00 | 0.65 | **1.55** | -0.03 | 0.00 | -0.03 | **-0.07** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Cherokee Canal, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| CHK_11-7_R | 0.00 | 11.75 | 11.76 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| MA 13 Unit 1 - Cherokee Canal right bank | 18.18 | Active | | Pending |
| MA 13 Unit 2 north - Cherokee Canal left bank | 4.78 | Active | | Pending |
| MA 13 Unit 2 south - Cherokee Canal left bank | 18.08 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the Spring 2012 Levee Inspection Report for the relevant information. The 2012 Spring Inspection Report provided minimally acceptable to acceptable ratings for all inspected items of all levee units.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of expenses and maintenance activities accomplished. Activities included encroachment removal, inspection, minor structure maintenance, mobile equipments, restoration/habitat enhancements, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total maintenance cost for the previous fiscal year was $188,874.



**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of administrative overhead, encroachment removal, minor structure maintenance, mobile equipments, patrolling, restoration/habitat enhancements, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total estimated cost for the current fiscal year is $215,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported levee toe encroachment on Levee Unit 1, LM 11.19 to 11.76 and on Levee Unit 2, LM 10.14 to 20.15.

# Sutter Maintenance Yard
# Maintenance Area 0016



## Sutter County

**Contact**
Karen Hull
Utility Craftsworker Superintendent
PO Box 40
Sutter CA 95982
Phone: (530) 755-0071

| Levee Short Name : MA0016 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Feather River | RB | 4.09 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.

## DWR Levee Inspection Summary

| MA0016 | Total LMA Miles | 4.09 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M * | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Encroachments | 0.01 | | 0.01 | **0.24** | | | | | -0.01 | | -0.01 | **-0.24** |
| Animal Control | 0.02 | | 0.02 | **0.49** | | | | | -0.02 | | -0.02 | **-0.49** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Metal Pipes | | 0.01 | 0.04 | **0.98** | | | | | | -0.01 | -0.04 | **-0.98** |
| *LMA Totals:* | 0.03 | 0.01 | 0.07 | **1.71*** | 0.00 | 0.00 | 0.00 | **0.00** | -0.03 | -0.01 | -0.07 | **-1.71** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

MA 16

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Feather River right bank - Sutter Bypass east bank | 66.72 | Inactive | 09/10/2010 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the Spring 2012 Levee Inspection Report for the relevant information. The 2012 Spring Inspection Report provided unacceptable rating for encroachment at Levee Unit 1, LM 0.45 to 0.49.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of expenses and maintenance activities accomplished. Activities included encroachment removal, inspection, minor structure maintenance, restoration/habitat enhancements, roadway maintenance, rodent control, and vegetation control. The reported total maintenance cost for the previous fiscal year was $50,564.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**



The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of administrative overhead, encroachment removal, minor structure maintenance, mobile equipments, patrolling, restoration/habitat enhancements, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total estimated cost for the current fiscal year is $65,500.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported encroachment at Levee Unit 1, LM 0.18 on levee shoulder and toe.

# Sutter Maintenance Yard
# Maintenance Area 0017

## Lake County



**Contact**
Karen Hull
Utility Craftsworker Superintendent
PO Box 40
Sutter CA 95982
Phone: (530) 755-0071

| Levee Short Name : MA0017 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Lake County Sutter Maintenance Yard - Middle Creek | LB | 3.90 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| MA0017 | Total LMA Miles | 3.90 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | 3.13 | 12.52 | **321.03** | | 3.13 | 12.52 | **321.03** | | | | **0.00** |
| Trim / Thin Trees | | 3.12 | 12.48 | **320.00** | | 3.12 | 12.48 | **320.00** | | | | **0.00** |
| *LMA Totals:* | 0.00 | 6.25 | 25.00 | **641.03** | 0.00 | 6.25 | 25.00 | **641.03** | 0.00 | 0.00 | 0.00 | **0.00** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

MA 17

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Middle Creek left bank - Unit 1 at Clear Lake | 1.33 | Active | | Pending |
| Middle Creek left bank - Unit 1 south | 3.51 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the Spring 2012 Levee Inspection Report for the relevant information. The 2012 Spring Inspection Report provided unacceptable rating for vegetation at Levee Unit 1 at various locations.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of expenses and maintenance activities accomplished. Activities included encroachment removal, inspection, minor structure maintenance, restoration/habitat enhancements, roadway maintenance, rodent control and vegetation control. The reported total maintenance cost for the previous fiscal year was $61,970.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of administrative overhead, encroachment removal, minor structure maintenance, mobile equipments, patrolling, plant O&M and repairs, restoration/habitat enhancements, roadway maintenance, rodent control and vegetation control. The reported total estimated cost for the current fiscal year is $91,200.



**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Sutter Maintenance Yard
# Nelson Bend

## Sutter County



**Contact**
Karen Hull
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PO Box 40
Sutter CA 95982
Phone: (530) 755-0071

| Levee Short Name : ST0006 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Feather River West Levee-Nelson Bend | | 0.50 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| ST0006 | Total LMA Miles | 0.50 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.99 | | 0.99 | **198.00** | 0.55 | | 0.55 | **110.00** | -0.44 | | -0.44 | **-88.00** |
| Trim / Thin Trees | 0.44 | | 0.44 | **88.00** | 0.44 | | 0.44 | **88.00** | | | | **0.00** |
| *LMA Totals:* | 1.43 | 0.00 | 1.43 | **286.00** | 0.99 | 0.00 | 0.99 | **198.00** | -0.44 | 0.00 | -0.44 | **-88.00** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Feather River - Nelsen Bend West Levee | 0.55 | Active | | N/A |
| Feather River right bank - Sutter Bypass east bank | 66.72 | Inactive | 09/10/2010 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the Spring 2012 Levee Inspection Report for the relevant information. The 2012 Spring Inspection Report provided unacceptable rating for encroachment at Levee Unit 1, LM 0.48.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

No information was provided by the Agency for Part 3.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Sutter Maintenance Yard
# Tisdale Bypass

## Sutter County



**Contact**
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PO Box 40
Sutter CA 95982
Phone: (530) 755-0071

| Levee Short Name : ST0009 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Tisdale Bypass | LB | 4.50 |
| Unit No. 02 Tisdale Bypass | RB | 4.43 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should focus more on backfilling rodent holes.

## DWR Levee Inspection Summary

| ST0009 | Total LMA Miles | 8.93 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Animal Control | | | | | 0.01 | | 0.01 | **0.11** | 0.01 | | 0.01 | **0.11** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.11** | 0.01 | | 0.01 | **0.11** | | | | **0.00** |
| *LMA Totals:* | 0.01 | 0.00 | 0.01 | **0.11** | 0.02 | 0.00 | 0.02 | **0.22** | 0.01 | 0.00 | 0.01 | **0.11** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0070 and RD 1660 - Sutter Basin North | 39.90 | Active | | Pending |
| RD 1500 and Tisdale Bypass - Sutter Basin South | 59.22 | Inactive | 05/14/2012 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the Spring 2012 Levee Inspection Report for the relevant information. The 2012 Spring Inspection Report provided minimally acceptable to acceptable ratings for inspected items of all levee units.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of expenses and maintenance activities accomplished. Activities included channel maintenance, encroachment removal, minor structure maintenance, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total maintenance cost for the previous fiscal year was $200,294.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of channel maintenance, minor structure maintenance, patrolling, restoration/habitat enhancements, roadway maintenance, rodent control, slope dragging, and vegetation control. The reported total estimated cost for the current fiscal year is $262,100.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Sutter Maintenance Yard
# Wadsworth Canal

## Sutter County

**Contact**
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Phone: (530) 755-0071

| Levee Short Name : ST0010 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Wadsworth Canal | LB | 4.66 |
| Unit No. 02 Wadsworth Canal | RB | 4.66 |

## Threat Assessment & Recommendations

- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| ST0010 | Total LMA Miles | 9.32 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Animal Control | 0.07 | | 0.07 | **0.75** | 0.03 | | 0.03 | **0.32** | -0.04 | | -0.04 | **-0.43** |
| Slope Stability | 0.01 | | 0.01 | **0.11** | 0.01 | | 0.01 | **0.11** | | | | **0.00** |
| Erosion / Bank Caving | 0.48 | | 0.48 | **5.15** | 0.51 | | 0.51 | **5.47** | 0.03 | | 0.03 | **0.32** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.05 | | 0.05 | **0.54** | 0.05 | | 0.05 | **0.54** | | | | **0.00** |
| *LMA Totals:* | 0.61 | 0.00 | 0.61 | **6.55** | 0.60 | 0.00 | 0.60 | **6.44** | -0.01 | 0.00 | -0.01 | **-0.11** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## USACE Sacramento River Erosion Summary

### Unit No. 01 Wadsworth Canal, LB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| WAD_2-1_L | 0.00 | 1.74 | 1.74 | eroding | M |
| WAD_2-4_L | 0.00 | 2.43 | 2.43 | eroding | M |

### Unit No. 02 Wadsworth Canal, RB

| Site ID | River Mile | Levee Mile | | Status | Rating |
|---|---|---|---|---|---|
| | | Start | End | | |
| WAD_2-1_R | 0.00 | 1.74 | 1.74 | eroding | M |
| WAD_2-4_R | 0.00 | 2.44 | 2.44 | eroding | M |
| WAD_4-3_R | 0.00 | 4.41 | 4.41 | eroding | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Feather River right bank - Sutter Bypass east bank | 66.72 | Inactive | 09/10/2010 | U |
| Wadsworth Canal right bank - Sutter Bypass East | 8.84 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to the Spring 2012 Levee Inspection Report for the relevant information. The 2012 Spring Inspection Report provided minimally acceptable to acceptable rating for inspected items of all levee units.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of expenses and maintenance activities accomplished. Activities included encroachment removal, erosion repair, inspection, minor structure maintenance, roadway maintenance, rodent control, seepage control, slope dragging, and vegetation control. The reported total maintenance cost for the previous fiscal year was $133,132.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of erosion repair, minor structure maintenance, patrolling, restoration/habitat enhancements, roadway maintenance, rodent control, seepage control, slope dragging, and vegetation control. The reported total estimated cost for the current fiscal year is $183,650.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

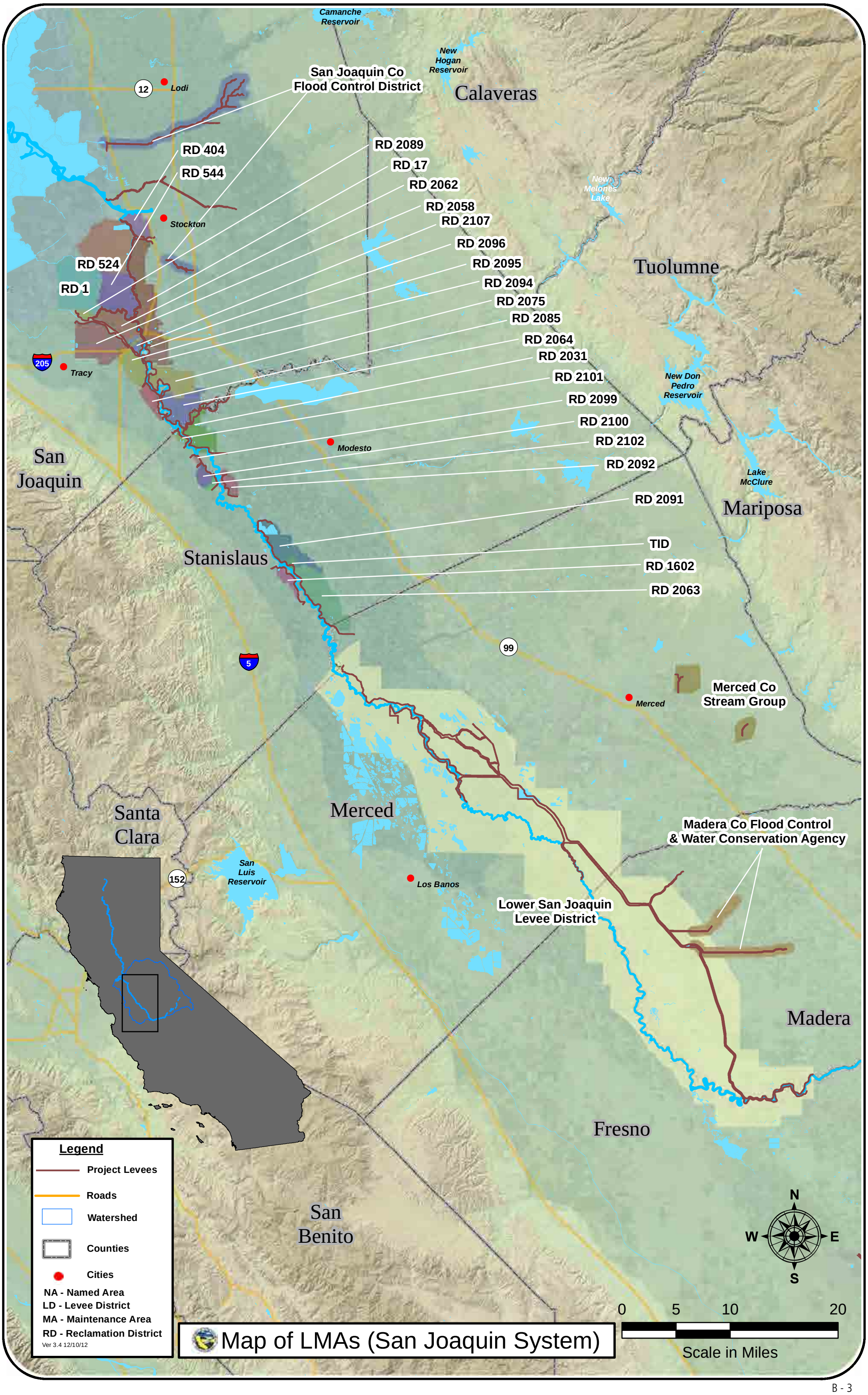
Appendix **B**

# San Joaquin River Individual Agency Summary Reports

A total of 29 LMAs and 29 local reporting areas for Project Levees are included in the San Joaquin River Flood Control Project. Appendix B includes an index to San Joaquin River System LMAs, a map to show the locations of each reporting area, and individual LMA summary profiles. Appendix B includes:

- San Joaquin River System LMA Index
- San Joaquin River System Map
- Individual Local Maintaining Area Summary Profiles, San Joaquin River System

| Local Agencies & Areas | County | Tab Name | Short Name | Page |
|---|---|---|---|---|
| **Reclamation Districts** | | | | |
| Reclamation District No. 0001 Union Island | San Joaquin | RD 1 | RD0001 | 5 |
| Reclamation District No. 0017 Mossdale | San Joaquin | RD 17 | RD0017 | 9 |
| Reclamation District No. 0404 Boggs | San Joaquin | RD 404 | RD0404 | 13 |
| Reclamation District No. 0524 Middle Roberts Island | San Joaquin | RD 524 | RD0524 | 17 |
| Reclamation District No. 0544 Upper Roberts Island | San Joaquin | RD 544 | RD0544 | 23 |
| Reclamation District No. 1602 Del Puerto | San Joaquin | RD 1602 | RD1602 | 27 |
| Reclamation District No. 2031 Elliot | Stanislaus | RD 2031 | RD2031 | 31 |
| Reclamation District No. 2058 Pescadaro | San Joaquin | RD 2058 | RD2058 | 35 |
| Reclamation District No. 2062 Stewart | San Joaquin | RD 2062 | RD2062 | 39 |
| Reclamation District No. 2063 Crows Landing | Merced | RD 2063 | RD2063 | 43 |
| Reclamation District No. 2064 River Junction | San Joaquin | RD 2064 | RD2064 | 47 |
| Reclamation District No. 2075 McMullin | San Joaquin | RD 2075 | RD2075 | 51 |
| Reclamation District No. 2085 Kasson | San Joaquin | RD 2085 | RD2085 | 55 |
| Reclamation District No. 2089 Stark | San Joaquin | RD 2089 | RD2089 | 59 |
| Reclamation District No. 2091 Chase | Stanislaus | RD 2091 | RD2091 | 63 |
| Reclamation District No. 2092 Dos Rios | Stanislaus | RD 2092 | RD2092 | 67 |
| Reclamation District No. 2094 Wathal | San Joaquin | RD 2094 | RD2094 | 71 |
| Reclamation District No. 2095 Paradise Cut | San Joaquin | RD 2095 | RD2095 | 75 |
| Reclamation District No. 2096 Wetherbee Lake | San Joaquin | RD 2096 | RD2096 | 79 |
| Reclamation District No. 2099 El Solyo Ranch | Stanislaus | RD 2099 | RD2099 | 83 |
| Reclamation District No. 2100 White Lake Ranch | Stanislaus | RD 2100 | RD2100 | 87 |
| Reclamation District No. 2101 Blewett | Stanislaus | RD 2101 | RD2101 | 91 |
| Reclamation District No. 2102 Lara Ranch | Stanislaus | RD 2102 | RD2102 | 95 |
| Reclamation District No. 2107 Mossdale Island | San Joaquin | RD 2107 | RD2107 | 99 |
| **Named Areas** | | | | |
| Lower San Joaquin Levee District | Fresno | LSJLD | NA0010 | 103 |
| Madera County FCWCA | Madera | Madera County | NA0011 | 109 |
| Merced Streams Group | Merced | Merced County | NA0013 | 113 |
| San Joaquin County Flood Control and Water Conservation District | San Joaquin | San Joaquin County | NA0017 | 117 |
| Turlock Irrigation District Gomes Lake | Stanislaus | TID | NA0065 | 123 |


Camanche Reservoir
New Hogan Reservoir
San Joaquin Co Flood Control District
Calaveras
Lodi
12
RD 404
RD 544
RD 2089
RD 17
RD 2062
RD 2058
RD 2107
RD 2096
RD 2095
RD 2094
RD 2075
RD 2085
RD 2064
RD 2031
RD 2101
RD 2099
RD 2100
RD 2102
RD 2092
RD 2091
TID
RD 1602
RD 2063
New Melones Lake
Tuolumne
Stockton
RD 524
RD 1
205
Tracy
New Don Pedro Reservoir
Modesto
San Joaquin
Lake McClure
Mariposa
Stanislaus
99
5
Merced
Merced Co Stream Group
Santa Clara
Merced
Madera Co Flood Control & Water Conservation Agency
San Luis Reservoir
152
Los Banos
Lower San Joaquin Levee District
Madera
Fresno
San Benito
Legend
Project Levees
Roads
Watershed
Counties
Cities
NA - Named Area
LD - Levee District
MA - Maintenance Area
RD - Reclamation District
Ver 3.4 12/10/12
Map of LMAs (San Joaquin System)
N
W
E
S
0
5
10
20
Scale in Miles

# Reclamation District No. 0001
## Union Island

### San Joaquin County

**Contact**
Bruno Marchini
Chairman
311 East Main Street Suite 504
Stockton CA 95202
Phone: (209) 943-5551

| Levee Short Name : RD0001 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Old River | RB | 1.15 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should enhance its rodent control program.

## DWR Levee Inspection Summary

| RD0001 | Total LMA Miles | 1.15 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | M * | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.01 | | 0.01 | **0.87** | 0.01 | | 0.01 | **0.87** | | | | **0.00** |
| Animal Control | 0.04 | | 0.04 | **3.48** | 0.03 | | 0.03 | **2.61** | -0.01 | | -0.01 | **-0.87** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | | | | | 0.01 | 0.04 | **3.48** | | 0.01 | 0.04 | **3.48** |
| *LMA Totals:* | 0.05 | 0.00 | 0.05 | **4.35** | 0.04 | 0.01 | 0.08 | **6.96*** | -0.01 | 0.01 | 0.03 | **2.61** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 01 Old River, RB

| Site ID | River Mile | Levee Mile | | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| | | Start | End | | | |
| RD0001U01RM31.4 | 31.4 | 0.00 | 0.00 | Maintenance Erosion | New Site | U |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0001 and RD 2089 - Union Island | 3.92 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided minimally acceptable to acceptable ratings for the inspected items of all levee units.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided minimally acceptable to acceptable ratings for the inspected items of all levee units.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency reported its ongoing corrective actions in response to DWR inspection comments. The corrective actions included encroachment and rodent control. The Agency also provided total routine maintenance cost for the previous fiscal year as $162,361.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency referred to the fiscal year 2012-2013 application to the Delta Levee Subventions Program for a summary of planned maintenance activities for 13 miles of Non-Project Levees and 1 mile of Project Levee. Expenses include costs of debris removal, encroachment control, erosion repair, flood emergency planning, inspection, levee drainage control, levee profile and cross sections, program management, roadway grading and repair, rodent control, survey, vegetation control, and waterside slope protection. The reported anticipated maintenance budget for the current fiscal year is $170,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 0017
# Mossdale

## San Joaquin County

**Contact**
Henry Long
President
871 West Yettner
French Camp CA 95231
Phone: (209) 982-1356

| Levee Short Name : RD0017 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 French Camp Slough | LB | 1.79 |
| Unit No. 02 San Joaquin River | RB | 14.45 |

## Threat Assessment & Recommendations

- There are one or more encroachments that may significantly impact the integrity of the levee in this Area.
- The LMA should work with landowners and the CVFPB to control unauthorized encroachments.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD0017 | Total LMA Miles | 16.24 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | M * | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.03 | | 0.03 | **0.19** | 0.03 | | 0.03 | **0.19** | | | | **0.00** |
| Trim / Thin Trees | 0.05 | | 0.05 | **0.31** | 0.01 | | 0.01 | **0.06** | -0.04 | | -0.04 | **-0.25** |
| Encroachments | 0.01 | | 0.01 | **0.06** | | 0.01 | 0.04 | **0.25** | -0.01 | 0.01 | 0.03 | **0.18** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | | | | 0.01 | 0.02 | 0.09 | **0.55** | 0.01 | 0.02 | 0.09 | **0.55** |
| *LMA Totals:* | 0.09 | 0.00 | 0.09 | **0.55** | 0.05 | 0.03 | 0.17 | **1.05*** | -0.04 | 0.03 | 0.08 | **0.49** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 02 San Joaquin River, RB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| RD0017U02RM44.32 | 44.32 | 1.08 | 1.08 | River Erosion | New Site | U |
| RD0017U02RM46.73 | 46.73 | 3.46 | 3.46 | Maintenance Erosion | New Site | U |
| RD0017U02RM45.97 | 45.97 | 5.43 | 5.43 | Maintenance Erosion | New Site | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0017, 2094, 2096, 2075, 2064 - SJ River East | 38.45 | Active | 12/17/2010 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring Inspection Report provided unacceptable rating for encroachments at Levee Unit 2 at various locations.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring Inspection Report provided unacceptable rating for encroachments at Levee Unit 2 at various locations.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency reported that the annual routine maintenance costs for the previous fiscal year were in excess of $250,000.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency anticipated maintenance budget for the current fiscal year to be $250,000. The Agency reported working with DWR on Early Implementation Projects to address seepage issues and mentioned that Phases 1 and 2 of the project are completed while Phase 3 is under development with a budget of $10,000,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 0404
## Boggs

### San Joaquin County

**Contact**
Jason P Cashman
Chairman
PO Box 1461
Stockton CA 95201
Phone: (209) 465-5883

| Levee Short Name : RD0404 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | RB | 2.36 |
| Unit No. 02 French Camp Slough | RB | 1.76 |

## Threat Assessment & Recommendations

- The crown roadway in this Area may not be able to be driven in all types of weather.
- The LMA should ensure that the levee crown and access roads are able to be driven in all weather conditions.

## DWR Levee Inspection Summary

| RD0404 | Total LMA Miles | 4.12 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.04 | | 0.04 | **0.97** | 0.22 | | 0.22 | **5.34** | 0.18 | | 0.18 | **4.37** |
| Trim / Thin Trees | 0.08 | | 0.08 | **1.94** | 0.08 | 0.07 | 0.36 | **8.74** | | 0.07 | 0.28 | **6.80** |
| Encroachments | 0.06 | | 0.06 | **1.46** | 0.07 | 0.01 | 0.11 | **2.67** | 0.01 | 0.01 | 0.05 | **1.21** |
| Animal Control | 0.34 | | 0.34 | **8.25** | 0.12 | | 0.12 | **2.91** | -0.22 | | -0.22 | **-5.34** |
| Slope Stability | 0.02 | | 0.02 | **0.49** | 0.10 | | 0.10 | **2.43** | 0.08 | | 0.08 | **1.94** |
| Erosion / Bank Caving | 0.03 | | 0.03 | **0.73** | 0.03 | | 0.03 | **0.73** | | | | **0.00** |
| Crown Surface / Depressions / Rutting | | | | | 0.69 | | 0.69 | **16.75** | 0.69 | | 0.69 | **16.75** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | 0.04 | 0.16 | **3.88** | | 0.10 | 0.40 | **9.71** | | 0.06 | 0.24 | **5.83** |
| *LMA Totals:* | 0.57 | 0.04 | 0.73 | **17.72** | 1.31 | 0.18 | 2.03 | **49.27** | 0.74 | 0.14 | 1.30 | **31.55** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 01 San Joaquin River, RB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| RD0404U01RM40.86 | 40.86 | 0.21 | 0.26 | River Erosion | Existing Site | U |
| RD0404U01RM41.11 | 41.11 | 0.48 | 0.48 | River Erosion | New Site | U |
| RD0404U01RM41.22 | 41.22 | 0.60 | 0.62 | River Erosion | New Site | U |
| RD0404U01RM41.23 | 41.23 | 0.62 | 0.62 | River Erosion | New Site | U |

### Unit No. 02 French Camp Slough, RB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| RD0404U02RM1.56 | 1.56 | 1.32 | 1.58 | Maintenance Erosion | Repaired Site | C |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0404 and Duck Creek right bank - Boggs Tract | 4.35 | Inactive | 08/21/2012 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided unacceptable rating for water side erosion at Levee Unit 1, LM 0.21 to 0.25.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided unacceptable rating for water side erosion at Levee Unit 1, LM 0.21 to 0.25.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency referred to Inspection Items/Corrective Action submitted for Summer 2012 Levee Inspection Report. The Agency also reported ongoing corrective actions in response to DWR inspection comments. The corrective actions included encroachment control, erosion and bank caving control, rodent control, slope stability repair, tree thinning and trimming, and vegetation control. The Agency also provided total routine maintenance cost for the previous fiscal year as $53,500.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency referred to the fiscal year 2012-2013 application to the Delta Subventions Program which provided a summary of estimated cost and maintenance activities planned for 0.65 miles of Non-Project Levees and 4.1 miles of Project Levees. Expenses include costs of encroachment control, erosion repair, flood emergency planning, inspection, levee drainage control, levee profile and cross sections, program management, roadway grading and repair, rodent control, seepage control, vegetation control, and waterside slope protection. The reported anticipated maintenance budget for the current fiscal year is $250,000 which includes approximately $200,000 for erosion repairs at various locations.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 0524
## Middle Roberts Island

### San Joaquin County

**Contact**
Daniel Roza, Jr
President
6800 South Roberts Road
Stockton CA 95206
Phone: (209) 462-4906

| Levee Short Name : RD0524 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | LB | 6.26 |

## Threat Assessment & Recommendations

- There is a significant erosion site in this Area that should be monitored.
- The LMA should focus on repairing erosion sites.

## DWR Levee Inspection Summary

| RD0524 | Total LMA Miles | 6.26 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.07 | 0.28 | 1.19 | **19.01** | 0.27 | 0.29 | 1.43 | **22.84** | 0.20 | 0.01 | 0.24 | **3.83** |
| Trim / Thin Trees | 0.77 | 0.08 | 1.09 | **17.41** | 0.73 | 0.22 | 1.61 | **25.72** | -0.04 | 0.14 | 0.52 | **8.31** |
| Encroachments | 0.24 | 0.01 | 0.28 | **4.47** | 0.22 | 0.02 | 0.30 | **4.79** | -0.02 | 0.01 | 0.02 | **0.32** |
| Animal Control | 0.35 | | 0.35 | **5.59** | 0.35 | | 0.35 | **5.59** | 0.00 | | | **0.00** |
| Slope Stability | 0.10 | | 0.10 | **1.60** | 0.14 | 0.02 | 0.22 | **3.51** | 0.04 | 0.02 | 0.12 | **1.92** |
| Erosion / Bank Caving | 0.22 | | 0.22 | **3.51** | 0.19 | 0.33 | 1.51 | **24.12** | -0.03 | 0.33 | 1.29 | **20.61** |
| Crown Surface / Depressions / Rutting | 0.02 | | 0.02 | **0.32** | 0.01 | | 0.01 | **0.16** | -0.01 | | -0.01 | **-0.16** |
| Operations & Maintenance Manuals | | | | | 0.06 | | 0.06 | **0.96** | 0.06 | | 0.06 | **0.96** |
| Flood Preparedness & Training | | | | | 0.06 | | 0.06 | **0.96** | 0.06 | | 0.06 | **0.96** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Metal Pipes | | | | | 0.01 | | 0.01 | **0.16** | 0.01 | | 0.01 | **0.16** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.02 | 0.35 | 1.42 | **22.68** | 0.07 | 0.29 | 1.23 | **19.65** | 0.05 | -0.06 | -0.19 | **-3.04** |
| *LMA Totals:* | 1.79 | 0.72 | 4.67 | **74.60** | 2.12 | 1.17 | 6.80 | **108.63** | 0.33 | 0.45 | 2.12 | **34.03** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 01 San Joaquin River, LB

| Site ID | River Mile | Levee Mile | | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| | | Start | End | | | |
| RD0524U01RM40.99 | 40.99 | 0.40 | 0.40 | River Erosion | New Site | U |
| RD0524U01RM41.15 | 41.15 | 0.53 | 0.60 | River Erosion | Repaired Site | C |
| RD0524U01RM41.39 | 41.39 | 0.77 | 0.78 | River Erosion | Existing Site | U |
| RD0524U01RM41.5 | 41.5 | 0.91 | 0.91 | River Erosion | Existing Site | M |
| RD0524U01RM41.59 | 41.59 | 1.00 | 1.01 | River Erosion | Repaired Site | C |
| RD0524U01RM41.58 | 41.58 | 1.00 | 1.00 | River Erosion | New Site | U |
| RD0524U01RM41.79 | 41.79 | 1.16 | 1.24 | River Erosion | Existing Site | U |
| RD0524U01RM41.92 | 41.92 | 1.29 | 1.32 | River Erosion | New Site | U |
| RD0524U01RM42.03 | 42.03 | 1.39 | 1.39 | River Erosion | New Site | U |
| RD0524U01RM42.2 | 42.2 | 1.58 | 1.64 | River Erosion | Existing Site | U |
| RD0524U01RM42.79 | 42.79 | 2.19 | 2.19 | River Erosion | New Site | M |
| RD0524U01RM42.93 | 42.93 | 2.32 | 2.32 | River Erosion | New Site | U |
| RD0524U01RM43.23 | 43.23 | 2.65 | 2.65 | River Erosion | New Site | M |
| RD0524U01RM43.52 | 43.52 | 2.96 | 2.96 | Maintenance Erosion | New Site | M |
| RD0524U01RM43.83 | 43.83 | 3.23 | 3.31 | River Erosion | Repaired Site | C |
| RD0524U01RM44.13 | 44.13 | 3.55 | 3.58 | River Erosion | New Site | U |
| RD0524U01RM45.07 | 45.07 | 4.53 | 4.54 | River Erosion | New Site | U |
| RD0524U01RM45.27 | 45.27 | 4.71 | 4.71 | Maintenance Erosion | Existing Site | M |
| RD0524U01RM46.12 | 46.12 | 5.65 | 5.66 | Maintenance Erosion | Existing Site | M |
| RD0524U01RM46.39 | 46.39 | 5.86 | 5.86 | River Erosion | New Site | U |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0524 and RD 0544 - Roberts Island | 16.37 | Inactive | 05/14/2012 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided unacceptable ratings for encroachment, erosion, and vegetation at various locations.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided unacceptable rating for encroachment at Levee Unit 1, LM 1.26, 1.64, 1.75, 2.59, 2.67, 4.06, and 6.01 to 6.05; erosion at LM 0.41 to 0.73, 0.53 to 0.60, 0.77 to 0.78, 0.91, 1 to 1.1, 1.16 to 1.24, 1.58 to 1.64, 3.23 to 3.31, 4.7, and 5.41; and vegetation issues at various locations.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency referred to the Inspection Items/Corrective Action submitted for Summer 2012 Levee Inspection Report. The Agency reported ongoing corrective actions in response to DWR inspection comments. The corrective actions included encroachment control, erosion and bank caving control, levee crown repair, rodent control, slope stability repair, tree thinning and trimming, and vegetation control. The Agency also provided total routine maintenance cost for the previous fiscal year as $76,067.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency referred to fiscal year 2012-2013 application to the Delta Levee Subventions Program for a summary of maintenance activities for 3.8 miles of Non-Project Levees and 5.9 miles of the Project Levee. Expenses include costs of encroachment control, erosion repair, flood emergency planning, inspection, levee drainage control, levee profile and cross sections, program management, roadway grading and repair, rodent control, vegetation control, and waterside slope protection. The reported anticipated budget for the current fiscal year is $80,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 0544
## Upper Roberts Island

### San Joaquin County

**Contact**
Jerry Robinson
Chairman
311 East Main Street Suite 504
Stockton CA 95202
Phone: (209) 943-5551

| Levee Short Name : RD0544 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | LB | 6.11 |
| Unit No. 02 Old River | RB | 4.22 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should ensure that the levee crown and access roads are able to be driven in all weather conditions.

## DWR Levee Inspection Summary

| RD0544 | Total LMA Miles | 10.33 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 5.32 | 0.41 | 6.96 | **67.38** | 4.88 | 0.10 | 5.28 | **51.11** | -0.44 | -0.31 | -1.68 | **-16.26** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.10** | 0.02 | | 0.02 | **0.19** | 0.01 | | 0.01 | **0.10** |
| Encroachments | 0.21 | 0.01 | 0.25 | **2.42** | 0.17 | 0.01 | 0.21 | **2.03** | -0.04 | | -0.04 | **-0.39** |
| Animal Control | 0.23 | | 0.23 | **2.23** | 0.27 | | 0.27 | **2.61** | 0.04 | | 0.04 | **0.39** |
| Slope Stability | 0.01 | 0.02 | 0.09 | **0.87** | 0.04 | 0.02 | 0.12 | **1.16** | 0.03 | | 0.03 | **0.29** |
| Erosion / Bank Caving | 0.02 | 0.02 | 0.10 | **0.97** | 0.03 | 0.01 | 0.07 | **0.68** | 0.01 | -0.01 | -0.03 | **-0.29** |
| Crown Surface / Depressions / Rutting | | 0.01 | 0.04 | **0.39** | 0.71 | 0.01 | 0.75 | **7.26** | 0.71 | | 0.71 | **6.87** |
| Flood Preparedness & Training | | | | | 0.10 | | 0.10 | **0.97** | 0.10 | | 0.10 | **0.97** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Erosion Areas | | 0.01 | 0.04 | **0.39** | | 0.01 | 0.04 | **0.39** | | | | **0.00** |
| *Channels* | | | | | | | | | | | | |
| Erosion / Bank Caving | | | | | | 0.01 | 0.04 | **0.39** | | 0.01 | 0.04 | **0.39** |
| Encroachments | | 0.01 | 0.04 | **0.39** | | 0.01 | 0.04 | **0.39** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | 0.04 | 0.16 | **1.55** | | 0.05 | 0.20 | **1.94** | | 0.01 | 0.04 | **0.39** |
| *LMA Totals:* | 5.80 | 0.53 | 7.92 | **76.67** | 6.22 | 0.23 | 7.14 | **69.12** | 0.42 | -0.30 | -0.78 | **-7.55** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 01 San Joaquin River, LB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| RD0544U01RM47.12 | 47.12 | 0.41 | 0.45 | River Erosion | Repaired Site | C |
| RD0544U01RM48.81 | 48.81 | 2.01 | 2.01 | River Erosion | New Site | U |
| RD0544U01RM49.67 | 49.67 | 2.94 | 2.94 | River Erosion | New Site | U |

### Unit No. 02 Old River, RB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| RD0544U02RM33.21 | 33.21 | 2.34 | 2.34 | River Erosion | New Site | U |
| RD0544U02RM32.91 | 32.91 | 2.65 | 2.67 | River Erosion | New Site | U |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0524 and RD 0544 - Roberts Island | 16.37 | Inactive | 05/14/2012 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided unacceptable ratings for crown surface depression at Levee Unit 1, LM 4.33; erosion and bank caving at Levee Unit 1, LM 0.45 to 0.45, and 2.28 and at Levee Unit 2, LM 2.35; encroachment and vegetation at various locations of all levee units; and slope stability at Levee Unit 1, LM 4.32 and at Levee Unit 2, LM 1.89.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided unacceptable rating for crown surface depression at Levee Unit 1, LM 4.33; erosion and bank caving at Levee Unit 1, LM 0.45 to 0.45 and 2.28 and at Levee Unit 2, LM 2.35; encroachment and vegetation at various locations of all levee units; and slope instability at Levee Unit 1, LM 4.32 and at Levee Unit 2, LM 1.89.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency referred to the Inspection Items/Corrective Action submitted for the Summer 2012 Levee Inspection Report. The Agency also reported on the ongoing corrective actions in response to DWR inspection comments. The corrective actions included encroachment control, erosion and bank caving control, levee crown repair, rodent control, slope stability repair, tree thinning and trimming, and vegetation control. The Agency also provided total routine maintenance cost for the previous fiscal year as $182,582.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency referred to the fiscal year 2012-2013 application to the Delta Levee Subventions Program for a summary of cost and maintenance activities for 4.4 miles of Non-Project Levees and 10.6 miles of Project Levees. Expenses include costs of encroachment control, erosion repair, flood emergency planning, inspection, levee drainage control, levee profile and corss sections, management and accounting, program management, removal of drift deposits and debris, roadway grading and repair, rodent control, survey, vegetation control, and waterside slope protection. The reported anticipated maintenance budget for the current fiscal year is $190,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 1602
## Del Puerto

### San Joaquin County

**Contact**
Dan Roberts
Manager
District Office
2012 Apple Avenue
Patterson CA 95363
Phone: (209) 605-7117

| Levee Short Name : RD1602 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | LB | 6.29 |

## Threat Assessment & Recommendations

- There is significant rodent activity in this Area.
- The LMA should enhance its rodent control program.

## DWR Levee Inspection Summary

| RD1602 | Total LMA Miles | 6.29 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 4.54 | | 4.54 | **72.18** | 2.10 | | 2.10 | **33.39** | -2.44 | | -2.44 | **-38.79** |
| Trim / Thin Trees | 0.03 | | 0.03 | **0.48** | | | | | -0.03 | | -0.03 | **-0.48** |
| Encroachments | 0.05 | | 0.05 | **0.80** | 0.04 | | 0.04 | **0.64** | -0.01 | | -0.01 | **-0.16** |
| Animal Control | 0.29 | | 0.29 | **4.61** | 0.55 | | 0.55 | **8.74** | 0.26 | | 0.26 | **4.13** |
| Slope Stability | 0.04 | | 0.04 | **0.64** | 0.04 | | 0.04 | **0.64** | | | | **0.00** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Encroachments | 0.01 | | 0.01 | **0.16** | 0.01 | | 0.01 | **0.16** | | | | **0.00** |
| Flap Gates | 0.01 | | 0.01 | **0.16** | 0.01 | | 0.01 | **0.16** | | | | **0.00** |
| Concrete Tilting / Settlement | 0.01 | | 0.01 | **0.16** | 0.01 | | 0.01 | **0.16** | | | | **0.00** |
| *LMA Totals:* | 4.98 | 0.00 | 4.98 | **79.17** | 2.76 | 0.00 | 2.76 | **43.88** | -2.22 | 0.00 | -2.22 | **-35.29** |

RD 1602

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 1602 - Del Puerto | 6.26 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported squirrel problem in some areas and referred to DWR's Inspection Report for detail. The Agency also reported unauthorized encroachment at all levee units and unauthorized vehicular traffic at Levee Unit 1 between LM 0.0 to 0.5 and at other locations.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency referred to DWR's Inspection Report for the relevant information. The Spring 2012 Levee Inspection Report provided minimally acceptable to acceptable rating for all inspected items.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units. The activities included rodent and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of rodent control, slope dragging, and vegetation spraying. The reported total estimated cost for the current fiscal year is $ 12,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 2031
# Elliot

## Stanislaus County

**Contact**
William Lyons, Jr
Manager
10555 Maze Boulevard
Modesto CA 95358
Phone: (209) 522-1762

| Levee Short Name : RD2031 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Stanislaus River | LB | 7.15 |
| Unit No. 02 San Joaquin River | RB | 6.04 |

## Threat Assessment & Recommendations

- There are one or more encroachments that may significantly impact the integrity of the levee in this Area.
- The LMA should work with landowners and the CVFPB to control unauthorized encroachments.

## DWR Levee Inspection Summary

| RD2031 | Total LMA Miles | 13.19 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M * | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.02 | | 0.02 | **0.15** | 0.02 | | 0.02 | **0.15** | | | | **0.00** |
| Trim / Thin Trees | 0.62 | | 0.62 | **4.70** | 0.61 | | 0.61 | **4.63** | -0.01 | | -0.01 | **-0.08** |
| Encroachments | 0.01 | | 0.01 | **0.08** | 0.52 | | 0.52 | **3.94** | 0.51 | | 0.51 | **3.87** |
| Animal Control | 0.03 | 0.01 | 0.07 | **0.53** | 0.14 | 0.03 | 0.26 | **1.97** | 0.11 | 0.02 | 0.19 | **1.44** |
| Erosion / Bank Caving | 0.03 | 0.01 | 0.07 | **0.53** | 0.03 | 0.01 | 0.07 | **0.53** | | | | **0.00** |
| Crown Surface / Depressions / Rutting | 0.02 | | 0.02 | **0.15** | 0.07 | | 0.07 | **0.53** | 0.05 | | 0.05 | **0.38** |
| Seepage / Sandboils | | 0.01 | 0.04 | **0.30** | | | | | | -0.01 | -0.04 | **-0.30** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Flap Gates | | | | | | 0.01 | 0.04 | **0.30** | | 0.01 | 0.04 | **0.30** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.04 | | 0.04 | **0.30** | 0.04 | | 0.04 | **0.30** | | | | **0.00** |
| *LMA Totals:* | 0.77 | 0.03 | 0.89 | **6.75*** | 1.43 | 0.05 | 1.63 | **12.36** | 0.66 | 0.02 | 0.74 | **5.61** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 01 Stanislaus River, LB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| RD2031U01RM0.48 | 0.48 | 0.47 | 0.50 | Maintenance Erosion | Existing Site | M |

### Unit No. 02 San Joaquin River, RB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| RD2031U02RM78.7 | 78.7 | 4.33 | 4.37 | River Erosion | Not Rated | A/W |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2031 - Elliot | 13.03 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

No information was provided by the Agency for Part 3.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 2058
## Pescadaro



### San Joaquin County

**Contact**
Nat Bacchetti
President
District Office
3650 West Canal Boulevard
Tracy CA 95304
Phone: (209) 835-2293

| Levee Short Name : RD2058 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Paradise Cut | LB | 6.71 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD2058 | Total LMA Miles | 6.71 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 4.17 | 0.02 | 4.25 | **63.34** | 0.06 | | 0.06 | **0.89** | -4.11 | -0.02 | -4.19 | **-62.44** |
| Trim / Thin Trees | 0.19 | | 0.19 | **2.83** | | | | | -0.19 | | -0.19 | **-2.83** |
| Encroachments | 0.01 | 0.01 | 0.05 | **0.75** | 0.01 | | 0.01 | **0.15** | | -0.01 | -0.04 | **-0.60** |
| Animal Control | | | | | 0.01 | | 0.01 | **0.15** | 0.01 | | 0.01 | **0.15** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.05 | | 0.05 | **0.75** | 0.05 | | 0.05 | **0.75** | | | | **0.00** |
| *LMA Totals:* | 4.42 | 0.03 | 4.54 | **67.66** | 0.13 | 0.00 | 0.13 | **1.94** | -4.29 | -0.03 | -4.41 | **-65.72** |

RD 2058

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 01 Paradise Cut, LB

| Site ID | River Mile | Levee Mile | | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| | | Start | End | | | |
| RD2058U01RM1.78 | 1.78 | 2.15 | 2.15 | Maintenance Erosion | Existing Site | M |
| RD2058U01RM3.97 | 3.97 | 4.49 | 4.53 | River Erosion | Existing Site | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2058 and RD 2095 - Paradise Cut | 11.45 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report



**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that trimming of trees at Unit 1, LM 0 to 6.57 was not permitted by the U.S. Fish and Wildlife and the Agency was only given verbal permission for grazing. The Agency also stated that elderberries could not be touched as restricted by the U.S. Fish and Wildlife. The Agency reported erosion at Unit 1, LM 0 to 6.57 and stated that the U.S. Fish and Wildlife has only given verbal permission for specified approved bait stations.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported that the restrictions imposed by other agencies are preventing the Agency to comply with DWR's maintenance requirements.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency reported grazing of the entire levee and rodent control on need basis. The Agency also reported corrected or ongoing corrective actions in response to DWR inspection comments. The corrected actions included encroachment and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of vegetation and rodent control. The reported total estimated cost for the current fiscal year is $32,200.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

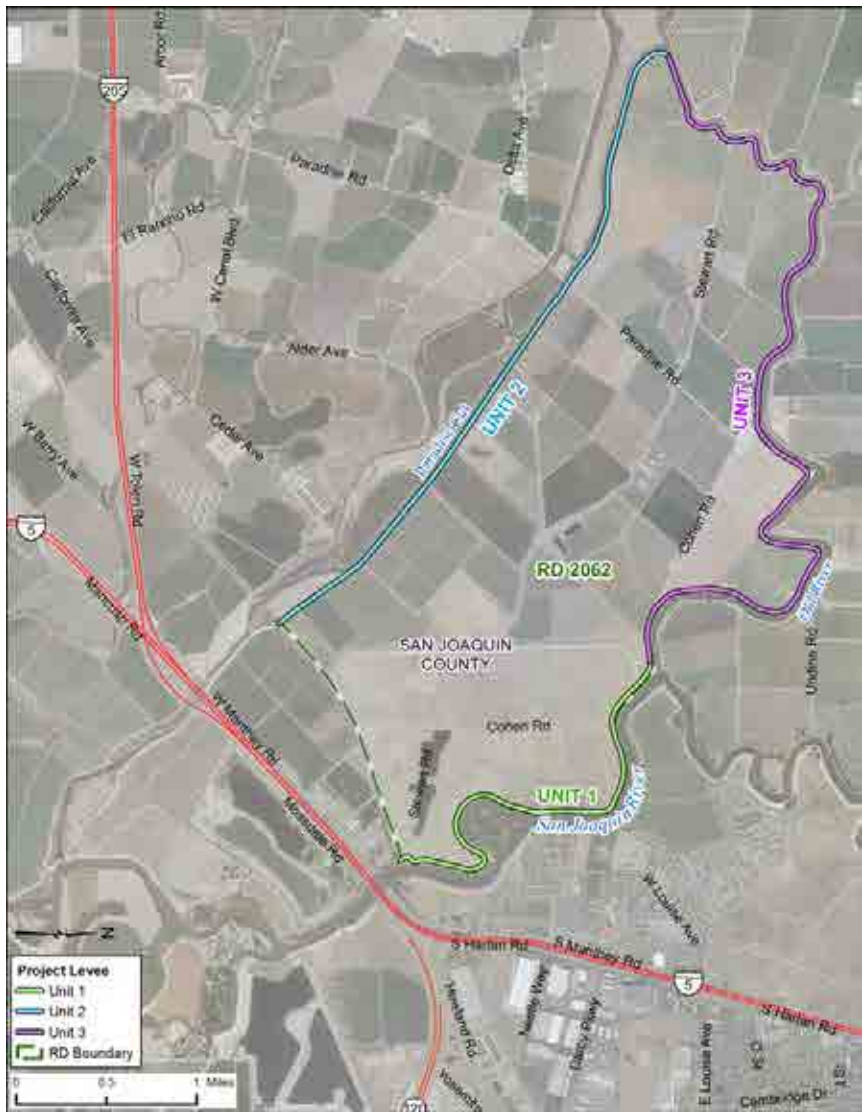
The Agency reported maintenance restrictions imposed by the California Department of Fish and Game since 2001 and the U.S. Fish and Wildlife since 2009/2010.

# Reclamation District No. 2062
## Stewart



### San Joaquin County

**Contact**
Susan Dell-Osso
President
District Office
73 West Stewart Road
Lathrop CA 95330
Phone: (209) 879-7900




| Levee Short Name : RD2062 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | LB | 2.69 |
| Unit No. 02 Paradise Cut | RB | 4.03 |
| Unit No. 03 Old River | LB | 5.63 |

## Threat Assessment & Recommendations

- There are one or more encroachments that may significantly impact the integrity of the levee in this Area.
- The LMA should work with landowners and the CVFPB to control unauthorized encroachments.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD2062 | Total LMA Miles | 12.35 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.01 | | 0.01 | **0.08** | 1.26 | | 1.26 | **10.20** | 1.25 | | 1.25 | **10.12** |
| Trim / Thin Trees | | | | | 0.02 | | 0.02 | **0.16** | 0.02 | | 0.02 | **0.16** |
| Encroachments | 1.81 | | 1.81 | **14.66** | 1.80 | | 1.80 | **14.58** | -0.01 | | -0.01 | **-0.08** |
| Animal Control | 0.09 | | 0.09 | **0.73** | 0.10 | | 0.10 | **0.81** | 0.01 | | 0.01 | **0.08** |
| Slope Stability | 0.01 | | 0.01 | **0.08** | 0.02 | | 0.02 | **0.16** | 0.01 | | 0.01 | **0.08** |
| Erosion / Bank Caving | 0.03 | | 0.03 | **0.24** | 0.03 | | 0.03 | **0.24** | | | | **0.00** |
| Crown Surface / Depressions / Rutting | 0.01 | 0.22 | 0.89 | **7.21** | | 0.22 | 0.88 | **7.13** | -0.01 | | -0.01 | **-0.08** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.15 | 0.21 | 0.99 | **8.02** | 0.17 | 0.19 | 0.93 | **7.53** | 0.02 | -0.02 | -0.06 | **-0.49** |
| *LMA Totals:* | 2.11 | 0.43 | 3.83 | **31.01** | 3.40 | 0.41 | 5.04 | **40.81** | 1.29 | -0.02 | 1.21 | **9.80** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 01 San Joaquin River, LB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| RD2062U01RM54.14 | 54.14 | 0.91 | 0.91 | Maintenance Erosion | Existing Site | M |

### Unit No. 02 Paradise Cut, RB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| RD2062U02RM2.14 | 2.14 | 3.27 | 3.28 | Maintenance Erosion | Existing Site | M |
| RD2062U02RM1.94 | 1.94 | 3.44 | 3.53 | Maintenance Erosion | Existing Site | M |

### Unit No. 03 Old River, LB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| RD2062U03RM29.93 | 29.93 | -0.03 | 0.07 | River Erosion | Existing Site | U |
| RD2062U03RM30.02 | 30.02 | 0.10 | 0.11 | River Erosion | Existing Site | M |
| RD2062U03RM30.1 | 30.1 | 0.18 | 0.18 | River Erosion | Existing Site | M |
| RD2062U03RM30.19 | 30.19 | 0.23 | 0.32 | River Erosion | Existing Site | U |
| RD2062U03RM30.27 | 30.27 | 0.35 | 0.35 | River Erosion | Existing Site | M |
| RD2062U03RM30.43 | 30.43 | 0.56 | 0.57 | River Erosion | Existing Site | U |
| RD2062U03RM31.12 | 31.12 | 1.20 | 1.21 | River Erosion | Existing Site | M |
| RD2062U03RM31.28 | 31.28 | 1.42 | 1.43 | Maintenance Erosion | Existing Site | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2062 and RD 2107 - Stewart Tract | 16.26 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report



**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that no new information is known beyond the information contained in DWR's Spring and Fall Inspection Reports. The Spring 2012 Levee Inspection Report provided unacceptable rating for crown surface depression/rutting at Levee Unit 1, LM 1.18 to 1.40 and for erosion at Levee Unit 3, LM .03 to .07, 0.18, 0.23 to 0.32, 0.35 and 0.56 to 0.57.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that no new information is known beyond the information contained in DWR's Spring and Fall Inspection Reports. The Spring 2012 Levee Inspection Report provided unacceptable rating for crown surface depression/rutting at Levee Unit 1, LM 1.18 to 1.40 and for erosion at Levee Unit 3, LM .03 to .07, 0.18, 0.23 to 0.32, 0.35 and 0.56 to 0.57.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units. Activities included disking of levee slopes, inspection, roadway maintenance, rodent baiting and trapping, tree trimming, and vegetation grazing and spraying.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of erosion repair, inspection and patrolling, roadway grading and maintenance, rodent baiting and trapping, tree trimming and pruning, and vegetation control by minor disking or mowing, grazing and spraying. The reported total estimated cost for the current fiscal year is $137,500.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 2063
## Crows Landing



**Merced County**
**Stanislaus County**

**Contact**
Joe Sallaberry
President
5780 South Central
Turlock CA 95380
Phone: (209) 587-2305

| Levee Short Name : RD2063 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | RB | 10.63 |

## Threat Assessment & Recommendations

- The crown roadway in this Area may not be able to be driven in all types of weather.
- The LMA should ensure that the levee crown and access roads are able to be driven in all weather conditions.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- A SPFC structure in this Area has conditions that may significantly impact its performance.
- The LMA should ensure that the SPFC structure is able to perform as designed and constructed.

## DWR Levee Inspection Summary

| RD2063 | Total LMA Miles | 10.63 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 2.03 | | 2.03 | **19.10** | 1.10 | | 1.10 | **10.35** | -0.93 | | -0.93 | **-8.75** |
| Trim / Thin Trees | 0.03 | | 0.03 | **0.28** | | | | | -0.03 | | -0.03 | **-0.28** |
| Encroachments | 0.12 | 0.01 | 0.16 | **1.51** | | | | | -0.12 | -0.01 | -0.16 | **-1.51** |
| Animal Control | 0.11 | | 0.11 | **1.04** | 0.11 | | 0.11 | **1.04** | 0.00 | | | **0.00** |
| Slope Stability | 0.01 | | 0.01 | **0.09** | | | | | -0.01 | | -0.01 | **-0.09** |
| Erosion / Bank Caving | | 0.16 | 0.64 | **6.02** | 0.02 | 0.01 | 0.06 | **0.56** | 0.02 | -0.15 | -0.58 | **-5.46** |
| Crown Surface / Depressions / Rutting | 10.58 | | 10.58 | **99.53** | 10.58 | | 10.58 | **99.53** | | | | **0.00** |
| *LMA Totals:* | 12.88 | 0.17 | 13.56 | **127.56** | 11.81 | 0.01 | 11.85 | **111.48** | -1.07 | -0.16 | -1.71 | **-16.09** |

RD 2063

## DWR Structure Inspection Summary

| Structure Name | Overall Rating |
|---|---|
| Reclamation District No. 2063 Pumping Plant (Nelson Drain) | U |

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 01 San Joaquin River, RB

| Site ID | River Mile | Levee Mile | | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| | | Start | End | | | |
| RD2063U01RM103.49 | 103.49 | 3.07 | 3.26 | River Erosion | Repaired Site | C |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2091 and RD 2063 - Chase and Crows Landing | 18.19 | Partial Inactive | 01/18/2008 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported tree trimming along entire length of Levee Unit 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished. Activities include erosion repair, gate repair, minor structural repair including pipe removal, rodent baiting and trapping, slope dragging, tree removal, thinning and trimming, and vegetation burning. The Agency also reported corrected and ongoing corrective actions in response to DWR inspection comments. The corrected actions included encroachment control, erosion and levee slope repair, rodent control, tree thinning and trimming, and vegetation control.



**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of erosion repair, legal services, insurance, minor structure maintenance, and vegetation control. The reported total estimated cost for the current fiscal year is $83,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported that Turlock Irrigation District (TID) has cut a ramp for access and the Agency has asked TID to repair it. However, the Agency believes the ramp does not impair the integrity of the levee. The Agency also reported a need for fixing the encroachment due to agricultural ditch that encroached into the berm and toe of the Project Levee. The Agency also noted conflict among governing agencies' guidance to the Agency on levee maintenance.

# Reclamation District No. 2064
## River Junction



### San Joaquin County

**Contact**
Don Moretti
President
District Office
PO Box 690695
Stockton CA 95269
Phone: (209) 239-2963

| Levee Short Name : RD2064 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | RB | 5.70 |
| Unit No. 02 Stanislaus River | RB | 6.20 |

## Threat Assessment & Recommendations

- The crown roadway in this Area may not be able to be driven in all types of weather.
- The LMA should ensure that the levee crown and access roads are able to be driven in all weather conditions.

## DWR Levee Inspection Summary

| RD2064 | Total LMA Miles | 11.90 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 6.93 | | 6.93 | **58.24** | | | | | -6.93 | | -6.93 | **-58.24** |
| Encroachments | 0.09 | 0.20 | 0.89 | **7.48** | | | | | -0.09 | -0.20 | -0.89 | **-7.48** |
| Crown Surface / Depressions / Rutting | | | | | 0.97 | | 0.97 | **8.15** | 0.97 | | 0.97 | **8.15** |
| *LMA Totals:* | 7.02 | 0.20 | 7.82 | **65.71** | 0.97 | 0.00 | 0.97 | **8.15** | -6.05 | -0.20 | -6.85 | **-57.56** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

RD 2064

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0017, 2094, 2096, 2075, 2064 - SJ River East | 38.45 | Active | 12/17/2010 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported seepage in most of Levee Unit 1 and some parts of Levee Unit 2 during high flows in San Joaquin and Stanislaus Rivers. The Agency mentioned of sand boils occurring during high water with its occurrences increasing with water level. The Agency also mentioned that beavers have blocked one closure structure in the Drainage Slough from time to time and also reported ongoing rodent problem.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported seepage in most of Levee Unit 1 and some parts of Levee Unit 2 during high flows in San Joaquin and Stanislaus Rivers. The Agency also mentioned of sand boils occurring during high water with the number of occurrences increasing with water level. The Agency also mentioned that beavers have blocked one closure structure in the Drainage Slough from time to time and also reported ongoing rodent problem.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**



The Agency reported that very little maintenance work was performed in the previous fiscal year due to lack of funding resulting from the failure of passage of Proposition 218. The Agency also reported the passage of Proposition 218 in April 2012 and start of the regular maintenance works from July, 2012.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of encroachment control, erosion repair, gate repair, inspections, minor structure repairs/maintenance, patrolling, permitting, restoration, roadway maintenance, rodent control, sediment removal, seepage control, slope dragging, surveying/engineering, tree removal, and vegetation mowing, spraying, thinning and trimming. The reported total estimated cost for the levee maintenance for the current fiscal year is $40,000, while the total cost for all activities and expenses of the LMA is $159,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency provided information on the levee breaks that have occurred in RD 2064 since 1955 - two on the Stanislaus and three on the San Joaquin River above the Airport Way Bridge. The Agency mentioned that the bridge acts as a choke point in the river causing sediment built up that can eventually cause levee failure in extended high water events. The Agency also mentioned that levee encroachment is causing high legal and engineering/surveying expenses to the District.

# Reclamation District No. 2075
# McMullin



## San Joaquin County

**Contact**
Eddy Cardoza
President
311 East Main Street Suite 504
Stockton CA 95202
Phone: (209) 943-5551

| Levee Short Name : RD2075 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | RB | 7.52 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.

## DWR Levee Inspection Summary

| RD2075 | Total LMA Miles | 7.52 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.71 | | 0.71 | **9.44** | 14.41 | 0.02 | 14.49 | **192.69** | 13.70 | 0.02 | 13.78 | **183.25** |
| Trim / Thin Trees | 0.04 | | 0.04 | **0.53** | 0.03 | | 0.03 | **0.40** | -0.01 | | -0.01 | **-0.13** |
| Crown Surface / Depressions / Rutting | 0.01 | | 0.01 | **0.13** | | | | | -0.01 | | -0.01 | **-0.13** |
| Operations & Maintenance Manuals | | | | | 0.08 | | 0.08 | **1.06** | 0.08 | | 0.08 | **1.06** |
| Flood Preparedness & Training | | | | | 0.08 | | 0.08 | **1.06** | 0.08 | | 0.08 | **1.06** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | 0.01 | 0.04 | **0.53** | 0.01 | | 0.01 | **0.13** | 0.01 | -0.01 | -0.03 | **-0.40** |
| *LMA Totals:* | 0.76 | 0.01 | 0.80 | **10.64** | 14.60 | 0.02 | 14.68 | **195.21** | 13.84 | 0.01 | 13.89 | **184.57** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

RD 2075

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 01 San Joaquin River, RB

| Site ID | River Mile | Levee Mile | | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| | | Start | End | | | |
| RD2075U01RM64.34 | 64.34 | 5.34 | 5.35 | River Erosion | Existing Site | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0017, 2094, 2096, 2075, 2064 - SJ River East | 38.45 | Active | 12/17/2010 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency provided information on the Agency's regular maintenance activities. The activities include corrective actions to address maintenance deficiencies, roadway maintenance, and tree chopping and pruning as per DWR's Interim Vegetation Policy.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units and the location of these activities. Activities included ditch maintenance and vegetation control. The reported total expenditure for the previous fiscal year was $59,110.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency stated that by the time of reporting the District had not met to approve budget for the current fiscal year.



**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 2085
## Kasson

### San Joaquin County



**Contact**
Ralph Timan
President
7541 West Rena
Tracy CA 95304
Phone: (209) 241-6793

| Levee Short Name : RD2085 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | LB | 5.20 |
| Unit No. 02 San Joaquin River | | 0.69 |
| Unit No. 03 San Joaquin River | | 0.29 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should enhance its rodent control program.

## DWR Levee Inspection Summary

| RD2085 | Total LMA Miles | 6.18 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 5.26 | | 5.26 | **85.11** | 2.60 | | 2.60 | **42.07** | -2.66 | | -2.66 | **-43.04** |
| Trim / Thin Trees | 0.25 | | 0.25 | **4.05** | 0.25 | | 0.25 | **4.05** | | | | **0.00** |
| Encroachments | 0.34 | 0.01 | 0.38 | **6.15** | 0.04 | 0.01 | 0.08 | **1.29** | -0.30 | | -0.30 | **-4.85** |
| Animal Control | 0.07 | | 0.07 | **1.13** | 0.08 | | 0.08 | **1.29** | 0.01 | | 0.01 | **0.16** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | | | | | 0.02 | 0.08 | **1.29** | | 0.02 | 0.08 | **1.29** |
| *LMA Totals:* | 5.92 | 0.01 | 5.96 | **96.44** | 2.97 | 0.03 | 3.09 | **50.00** | -2.95 | 0.02 | -2.87 | **-46.44** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 01 San Joaquin River, LB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| RD2085U01RM66.5 | 66.5 | 2.24 | 2.26 | River Erosion | Existing Site | U |
| RD2085U01RM67.7 | 67.7 | 3.58 | 3.71 | River Erosion | Not Rated | A/W |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2085 - Kasson District | 6.27 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported ongoing trespassing, animal burrows, and vegetation maintenance issues.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported an erosion site on Levee Unit 1 at LM 3.64.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units. Activities included general administration, legal and management services, permitting, rodent control, and vegetation spraying.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of accounting, California Department of Fish and Game Resource Management Agreement fees, engineering, gate maintenance, insurance, legal and administrative services, permits, road grading, rodent control, and vegetation control. The reported total estimated cost for the current fiscal year is $68,349.



**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Reclamation District No. 2089
## Stark

### San Joaquin County



**Contact**
Michael Gikas
Chairman
311 East Main Street Suite 504
Stockton CA 95202
Phone: (209) 943-5551

| Levee Short Name : RD2089 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Old River | RB | 1.53 |
| Unit No. 02 Salmon Slough | RB | 1.37 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should enhance its rodent control program.

## DWR Levee Inspection Summary

| RD2089 | Total LMA Miles | 2.90 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 1.20 | 1.30 | 6.40 | **220.69** | 1.20 | 1.30 | 6.40 | **220.69** | | | | **0.00** |
| Trim / Thin Trees | 0.27 | 0.15 | 0.87 | **30.00** | 0.28 | 0.14 | 0.84 | **28.97** | 0.01 | -0.01 | -0.03 | **-1.03** |
| Encroachments | 0.06 | 0.01 | 0.10 | **3.45** | 0.07 | 0.01 | 0.11 | **3.79** | 0.01 | | 0.01 | **0.34** |
| Animal Control | 0.08 | 0.06 | 0.32 | **11.03** | 0.09 | 0.06 | 0.33 | **11.38** | 0.01 | | 0.01 | **0.34** |
| Crown Surface / Depressions / Rutting | 0.05 | | 0.05 | **1.72** | 0.05 | | 0.05 | **1.72** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.01 | 0.02 | 0.09 | **3.10** | 0.01 | 0.02 | 0.09 | **3.10** | | | | **0.00** |
| *LMA Totals:* | 1.67 | 1.54 | 7.83 | **270.00** | 1.70 | 1.53 | 7.82 | **269.66** | 0.03 | -0.01 | -0.01 | **-0.34** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 01 Old River, RB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| RD2089U01RM29.95 | 29.95 | 0.30 | 0.31 | River Erosion | Repaired Site | C |
| RD2089U01RM29.8 | 29.8 | 0.45 | 0.45 | Maintenance Erosion | Existing Site | M |
| RD2089U01RM29.61 | 29.61 | 0.66 | 0.66 | River Erosion | Existing Site | U |

### Unit No. 02 Salmon Slough, RB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| RD2089U02RM28.35 | 28.35 | 0.42 | 0.43 | River Erosion | Existing Site | U |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0001 and RD 2089 - Union Island | 3.92 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided unacceptable rating for animal control, encroachment, and vegetation at various locations of all levee units. The Spring 2012 Inspection Report also provided unacceptable rating for erosion at Levee Unit 1, LM 0.66 and Levee Unit 2, LM 0.42 to 0.43.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency concurred with the information contained in the Spring 2012 Levee Inspection Report. The Spring 2012 Levee Inspection Report provided unacceptable rating for animal control, encroachment, and vegetation at various locations of all levee units. The Spring 2012 Inspection Report also provided unacceptable rating for erosion at Levee Unit 1, LM 0.66 and Levee Unit 2, LM 0.42 to 0.43.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency refereed to Inspection Items/Corrective Action submitted for Summer 2012 Inspection Report for a summary of maintenance activities. The Agency also reported corrected and ongoing corrective actions in response to DWR inspection comments. The corrective actions include encroachment control, levee crown surface maintenance, rodent control, tree thinning and trimming, and vegetation control. The Agency also provided the annual routine maintenance cost for the previous fiscal year as $21,452.



**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency referred to the fiscal year 2012-2013 application to the Delta Levee Subventions Program which provided a summary of maintenance activities planned for 0.7 miles of Non-Project Levee and 2.8 miles of Project Levee. Activities include encroachment control, erosion repair, flood emergency planning, inspection, levee drainage control, levee profile and corss sections, program management, roadway grading and repair, rodent control, vegetation control, and waterside slope protection. The reported anticipated maintenance budget for the current fiscal year is $25,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 2091
## Chase

### Stanislaus County



**Contact**
Wendel Trinkler, Jr
President
District Office
7007 Jennings Road
Modesto CA 95358
Phone: (209) 537-9883

| Levee Short Name : RD2091 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | RB | 7.59 |
| Unit No. 02 San Joaquin River | NA | 0.33 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should enhance its rodent control program.

## DWR Levee Inspection Summary

| RD2091 | Total LMA Miles | 7.92 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M * | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | 0.04 | | 0.04 | **0.51** | 0.04 | | 0.04 | **0.51** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.13** | 0.04 | | 0.04 | **0.51** | 0.03 | | 0.03 | **0.38** |
| Animal Control | 0.01 | | 0.01 | **0.13** | 0.08 | | 0.08 | **1.01** | 0.07 | | 0.07 | **0.88** |
| Slope Stability | | 0.01 | 0.04 | **0.51** | | | | | | -0.01 | -0.04 | **-0.51** |
| *LMA Totals:* | 0.02 | 0.01 | 0.06 | **0.76*** | 0.16 | 0.00 | 0.16 | **2.02** | 0.14 | -0.01 | 0.10 | **1.26** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

RD 2091

## DWR San Joaquin River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2091 and RD 2063 - Chase and Crows Landing | 18.19 | Partial Inactive | 01/18/2008 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported 100-foot long and 5 to 7-foot wide erosion site at Levee Unit 1, LM 1.5 and mentioned there was no issue to report for Levee Unit 2.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there were no issues to report for both levee units.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units. Activities included inspection, roadway maintenance, rodent control, and vegetation control- burning, disking, slope dragging, spraying, thinning and trimming.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of erosion control, flood preparedness, inspections, minor structure repair, roadway maintenance, rodent control, slope dragging, tree trimming, and vegetation burning and spraying. The reported total estimated cost for the current fiscal year is $45,877.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 2092
## Dos Rios

### Stanislaus County

**Contact**
John Carlon
President
580 Vallombrosa Avenue
Chico CA 95926
Phone: (530) 894-5401

| Levee Short Name : RD2092 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | RB | 3.76 |

## Threat Assessment & Recommendations

- There is significant rodent activity in this Area.
- The LMA should focus more on backfilling rodent holes.

## DWR Levee Inspection Summary

| RD2092 | Total LMA Miles | 3.76 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M * | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Encroachments | | | | | 0.01 | | 0.01 | **0.27** | 0.01 | | 0.01 | **0.27** |
| Animal Control | 0.12 | | 0.12 | **3.19** | 0.04 | | 0.04 | **1.06** | -0.08 | | -0.08 | **-2.13** |
| Slope Stability | 0.05 | | 0.05 | **1.33** | 0.01 | | 0.01 | **0.27** | -0.04 | | -0.04 | **-1.06** |
| Crown Surface / Depressions / Rutting | 0.01 | | 0.01 | **0.27** | | | | | -0.01 | | -0.01 | **-0.27** |
| Seepage / Sandboils | | 0.01 | 0.04 | **1.06** | | | | | | -0.01 | -0.04 | **-1.06** |
| Emergency Supplies & Equipment | | | | | 0.04 | | 0.04 | **1.06** | 0.04 | | 0.04 | **1.06** |
| Flood Preparedness & Training | | | | | 0.04 | | 0.04 | **1.06** | 0.04 | | 0.04 | **1.06** |
| *LMA Totals:* | 0.18 | 0.01 | 0.22 | **5.85*** | 0.14 | 0.00 | 0.14 | **3.72** | -0.04 | -0.01 | -0.08 | **-2.13** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 01 San Joaquin River, RB

| Site ID | River Mile | Levee Mile | | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| | | Start | End | | | |
| RD2092U01RM84.6 | 84.6 | 1.55 | 1.69 | Maintenance Erosion | Repaired Site | C |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2092 - Dos Rios Ranch | 3.63 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported vegetation, levee crown shape, rodent burrows and slope instability issues at various locations of the Levee Unit.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported presence of rodent burrowing holes and a levee slope damage by livestock at various locations on the levee unit. The Agency also reported that a sand boil had occurred on landside levee toe at an unspecified location due to a leaking underground pipe.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency reported that corrective actions in response to DWR inspection comments to address maintenance deficiencies were pending and stated that no maintenance activities had occurred at the time of reporting.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided an anticipated list of maintenance activities planned for all levee units. The anticipated maintenance activities include encroachment control, erosion repair, inspections, and vegetation control. The Agency also provided total estimated cost of $9,000 for backfilling burrows, and vegetation control for the current fiscal year.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported a number of encroachments by agricultural ditches and fences on Levee Unit 1.

# Reclamation District No. 2094
## Wathal

### San Joaquin County

**Contact**
Brian Mizuno
President
PO Box 871
Manteca CA 95336
Phone: (209) 239-4014

| Levee Short Name : RD2094 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | RB | 2.82 |
| Unit No. 02 San Joaquin River | | 0.46 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.

## DWR Levee Inspection Summary

| RD2094 | Total LMA Miles | 3.28 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *LMA Totals:* | 0.00 | 0.00 | 0.00 | **0.00** | 0.00 | 0.00 | 0.00 | **0.00** | 0.00 | 0.00 | 0.00 | **0.00** |

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 0017, 2094, 2096, 2075, 2064 - SJ River East | 38.45 | Active | 12/17/2010 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported seepage during high water at Levee Unit 1 between LM 0 to 2.82. The Agency also reported steep landslide slope at Levee Unit 1 between LM 0.6 to 0.69 from 1997 reconstruction.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported seepage and rodent issues throughout Levee Unit 1 and identified an unauthorized levee built adjacent to the Project Levee at Levee Unit 1, LM 0.20. The Agency also reported river bank erosion at Levee Unit 2 due to river course changes.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units. Activities included roadway maintenance, slope dragging, and vegetation spraying. The reported total cost for roadway maintenance and vegetation spraying in the previous fiscal year was $4275.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of roadway maintenance and vegetation control. The reported total estimated cost for the current fiscal year is $8,850.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported a historical construction issue of the landside levee slope being too steep at Levee Unit 1, LM 0.6 to 0.69. The Agency noted that an unauthorized levee at Levee Unit 1 changes the course of the river during high flows. The Agency also reported that a change in river flow is affecting river bank near the Levee Unit 2.

# Reclamation District No. 2095
## Paradise Cut

### San Joaquin County

**Contact**
Bob Pombo
President
7541 West Rena
Tracy CA 95304
Phone: (209) 481-4136

| Levee Short Name : RD2095 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Paradise Cut | LB | 1.45 |
| Unit No. 02 San Joaquin River | LB | 3.38 |

## Threat Assessment & Recommendations

- There is erosion occurring in this Area that should be monitored.
- The LMA should focus on repairing erosion sites.
- The LMA should ensure that the levee crown and access roads are able to be driven in all weather conditions.

## DWR Levee Inspection Summary

| RD2095 | Total LMA Miles | 4.83 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M * | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.05 | 0.01 | 0.09 | **1.86** | 0.05 | 0.01 | 0.09 | **1.86** | | | | **0.00** |
| Trim / Thin Trees | | | | | 0.01 | | 0.01 | **0.21** | 0.01 | | 0.01 | **0.21** |
| Encroachments | | | | | 0.01 | | 0.01 | **0.21** | 0.01 | | 0.01 | **0.21** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.21** | 0.01 | | 0.01 | **0.21** |
| Crown Surface / Depressions / Rutting | | | | | 0.33 | | 0.33 | **6.83** | 0.33 | | 0.33 | **6.83** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.05 | 0.05 | 0.25 | **5.18** | 0.09 | 0.01 | 0.13 | **2.69** | 0.04 | -0.04 | -0.12 | **-2.48** |
| *LMA Totals:* | 0.10 | 0.06 | 0.34 | **7.04*** | 0.50 | 0.02 | 0.58 | **12.01** | 0.40 | -0.04 | 0.24 | **4.97** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 01 Paradise Cut, LB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| RD2095U01RM6.74 | 6.74 | 0.73 | 0.74 | River Erosion | Existing Site | M |
| RD2095U01RM6.88 | 6.88 | 0.86 | 0.86 | River Erosion | Existing Site | U |

### Unit No. 02 San Joaquin River, LB

| Site ID | River Mile | Levee Mile Start | Levee Mile End | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| RD2095U02RM60.62 | 60.62 | 1.77 | 1.80 | River Erosion | Existing Site | M |
| RD2095U02RM60.69 | 60.69 | 1.85 | 1.89 | River Erosion | Existing Site | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2058 and RD 2095 - Paradise Cut | 11.45 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported slope instability issue on the landside of the Levee Unit 1, LM 1.18. The Agency also reported trespassing issues throughout the District and vegetation issues at some locations at Levee Unit 2.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported erosion sites at Levee Unit 1, LM 0.73 to 0.74 and 0.86, and at Levee Unit 2, LM 1.77 to 1.8 and 1.85 to 1.89.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units. Activities included encroachment control, rodent control, and vegetation mowing and spraying.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of engineering, Fish & Game Resource Management Agreement fees, flood fight/highwater monitoring, insurance, legal and administrative services, maintenance, office supplies, and repairs. The reported total estimated cost for the current fiscal year is $43,050.

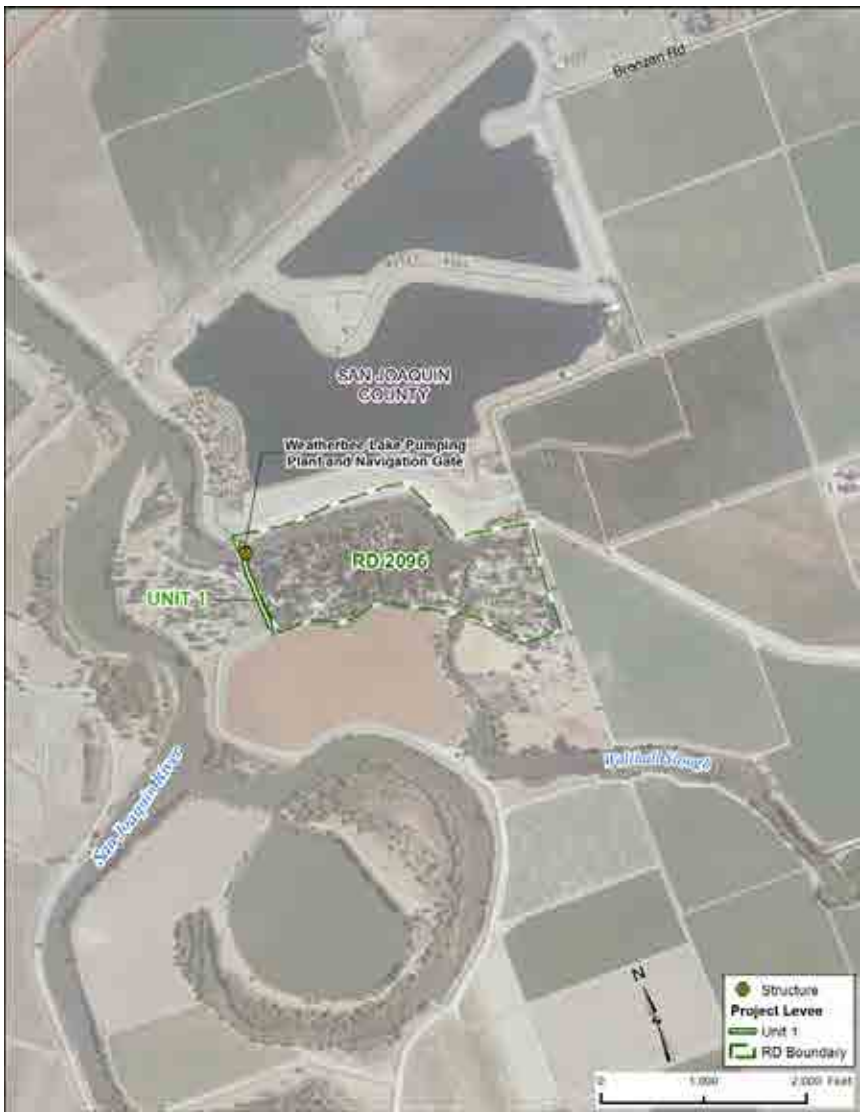
**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported the Resource Management Agreement with the California Department of Fish and Game and a 2011-01 encroachment permit.

# Reclamation District No. 2096
## Wetherbee Lake

### San Joaquin County

**Contact**
Randy Barker
President
District Office
PO Box 909
Manteca CA 95336
Phone: (209) 401-6741




| Levee Short Name : RD2096 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | RB | 0.17 |

## Threat Assessment & Recommendations

- There are one or more encroachments that may significantly impact the integrity of the levee in this Area.
- The LMA should work with landowners and the CVFPB to control unauthorized encroachments.
- A SPFC structure in this Area has conditions that may significantly impact its performance.
- The LMA should ensure that the SPFC structure is able to perform as designed and constructed.

## DWR Levee Inspection Summary

| RD2096 | Total LMA Miles | 0.17 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Encroachments | | | | | | 0.01 | 0.04 | **23.53** | | 0.01 | 0.04 | **23.53** |
| Animal Control | | | | | 0.02 | | 0.02 | **11.77** | 0.02 | | 0.02 | **11.77** |
| *LMA Totals:* | 0.00 | 0.00 | 0.00 | **0.00** | 0.02 | 0.01 | 0.06 | **35.29** | 0.02 | 0.01 | 0.06 | **35.29** |

## DWR Structure Inspection Summary

| Structure Name | Overall Rating |
|---|---|
| Wetherbee Lake Pumping Plant & Navigation Gate | M |

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that there was no new information to report.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported silt build-up on Walthall Slough side of pump intake.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished. Activities included fence repair, gate maintenance, and rodent control. The Agency also reported corrected actions in response to DWR inspection comments. The corrected actions included rodent control by slurry filling in burrows and rodent trapping.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided an estimated cost for flood gate security and maintenance planned for the current fiscal year as $5,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported silt built up is threatening flood intake pumps.

# Reclamation District No. 2099
## El Solyo Ranch

### Stanislaus County

**Contact**
Kim Forrest
Mail Recipient
San Luis National Wildlife Refuge Complex
PO Box 2176
Los Banos CA 93635
Phone: (209) 826-3508

| Levee Short Name : RD2099 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | LB | 2.40 |

## Threat Assessment & Recommendations

- DWR does not inspect this area and no threat assessment or recommendations were done.

## DWR Levee Inspection Summary

Levees in this District are not Inspected.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2099 - El Solyo Ranch (3 Amigos - USFWS) | 2.32 | Inactive | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

No information was provided by the Agency for Part 3.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

This Reclamation District was purchased by the U.S. Fish and Wildlife Service and is now part of the San Joaquin River National Wildlife Refuge. The Project Levee in this area has been breached and no longer provides flood protection. Please refer to the letter from U.S. Fish and Wildlife Service in Appendix D

# Reclamation District No. 2100
## White Lake Ranch

### Stanislaus County

**Contact**
Kim Forrest
Mail Recipient
San Luis National Wildlife Refuge Complex
PO Box 2176
Los Banos CA 93635
Phone: (209) 826-3508

| Levee Short Name : RD2100 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | LB | 2.70 |

## Threat Assessment & Recommendations

- DWR does not inspect this area and no threat assessment or recommendations were done.

## DWR Levee Inspection Summary

Levees in this District are not Inspected.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2100 and 2102 - White Lake and Lara Ranch (3 Amigos - USFWS) | 4.42 | Inactive | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

No information was provided by the Agency for Part 3.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

This Reclamation District was purchased by the U.S. Fish and Wildlife Service and is now part of the San Joaquin River National Wildlife Refuge. The Project Levee in this area has been breached and no longer provides flood protection. Please refer to the letter from U.S. Fish and Wildlife Service in Appendix D.

# Reclamation District No. 2101
# Blewett

## Stanislaus County

**Contact**
James Coddington
President
6130 Huntingdale Circle
Stockton CA 95219
Phone: (209) 477-2156

| Levee Short Name : RD2101 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | LB | 3.20 |
| Unit No. 02 San Joaquin River (Spur Levee) | RB | 0.31 |

## Threat Assessment & Recommendations

- There is significant rodent activity in this Area.
- The LMA should enhance its rodent control program.

## DWR Levee Inspection Summary

| RD2101 | Total LMA Miles | 3.51 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 2.98 | | 2.98 | **84.90** | 0.08 | | 0.08 | **2.28** | -2.90 | | -2.90 | **-82.62** |
| Trim / Thin Trees | 0.24 | | 0.24 | **6.84** | 0.02 | | 0.02 | **0.57** | -0.22 | | -0.22 | **-6.27** |
| Encroachments | | | | | 0.01 | | 0.01 | **0.29** | 0.01 | | 0.01 | **0.29** |
| Animal Control | 0.03 | 0.21 | 0.87 | **24.79** | 0.24 | 0.02 | 0.32 | **9.12** | 0.21 | -0.19 | -0.55 | **-15.67** |
| Erosion / Bank Caving | 0.02 | | 0.02 | **0.57** | 0.02 | | 0.02 | **0.57** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | 0.10 | 0.40 | **11.40** | | 0.10 | 0.40 | **11.40** | | | | **0.00** |
| *LMA Totals:* | 3.27 | 0.31 | 4.51 | **128.49** | 0.37 | 0.12 | 0.85 | **24.22** | -2.90 | -0.19 | -3.66 | **-104.27** |

RD 2101

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 01 San Joaquin River, LB

| Site ID | River Mile | Levee Mile | | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| | | Start | End | | | |
| RD2101U01RM73.92 | 73.92 | 1.91 | 2.00 | River Erosion | Existing Site | U |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2101 - Blewatt District | 3.42 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported historical breach location at Levee Unit 1 at LM 1.8 to 1.95 and erosion sites at Levee Unit 1, LM 1.9, 2.0, and 2.9 and at Levee Unit 2, LM 3.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported historical breach location at Levee Unit 1 at LM 1.8 to 1.95, and erosion sites at Levee Unit 1, LM 1.9, 2.0, and 2.9 and at Levee Unit 2, LM 3.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units. Activities included gate repair, inspection, minor structure repair, roadway maintenance, rodent control, tree removal, and Vegetation mowing and spraying.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of gate repair, inspection, minor structure repair, roadway maintenance, rodent control, tree removal, and vegetation mowing and spraying. The reported total estimated cost for the current fiscal year is $25,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Reclamation District No. 2102
## Lara Ranch

### Stanislaus County

**Contact**
Kim Forrest
Mail Recipient
San Luis National Wildlife Refuge Complex
PO 2176
Los Banos CA 93635
Phone: (209) 826-3508

| Levee Short Name : RD2102 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | LB | 1.80 |

## Threat Assessment & Recommendations

- DWR does not inspect this area and no threat assessment or recommendations were done.

## DWR Levee Inspection Summary

Levees in this District are not Inspected.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2100 and 2102 - White Lake and Lara Ranch (3 Amigos - USFWS) | 4.42 | Inactive | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

No information was provided by the Agency for Part 3.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

This Reclamation District was purchased by the U.S. Fish and Wildlife Service and is now part of the San Joaquin River National Wildlife Refuge. The Project Levee in this area has been breached and no longer provides flood protection. Please refer to the letter from U.S. Fish and Wildlife Service in Appendix D.

# Reclamation District No. 2107
## Mossdale Island



### San Joaquin County

**Contact**
Robert Brown
Chairman
311 East Main Street Suite 504
Stockton CA 95202
Phone: (209) 943-5551

| Levee Short Name : RD2107 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | LB | 2.37 |
| Unit No. 02 Paradise Cut | RB | 1.84 |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last inspection.
- The LMA should repair locations where the levee slope may be unstable.

## DWR Levee Inspection Summary

| RD2107 | Total LMA Miles | 4.21 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | 0.02 | | 0.02 | **0.48** | 0.02 | | 0.02 | **0.48** |
| Encroachments | | | | | 0.01 | | 0.01 | **0.24** | 0.01 | | 0.01 | **0.24** |
| Animal Control | | | | | 0.01 | | 0.01 | **0.24** | 0.01 | | 0.01 | **0.24** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.24** | 0.01 | | 0.01 | **0.24** |
| *LMA Totals:* | 0.00 | 0.00 | 0.00 | **0.00** | 0.05 | 0.00 | 0.05 | **1.19** | 0.05 | 0.00 | 0.05 | **1.19** |

RD 2107

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| RD 2062 and RD 2107 - Stewart Tract | 16.26 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report



**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency mentioned that normal levee crown maintenance and vegetation control works are performed and deficiency items are addressed as needed.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency reported vegetation control activities accomplished in the last fiscal year. The reported total expenses in the previous fiscal year was $32,297.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

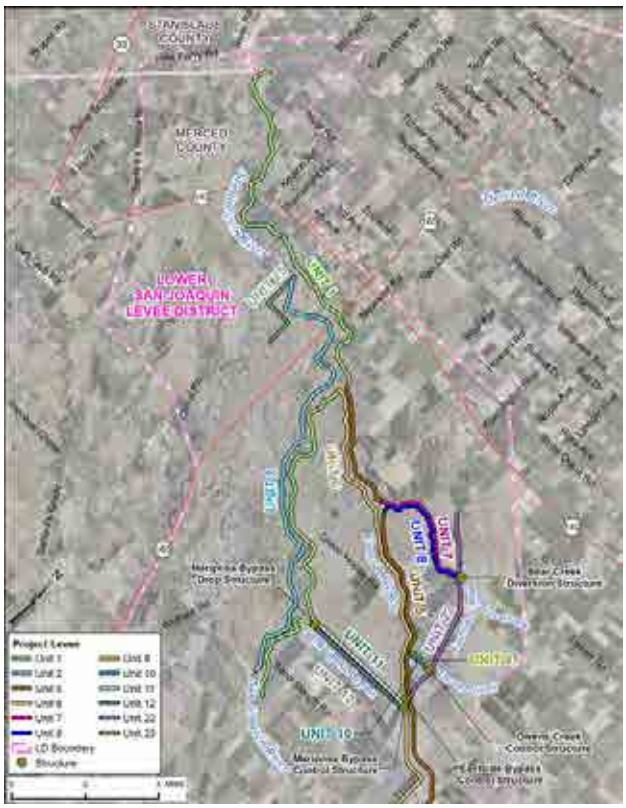
**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Lower San Joaquin Levee District

**Fresno County**
**Madera County**
**Merced County**
**Stanislaus County**

**Contact**
Roy Catania
Chairman
11704 West Henry Miller Avenue
Dos Palos CA 93620
Phone: (209) 387-4545


MERCED COUNTY
LOWER SAN JOAQUIN LEVEE DISTRICT
UNIT 7
UNIT 8
UNIT 9
UNIT 10
UNIT 11
UNIT 12
UNIT 13
Project Levee
LD Boundary
Structure

MERCED COUNTY
MADERA COUNTY
FRESNO COUNTY
UNIT 13
UNIT 14
UNIT 15
UNIT 16
LOWER SAN JOAQUIN LEVEE DISTRICT
Project Levee
LD Boundary
County Boundary
Structure

LOWER SAN JOAQUIN LEVEE DISTRICT
UNIT 21
UNIT 22
UNIT 23
UNIT 24
MADERA COUNTY
FRESNO COUNTY
Project Levee
LD Boundary
County Boundary
Structure

| Levee Short Name : NA0010 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 San Joaquin River | RB | 22.56 |
| Unit No. 02A San Joaquin River | LB | 7.87 |
| Unit No. 02B San Joaquin River | LB | 5.92 |
| Unit No. 03 San Joaquin River | RB | 2.16 |
| Unit No. 04 San Joaquin River | LB | 1.58 |
| Unit No. 05 East Side Bypass | RB | 34.75 |
| Unit No. 06 East Side Bypass | LB | 36.38 |
| Unit No. 07 Bear Creek Bypass | RB | 3.62 |
| Unit No. 08 Bear Creek Bypass | LB | 3.63 |
| Unit No. 09 Owens Creek Bypass | RB | 0.88 |
| Unit No. 10 Owens Creek Bypass | LB | 0.82 |
| Unit No. 11 Mariposa Bypass | RB | 3.31 |
| Unit No. 12 Mariposa Bypass | LB | 3.33 |
| Unit No. 13 Ash Slough | RB | 1.28 |
| Unit No. 14 Ash Slough | LB | 1.28 |
| Unit No. 15 Berenda Slough | RB | 2.03 |
| Unit No. 16 Berenda Slough | LB | 1.98 |
| Unit No. 17 Chowchilla Canal Bypass | RB | 16.09 |
| Unit No. 18 Chowchilla Canal Bypass | LB | 15.33 |
| Unit No. 22A East Side Canal | LB | 5.50 |
| Unit No. 23 San Joaquin River | RB | 10.25 |
| Unit No. 24 San Joaquin River | LB | 8.34 |
| Unit No. 25 Salt Slough | RB | 2.47 |

## Threat Assessment & Recommendations

- There is vegetation that significantly impacts access and visibility in this Area.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should ensure that the levee crown and access roads are able to be driven in all weather conditions.
- The LMA should ensure that the SPFC structure is able to perform as designed and constructed.

## DWR Levee Inspection Summary

| NA0010 | Total LMA Miles | 191.36 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 19.91 | | 19.91 | **10.40** | 145.00 | | 145.00 | **75.77** | 125.09 | | 125.09 | **65.37** |
| Trim / Thin Trees | 0.08 | | 0.08 | **0.04** | 0.02 | | 0.02 | **0.01** | -0.06 | | -0.06 | **-0.03** |
| Encroachments | 0.06 | 0.01 | 0.10 | **0.05** | 0.61 | | 0.61 | **0.32** | 0.55 | -0.01 | 0.51 | **0.27** |
| Animal Control | 1.09 | | 1.09 | **0.57** | 2.68 | | 2.68 | **1.40** | 1.59 | | 1.59 | **0.83** |
| Slope Stability | 0.76 | | 0.76 | **0.40** | 0.76 | | 0.76 | **0.40** | | | | **0.00** |
| Erosion / Bank Caving | 0.02 | 0.01 | 0.06 | **0.03** | 0.13 | 0.01 | 0.17 | **0.09** | 0.11 | | 0.11 | **0.06** |
| Crown Surface / Depressions / Rutting | 3.78 | | 3.78 | **1.98** | 43.08 | | 43.08 | **22.51** | 39.30 | | 39.30 | **20.54** |
| Repair Gates | 0.01 | 0.01 | 0.05 | **0.03** | | | | | -0.01 | -0.01 | -0.05 | **-0.03** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Vegetation & Obstructions | | | | | | 0.01 | 0.04 | **0.02** | | 0.01 | 0.04 | **0.02** |
| *Channels* | | | | | | | | | | | | |
| Encroachments | 0.02 | | 0.02 | **0.01** | | | | | -0.02 | | -0.02 | **-0.01** |
| Concrete Foundations | 0.01 | | 0.01 | **0.01** | 0.01 | | 0.01 | **0.01** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | 0.16 | 0.64 | **0.33** | | | | | | -0.16 | -0.64 | **-0.33** |
| *LMA Totals:* | 25.74 | 0.19 | 26.50 | **13.85** | 192.29 | 0.02 | 192.37 | **100.53** | 166.55 | -0.17 | 165.87 | **86.68** |

## DWR Structure Inspection Summary

| Structure Name | Overall Rating |
|---|---|
| Ash Slough Drop Structure No. 1 | A |
| Ash Slough Drop Structure No. 2 | A |
| Ash Slough Drop Structure No. 3 | A |
| Ash Slough Drop Structure No. 4 | A |
| Bear Creek Diversion Structure | A |
| Eastside Bypass Control Structure | A |
| Eastside Bypass Drop Structure No. 1 | A |
| Eastside Bypass Drop Structure No. 2 | A |
| Fresno River Drainage Structure | A |
| Mariposa Bypass Control Structure | A |
| Mariposa Bypass Drop Structure | A |
| Owens Creek Control Structure | A |
| Owens Creek Overflow Structure | A |
| San Joaquin River And Chowchilla Canal Bypass Control Structure | A |
| San Joaquin River Structure And Sand Slough Structure | A |

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

### Unit No. 23 San Joaquin River, RB

| Site ID | River Mile | Levee Mile | | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| | | Start | End | | | |
| NA0010U23RM224.27 | 224.27 | 9.10 | 9.21 | River Erosion | Repaired Site | C |
| NA0010U23RM224.33 | 224.33 | 9.21 | 9.26 | River Erosion | Repaired Site | C |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| LSJLD-Unit 24 | 8.38 | Active | | N/A |
| LSJLD-Units 1, 4, 6, and 12 | 17.70 | Active | | N/A |
| LSJLD-Units 1, 5, 7, and 22 | 20.31 | Inactive | 04/13/2012 | U |
| LSJLD-Units 1, 6, and 11 | 20.71 | Active | | Pending |
| LSJLD-Units 17, 23 - Fresno R, Chowchilla Bypass | 35.35 | Partial Inactive | 07/28/2008 | N/A |
| LSJLD-Units 2 and 25 | 16.22 | Inactive | 04/23/2012 | U |
| LSJLD-Units 3, 6, 18 - Eastside-Chowchilla Bypass | 34.48 | Partial Inactive | | Pending |
| LSJLD-Units 5 and 13 - Ash Slough right bank | 23.53 | Partial Inactive | 07/28/2008 | Pending |
| LSJLD-Units 5 and 16 - Berenda Slough and Fresno R | 16.35 | Partial Inactive | 07/28/2008 | Pending |
| LSJLD-Units 5, 10, and 22 | 2.98 | Active | | Pending |
| LSJLD-Units 5, 14, and 15 - Ash and Berenda Slghs | 9.89 | Partial Inactive | 07/28/2008 | Pending |
| LSJLD-Units 5, 8, 9, and 22 | 11.29 | Active | | Pending |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported no changes after 2011 Reporting. The 2011 LMA Report provided information on a variety of issues affecting Levee Units 1, 2A, 2B, 5, and 6. Issues included excessive traffic resulting from personnel using crown roadway to access San Luis Wildlife Refuge, fencing installed by the California State Parks which encroaches on levee slopes, and poor soil along East Side Bypass Levee which cannot sustain proper cover.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported no changes in information after 2011 Reporting. The 2011 LMA Report provided information on a variety of issues affecting Levee Units 1, 2A, 3, 5, 6, 12, 17A, 18, 22A, 23 and 24. Key issues included seepage in many units resulting from various reasons including native levee soil material type, a levee breach by landowner at Levee Unit 1 as waterside flood elevations exceeded that of landslide, erosion into levee crown roadway in Levee Unit 2A, 1.5 miles downstream of Highway 165, a flap gate replacement with a free-flowing corrugated metal pipe at Levee Unit 5, freeboard and channel capacity issues along the entire length of Levee Unit 6, a waterside erosion from livestock grazing on entire Levee Unit 22A, and a river berm erosion caused by 2006 flood event on Levee Unit 23, LM 5.9.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units. Activities included administrative, management and professional services, bank revetment, channel debris removal, sediment extraction, drainage ditch maintenance, encroachment control, equipment maintenance, erosion repair, field observation, research, minor structure maintenance, roadway graveling, rodent control, hole grouting and compaction, personnel training, slope dragging, and vegetation burning, mowing, planting and spraying. The Agency also provided the total maintenance cost for the previous fiscal year as $964,532.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of administrative, management and professional services, bank revetment, channel debris removal, sediment extraction, drainage ditch maintenance, encroachment control, equipment maintenance, erosion repair, field observation and research, hole grouting, compaction, minor structure maintenance, roadway graveling, rodent control, slope dragging, personnel training and supervision, and vegetation burning, mowing, planting and spraying. The reported total estimated cost for all units for the current fiscal year is $975,471.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency provided summary of Project Levees and facility operational concerns. The Agency also provided the locations of these concerns and their potential remedies. The Agency reported seepage at Levee Unit 1, LM 4.5 to 5.5, 12 to 16.5, 16.5 to 17 and 20.5 to 21.5, Levee Unit 3, LM 0 to 2.16, Levee Unit 6, LM 11.75 to 19.42 and 21 to 22, Levee Unit 17, LM 13 to 15, Levee Unit 18, LM 9 to 13.75, Levee Unit 23, LM 0 to 6, and Levee Unit 24, LM 0 to 5.75.

# Madera County FCWCA

## Madera County

**Contact**
Kheng Vang
County Engineer
2037 West Cleveland Avenue
Madera CA 93637
Phone: (559) 675-7817

| Levee Short Name : NA0011 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Ash Slough | RB | 2.41 |
| Unit No. 02 Ash Slough | LB | 2.07 |
| Unit No. 03 Berenda Slough | RB | 1.55 |
| Unit No. 04 Berenda Slough | LB | 2.28 |
| Unit No. 05 Fresno River | RB | 9.20 |
| Unit No. 06 Fresno River | LB | 9.14 |

## Threat Assessment & Recommendations

- There is significant rodent activity in this Area.
- The LMA should enhance its rodent control program.
- The LMA should focus more on controlling vegetation to maintain visibility and access.
- The LMA should continue to maintain the area at the high level seen during the last Structure inspection.
- Soil and vegetation exist that may significantly impact the capacity of channels in this Area.
- The LMA should ensure that the capacity of the channel as designed and constructed is maintained.

## DWR Levee Inspection Summary

| NA0011 | Total LMA Miles | 26.65 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 21.73 | 1.58 | 28.05 | **105.25** | 52.77 | 13.25 | 105.77 | **396.89** | 31.04 | 11.67 | 77.72 | **291.63** |
| Trim / Thin Trees | 0.50 | | 0.50 | **1.88** | 0.50 | | 0.50 | **1.88** | | | | **0.00** |
| Encroachments | 0.44 | 0.03 | 0.56 | **2.10** | 0.43 | 0.04 | 0.59 | **2.21** | -0.01 | 0.01 | 0.03 | **0.11** |
| Animal Control | 12.24 | 0.08 | 12.56 | **47.13** | 16.61 | 1.29 | 21.77 | **81.69** | 4.37 | 1.21 | 9.21 | **34.56** |
| Slope Stability | | 0.01 | 0.04 | **0.15** | | 0.01 | 0.04 | **0.15** | | | | **0.00** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.04** | 0.01 | | 0.01 | **0.04** | | | | **0.00** |
| Crown Surface / Depressions / Rutting | 0.44 | | 0.44 | **1.65** | 0.80 | | 0.80 | **3.00** | 0.36 | | 0.36 | **1.35** |
| *Channels* | | | | | | | | | | | | |
| Vegetation & Obstructions | | 0.01 | 0.04 | **0.15** | | | | | | -0.01 | -0.04 | **-0.15** |
| Encroachments | | | | | 0.01 | | 0.01 | **0.04** | 0.01 | | 0.01 | **0.04** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.12 | | 0.12 | **0.45** | 0.12 | | 0.12 | **0.45** | | | | **0.00** |
| *LMA Totals:* | 35.48 | 1.71 | 42.32 | **158.80** | 71.25 | 14.59 | 129.61 | **486.34** | 35.77 | 12.88 | 87.29 | **327.54** |

## DWR Structure Inspection Summary

| Structure Name | Overall Rating |
|---|---|
| Ash And Berenda Slough Control Structures | A |
| Fresno River Diversion Weir | A |

## DWR Channel Inspection Summary

| Channel Name | Overall Rating |
|---|---|
| Ash Slough | A |
| Berenda Slough | U |
| Chowchilla River | A |
| Fresno River | M |

## DWR San Joaquin River Erosion Summary

### Unit No. 01 Ash Slough, RB

| Site ID | River Mile | Levee Mile | | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| | | Start | End | | | |
| NA0011U01RM2.57 | 2.57 | 1.11 | 1.20 | River Erosion | Existing Site | M |
| NA0011U01RM3.8 | 3.8 | 2.37 | 2.39 | Maintenance Erosion | Existing Site | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported about the presence of natural vegetation on water side of Levee Unit 1 at LM 0.01 to 0.47 and drift and trash or debris accumulated at Levee Unit 2, LM 1.75. The Agency also reported about an unauthorized encroachment at Levee Unit 3, LM 0.05 and stated that the permit for the same is now under CVFPB review.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported slope instability and related levee damage due to an unauthorized pipe installation at Levee Unit 4 at an unspecified location. The Agency also reported presence of rodent holes on both sides of levee at Levee Unit 5.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities performed for all levee units and the location of these activities. Activities included Arrundo clearing and spraying for all levee units with the aid of IRWMP grant and sediment removal at Levee Unit 1 between roads 8 and 15.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of Arrundo clearing and spraying with the aid of IRWMP Grant, channel maintenance, Fresno River boil repair, rodent control, and vegetation control. The reported total estimated cost for various flood control and water conservation activities including maintenance of the Project Levee is $1,250,000 for the current fiscal year.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

No information was provided by the Agency for Part 5.

# Merced Streams Group

## Merced County

**Contact**
Paul Fillebrown
Public Works Director
715 Martin Luther King Jr. Way
Merced CA 95341
Phone: (209) 385-7602

| Levee Short Name : NA0013 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Black Rascal Diversion | RB | 1.64 |
| Unit No. 02 Black Rascal Diversion | LB | 1.88 |
| Unit No. 03 Owens Creek Diversion | RB | 1.44 |
| Unit No. 04 Owens Creek Diversion | LB | 1.44 |

## Threat Assessment & Recommendations

- There is significant rodent activity in this Area.
- The LMA should enhance its rodent control program.
- The LMA should repair locations where the levee slope may be unstable.
- A SPFC structure in this Area has conditions that may significantly impact its performance.
- The LMA should ensure that the SPFC structure is able to perform as designed and constructed.
- Soil and vegetation exist that may significantly impact the capacity of channels in this Area.
- The LMA should ensure that the capacity of the channel as designed and constructed is maintained.

## DWR Levee Inspection Summary

| NA0013 | Total LMA Miles | 6.40 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.46 | 0.32 | 1.74 | **27.19** | 0.61 | | 0.61 | **9.53** | 0.15 | -0.32 | -1.13 | **-17.66** |
| Trim / Thin Trees | 0.02 | | 0.02 | **0.31** | 0.01 | 0.17 | 0.69 | **10.78** | -0.01 | 0.17 | 0.67 | **10.47** |
| Encroachments | 0.03 | | 0.03 | **0.47** | 0.02 | | 0.02 | **0.31** | -0.01 | | -0.01 | **-0.16** |
| Animal Control | 1.48 | 0.02 | 1.56 | **24.38** | 1.70 | 0.64 | 4.26 | **66.56** | 0.22 | 0.62 | 2.70 | **42.19** |
| Erosion / Bank Caving | | | | | 0.01 | | 0.01 | **0.16** | 0.01 | | 0.01 | **0.16** |
| Crown Surface / Depressions / Rutting | 0.51 | | 0.51 | **7.97** | 0.52 | | 0.52 | **8.13** | 0.01 | | 0.01 | **0.16** |
| *Channels* | | | | | | | | | | | | |
| Encroachments | 2.52 | | 2.52 | **39.38** | 0.40 | | 0.40 | **6.25** | -2.12 | | -2.12 | **-33.13** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.15 | 0.01 | 0.19 | **2.97** | 0.16 | | 0.16 | **2.50** | 0.01 | -0.01 | -0.03 | **-0.47** |
| *LMA Totals:* | 5.17 | 0.35 | 6.57 | **102.66** | 3.43 | 0.81 | 6.67 | **104.22** | -1.74 | 0.46 | 0.10 | **1.56** |

## DWR Structure Inspection Summary

| Structure Name | Overall Rating |
|---|---|
| Black Rascal Creek Drop Structure | A |
| Owens Creek Siphon Structure | M |

## DWR Channel Inspection Summary

| Channel Name | Overall Rating |
|---|---|
| Bear Creek | M |
| Black Rascal Creek | M |
| Burns Creek | A |
| Mariposa Creek & Duck Slough | M |
| Miles Creek | A |
| Owens Creek | M |

## DWR San Joaquin River Erosion Summary

### Unit No. 03 Owens Creek Diversion, RB

| Site ID | River Mile | Levee Mile | | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| | | Start | End | | | |
| NA0013U03RM1 | 1 | 1.00 | 1.00 | Maintenance Erosion | Existing Site | M |
| NA0013U03RM1.25 | 1.25 | 1.25 | 1.25 | Maintenance Erosion | Existing Site | M |

### Unit No. 04 Owens Creek Diversion, LB

| Site ID | River Mile | Levee Mile | | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| | | Start | End | | | |
| NA0013U04RM0.21 | 0.21 | 0.15 | 0.28 | Maintenance Erosion | Existing Site | M |
| NA0013U04RM0.42 | 0.42 | 0.42 | 0.43 | Maintenance Erosion | Existing Site | M |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Merced Stream Group - Black Rascal - Unit 1 | 1.61 | Active | | N/A |
| Merced Stream Group - Black Rascal - Unit 2 | 1.83 | Active | | N/A |
| Merced Stream Group - Owens Creek - Unit 1 | 1.36 | Active | | N/A |
| Merced Stream Group - Owens Creek - Unit 2 | 1.39 | Active | | N/A |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported levee crown depressions at Levee Unit 2, LM 0.45 to 0.48 and 1.04 to 1.55. The Agency also reported existing rodent issues at Levee Unit 3 and 4 and vegetation issues at all levee units at various locations.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported that cracks are visible on waterside of Levee Unit 3, LM 1 and Levee Unit 4, LM 0.15 to 3 and 0.97. The Agency reported that Levee Units 1 and 2 have only 1-foot freeboard for 100-year flood. The Agency also reported rodent burrows at Levee Unit 3, LM 0.8 to 1.25 and at Levee Unit 4, LM 0.1 to 1.15.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units. Activities included rodent control, slope dragging, and vegetation mowing.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units and the locations of these activities. Expenses include costs of rodent baiting and trapping, hole grouting, sediment removal, slope dragging, tree removal, and vegetation control. The reported total estimated cost for the current fiscal year is $40,500.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that current MOU with the California Department of Fish and Game allows routine channel maintenance only during the non-nesting periods. The Agency mentioned that this restriction is affecting the DWR Inspection Ratings for the maintained channels.

# San Joaquin County Flood Control and Water Conservation District

## San Joaquin County

**Contact**
Tom Gau
Public Works Director
PO Box 1810
Stockton CA 95201
Phone: (209) 953-7617

SAN JOAQUIN COUNTY
Project Levee
Unit 1
Unit 2

UNIT 12
UNIT 14
UNIT 9
UNIT 11
UNIT 10
UNIT 8
UNIT 7
SAN JOAQUIN COUNTY
Project Levee

SAN JOAQUIN COUNTY
UNIT 16
UNIT 15
UNIT 18
UNIT 17
Structure
Project Levee

| Levee Short Name : NA0017 | Bank | Unit Length (Miles) |
|---|---|---|
| Unit No. 01 Littlejohn Creek | LB | 2.87 |
| Unit No. 02 Littlejohn Creek | RB | 3.21 |
| Unit No. 06 SPRR Drain | LB | 0.50 |
| Unit No. 07 Bear Creek | RB | 16.69 |
| Unit No. 08 Bear Creek | LB | 16.47 |
| Unit No. 09 Paddy Creek | LB | 1.54 |
| Unit No. 10 Paddy Creek | RB | 1.42 |
| Unit No. 11 North Paddy Creek | RB | 3.56 |
| Unit No. 12 North Paddy Creek | LB | 3.53 |
| Unit No. 13 Middle Paddy Creek | LB | 1.40 |
| Unit No. 14 Middle Paddy Creek | RB | 1.40 |
| Unit No. 15 Mormon Slough | RB | 25.62 |
| Unit No. 16 Mormon Slough | LB | 24.00 |
| Unit No. 17 Potter Creek | RB | 0.86 |
| Unit No. 18 Potter Creek | LB | 0.89 |

## Threat Assessment & Recommendations

- There is a significant erosion site in this Area that should be monitored.
- The LMA should focus on repairing erosion sites.
- The LMA should work with landowners and the CVFPB to control unauthorized encroachments.
- The LMA should continue to maintain the area at the high level seen during the last Structure inspection.
- The LMA should ensure that the capacity of the channel as designed and constructed is maintained.

## SAN JOAQUIN SYSTEM : San Joaquin County Flood Control and Water Conservation District

### DWR Levee Inspection Summary

| NA0017 | Total LMA Miles | 103.96 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.66 | | 0.66 | **0.64** | 0.82 | | 0.82 | **0.79** | 0.16 | | 0.16 | **0.15** |
| Trim / Thin Trees | 0.04 | | 0.04 | **0.04** | 0.03 | | 0.03 | **0.03** | -0.01 | | -0.01 | **-0.01** |
| Encroachments | 3.93 | 0.39 | 5.49 | **5.28** | 1.68 | 0.01 | 1.72 | **1.65** | -2.25 | -0.38 | -3.77 | **-3.63** |
| Animal Control | 0.62 | 0.02 | 0.70 | **0.67** | 0.59 | 0.03 | 0.71 | **0.68** | -0.03 | 0.01 | 0.01 | **0.01** |
| Slope Stability | 0.81 | 0.09 | 1.17 | **1.13** | 0.72 | 0.01 | 0.76 | **0.73** | -0.09 | -0.08 | -0.41 | **-0.39** |
| Erosion / Bank Caving | 0.32 | | 0.32 | **0.31** | 0.11 | | 0.11 | **0.11** | -0.21 | | -0.21 | **-0.20** |
| Cracking | 0.01 | | 0.01 | **0.01** | 0.02 | | 0.02 | **0.02** | 0.01 | | 0.01 | **0.01** |
| Crown Surface / Depressions / Rutting | 0.19 | | 0.19 | **0.18** | 0.17 | | 0.17 | **0.16** | -0.02 | | -0.02 | **-0.02** |
| Repair Gates | 0.01 | | 0.01 | **0.01** | | | | | -0.01 | | -0.01 | **-0.01** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Culverts: Inlets / Outlets | 0.02 | | 0.02 | **0.02** | | | | | -0.02 | | -0.02 | **-0.02** |
| Flap Gates | 0.01 | 0.02 | 0.09 | **0.09** | 0.01 | 0.01 | 0.05 | **0.05** | | -0.01 | -0.04 | **-0.04** |
| *Concrete Floodwalls* | | | | | | | | | | | | |
| Concrete Surfaces | 0.01 | | 0.01 | **0.01** | | | | | -0.01 | | -0.01 | **-0.01** |
| Monolith Joints | 0.06 | | 0.06 | **0.06** | 0.06 | | 0.06 | **0.06** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.01 | 0.92 | 3.69 | **3.55** | 0.17 | 1.68 | 6.89 | **6.63** | 0.16 | 0.76 | 3.20 | **3.08** |
| *LMA Totals:* | 6.70 | 1.44 | 12.46 | **11.99** | 4.38 | 1.74 | 11.34 | **10.91** | -2.32 | 0.30 | -1.12 | **-1.08** |

### DWR Structure Inspection Summary

| Structure Name | Overall Rating |
|---|---|
| Duck Creek Diversion Weir And Control Structure | A |
| Mormon Slough Pumping Plant No. 1 | A |
| Mormon Slough Pumping Plant No. 2 | A |
| Mormon Slough Pumping Plant No. 3 | A |

### DWR Channel Inspection Summary

| Channel Name | Overall Rating |
|---|---|
| Duck Creek Diversion Channel | A |
| North Littlejohn Creek | M |
| South Littlejohn Creek | A |
| South Littlejohn Creek North Branch | A |

## DWR San Joaquin River Erosion Summary



### Unit No. 15 Mormon Slough, RB

| Site ID | River Mile | Levee Mile | | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| | | Start | End | | | |
| NA0017U15RM0.86 | 0.86 | 0.41 | 1.32 | River Erosion | Existing Site | U |
| NA0017U15RM1.58 | 1.58 | 1.55 | 1.62 | River Erosion | Repaired Site | C |
| NA0017U15RM3.14 | 3.14 | 3.14 | 3.15 | Maintenance Erosion | Repaired Site | C |

### Unit No. 16 Mormon Slough, LB

| Site ID | River Mile | Levee Mile | | Issue Type | Status | Rating |
|---|---|---|---|---|---|---|
| | | Start | End | | | |
| NA0017U16RM23.35 | 23.35 | 0.13 | 0.47 | River Erosion | New Site | U |
| NA0017U16RM22.74 | 22.74 | 0.97 | 0.99 | River Erosion | New Site | U |
| NA0017U16RM22.58 | 22.58 | 1.13 | 1.13 | River Erosion | New Site | M |
| NA0017U16RM22.15 | 22.15 | 1.59 | 1.59 | River Erosion | New Site | M |
| NA0017U16RM22.01 | 22.01 | 1.74 | 1.75 | River Erosion | New Site | M |
| NA0017U16RM21.95 | 21.95 | 1.75 | 1.76 | River Erosion | New Site | M |
| NA0017U16RM21.94 | 21.94 | 1.77 | 1.78 | River Erosion | New Site | M |
| NA0017U16RM21.05 | 21.05 | 1.93 | 1.95 | River Erosion | New Site | U |
| NA0017U16RM20.71 | 20.71 | 2.31 | 2.32 | River Erosion | New Site | U |
| NA0017U16RM20.62 | 20.62 | 2.37 | 2.38 | River Erosion | New Site | U |
| NA0017U16RM20 | 20 | 3.00 | 3.06 | River Erosion | New Site | U |
| NA0017U16RM19.28 | 19.28 | 3.78 | 3.79 | River Erosion | New Site | U |
| NA0017U16RM19.23 | 19.23 | 3.84 | 3.85 | River Erosion | New Site | M |
| NA0017U16RM19.18 | 19.18 | 3.89 | 3.91 | River Erosion | New Site | M |
| NA0017U16RM18.69 | 18.69 | 4.32 | 4.34 | River Erosion | New Site | U |
| NA0017U16RM17.99 | 17.99 | 5.03 | 5.03 | River Erosion | New Site | M |
| NA0017U16RM11.81 | 11.81 | 5.52 | 5.57 | River Erosion | New Site | U |
| NA0017U16RM6.47 | 6.47 | 6.47 | 6.48 | River Erosion | Repaired Site | C |
| NA0017U16RM16.27 | 16.27 | 6.72 | 6.91 | River Erosion | New Site | U |
| NA0017U16RM14.48 | 14.48 | 8.61 | 8.65 | River Erosion | New Site | M |
| NA0017U16RM13.86 | 13.86 | 8.99 | 8.99 | River Erosion | New Site | U |
| NA0017U16RM13.72 | 13.72 | 9.39 | 9.41 | River Erosion | New Site | U |
| NA0017U16RM13.53 | 13.53 | 9.58 | 9.60 | River Erosion | New Site | M |
| NA0017U16RM12.95 | 12.95 | 10.16 | 10.18 | River Erosion | New Site | U |

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| Bear Creek - Unit 8, west of I-5 | 0.85 | Inactive | 04/23/2012 | U |
| Bear Creek - Units 12 north | 0.44 | Active | 04/23/2012 | M |
| Bear Creek - Units 12 south, 10, and 13 | 3.67 | Inactive | 08/21/2012 | U |
| Bear Creek - Units 7 east | 6.54 | Inactive | 08/21/2012 | U |
| Bear Creek - Units 7 west and 21 | 4.19 | Inactive | 08/21/2012 | U |
| Bear Creek - Units 7, 22, and 23 | 9.29 | Inactive | 08/21/2012 | U |
| Bear Creek - Units 8, 10, and 11 | 7.25 | Inactive | 08/21/2012 | U |
| Bear Creek - Units 8, 24, 26, and 9 | 5.57 | Inactive | 08/21/2012 | U |
| Bear Creek - Units 8, 25, and 27 | 11.14 | Inactive | 08/21/2012 | U |
| Littlejohn Creek left bank - Unit 1 | 2.55 | Inactive | 01/18/2008 | N/A |
| Littlejohn Creek right bank - Unit 2 | 2.14 | Inactive | 01/18/2008 | N/A |
| Mormon Slough - Calaveras R right bank - RD 2074 | 11.68 | Inactive | 04/23/2012 | U |
| Mormon Slough - Calaveras, Divert Canal left bank | 12.75 | Inactive | 08/21/2012 | U |
| Mormon Slough - Diverting Canal right bank | 9.58 | Inactive | 04/23/2012 | U |
| Mormon Slough left bank along RR tracks - Unit 16 | 0.46 | Inactive | 08/21/2012 | U |
| Mormon Slough right bank - Unit 15 east | 3.64 | Inactive | 08/21/2012 | U |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported trash accumulation at all levee units and floodplain due to illegal dumping. The Agency also reported about its routine cleaning activities. The Agency stated vegetation debris accumulates at low water crossing at Levee Unit 1 at north branch of South Little John, upstream of Jack Tone Road. The Agency reported caving on both water and landside slopes at Levee Unit 2 at South Little John by low water crossing upstream of Mariposa Rd and mentioned that channel vegetation is hindering waterside access at Levee Unit 18 upstream of Fine Rd. The Agency also provided maintenance and repair activities such as encroachment control at Unit 15, erosion repairs along waterside toe at Levee Unit 2 at South Little John downstream of Mariposa Rd and on waterside slope upstream of Flood Rd on Levee Unit 16, rodent control on Levee Unit 8, encroachment control at Levee Unit 15, and removal of tree limbs and vegetation from slope and channel at Levee Unit 16.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

The Agency reported erosion repairs on waterside toe and slope at Levee Units 8 and 16.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units. Activities included erosion repair, encroachment control, gate repair, inspection, patrolling, roadway grading, and vegetation mowing. The Agency also reported corrected or ongoing corrective actions in response to DWR insepction comments. The corrected actions included encroachment control, erosion repair, levee slope repair, roadway grading, rodent control, tree thinning and trimming, and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of erosion repair, gate repair, in-channel sediment and weed removal, maintenance, minor structure repair, patrolling, roadway grading, tree removal, and vegetation mowing, spraying and planting. The reported total estimated cost for the current fiscal year is $2,095,070.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that there was no new information to report.

# Turlock Irrigation District
## Gomes Lake

### Stanislaus County

**Contact**
Les Barrigar
Manager
333 East Canal Drive
Turlock CA 95381
Phone: (209) 883-8272

## SAN JOAQUIN SYSTEM : Turlock Irrigation District Gomes Lake

| Levee Short Name : NA0065 | Bank | Unit Length (Miles) |
|---|---|---|

No Units Associated with this District.

### Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last Structure inspection.
- The LMA should ensure that the SPFC structure is able to perform as designed and constructed.

## DWR Levee Inspection Summary

Levees in this District are not Inspected.

## DWR Structure Inspection Summary

| Structure Name | Overall Rating |
|---|---|
| Gomes Lake Pumping Plant | A |

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 1.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

No information was provided by the Agency for Part 3.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

No information was provided by the Agency for Part 4.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency stated that the report for this levee unit was submitted by RD2091 as Levee Unit 2.

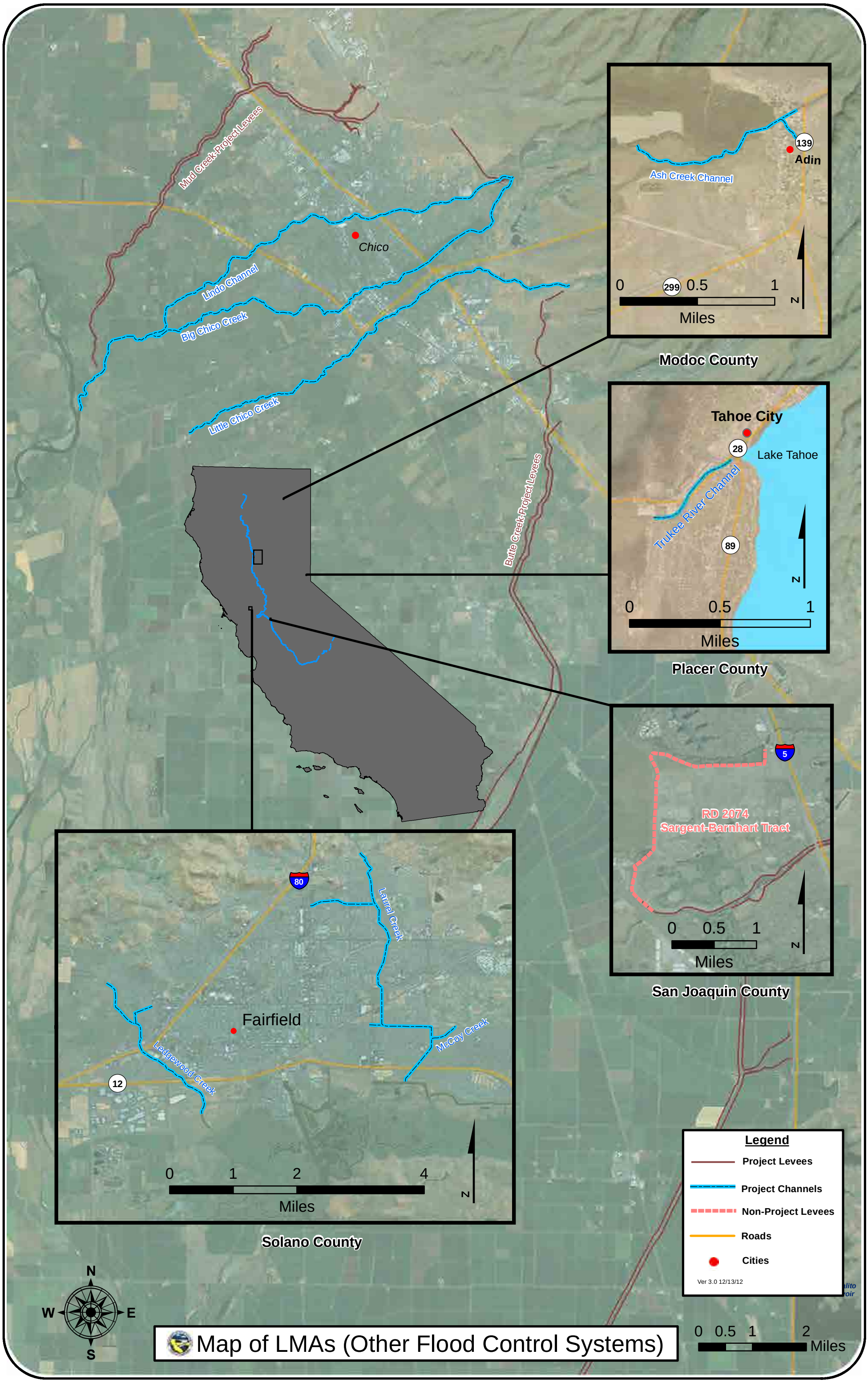
Appendix **C**

# Miscellaneous Summary Reports

This Appendix includes reporting of a Non Project Levee in the San Joaquin River Flood Control Project. It also includes channels in areas that are outside of the the Sacramento and San Joaquin River Flood Control Project. Appendix C includes:

- Miscellaneous Index
- Map
- Individual local area Summary Profiles

| Local Agencies & Areas | County | Tab Name | Short Name | Page |
|---|---|---|---|---|
| **Reclamation Districts** | | | | |
| Reclamation District No. 2074 Sargent-Barnhart Tract | San Joaquin | RD 2074 | RD2074 | 5 |
| **Named Areas** | | | | |
| Adin Community Service District | Modoc | Adin | NA0030 | 9 |
| Fairfield Suisun Sewer District | Solano | FSSD | NA0035 | 13 |
| Placer County | Placer | Truckee River | NA0045 | 17 |


Mud Creek-Project Levees
Chico
Lindo Channel
Big Chico Creek
Little Chico Creek
Butte Creek-Project Levees
Ash Creek Channel
139
Adin
0
299
0.5
1
Miles
N
Modoc County
Tahoe City
28
Lake Tahoe
Trukee River Channel
89
0
0.5
1
Miles
N
Placer County
5
RD 2074
Sargent-Barnhart Tract
0
0.5
1
Miles
N
San Joaquin County
80
Laurel Creek
Fairfield
McCoy Creek
Ledgewood Creek
12
0
1
2
4
Miles
N
Solano County
Legend
Project Levees
Project Channels
Non-Project Levees
Roads
Cities
Ver 3.0 12/13/12
N
W
E
S
Map of LMAs (Other Flood Control Systems)
0
0.5
1
2
Miles

# Reclamation District No. 2074
## Sargent-Barnhart Tract

### San Joaquin County

**Contact**
Nelson Bahler
President
PO Box 7576
Stockton CA 95267
Phone: (209) 473-6024

| Levee Short Name : RD2074 | Bank | Unit Length (Miles) |
|---|---|---|
| No Units Associated with this District. | | |

## Threat Assessment & Recommendations

- DWR does not inspect this area and no threat assessment or recommendations were done.

## DWR Levee Inspection Summary

Levees in this District are not Inspected.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

No Channels Inspected in this District.

## DWR San Joaquin River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

**Part 1 Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)**

The Agency stated that existing encroachments are regularly inspected and new encroachments will meet CVFPB, DWR, and USACE standards. The Agency also reported regular maintenance activities and good levee condition.

**Part 2 Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

No information was provided by the Agency for Part 2.

**Part 3 A summary of maintenance performed by the Local Agency during the previous fiscal year**

The Agency provided a summary of maintenance activities accomplished for all levee units. Activities included encroachment control, erosion repair, gate repair, inspection, road maintenance, rodent control, and vegetation control.

**Part 4 A statement of work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency**

The Agency provided a summary of expenses and maintenance activities planned for all levee units. Expenses include costs of encroachment control, erosion repair including riprap revetment, gate repair, installation of flap gates on the storm drain pipe, roadway maintenance, rodent control, and vegetation control. The reported total estimated cost for the current fiscal year is $635,000.

**Part 5 Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

The Agency reported the Five Year Plan, Emergency Procedures Manual, Existing Encroachment Permits, and Operation and Maintenance Activity Logs are available upon request.

# Adin Community Service District

## Modoc County

**Contact**
Katie Bidwell
President
PO Box 258
Adin CA 96006
Phone: (530) 260-6396

| Levee Short Name : NA0030 | Bank | Unit Length (Miles) |
|---|---|---|
| No Units Associated with this District. | | |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last Channel inspection.

## DWR Levee Inspection Summary

Levees in this District are not Inspected.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

| Channel Name | Overall Rating |
|---|---|
| Ash Creek | A |
| Dry Creek | A |

## DWR San Joaquin River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

No Reporting by this District.

# Fairfield Suisun Sewer District

## Solano County

**Contact**
Kevin Cullen
Senior Environmental Engineer
1010 Chadbourne Road
Fairfield CA 94534-9700
Phone: (707) 429-8930

| Levee Short Name : NA0035 | Bank | Unit Length (Miles) |
|---|---|---|
| No Units Associated with this District. | | |

## Threat Assessment & Recommendations

- Soil and vegetation exist that may significantly impact the capacity of channels in this Area.
- The LMA should ensure that the capacity of the channel as designed and constructed is maintained.

## DWR Levee Inspection Summary

Levees in this District are not Inspected.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

| Channel Name | Overall Rating |
|---|---|
| Laurel Creek | M |
| Ledgewood Creek | M * |
| McCoy Creek | A |
| Union Avenue Diversion | A |

* Overall channel rating average is less than 20.00%; however, U rated issues are present, so the Overall rating is M instead of A.

## DWR San Joaquin River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

No Reporting by this District.

# Placer County

## Placer County

**Contact**
Brian Keating
District Manager
3091 County Center Drive Suite 220
Auburn CA 95603
Phone: (530) 745-7592

## MISCELLANEOUS : Placer County

| Levee Short Name : NA0045 | Bank | Unit Length (Miles) |
|---|---|---|
| No Units Associated with this District. | | |

## Threat Assessment & Recommendations

- The LMA should continue to maintain the area at the high level seen during the last Channel inspection.

## DWR Levee Inspection Summary

Levees in this District are not Inspected.

## DWR Structure Inspection Summary

No Structures Inspected in this District.

## DWR Channel Inspection Summary

| Channel Name | Overall Rating |
|---|---|
| Truckee River | A |

## DWR San Joaquin River Erosion Summary

No Supplemental Erosion Sites.

## USACE Inspection Ratings Summary

| System Name | Length (Miles) | RIP Status | RIP Date | Rating |
|---|---|---|---|---|
| No USACE Ratings available. | | | | |

## DWR Summary of Local Maintaining Agency Report

No Reporting by this District.

Appendix **D**

# Relevant Correspondence for the LMA Reporting Program

Report Submission Letter to Libraries, May 3, 2012

Report Submission Letter to Counties, May 3, 2012

2012 Local Maintaining Agency Reporting Requirements Workshop Flyer, August 2012

Fact Sheet – Local Maintaining Agency Reporting Requirements, Updated August 2011

Reporting Requirements Letter to the LMAs, August 30, 2012

Local Maintaining Agency Paper Copy Reporting Guidance

Five Part Reporting Forms

US Fish and Wildlife Letter Regarding Reclamation District Nos. 2099, 2100, and 2102, September 1, 2010

DWR response to US Fish and Wildlife Letter Regarding Reclamation District Nos. 2099, 2100, and 2102, November 4, 2010

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY

EDMUND G. BROWN JR., Governor

**DEPARTMENT OF WATER RESOURCES**
DIVISION OF FLOOD MANAGEMENT
P.O. BOX 219000
SACRAMENTO, CA 95821-9000

May 3, 2012

To: Libraries Designated by California Water Code Sections 9140 and 9141

RE: Issuance of 2011 Local Maintaining Agency Annual Report

We are hereby providing the 2011 Local Maintaining Agency Annual Report to your library. The enclosed CD holds the electronic version of this report. This report contains information provided by Local Maintaining Agencies for Project Levees along the Sacramento and San Joaquin River Flood Control Systems. The Department of Water Resources (the Department) is required to prepare this annual report pursuant to California Water Code Section 9141 (AB 156) and required to send the report to your library in accordance, which follows:

> **"The department shall make the flood management report for each local agency available on the Internet Web site of the board and shall provide the report to all of the following entities:**
>
> **(1) The local agency.**
> **(2) Any city or county within the local agency's jurisdiction.**
> **(3) Any public library located within the local agency's jurisdiction."**

The following web site has links to the Local Maintaining Agency Annual Reports along with other information relating to our program:

**http://cdec.water.ca.gov/lma.html**

Hard copies of this report can be obtained via mail request to: Department of Water Resources, Publications, P.O. Box 942836, Sacramento, CA 94236, 916-653-1097 or by e-mail request to Publications at: imr-publications@water.ca.gov.

Thank you for helping to make this report available to the public. If you have any other question or need additional information, please contact me at teusuff@water.ca.gov or (916) 574-2362.

Sincerely,

Tasmin Eusuff, Chief
Local Maintaining Agency Assessment Section

Enclosure

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY

EDMUND G. BROWN JR., Governor

**DEPARTMENT OF WATER RESOURCES**
DIVISION OF FLOOD MANAGEMENT
P.O. BOX 219000
SACRAMENTO, CA 95821-9000

May 3, 2012

To: Counties Designated by California Water Code Sections 9140 and 9141

RE: Issuance of 2011 Local Maintaining Agency Annual Report

We are hereby providing the 2011 Local Maintaining Agency Annual Report to your county Public Office. The enclosed CD holds the electronic version of this report. This report contains information provided by Local Maintaining Agencies for Project Levees along the Sacramento and San Joaquin River Flood Control Systems. The Department of Water Resources (the Department) is required to prepare this annual report pursuant to California Water Code Section 9141 (AB 156) and is required to send the report to your county in accordance, which follows:

> **"The department shall make the flood management report for each local agency available on the Internet Web site of the board and shall provide the report to all of the following entities:**
>
> **(1) The local agency.**
> **(2) Any city or county within the local agency's jurisdiction.**
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The following web site has links to the Local Maintaining Agency Annual Reports along with other information relating to our program:

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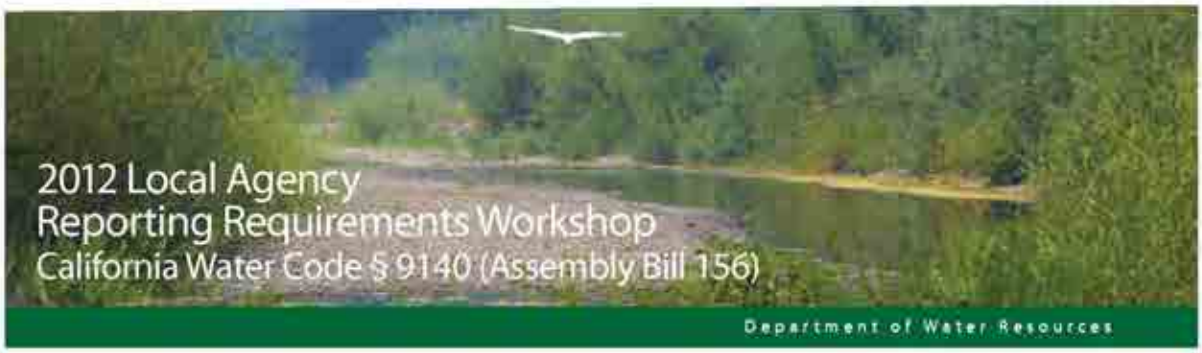
Hard copies of this report can be obtained via mail request to: Department of Water Resources, Publications, P.O. Box 942836, Sacramento, CA 94236, 916-653-1097 or by e-mail request to Publications at: imr-publications@water.ca.gov.

Thank you for helping to make this report available to the public. If you have any other questions or need additional information, please contact me at teusuff@water.ca.gov or (916) 574-2362.

Sincerely,

Tasmin Eusuff, Chief
Local Maintaining Agency Assessment Section

Enclosure




Would you like to know about the improvements made by the Department of Water Resources (DWR) in the Local Maintaining Agency Annual Reporting (LMAAR) Program? Do you want more information about DWR's Levee Inspection Program and criteria? Would you like to be briefed by DWR on the new tool that has been developed for Levee Threat Monitoring?

If you answered "yes" to any of the above questions, please come and join us for the fifth annual workshop hosted by DWR's Flood Project Integrity and Inspection Branch. To accommodate all interested LMAs, DWR will hold the same workshop on two different dates, so please join the one convenient for you. The workshop will provide information to LMAs about the Local Maintaining Agency Annual Reporting Program and features of the electronic web application developed in partnership with the California Data Exchange Center (CDEC).

At each workshop, there will be a demonstration and hands-on exercise session of the web application. The application is designed to provide LMAs with access to flood control system information and to facilitate reporting under the California Water Code (CWC § 9140) requirements resulting from Assembly Bill 156. In addition, staff from our Levee Inspection, Flood Operations Center, and Erosion Survey programs will present information about their programs and will be available to answer questions.

## Intended Workshop Audience:

Local agencies and their representatives

## Proposed Agenda:

- Introductions
- Review of 2012 Annual Report
- Program Improvements in 2012
- Levee Inspection Program
- Levee Threat Monitoring Guidelines
- Erosion Survey Program
- Hands-on Demonstration of Web Application
- Q&A Session
- Comments

## Workshop Sessions:

1: August 14, 2012, 9:00–11:00 am.
2: August 15, 2012, 1:30–3:30 pm.

Location: Department of Water Resources
Joint Operations Center
2nd Floor, Flood Operations Center
3310 El Camino Avenue
Sacramento, CA 95821

Please RSVP by calling or e-mailing:
Tariq Chechi at (916) 574-2354 (tchechi@water.ca.gov), or
Mahesh Gautam at (916) 574-2759 (mgautam@water.ca.gov).

Your response by August 3, 2012 will be much appreciated.

## Please View the Updated Web Application

We invite you to view the updated electronic reporting web application at any time using the link below.

http://cdec.water.ca.gov/lma.html

Individual usernames and password specific to your Local Agency or Agency representatives can be requested through the CDEC e-mail address provided on the website.
Existing users do not need to send another request.

We like to hear from you. Please send any comments or suggestions to:
Tasmin Eusuff at (teusuff@water.ca.gov)
or send them using the CDEC e-mail address provided with the web application.

The updated web application for 2012 reporting is now live.

Last updated: August 2011

## Why Am I Receiving This Fact Sheet?

This fact sheet has been prepared by the California Department of Water Resources (DWR) to help clarify additions to the California Water Code (CWC) resulting from the adoption of Assembly Bill (AB) 156 (Laird) Flood Control, which was enacted during the 2007-08 Legislative Session. Additions to the Water Code include requirements for local levee maintaining agencies (Local Agencies) to submit to DWR, by September 30 each year, specific information relative to the Project Levees they operate and maintain. In turn, DWR will be required to summarize this information in an annual report to the Central Valley Flood Protection Board (CVFPB) by December 31 each year. These additions to the Water Code were effective on July 1, 2008.

## Who Is Required to Report Information?

**Local Agencies** who maintain either (1) **Project Levees** or (2) **Non-Project Levees** that also benefit land within the boundaries of an area benefited by a Project Levee, are required to submit five categories of information annually.

*(Please see below for a description of the five categories.)*

**NOTE:** A **Local Agency** responsible for operation and maintenance of a levee not otherwise subject to these requirements may voluntarily prepare and submit to DWR or the CVFPB a flood management report for website posting.

## What Information Is Required in the Local Agency Report?

Reports submitted to DWR by a **Local Agency** pursuant to CWC §9140 must include all of the following:

1. Information known to the Local Agency that is relevant to the condition or performance of the Project Levee *(or jurisdictional Non-Project Levee);*
2. Information identifying known conditions that might impair or compromise the level of flood protection provided by the **Project Levee** *(or jurisdictional Non-Project Levee);*
3. A summary of maintenance performed by the **Local Agency** during the previous fiscal year;
4. A statement of work and estimated cost for operation and maintenance of the Project Levee *(or jurisdictional Non-Project Levee)* for the current fiscal year, as approved by the Local Agency; and
5. Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee *(or jurisdictional Non-Project Levee)*, as determined by the CVFPB or DWR.

## How Can Local Agencies Submit This Information?

Based upon feedback received from Local Agencies, the Department developed a web application to facilitate reporting of Local Agency information. This web application allows Local Agencies to establish individual user accounts with access to certain DFM flood system information and the ability to submit required information electronically. The web application is active and can be accessed at http://cdec.water.ca.gov/lma.html.

A reporting package is mailed each year to all Local Agencies in July-August. The package includes template forms, reporting instructions, returning envelope, and letter to assist agencies with reporting. The letter provides additional background information on the electronic reporting web application.

## How Will Local Agency Reports Be Used?

DWR will be required to prepare and transmit to the CVFPB an annual report on **Project Levees** *(and jurisdictional Non-Project Levees)* operated and maintained by **Local Agencies**. The annual report will summarize submitted information, as well as relevant portions of any of the following documents as determined by DWR:

1. Annual inspection reports on **Local Agency** maintenance prepared by DWR or the CVFPB;
2. The State Plan of Flood Control;
3. The flood control system status report described in CWC, Section 9120;
4. The schedule for mapping described in CWC, Section 8612;
5. Any correspondence, document, or information deemed relevant by DWR.

DWR will be required to make available for website viewing each **Local Agency**'s flood management report, and will also be required to provide a copy of each report to the following entities:

1. The Local Agency;
2. Any city or county within the Local Agency's jurisdiction;
3. Any public library located within the Local Agency's jurisdiction.

## What Are the Mandated Reporting Timelines?

| | |
|---|---|
| Water Code changes become effective: | July 1, 2008 |
| **Local Agency** reports to **DWR**: | Due September 30 each year |
| **DWR** consolidates report to **CVFPB**: | Due December 31 each year |

## Background on AB 156

AB 156 was introduced during the 2007-08 Legislative Session and was approved by the Governor and chaptered by the Secretary of State on October 10, 2007 *(Chapter 368, Statutes of 2007)*. Additions to the CWC a result of AB 156 include: requirements that on or before September 30 of each year, a **Local Agency** responsible for the operation and maintenance of a **Project Levee** *(or jurisdictional Non-Project Levee)* will prepare and submit to DWR a report of specified information for inclusion in periodic flood management reports prepared by DWR (CWC §9140). By establishing these requirements for **Local Agencies**, AB 156 imposes a State-mandated local program. Additions to the Water Code were effective July 1, 2008.

## Where have the Local Agency Reporting Requirements been added to the Water Code?

AB 156 has added Chapter 9, commencing with Section 9110, to Part 4 of Division 5 of the CWC. Water Code additions specific to the Local Agency Reporting Program are outlined below:

| Water Code Section | Topic |
|---|---|
| Chapter 9. Article 1. Section 9110: | Selected Definitions |
| Chapter 9, Article 4, Section 9140: | Local Reports |

## Have Other Statutory Changes Resulted from AB 156?

Yes. AB 156 has resulted in additions to the Government Code, the Public Resources Code, and numerous other additions and amendments to the Water Code.

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## Glossary – Selected Definitions

"**Local Agency**" means a Local Agency responsible for the maintenance of a Project Levee.

"**Maintenance**" has the same meaning as that set forth in subdivision (f) of Section 12878. *("Maintenance" means work described as maintenance by the federal regulations issued by the Secretary of the Army, the Secretary of Agriculture, the DWR, or the CVFPB for any project.)*

"**Project levee**" means any levee that is part of the facilities of the State Plan of Flood Control.

"**State Plan of Flood Control**" means the State and federal flood control works, lands, programs, plans, policies, conditions, and mode of maintenance and operations of the Sacramento River Flood Control Project described in Section 8350, and of flood control projects in the Sacramento River and San Joaquin River watersheds authorized pursuant to Article 2 *(commencing with Section 12648)* of Chapter 2 of Part 6 of Division 6 for which the CVFPB or DWR has provided *the assurances of nonfederal cooperation to the United States, and those facilities identified in Section 8361.*

"**Fiscal year**" has the same meaning as that set forth in Section 13290 of the Government Code. (The fiscal year shall commence on the first day of July)

## For More Information

If you would like more information, or have questions on the Local Agency reporting requirements or web application, please contact:

**Tasmin Eusuff** at (916) 574-2362 *(teusuff@water.ca.gov)*, or
**Jaime Matteoli** at (916) 574-2759 *(matteoli@water.ca.gov)*, or
**Tariq Chechi** at (916) 574-2354 *(tchechi@water.ca.gov)*

STATE OF CALIFORNIA – CALIFORNIA NATURAL RESOURCES AGENCY EDMUND G. BROWN JR., *Governor*

**DEPARTMENT OF WATER RESOURCES**
DIVISION OF FLOOD MANAGEMENT
P.O. BOX 219000
SACRAMENTO, CA 95821-9000

August 30, 2012

To: Local Levee Maintaining Agencies

RE: Local Agency Reporting Requirements

The purpose of this letter is to remind you of the California Water Code (CWC) § 9140 Local Maintaining Agency Annual Reporting deadline and the tools available for submitting the required information.

CWC § 9140 includes requirements for Local Levee Maintaining Agencies (Local Agencies) to provide an annual report to DWR on the following five categories of information:

1. Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee).
2. Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee).
3. A summary of maintenance performed by the Local Agency during the previous fiscal year.
4. A statement of work and estimated cost for operation and maintenance of the Project Levee, (or jurisdictional Non-Project Levee), for the current fiscal year, as approved by the Local Agency.
5. Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee, (or jurisdictional Non-Project Levee), as determined by the Central Valley Flood Protection Board (CVFPB) or DWR.

The CWC deadline for Local Agencies to submit this information for 2012 is **September 30, 2012**.

In turn, DWR is required to consolidate this information and provide a summary report to CVFPB by **December 31, 2012**.

DWR has developed both electronic and hard copy reporting options to assist Local Agencies in meeting the annual reporting requirements. The electronic reporting 'Web Application' can be found by clicking on the *Local Agency Information & Reporting* link at the Local Agency Program site located at:

**http://cdec.water.ca.gov/lma.html**

This site, developed in coordination with the California Data Exchange Center (CDEC), provides additional references (Fact Sheet, Maps, Reporting Examples, Web Application User Manual, etc) and instructions on how to request a Local Agency account by establishing a user login and password.

For hard copy reporting, or for submitting documents or attachments, we have enclosed reporting instructions and template forms. Please also find an envelope enclosed with the address noted below for returning the information to DWR:

Department of Water Resources
Flood Project Integrity and Inspection Branch
P.O. BOX 219000, Room 256
Sacramento, CA 95821-9000
Attn: Tasmin Eusuff

**To meet the CVFPB's December 31 deadline, DWR is encouraging Local Agencies to submit reports by September 30, 2012. Any information submitted after this date may not be included in the 2012 Annual Report.**

In an effort to understand and potentially address regulatory challenges faced by local levee maintaining agencies, DWR is interested in learning about future maintenance activities that are likely to remain incomplete because of mitigation requirements, such as when avoidance of species listed by the federal Endangered Species Act and/or the California Endangered Species Act, cannot be met. Please describe these activities under Part 5 of the Local Maintaining Agency's Annual Report. DWR is looking into obtaining permits which could aid locals with these and similar issues, but need a better understanding of the size and scope of the problem. If you have questions about this reporting, please contact Leah McNearney at (916) 653-8170 or lmcnearn@water.ca.gov.

Additionally, to qualify for the DWR Flood Emergency Response Grants, Local Agencies must be in compliance with Local Maintaining Agency Annual Report. If you need more information regarding these grants, please visit http://www.water.ca.gov/floodmgmt/hafoo/fob/floodER/ or contact Pat Clark at (916) 574-1249 (clarkp@water.ca.gov).

If you have any other question or comment regarding the Local Maintaining Agency Annual Reporting program (CWC § 9140), please contact me at (916) 574-2362 (teusuff@water.ca.gov), Tariq Chechi at (916) 574-2354 (tchechi@water.ca.gov) or Mahesh Gautam at (916) 574-2759 (mgautam@water.ca.gov).

Sincerely,

Tasmin Eusuff, Chief
Local Maintaining Agency Assessment Section

Enclosures

## Local Agency Paper Copy Reporting Guidance

The enclosed forms are provided for your use in reporting Local Agency information required by California Water Code (CWC) § 9140.

As a reminder, information may also be submitted using the electronic reporting web application developed in partnership with the California Data Exchange Center (CDEC). This electronic reporting application can be found at:

**http://cdec.water.ca.gov/lma.html**

For paper copy reporting you may also wish to include, or simply submit reports your Local Agency generates, other attachments, photographs, spreadsheets, etc. An overview of the information required by CWC § 9140 is shown below:

| CWC § 9140 'Parts' | Information Requested |
|---|---|
| Part 1 Reporting | Issues Relevant to Levee Condition or Performance |
| Part 2 Reporting | Conditions that might Impair or Compromise Level of Flood Protection |
| Part 3 Reporting | Summary of Levee Maintenance Performed during the Previous Fiscal Year (July 1, 2011 – June 30, 2012) |
| Part 4 Reporting | Statement of Levee Work and Estimated Cost for Operation & Maintenance for Current Fiscal Year (July 1, 2012 – June 30, 2013) |
| Part 5 Reporting | Other Readily Available Information Relevant to Levee Condition or Performance |

When completed, please return the information using the enclosed pre-addressed envelope. Local Agency reports are due to the Department by **September 30th of each year**.

Further guidance on the type of information requested is described below:

| **Part 1 Reporting**: Issues Relevant to Levee Condition or Performance | |
|---|---|
| ***Type of Information Requested*** | **Condition/Performance Feature or Category** |
| In Part 1, the Department would like to receive information on areas of concern known by the Local Agencies relative to levee operation or maintenance conditions. The **Condition/Performance Feature or Category** items shown to the right are intended as a guide to the type of information categories the Department would like to see reported for Part 1. The list of items was developed using operation, maintenance, and inspection items which are related to the condition or performance of levees. The items were derived from the Standard Operation and Maintenance (O&M) Manuals published for the Sacramento and San Joaquin River Flood Control Projects, inspection checklists provided in the Supplemental Unit O&M Manuals, and the Superintendent's Guide to Operation and Maintenance of California's Flood Control Projects. These are suggested reporting items and/or categories which are intended to facilitate consistent reporting. The list is not all inclusive, and 'Other' may be used for items that are not identified. Issues identified by the Department in your inspection report do not need to be reported. | Settlement, Sloughing, or Loss of Grade |
| | Caving (Either side of the Levee – W.S. or L.S.) |
| | Seepage, Saturated Areas, Sand Boils |
| | Levee/Berm Erosion |
| | Waterway/Channel Migration |
| | Sediment Accumulation |
| | Revetment/Rip-Rap |
| | Barren Area/no cover or sod |
| | Access Gates |
| | Access Roads and Road Ramps |
| | Cattle Guards and Gates |
| | Levee Crown Shape |
| | Unauthorized Grazing or Vehicle Traffic |
| | Unauthorized Encroachment |
| | Compaction/Loose Fill |
| | Borrow/Excavation Sites |
| | Accumulations of drift, trash or debris |
| | Vegetation |
| | Pipes/Crossings |
| | Pipe Flap Gates, Gate Valves |
| | Toe/Drainage Systems |
| | Pump Stations |
| | Relief Wells/Piezometers |
| | Bridges and Crossings |
| | Slurry Walls |
| | Flood Walls |
| | Closure Structures |
| | Miscellaneous Facilities |
| | Other |

| **Part 2 Reporting:** Levee Conditions that might Impair or Compromise Level of Flood Protection | |
|---|---|
| ***Type of Information Requested*** | **Condition Feature or Category** |
| In Part 2, the Department would like to receive information on areas of concern known by the Local Agencies relative to levee integrity/stability conditions. The Levee **Condition Feature or Category** items shown to the right are intended as a guide to the type of information categories the Department would like to see reported for Part 2.<br>The selectable items list was developed considering items and conditions related to the structural integrity of, or structural changes to, the levee system. There may be many overlapping items that could be entered into either Part 2 or Part 1. The list includes typical geotechnical levee distress issues, and conditions described in the "Suggested Methods of Combating Flood Conditions" sections of the Standard Operation and Maintenance (O&M) Manuals published for the Sacramento and San Joaquin River Flood Control Projects and the associated Supplemental Unit O&M Manuals. These are suggested reporting items and/or categories which are intended to facilitate consistent reporting. The list is not all inclusive, and 'Other' may be used for items that are not identified. Issues identified by the Department in your inspection report do not need to be reported. | Erosion<br>Seepage<br>Burrow Holes<br>Cracks<br>Sand Boils<br>Subsidence<br>Freeboard/Deficient Levee Crown Height<br>Toe Drainage<br>Visibility/Access<br>Problems Identified on adjacent levees protecting same area<br>Slurry Walls<br>Flood Walls<br>Closure Structures<br>Other |

**Part 3 Reporting**: Summary of Levee Maintenance Performed during the Previous Fiscal Year (**July 1, 2011 – June 30, 2012**)

| ***Type of Information Requested*** | **Maintenance Category** |
|---|---|
| Reporting that is due on September 30th each year for Part 3 encompasses maintenance activities performed during the **previous fiscal year** (July 1, 2011 – June 30, 2012). The list of **Maintenance Categories** shown to the right is intended as a guide. The list was developed considering typical levee maintenance activities reported in previous years as well as activities described in the Standard Operation and Maintenance (O&M) Manuals published for the Sacramento and San Joaquin River Flood Control Projects, the associated Supplemental Unit O&M Manuals, and the Superintendent's Guide to Operation and Maintenance of California's Flood Control Projects. These are suggested reporting items and/or categories which are intended to facilitate consistent reporting. The list is not all inclusive, and 'Other' may be used for items that are not identified. | Encroachment Control |
| | Erosion Repair |
| | Gates |
| | Inspections |
| | Insurance/Dues |
| | Legal/Administrative/Management Services |
| | Minor Structure Repair/Maintenance |
| | Mobile Equipment Costs |
| | Office Overhead |
| | Other |
| | Patrolling |
| | Permitting |
| | Restoration |
| | Roadways |
| | Rodent Control/Bait & Traps |
| | Rodent Control/Grouting |
| | Rodent Control/Other |
| | Sediment Removal |
| | Seepage Control |
| | Slope Dragging |
| | Surveying/Engineering |
| | Telemetry Maintenance |
| | Vegetation Control/Burn |
| | Vegetation Control/Mow |
| | Vegetation Control/Channel |
| | Vegetation Control/Spray |
| | Vegetation Control/Thin & Trim |
| | Vegetation Control/Tree Removal |
| | Vegetation Control/Other |

**Part 4 Reporting**: Statement of Levee Work and Estimated Cost for Operation & Maintenance for Current Fiscal Year (**July 1, 2012 – June 30, 2013**)

| ***Type of Information Requested*** | **Maintenance Category** |
|---|---|
| Reporting that is due on September 30th each year for Part 4 encompasses completed or planned levee operation and maintenance activities or repair or improvement projects and their estimated costs for the **current fiscal year** (July 1, 2012 – June 30, 2013). The list of **Maintenance Categories** shown to the right is intended as a guide. The list was developed considering typical levee maintenance activities reported in 2008, as well as activities described in the Standard Operation and Maintenance (O&M) Manuals published for the Sacramento and San Joaquin River Flood Control Projects, the associated Supplemental Unit O&M Manuals, and the Superintendent's Guide to Operation and Maintenance of California's Flood Control Projects. These are suggested reporting items and/or categories which are intended to facilitate consistent reporting. The list is not all inclusive, and 'Other' may be used for items that are not identified. | Encroachment Control<br>Erosion Repair<br>Gates<br>Inspections<br>Insurance/Dues<br>Legal/Administrative/Management Services<br>Minor Structure Repair/Maintenance<br>Mobile Equipment Costs<br>Office Overhead<br>Other<br>Patrolling<br>Permitting<br>Restoration<br>Roadways<br>Rodent Control/Bait & Traps<br>Rodent Control/Grouting<br>Rodent Control/Other<br>Sediment Removal<br>Seepage Control<br>Slope Dragging<br>Surveying/Engineering<br>Telemetry Maintenance<br>Vegetation Control/Burn<br>Vegetation Control/Mow<br>Vegetation Control/Channel<br>Vegetation Control/Spray<br>Vegetation Control/Thin & Trim<br>Vegetation Control/Tree Removal<br>Vegetation Control/Other |

| **Part 5 Reporting**: Readily Available Information Relevant to Levee Condition or Performance | |
|---|---|
| ***Type of Information Requested*** | **Other Relevant Information** |
| In Part 5, the Department would like to receive other information known by the Local Agencies relevant to levee condition or performance. The **Other Relevant** items shown to the right are intended as a guide to the type of information categories the Department would like to see reported for Part 5. The list is intended as a guide to the type of information the Department would like to see reported for Part 5. The list was developed considering more general information items related to the levee system including reports, studies, investigations, site conditions, construction drawings, or upcoming activities which may modify, change, or impact the levee system. These are suggested reporting items and/or categories which are intended to facilitate consistent reporting. The selectable menu list is not all inclusive, and the 'Other' menu item may be selected for items that are not listed. | Historical Construction Issues<br>Dump/Hazardous Waste Sites<br>Construction Drawings/As-Builts<br>Plat Maps<br>Reports/Studies<br>Geotechnical Investigations<br>Well Logs<br>Encroachments<br>Rights of Way/Easements<br>Permits/MOU's<br>Safety Plan<br>EAP,EOP, and ERP<br>Other |

| Agency Name: | | | | Date: |
|---|---|---|---|---|
| **PART 1 Reporting Form** | | | | |
| **Part 1: Information known to the Local Agency that is relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee)** | | | | |
| **Levee Unit** | **Location**<br>Lat/Long (Decimal)<br>Levee Mile (LM)<br>River Mile (RM)<br>Stationing<br>Other | **Condition/Performance Feature or Category** (See Part 1 Reporting Guidance) | **Observation/Description** | **Date**<br>Date Identified (DI)<br>Date Occurred (DO)<br>Date Reported (DR) |
| | | | | |
| | | | | |
| | | | | |

## PART 2 Reporting Form

**Part 2: Information identifying known conditions that might impair or compromise the level of flood protection provided by the Project Levee (or jurisdictional Non-Project Levee)**

| **Levee Unit** | **Location**<br>Lat/Long (Decimal)<br>Levee Mile (LM)<br>River Mile (RM)<br>Stationing<br>Other | **Condition Feature or Category**<br>(See Part 2 Reporting Guidance) | **Observation/Description** | **Date**<br>Date Identified (DI)<br>Date Occurred (DO)<br>Date Reported (DR) |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

## PART 3 Reporting Form

**Part 3: A summary of maintenance performed by the Local Agency during the previous fiscal year (July 1, 2011 – June 30, 2012)**

| **Levee Unit** | **Location**<br>Lat/Long (Decimal)<br>Levee Mile (LM)<br>River Mile (RM)<br>Stationing<br>Other | **Maintenance Category**<br>(See Part 3 Reporting Guidance) | **Description of Activity** | **Date** |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

## PART 4 Reporting Form

**Part 4: A statement of levee work and estimated cost for operation and maintenance of the Project Levee (or jurisdictional Non-Project Levee) for the current fiscal year, as approved by the Local Agency (July 1, 2012 – June 30, 2013)**

| **Levee Unit** | **Location**<br>Lat/Long (Decimal)<br>Levee Mile (LM)<br>River Mile (RM)<br>Stationing<br>Other | **Maintenance Category**<br>(See Part 4 Reporting Guidance) | **Description of Activity & Cost** | **Date** | **Estimated Cost** |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |

## PART 5 Reporting Form

**Part 5: Any other readily available information contained in the records of the Local Agency relevant to the condition or performance of the Project Levee (or jurisdictional Non-Project Levee), as determined by the CVFPB or DWR**

| **Levee Unit** | **Location**<br>Lat/Long (Decimal)<br>Levee Mile (LM)<br>River Mile (RM)<br>Stationing<br>Other | **Other Relevant Information Category** (See Part 5 Reporting Guidance) | **Observation/Description** | **Date**<br>Date Identified (DI)<br>Date Occurred (DO)<br>Date Reported (DR) |
|---|---|---|---|---|
| | | | | |
| | | | | |
| | | | | |

# United States Department of the Interior

FISH AND WILDLIFE SERVICE

San Luis National Wildlife Refuge Complex
Post Office Box 2176
Los Banos, California 93635

01 September 2010

Mr. Tasmin Eusuff, Chief
Local Maintaining Agency Assessment Section
California Department of Water Resources
Flood Project Integrity and Inspection Branch
P.O. Box 219000
Sacramento, CA 95821-9000

**Re: Memo "Request for Local Picture for California Water Code (CWC) 9141 Local Agency Annual Report (AB 156)"**

Dear Mr. Eusuff:

We received three letters, addressed to Reclamation District Nos. 2099, 2100, and 2102. These three districts were purchased in their entirety by the U. S. Fish and Wildlife Service over ten years ago, and are now a part of the San Joaquin River National Wildlife Refuge. Those Reclamation Districts are now non-functional and no longer exist. The levees are no longer maintained because they only protected lands that are now within the Refuge. We are also working with the Army Corps of Engineers to remove any Corps levee from their Maintenance Manual. In fact, these levees have been breached by floodwaters, and we intend to construct additional breaches to restore the natural floodplain hydrology.

Please remove this Refuge from the mailing list that pertains to reclamation districts. If you have any questions, please don't hesitate to call (209/826-3508).

Sincerely,

Kim Forrest
Wildlife Refuge Manager

STATE OF CALIFORNIA – THE RESOURCES AGENCY

ARNOLD SCHWARZENEGGER, *Governor*

**DEPARTMENT OF WATER RESOURCES**
FLOOD PROJECT INTEGRITY AND INSPECTION BRANCH
P.O. BOX 219000
SACRAMENTO, CA 95821-9000

November 4, 2010

To: Kim Forrest, Fish and Wildlife Service

RE: Response to your September 1, 2010 letter and request for reprint

Thank you for clarifying the ownership and maintenance situation regarding the non-functional Reclamation Districts 2099, 2100, and 2102.

We do not expect any reports from this area. However, until we receive a letter from US Corps of Engineers indicating changes in their Operation and Maintenance Manual, we are required according to CWC §9141 to keep these non-functional districts in our list.

We request your permission to use your September 1, 2010 letter in our 2010 Annual Report to explain the situation to the Central Valley Flood Protection Board. If you prefer a different version of the letter, please send it to the address below.

If you have any questions, please call or email me at 916-574-2362 or teusuff@water.ca.gov.

Thank you for good cooperation with us.

Sincerely,

Tasmin Eusuff, Chief
Local Maintaining Agency Assessment Section
CA Department of Water Resources
P.O. Box 219000
Sacramento, CA 95821

Appendix **E**

# Supplemental Figures and Tables for the Inspection Program

This Appendix contains additional figures and tables for the results of the fall 2012 Levee Inspections.

The following figures supplement information contained in Sections 2 through 4 of the main report. In general, these figures present different ways of analyzing maintenance results such as plotting information separately for the Sacramento and San Joaquin river basins or plotting results by type of deficiency. Data shown in these figures and tables for the thirty-one Areas that were not inspected in 2010 are from fall 2009 data as discussed in the body of this report.

### *2012 Levee Maintenance Inspections*

- Figure E-1 shows the levee maintenance inspection ratings grouped by Sacramento River, San Joaquin River, and Miscellaneous basins
- Figure E-2 shows the changes in ratings grouped by basin.
- Figure E-3 shows the percentage of miles of levees with deficiencies in the total system for each type of rated items. Vegetation deficiencies make up the vast majority of the miles in all years. In 2012 crown surface and animal control deficiencies were also significant contributor to the total length of levees with deficiencies.
- Figure E-4 shows the same information as Figure E-3 but is separated by basin. Encroachment issues with an Enforcement Issue Type are not included in these figures.
- Table E-1 shows the length, in miles, of Minimally Acceptable (M) and Unacceptable (U) issues for each category in the total system and the percentage of the total project length along which these lengths occur. Also shown in this table is the change in M and U lengths as well as the resultant change in the percent of total project lengths. Tables E-2, E-3, and E-4 show similar information to Table I-1 but only contain the lengths for the Sacramento River, San Joaquin River, and Miscellaneous basins, respectively.
- Figures E-5 and E-6 are maps of the Sacramento and San Joaquin systems, showing the location and rating of each LMA. To find the general location of an LMA, refer to Appendices A, B and C.

**Figure E-1: LMA Maintenance Rating Comparison for 2007 through 2012 by Basin**

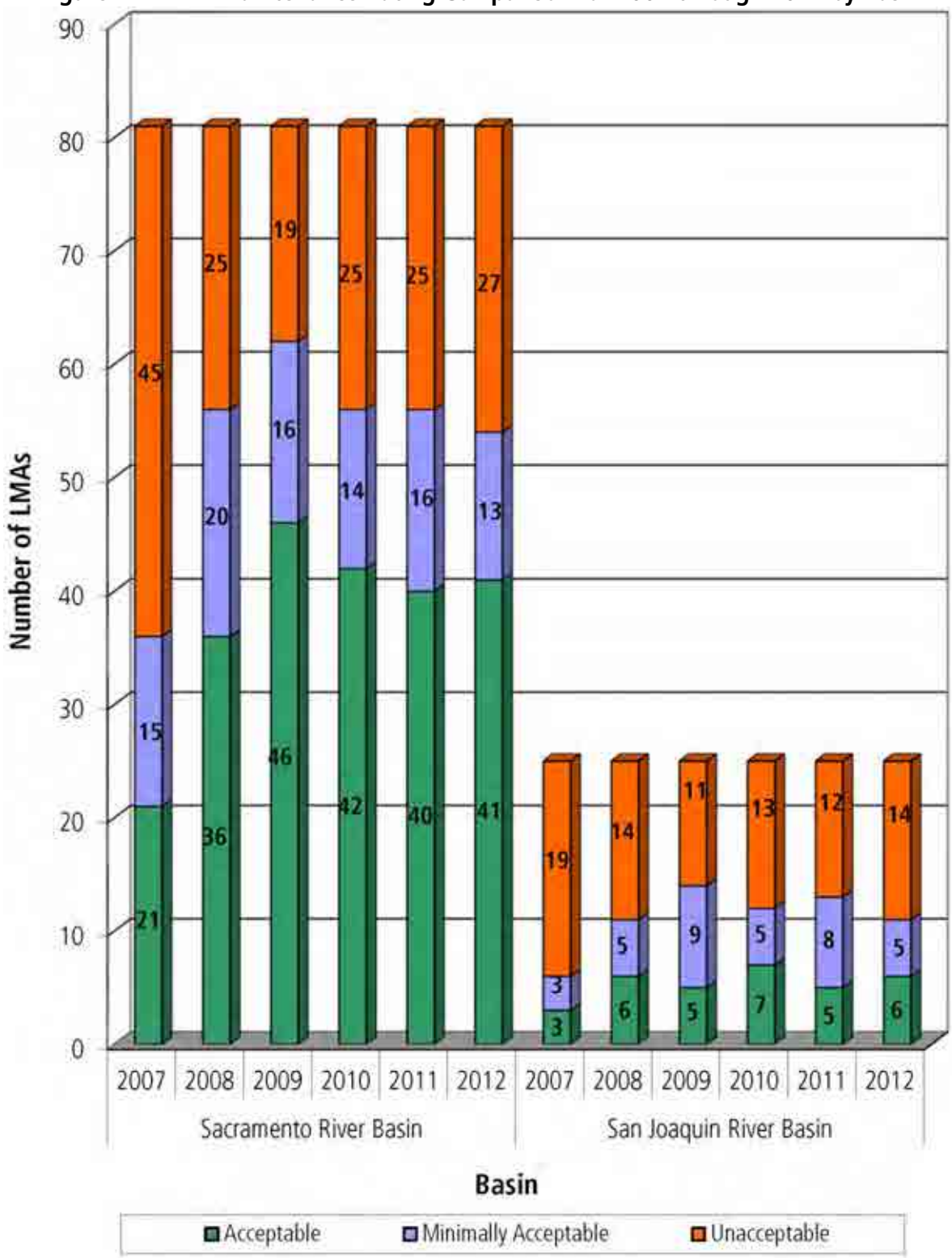


**Figure E-2: LMA Maintenance Rating Changes from Fall 2007 to Fall 2012 by Basin**

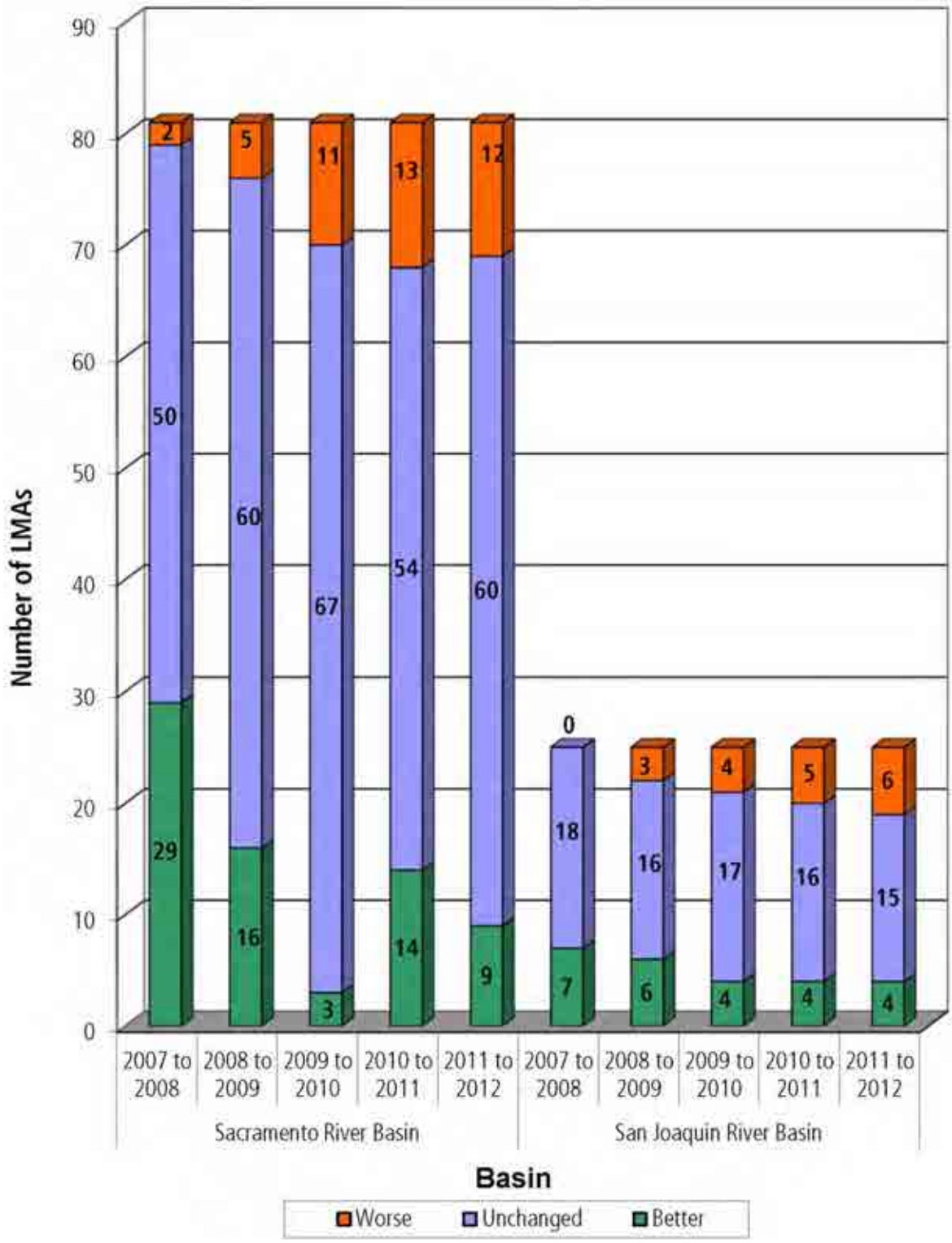


**Figure E-3: Percentage of Total System Levee Miles with Maintenance Deficiencies**

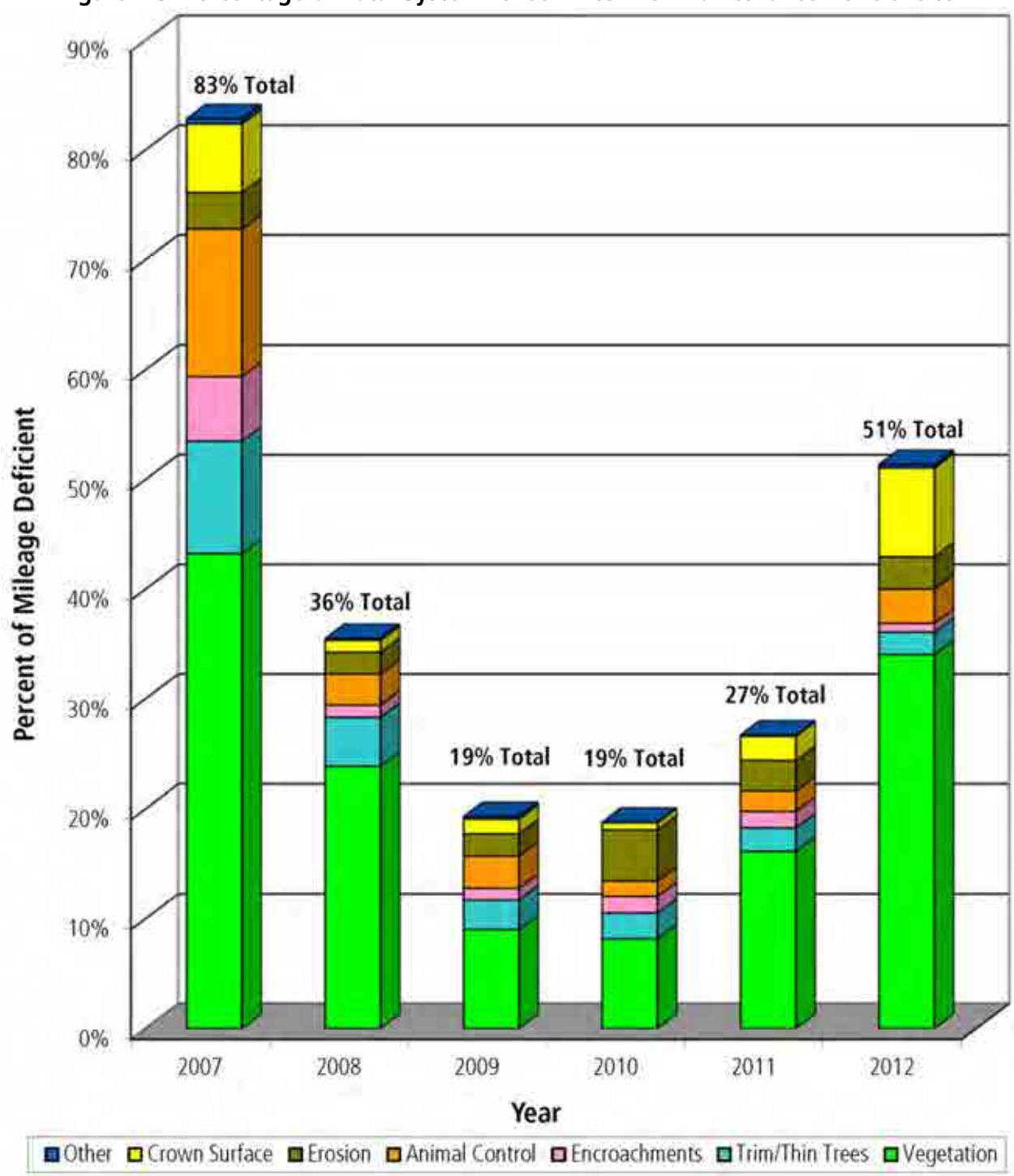


**Figure E-4: Percentage of Levee Miles with Maintenance Deficiencies by Basin**

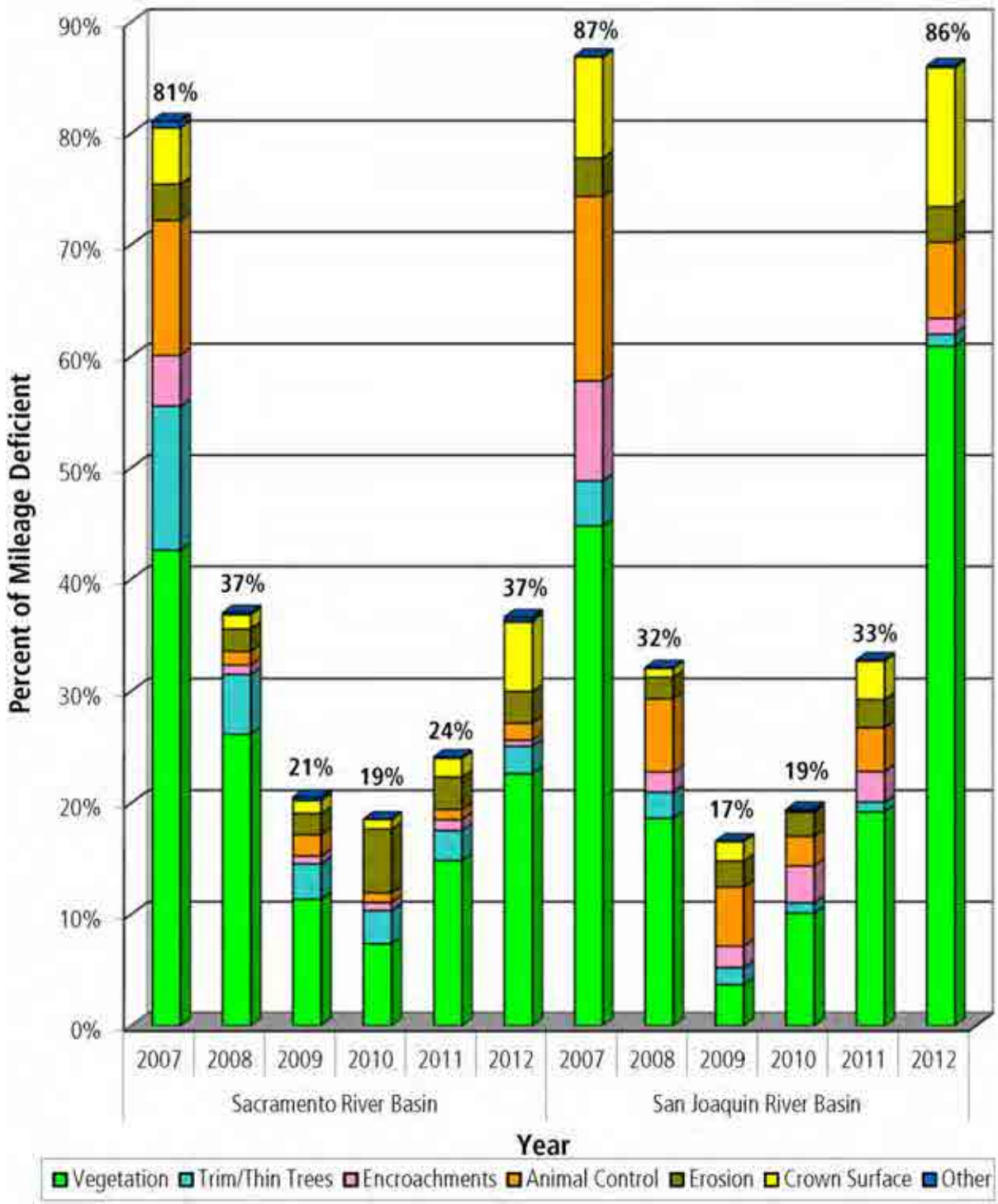


**Table E-1: Total of Maintenance Issue Lengths for 2011 and 2012**

| Total Project Length: 1576.04 miles | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rated Item | M Miles | U Miles | M+4U Miles | Threshold Percent | M Miles | U Miles | M+4U Miles | Threshold Percent | M Miles | U Miles | M+4U Miles | Threshold Percent |
| Vegetation | 185.58 | 17.28 | 254.70 | 16.16% | 377.95 | 39.75 | 536.95 | 34.07% | 192.37 | 22.47 | 282.25 | 19.71% |
| Trim/Thin Trees | 17.53 | 4.08 | 33.85 | 2.15% | 15.82 | 4.10 | 32.22 | 2.04% | -1.71 | 0.02 | -1.63 | -0.10% |
| Encroachments | 17.61 | 1.47 | 23.49 | 1.49% | 11.71 | 0.26 | 12.75 | 0.81% | -5.90 | -1.21 | -10.74 | -0.68% |
| Animal Control | 27.24 | 0.44 | 29.00 | 1.84% | 40.64 | 2.12 | 49.12 | 3.12% | 13.40 | 1.68 | 20.12 | 1.28% |
| Erosion | 25.97 | 4.40 | 43.57 | 2.76% | 24.07 | 5.60 | 46.47 | 2.95% | -1.90 | 1.19 | 2.86 | 0.18% |
| Crown Surface | 33.91 | 0.30 | 35.11 | 2.23% | 88.11 | 9.90 | 127.71 | 8.10% | 54.20 | 9.60 | 92.60 | 5.87% |
| Other | 0.93 | 0.08 | 1.25 | 0.08% | 4.45 | 0.06 | 4.69 | 0.30% | 0.09 | -0.02 | 0.01 | 0.00% |
| Total | 308.77 | 28.05 | 420.97 | 26.71% | 562.75 | 61.79 | 809.91 | 51.38% | 250.55 | 33.73 | 385.47 | 24.45% |

**Table E-2: Sacramento River Basin Maintenance Issue Lengths for 2011 and 2012**

| Sacramento Project Length: 1104.22 miles | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rated Item | M Miles | U Miles | M+4U Miles | Threshold Percent | M Miles | U Miles | M+4U Miles | Threshold Percent | M Miles | U Miles | M+4U Miles | Threshold Percent |
| Vegetation | 109.45 | 13.35 | 162.85 | 14.82% | 150.40 | 24.77 | 249.48 | 22.59% | 40.95 | 11.42 | 86.63 | 7.89% |
| Trim/Thin Trees | 14.30 | 3.85 | 29.70 | 2.70% | 13.16 | 3.50 | 27.16 | 2.46% | -1.14 | -0.35 | -2.54 | -0.23% |
| Encroachments | 7.59 | 0.77 | 10.67 | 0.97% | 5.57 | 0.12 | 6.05 | 0.55% | -2.02 | -0.65 | -4.62 | -0.42% |
| Animal Control | 10.02 | 0.04 | 10.18 | 0.93% | 16.82 | 0.05 | 17.02 | 1.54% | 6.80 | 0.01 | 6.84 | 0.62% |
| Erosion | 22.86 | 2.15 | 31.46 | 2.86% | 20.71 | 2.66 | 31.35 | 2.84% | -2.15 | 0.51 | -0.11 | -0.01% |
| Crown Surface | 18.29 | 0.07 | 18.57 | 1.69% | 30.13 | 9.67 | 68.81 | 6.23% | 11.84 | 9.60 | 50.24 | 4.57% |
| Other | 0.77 | 0.03 | 0.89 | 0.08% | 3.86 | 0.04 | 4.02 | 0.36% | 0.12 | 0.01 | 0.16 | 0.01% |
| Total | 183.28 | 20.26 | 264.32 | 24.06% | 240.65 | 40.81 | 403.89 | 36.58% | 54.40 | 20.55 | 136.60 | 12.44% |

**Table E-3: San Joaquin River Basin Maintenance Issue Lengths for 2011 and 2012**

| San Joaquin Project Length: 471.82 miles | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Rated Item | M Miles | U Miles | M+4U Miles | Threshold Percent | M Miles | U Miles | M+4U Miles | Threshold Percent | M Miles | U Miles | M+4U Miles | Threshold Percent |
| Vegetation | 76.13 | 3.93 | 91.85 | 19.23% | 227.55 | 14.98 | 287.47 | 60.93 | 192.37 | 22.47 | 282.25 | 17.91% |
| Trim/Thin Trees | 3.23 | 0.23 | 4.15 | 0.87% | 2.66 | 0.60 | 5.06 | 1.075 | -1.71 | 0.02 | -163 | -0.10% |
| Encroachments | 10.02 | 0.70 | 12.82 | 2.68% | 6.14 | 0.14 | 6.70 | 1.425 | -5.90 | -1.21 | -10.74 | -0.68% |
| Animal Control | 17.22 | 0.40 | 18.82 | 3.94% | 23.82 | 2.07 | 32.10 | 6.805 | 13.40 | 1.68 | 20.12 | 1.28% |
| Erosion | 3.11 | 2.25 | 12.11 | 2.53% | 3.36 | 2.94 | 15.12 | 3.205 | -1.90 | 1.19 | 2.86 | 0.18% |
| Crown Surface | 15.62 | 0.23 | 16.54 | 3.46% | 57.98 | 0.23 | 58.90 | 12.485 | 54.20 | 9.60 | 92.60 | 5.87% |
| Other | 0.16 | 0.05 | 0.36 | 0.08% | 0.59 | 0.02 | 0.67 | 0.145 | 0.09 | 0.02-. | 0.01 | 0.00% |
| Total | 125.49 | 7.79 | 156.65 | 32.79% | 322.10 | 20.98 | 406.02 | 86.055 | 250.55 | 33.73 | 385.47 | 24.45% |

**Figure E-5: Map of 2012 Local Maintaining Agency Ratings; Northern Area**

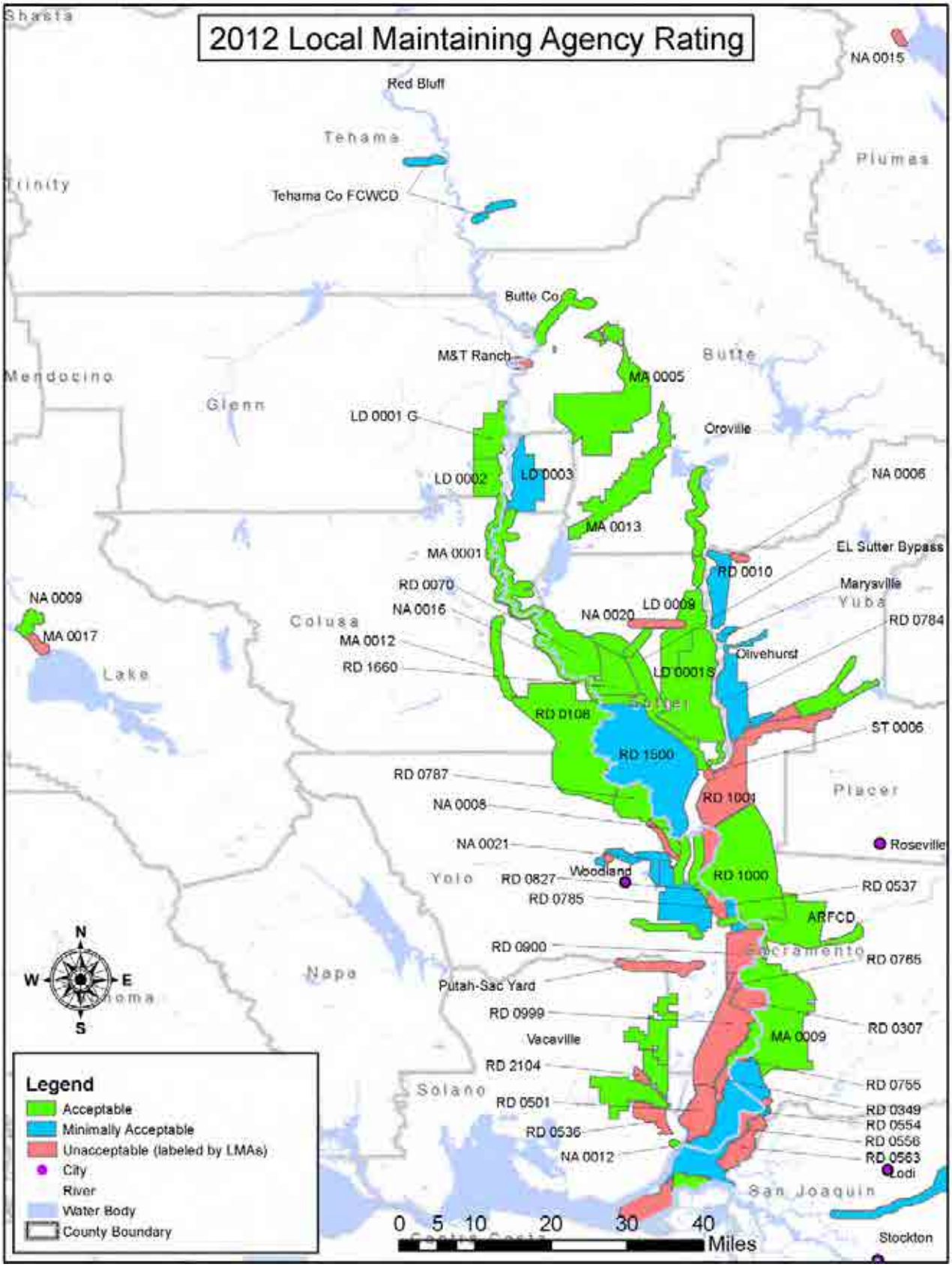
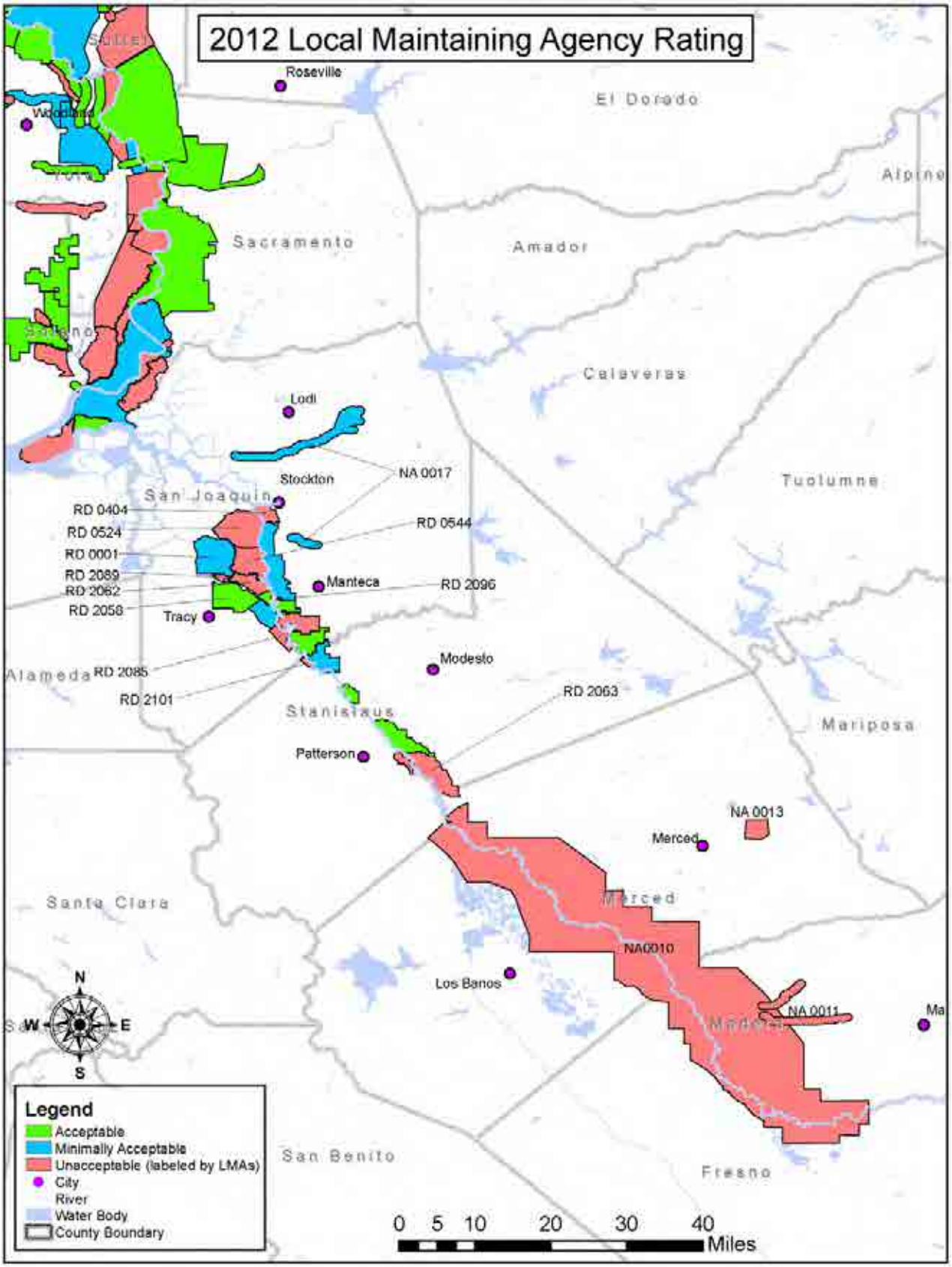


**Figure E-5: Map of 2012 Local Maintaining Agency Ratings; Southern Area**



# Appendix F: Maintenance Requirements and Responsibilities

Appendix F includes background information on the State-federal flood protection system in the Central Valley, maintenance requirements, and maintenance responsibilities as well as federal and State inspection criteria and rating methodology. Inspections include levees, channels, and structures in the State Plan of Flood Control. This information remains relatively static from year to year. Any significant changes in maintenance requirements and maintenance responsibilities that occur in a given year, if any, are noted in Section 1.1 of the main report.

## F-1 STATE-FEDERAL FLOOD PROTECTION SYSTEM

The State-federal flood protection system is located in the Central Valley and is composed of many projects along the Sacramento and San Joaquin rivers and tributaries. The system includes federally authorized projects for which the State participated and provided the federal government assurances of continued cooperation.

Congress authorized the Sacramento River Flood Control Project (SRFCP) in 1917, and subsequent supplemental authorizations (e.g. Sacramento River and Major and Minor Tributaries, American River levees, etc.) have added projects to the SRFCP over the years. The San Joaquin River Flood Control Project consists of a number of separate federally authorized flood protection projects, most of which have been built since the 1940's (for example: Merced County Stream Group, Lower San Joaquin River, etc.).

Some existing levees were also incorporated into the Sacramento and San Joaquin flood protection systems through the passage of federal statutes if the USACE believed the levees met or exceeded design standards. The State of California generally provides lands, easements, and right-of-ways for project construction. An exception to this process is the Lower San Joaquin River Flood Control Project that was designed and constructed to federal standards by the State of California (substituting physical works for acquisition of more costly flowage easements required for the authorized federal project).

The major river flood protection systems currently have combined totals of approximately 1,576 miles of federal project levees, 1,200 miles (148,000 acres) of designated floodways, 26 project channels covering several thousand acres, and 56 other major flood protection works including overflow weirs, flood relief structures, outfall gates, and pumping plants.

Since the beginning of federal participation, the Sacramento River and San Joaquin River flood systems have been constructed, expanded, improved, and repaired through a series of subsequent federal authorizations. Projects within these systems, for which the Central Valley Flood Protection Board (formerly the Reclamation Board) or DWR has provided the assurances of nonfederal cooperation to the United States, are considered the State-federal flood protection system in the Central Valley.

### *F-1.1 Integrated Flood Management*

It should be noted that this State-federal flood protection system is a part of an integrated flood protection system in the Central Valley. Parts of this larger system are interdependent and rely on other features operating successfully. For example, many reservoirs, private levees and designated floodways, though not part of the State-federal flood protection system, regulate and contain flood flows to the benefit of the State-federal flood protection system.

Improved and sustainable integrated flood management is a stated goal of FloodSAFE California, specifically the Central Valley Flood Planning (CVFP) Program. Legislation passed in 2007 directs the California Department of Water Resources (DWR) to develop three important documents that will guide improvement of integrated flood management:

- **State Plan of Flood Control (SPFC) Descriptive Document** to inventory and describe the flood management facilities, land, programs, conditions, and mode of operations and maintenance for the State-federal flood protection system in the Central Valley.
- **Flood Control System Status Report** to assess the status of the facilities included in the SPFC Descriptive Document, identify deficiencies, and make recommendations.

- **Central Valley Flood Protection Plan (CVFPP)** to describe a sustainable, integrated flood management plan that reflects a system-wide approach for protecting areas of the Central Valley currently receiving protection from flooding by existing facilities of the SPFC.

These documents can be found at http://www.water.ca.gov/cvfmp/documents.cfm.

# F-2 MAINTENANCE REQUIREMENTS

Title 33 of the Code of Federal Regulations, Section 208.10 (33 CFR 208.10) outlines federal regulatory requirements for the maintenance and operation of structures and facilities that comprise the State-federal flood protection system.

33 CFR 208.10 provides general operation and maintenance guidance to obtain the maximum benefits from the following features:

a) Structures and Facilities
b) Levees
c) Floodwalls
d) Drainage
e) Closure Structures
f) Pumping Plants
g) Channels and Floodways

Additionally, Standard and Supplemental O&M Manuals were prepared by USACE, Sacramento District, for project levees and flood protection works in the Central Valley.

A Standard O&M Manual was published for the Sacramento River Flood Control Project in May 1955, and for the Lower San Joaquin River Levees, Lower San Joaquin River and Tributaries Project in April 1959. The purpose of these Standard O&M Manuals is to present general information for use by local interests who maintain and operate the various geographical units comprising the Projects.

Supplemental O&M Manuals were prepared to supplement the respective USACE Standard O&M Manual. These supplemental manuals serve as a project specific guide to assist each LMA in carrying out its responsibilities for levee maintenance. Section 4 of the Standard O&M Manual and Section 2 of the supplements describe some of the standards to be met by LMAs in the performance of their routine maintenance.

# F-3 MAINTENANCE RESPONSIBILITIES

As construction of federally authorized project units was completed, the USACE prepared unit-specific operation manuals and transferred the projects by letter to the CVFPB for review and acceptance. Project levees and flood protection works for which the State of California had provided the assurances of non-federal cooperation were formally accepted by the CFVPB on behalf of the State for operation and maintenance in accordance with federal regulations. In many cases, the State officially transferred operation and maintenance responsibilities to local entities.

Local public entities within the Sacramento and San Joaquin river systems have the responsibility, liability, and duty to maintain and operate the levees and other flood protection works on a day-to-day basis in accordance with assurance agreements, guidelines provided in the USACE Standard O&M Manuals, and each applicable supplement for individual project units. Flood protection features for which operation and maintenance are not performed by local entities are those SRFCP works maintained by DWR in accordance with Water Code §8361; and those facilities within Maintenance Areas (MA) that are maintained by DWR, with local beneficiaries paying costs under Water Code §12878. For the Sacramento River Flood Control Project, the LMA responsibilities were set forth in Water Code §8370 with the exception of enumerated works identified under Water Code §8361 and those for which provision is made by federal law. Flood protection project responsibilities in the San Joaquin River basin are based upon assurance agreements between the CVFPB and each LMA.

Currently, operation and maintenance responsibilities for the State-federal flood protection system levees in the Central Valley are carried out by 106 individual State and local maintaining agencies.

# F-4 FEDERAL INSPECTION REQUIREMENTS AND CORPS OF ENGINEERS INSPECTION CHECKLIST

This appendix presents federal and state inspection criteria and rating methodology for levees, channels, and structures.

## *F-4.1 Federal Inspection Requirements and Corps of Engineers Inspection Checklist*

Title 33 of CFR, *Navigation and Navigable Waters*, Section 208.10 (33 CFR 208.10) outlines the federal requirements for the periodic inspection of structures and facilities that comprise the State-federal flood protection system. These include inspections:

- Immediately prior to the beginning of the flood season
- Immediately following each major high water period
- At intervals not exceeding 90 days
- At intermediate times as necessary

Title 33 CFR 208.10 can be viewed at: http://www.access.gpo.gov/nara/cfr/waisidx_06/33cfr208_06.html

DWR implements this as:

- The LMAs and DWR patrol and inspect all project levees during high water events.
- Four quarterly inspections are required per year.

To meet this federal requirement, DWR performs comprehensive levee inspections in the spring and fall. Channel and structure inspections are conducted by DWR in the summer. The findings of these inspections make up the results of this report.

The LMAs are required to perform summer and winter levee inspections. LMAs report the condition of their system in relation to the most recent DWR inspection results. They do so by describing any changes in the condition of the system (since the last DWR inspection) or by reporting that none have occurred. The findings of these inspections are reported to the Chief Engineer of the CVFPB through DWR's FPIIB. Pursuant to California Water Code (CWC) Sections 9140 and 9141, LMAs are required to report in greater detail the results of their inspections and O&M activities. With the release of the 2012 version of this report, this information is now available in Appendices A, B, and C. Older versions of this information can be viewed at http://cdec.water.ca.gov/lma.html.

Criteria by which the flood control projects inspections have historically been reported are outlined in the Standard Operation and Maintenance Manuals. Subsequently, the USACE has developed additional inspection criteria for project and non-project systems participating in the federal PL84-99 rehabilitation and inspection program. The USACE checklist, *Flood Damage Reduction Segment/System Inspection Report* includes the USACE inspection criteria. For a copy, see http://www.spk.usace.army.mil/Missions/CivilWorks/LeveeSafetyProgram.aspx.

# F-5 DWR MODIFICATION TO USACE CRITERIA

## *F-5.1 Levee Inspection Criteria*

The USACE's *Flood Damage Reduction System Inspection Report* forms the basis of the DWR flood project inspection program. However, changes to some portions of the checklist have been made by DWR. The USACE criteria rates an Area's entire levee as unacceptable if any single inspection category is found to be unacceptable at any point on the levee. Therefore, under USACE criteria, an Area with a few unacceptable trees is rated the same as an Area with unacceptable ratings in several different rating categories. Additionally, strict application of the checklist, considering the unique environmental conditions of vegetation and encroachments on California levees, would result in almost universally unacceptable ratings throughout the system without providing any overall benefit to the system.

DWR believes that its modified criteria described below provide for realistic view of the severity of deficiencies and of the significant differences among LMA maintenance performance. DWR considers the length of each deficiency with respect to the total length of levee maintained by an LMA as well as the LMA's ability and responsibility to address the issue. Since a given reach of levee may have several concurrent deficiencies, the length of total deficiencies can exceed the length of the levee. (See detail of the rating methodology later in this appendix)

DWR's criteria for vegetation and encroachments are aimed at improving public safety by encouraging continued maintenance by LMAs for access and visibility of the flood protection system.

### *Inspection Criteria - Vegetation*

DWR inspects vegetation on levees based upon USACE's checklist criteria with exceptions listed below. More details on DWR's Levee Vegetation Management Strategy can be found in the *2012 Central Valley Flood Protection Plan* and DWR's *Urban Levee Design Criteria*.

- DWR inspectors evaluate and rate all vegetation within the top 20 feet (slope length) of the waterside hinge point (intersection of crown and slope), anywhere on the landside slope, and within 15 feet of the landside toe or to the edge of the easement. Riparian vegetation and other vegetation beyond 20 feet from the waterside hinge point are not evaluated or rated at present. See Figures F-1 through F-4 for further clarification and special cases.
- Grass and weeds on the landside and upper waterside must be maintained at a height of less than 12 inches.
- Trees must be trimmed at least five feet above the ground and 12 feet above the ground over roadways.
- Trees must be thinned sufficiently to allow clear visibility and access for flood fight operations.
- Brush and woody vegetation must be trimmed, thinned, or removed to allow clear visibility and access for flood fight operations.
- Minimal densities of vegetation not meeting these criteria are rated as Minimally Acceptable.
- Significant densities of vegetation not meeting these criteria are rated as Unacceptable.
- Elderberries are evaluated using the same criteria as trees or other vegetation.
- Vegetation on the levee and within the easement must be managed in compliance with the Life Cycle Management policy outlined in the Urban Levee Design Criteria and the Central Valley Flood Protection Plan.

These criteria are shown in Figures F-1 through F-4. The criteria protect levee operability and integrity by requiring open visibility and access to those portions of the levee most susceptible to high water damage while retaining vegetation that possess both habitat and environmental value. Such vegetation may also have positive effects on levee integrity. The Urban Levee Design Criteria and the Central Valley Flood Protection Plan have more information on DWR's vegetation criteria. These documents can be reviewed at http://www.water.ca.gov/floodsafe/leveedesign/ and http://www.water.ca.gov/cvfmp/documents.cfm. These criteria may change in the future as more information becomes available.

**Figure F-1: Vegetation Management for Existing Levees with a Long Waterside Slope**

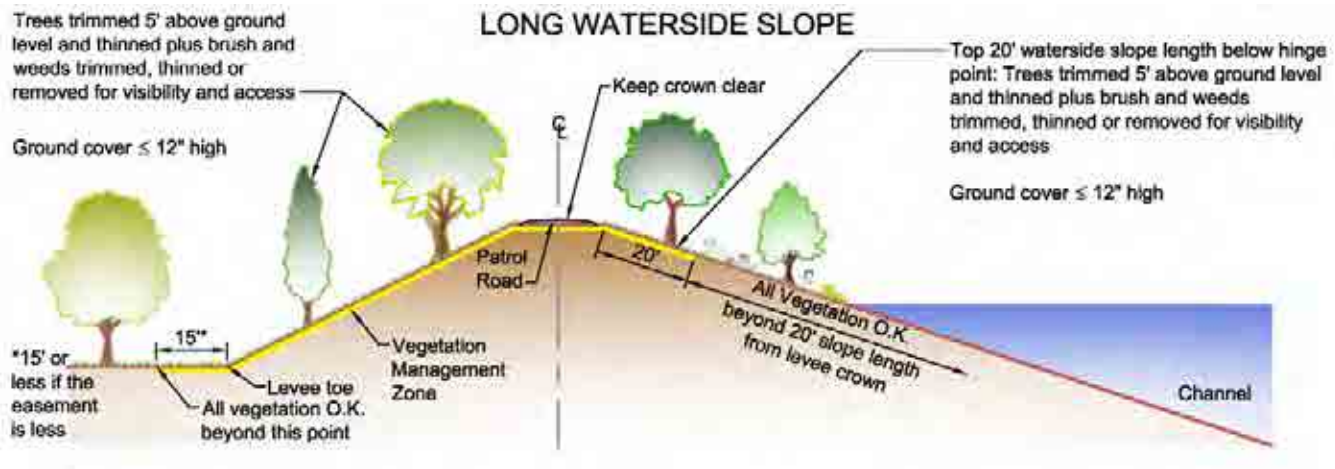



**Figure F-2: Vegetation Management for Existing Levees with a Short Waterside Slope**

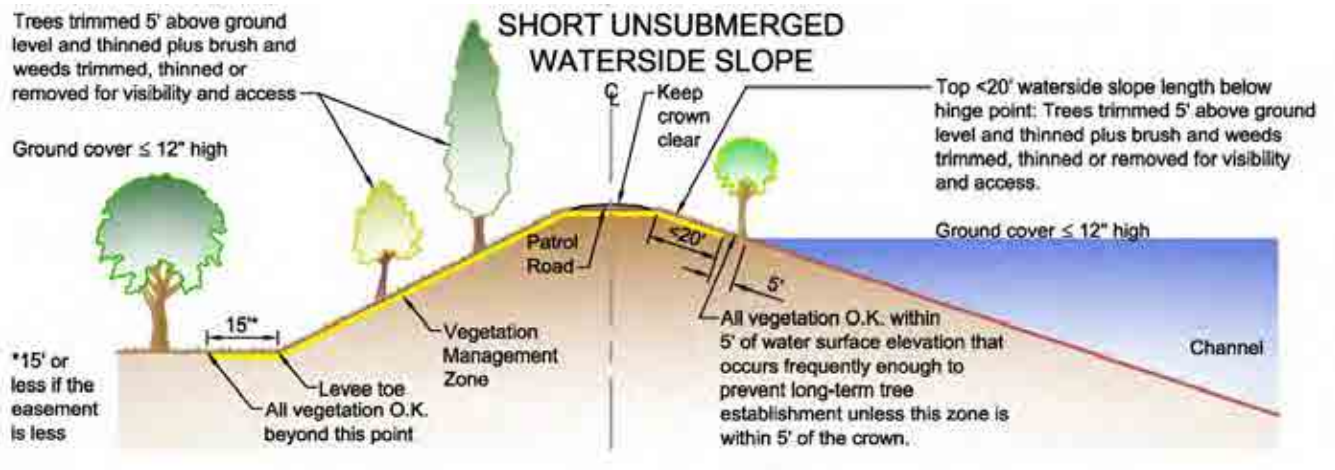



**Figure F-3: Vegetation Management for Existing Levees with a Short Waterside Slope above the Water Surface Elevation that Frequently Submerges the Lower Waterside Slope**

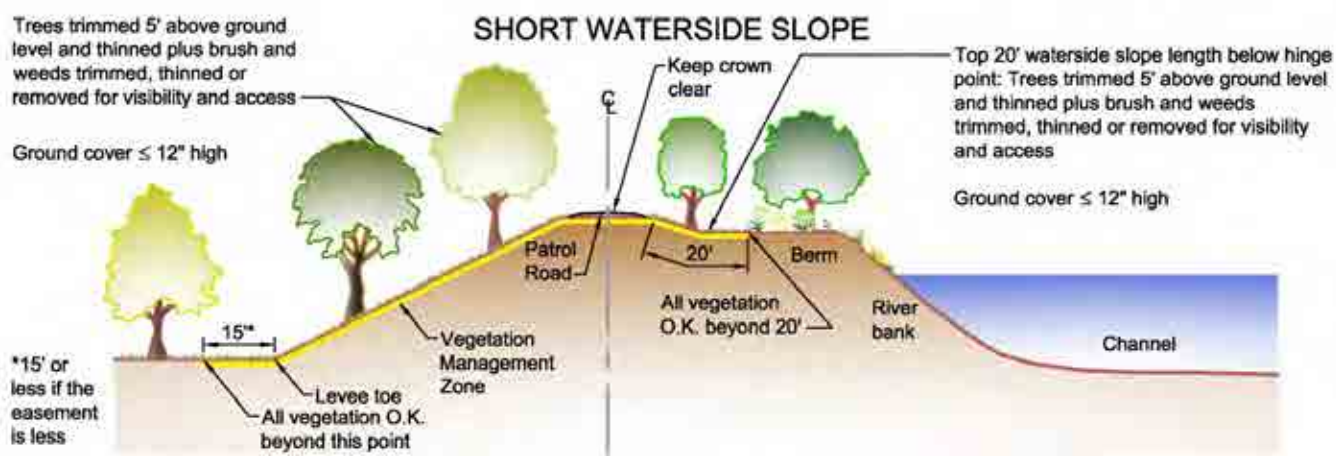
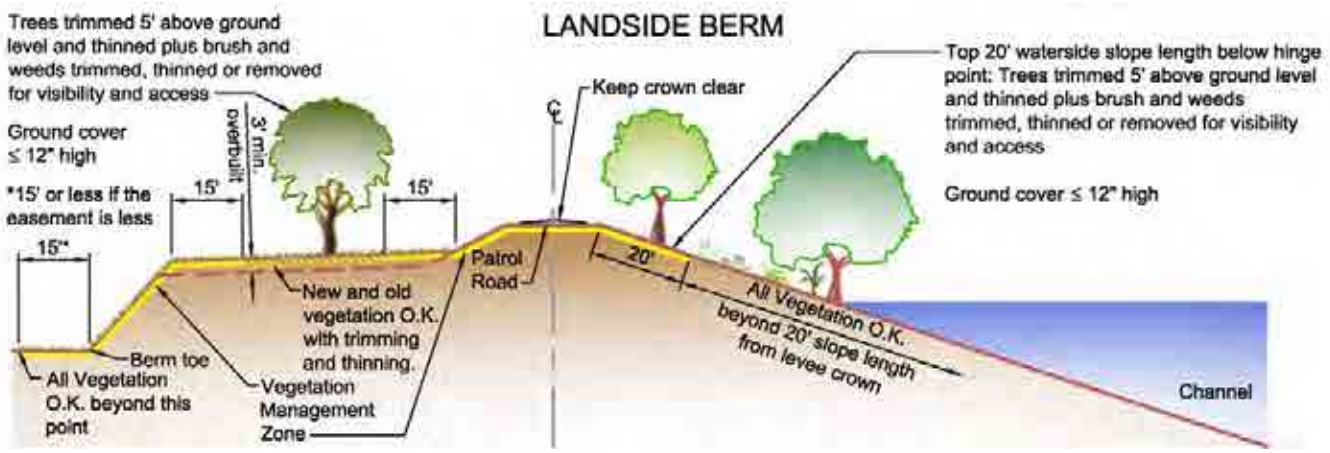


**Figure F-4: Vegetation Management for Existing Levees with a Landside Berm**



The following photos show examples of Acceptable, Minimally Acceptable, and Unacceptable maintenance of vegetation and trees.

**Acceptable Vegetation Maintenance**: Good grass coverage with no grass or brush over 12″ tall

**Minimally Acceptable Maintenance**: Grass or brush partially obstruct visibility and access

**Unacceptable Maintenance**: Grass or brush completely obstruct visibility and access

**Acceptable Tree Maintenance**: No limbs within 5′ of the levee obstruct visibility or access

**Minimally Acceptable Tree Maintenance**: Moderate density of tree limbs partially obstruct visibility and access

**Unacceptable Tree Maintenance**: Significant density of tree limbs completely obstruct visibility and access

### *Inspection Criteria - Encroachments*

Past USACE inspections identified encroachments that posed a threat to the integrity of the levee, or blocked visibility or access to the levee as unacceptable (U). DWR inspectors followed a similar approach during their inspections since fall 2007.

The DWR approach included documenting and rating three types of encroachments:

a) Encroachments that threaten levee integrity.
b) Encroachments that are inappropriately placed on the levee, such as trash, prunings, abandoned equipment, etc.
c) Encroachments that obstruct visibility and access during the flood fighting efforts.

Inspections completed from 2007 through 2011 rated the first two encroachment types as either Minimally Acceptable (M) or Unacceptable (U). The first two types of encroachments are generally included in the overall ratings and should generally be corrected by the LMAs. The third type of encroachment that the USACE identified as unacceptable may be beyond the current authority of the LMAs to correct because the encroachment may be Board permitted or have other factors associated with it that prevent LMAs from taking action. These Partially Obstructing (PO) and Completely Obstructing (CO) encroachments are not included in the overall ratings (A, M, and U). Instead, they are identified to generate an inventory of those encroachments that the USACE has, in the past, found to be unacceptable and those encroachments that could affect the operation of the system. The permit status of these encroachments may not have been determined.

In the current inspections, as of 2012, DWR inspectors rats all encroachments as A, M, or U instead of PO and CO, but introduced Issue Types. Issue Types are discussed in the next section. Encroachments that LMAs may not be able to address and would have been rated as PO or CO previously are assigned an Issue Type of Enforcement in 2012 and beyond.

### *Inspection Criteria - Issue Type*

The DWR inspection criterion includes three issue types: Maintenance, Enforcement, and Design/System Obsolescence.

- **Maintenance** – These issues include animal control, vegetation, and other deficiencies, as described in Appendix G, where annual maintenance is required by the LMAs to maintain the levees to an acceptable condition to ensure the project will function as designed, intended, or required. Items with this Issue Type are included the overall ratings.
- **Enforcement** – This includes encroachments: that threaten levee integrity, that are inappropriately placed on the levee, or that obstruct visibility and access during the flood fighting efforts. Some of these encroachments may require enforcement action and may have been permitted by the Board. It is recommended that the LMAs collaborate with the Board in addressing situations where they are not able to address the issue without an enforcement action. Items with this Issue Type are not included in the overall ratings but still need to be addressed.
- **Design/System Obsolescence** – This category encompasses deficient conditions that may be a part of or a result of the original design and construction of the project. These conditions may also be due to the age of the project and require actions beyond the ability of the LMA. Items with this Issue Type are not included in the overall ratings but still need to be addressed.

Not all issues are documented with all three of these Issue Types. See Appendix G for further criteria descriptions and what Issue Types are used for individual issues.

## *F-5.2 Levee Inspection Rating Methodology*

This section conveys the rating method (developed in 2007 and revised in 2012) and the associated maintenance guidelines that are applied by the Inspection Section of the FPIIB to generate the *overall* Area ratings which are a representation of the LMAs' annual levee maintenance practices.

### *The Rating Method*

USACE Document ER 500-1-1, paragraph 5-5.b (2) (b) defines the following project condition as presented in EP 500-1-1, Table 5-2:

- **Acceptable** – No immediate work required, other than routine maintenance. The flood protection project will function as designed and intended, with a high degree of reliability, and necessary cyclic maintenance is being adequately performed.
- **Minimally Acceptable** – One or more deficient conditions exist in the flood protection project that need to be improved or corrected. However, the project will essentially function as designed with a lesser degree of reliability than what the project could provide.
- **Unacceptable** – One or more deficient conditions exist that may prevent the project from functioning as designed, intended, or required. Minimally Acceptable issues that have not been addressed within two years may also be rated as Unacceptable. The USACE treats Unacceptable differently, depending on the situation. DWR does not differential Unacceptable items.
- **Acceptable but Monitor and Maintain** – DWR uses this rating to document an item that inspectors want to flag. The item may be something that should be monitored or that some maintenance may be helpful, but it does not violate criteria at the time of inspection.

USACE is in the process of modifying the levee inspection checklist and has requested that DWR use the new Checklist. With revisions to DWR's criteria in 2012 the criteria closely match the USACE's criteria in most categories with few exceptions, including vegetation.

In the past, DWR arrived at each overall unit and Area rating by making an estimation of the number, expanse, and seriousness of the deficient conditions found during the annual inspection and arriving at one of the above project condition ratings. This system was subjective and possibly inconsistent. It did not always reflect the possible negative effect of combined deficiencies.

Under the current USACE ratings directive, a System with a single Minimally Acceptable deficient condition may have received the same overall Minimally Acceptable rating as a System with dozens of Minimally Acceptable deficient conditions throughout its length. DWR believes that the LMAs should be rated by their overall maintenance condition rather than just by the rating of their worst deficient condition.

- In 2007, DWR created a new methodology, whereby 2007 overall ratings were calculated using the percentage of an Area's overall mileage receiving less-than-acceptable ratings. This is known as the threshold percent.
- This methodology has proven to be effective and was again applied for subsequent cycles.
- In 2010, DWR introduced an additional rating, Acceptable/Watch/Monitor (A/W) and uses it to document issues found during inspections that do not yet warrant an M or U rating but that should be monitored or maintained to avoid a maintenance deficiency in the future.

### *Thresholds*

Thresholds were established that determine the overall rating as shown below. If over 20 percent of the total Area mileage was given a Minimally Acceptable rating, the overall rating was deemed Unacceptable.

### *Greater than 100% Deficient*

Since 12 main categories and numerous minor categories were inspected, with most receiving ratings for the landside, waterside, and crown (triple the length of the levee), it is possible for a poorly maintained levee to receive Minimally Acceptable or Unacceptable ratings for well over 100 percent of its length.

Table F-1 and Figure F-5 further explain the rating method.

## Table F-1: Overall Rating Thresholds

A = Acceptable, M = Minimally Acceptable, U = Unacceptable

**Only M ratings within Unit or Area:**

Zero to < 10 % M results in Overall A rating. 10% to < 20% M results in Overall M rating. ≥ 20% M results in Overall U Rating

$$\frac{If\ Miles\ of\ M\ in\ Unit\ or\ LMA}{Total\ Miles\ in\ Unit\ or\ LMA} > 0.00, \quad but < 0.10, \quad Overall\ Rating = A$$

$$\frac{If\ Miles\ of\ M\ in\ Unit\ or\ LMA}{Total\ Miles\ in\ Unit\ or\ LMA} \geq 0.10, \quad but < 0.20, \quad Overall\ Rating = M$$

$$\frac{If\ Miles\ of\ M\ in\ Unit\ or\ LMA}{Total\ Miles\ in\ Unit\ or\ LMA} \geq 0.20, \quad Overall\ Rating = U$$

**Only U ratings within Unit or Area:**

> Zero to < 5% U rating results in Overall M rating. ≥ 5% U rating results in Overall U rating

$$\frac{If\ Miles\ of\ U\ in\ Unit\ or\ LMA}{Total\ Miles\ in\ Unit\ or\ LMA} > 0.00, \quad but < 0.05, \quad Overall\ Rating = M$$

$$\frac{If\ Miles\ of\ U\ in\ Unit\ or\ LMA}{Total\ Miles\ in\ Unit\ or\ LMA} \geq 0.05, \quad Overall\ Rating = U$$

**Both M and U ratings within Unit or Area:**

$$Correlation\ of\ Severity = COS = \frac{Only\ M\ Threshold\ \%}{Only\ U\ Threshold\ \%} = \frac{20\%}{5\%} = 4$$

Multiply *Miles of U* by COS of 4 and add to *Miles of M* → $M + 4U$

$$\frac{If\ Miles\ of\ (M + 4U)\ in\ Unit\ or\ LMA}{Total\ Miles\ in\ Unit\ or\ LMA} > 0.00, \quad but < 0.20, \quad Overall\ Rating = M$$

$$\frac{If\ Miles\ of\ (M + 4U)\ in\ Unit\ or\ LMA}{Total\ Miles\ in\ Unit\ or\ LMA} \geq 0.20, \quad Overall\ Rating = U$$

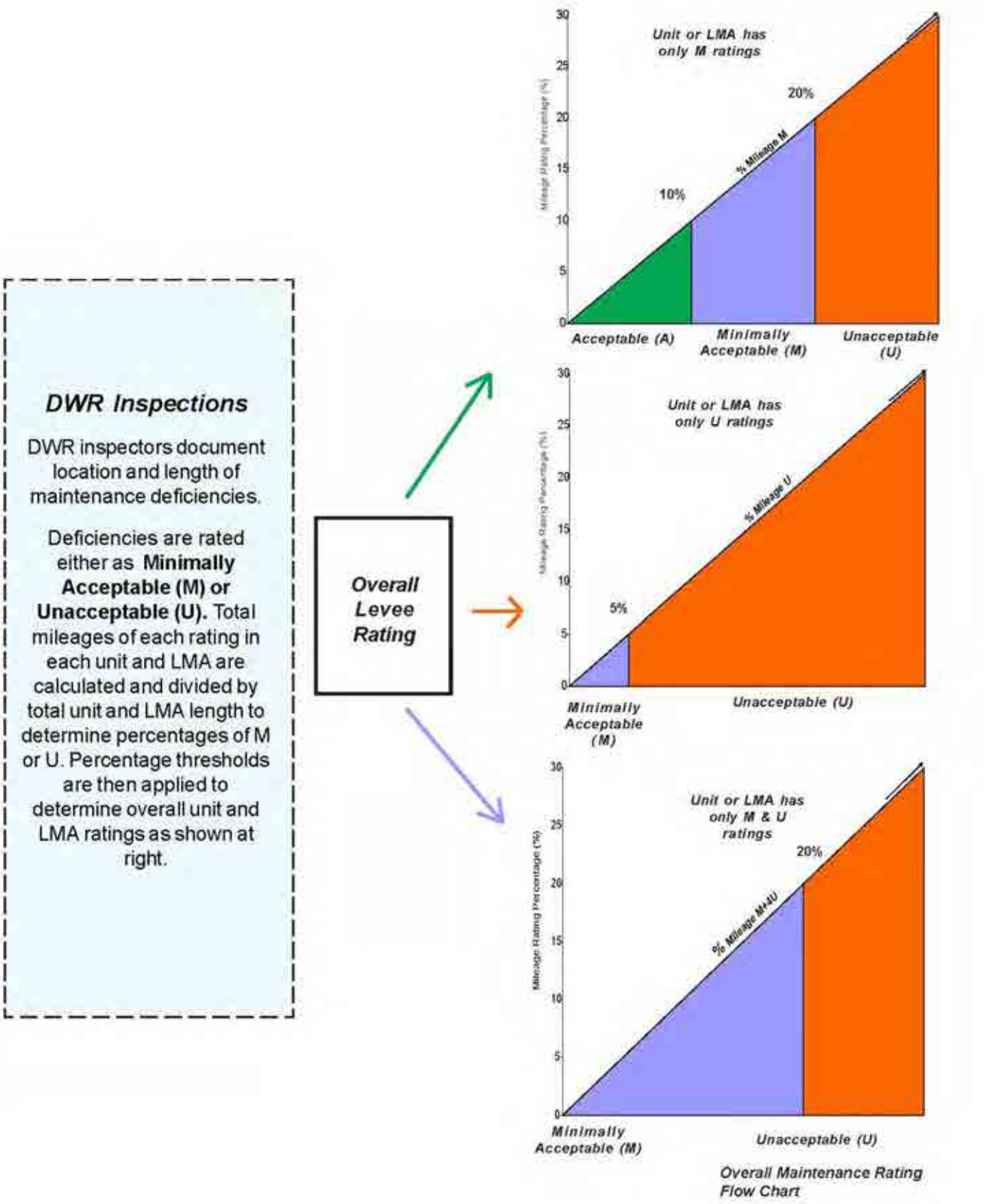
*Example 1:* Unit length = 10.00 miles, M = 0.60 mile, U = 0.30 mile:
4U = 4(0.30) = 1.20 miles. M + 4U = 0.60 mile + 1.20 mile = 1.80 miles

$$\frac{M + 4U}{Total\ unit\ miles} = \frac{1.80\ miles}{10.00\ miles} = 0.18 < 0.20 \quad so\ Overall\ Rating = M$$

*Example 2:* Unit length = 10.00 miles, M = 1.10 mile, U = 0.30 mile:
4U = 4(0.30) = 1.20 miles. M + 4U = 1.10 miles + 1.20 miles = 2.30 miles

$$\frac{M + 4U}{Total\ unit\ miles} = \frac{2.30\ miles}{10.00\ miles} = 0.23 > 0.20 \quad so\ Overall\ Rating = U$$

**Figure F-5: Overall Maintenance Rating Flow Chart:** *The Maintenance Guidelines*



When applying the ratings described above, a number of maintenance categories pertaining to levee maintenance are considered. These categories are based on maintenance guidelines listed below.

### Readiness for Flood Emergency

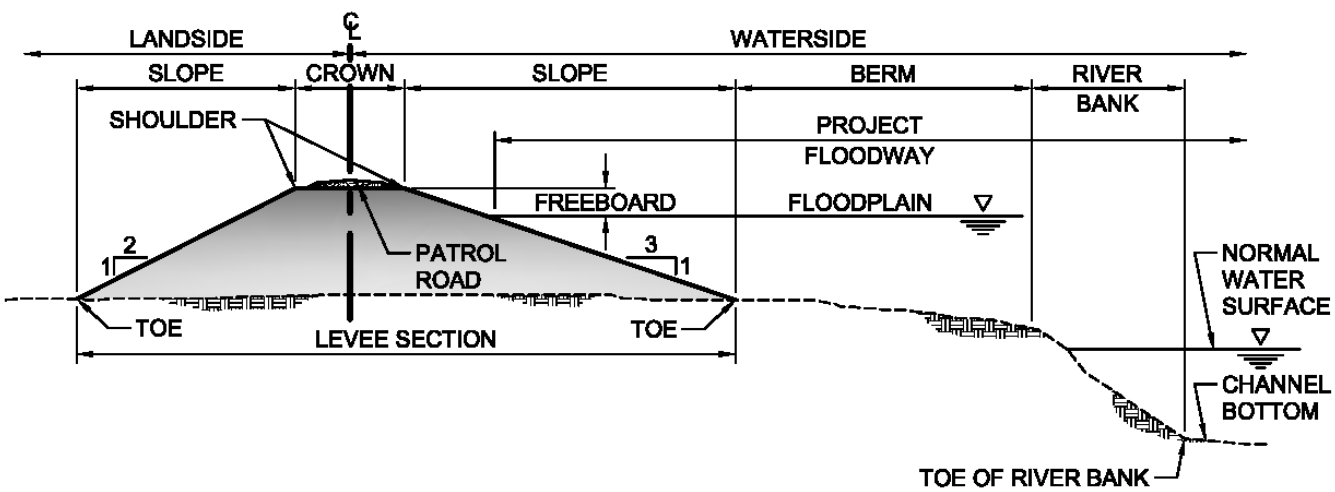
Each LMA shall have an organized plan to effectively combat a flood situation. This should include the appointment of a superintendent to supervise and execute the plan, a copy of applicable O&M Manuals, maintain a stockpile of standard flood-fighting equipment and materials, and have a network of handheld radios or cellular telephones for communication available while patrolling during a flood emergency. DWR started looking at these items again during the 2012 inspections and is including them in the overall Area ratings. Each of three ratings will count as an appropriately rated issue with a length of 1% of the total Area's length, or 0.01 miles, whichever is greater.

The LMA is encouraged to improve the overall quality of the project by addressing the three issue types previously discussed. The overall rating is affected by the number of issues noted during the fall inspection; as the LMA properly addresses the noted issues the overall rating of the project improves. The overall improvement of the project will facilitate increased effectiveness of potential flood-fighting efforts.

### Adequate Levee Section and Grade

Each LMA must perform the work necessary to maintain levee side-slopes, grade, and crown width to meet the standards for its particular reach of the levee system. Levee design standards are summarized in Figure F-6.

**Figure F-6: Project Levee Terminology**




### Adequate Encroachment Control

Each LMA is held responsible for preventing the construction of, or requiring the removal of, any illegally encroaching structures or activities on the levee or within the fifteen-foot regulatory easement at the landward toe of the levee. The maintaining agency must also stop any unauthorized modifications or alterations to the levee. If any person or organization deems any construction or modification necessary within the levee regulatory easement, that person or organization must apply for an encroachment permit. The permit may only be issued by the CVFPB. Failure of the LMA to control unauthorized encroachments can threaten the integrity of the levee, interfere with levee patrol visibility, and hamper a flood fight. These may be cause for downgrading the Area's annual rating in this report. More information on Issue Types may be found in the *Inspection Criteria – Issue Types* section of this appendix.

### Vegetation

Each LMA shall have a program to selectively control vegetation on the levee slopes and in rock revetments. This requirement provides visibility for inspection and patrol and prevents interference with flood-fighting activities. Some vegetation on oversized levees is permitted in accordance with standards as set forth in CCR, Title 23. However, present

DWR vegetation inspection criteria allow vegetation on standard-sized levees as well, provided that visibility and flood fight capabilities are maintained. Both water-side and land-side slopes are rated for vegetation and obstructions. An un-maintained band of vegetation is allowed anywhere beyond 20 feet (slope length) from the waterside hinge (intersection of levee slope and crown – see Figures F-1 through F-4).

### Rodent and Animal Control

It is imperative that each LMA have a rodent control program. Rodent burrows can weaken the structural integrity of a levee by creating a seepage path through the levee. Diligent efforts to eradicate burrowing animals are a necessity, and eliminating them from an infested levee is extremely difficult. Control of these animals must be pursued frequently and persistently to ensure safety of the levee during high water events. Effective filling of the burrows is necessary to maintain the integrity of the levee. This category also includes effective control of grazing animals on the levee or easement.

DWR encourages effective rodent control methods, such as grouting and baiting. The LMAs may request a schematic of an inexpensive grout machine as well as other related literature with methods DWR has found effective by contacting their DWR inspector.

### Seepage/Boils

Seepage under or through the levee can cause boils, leading to erosion and possible piping failure of the foundation or structure of the levee. Seepage and boils must be identified, monitored, controlled, and corrected as quickly and effectively as possible.

### Slope Stability and Repair of Cracks, Erosion, and Caving

Each LMA shall maintain slope stability and repair cracks, flow current or wave wash erosion, and caving or other structural problems. Timely repair of these problems is critical. Failure to address slope stability problems and repair cracks, erosion, or caving could lead to a levee failure.

The LMA superintendent is required to report to the CVFPB's Chief Engineer any suspected or known structural abnormalities found during his inspections. Such un-repaired structural problems are also cause for downgrading of the Area rating.

### Condition of Rock Revetment

Each LMA shall make all repairs to scour, wash, settlement, or failure of any portion of rock revetments. Rock revetments have been installed at locations where stream flow conditions indicate the need for such protection. Early detection and prompt repair will result in a minimum of effort and reduce the cost to restore the revetment.

### Condition of Levee Crown and Roadway

Each LMA is required to keep crown roadways shaped and graded to provide proper drainage and all-weather access. Repair of ruts and addition of gravel ensures a serviceable road under adverse conditions.

### Condition of Pipes and Interior Drainage System

Each LMA must examine all structures situated through, in, or on the levee for stability and structural soundness and record its observations twice annually. All component parts must be examined for proper operation and reliability before the start of each flood season. New structures should be installed or older structures repaired only in accordance with adopted Board standards and under the supervision of qualified Board personnel. Defective structures must be repaired, replaced, or removed immediately. Although maintenance and repair of pipes and other structures passing through a levee are the responsibility of the owner (e.g., a farmer owning an irrigation pipe), the LMA may be responsible for inspecting the pipes for corrosion, collapse, valve integrity, seepage, and any other condition that could threaten the integrity of the levee. Many of these issues can be discovered through an external examination of the pipe as well as the soil and vegetation around it. Because of its full-time presence, the LMA is most able to discover and identify actual and potential problems and should make all efforts to immediately notify DWR of any problems found and thereafter include the problems on their inspection reports until they are resolved. DWR works with the Board to require the timely repair or removal of pipes or other structures that threaten the levee integrity.

**Concrete Floodwalls / Closure Structures**

In some instances, a portion of a levee is not built to the design height of the rest of the levee. A floodwall, usually either concrete or driven piling, is built to provide necessary hydraulic capacity. In some cases, due to space constraints, a floodwall may be constructed in lieu of a levee. Where a roadway or railroad passes through a levee or floodwall, a closure structure is built on either side of the roadway to hold gates or barriers to be installed for use during high water events. Floodwalls, closure structures, gates, and barriers must be properly maintained, structurally sound, and of proper height and design. Gates and barriers and installation paths must be readily accessible for timely installation and dependable performance and maintained and operated in compliance with the operations and maintenance (O&M) Manual.

### *Combining Criteria, Maintenance Guidelines and Methodology*

In the field, each inspector documents the location, length, and type of maintenance category (see the guidelines listed above) giving a rating to each category found to be deficient in accordance with the established ratings criteria above. In any field inspection process, there will be some inherent subjectivity. However, DWR believes that training, the use of the new database driven inspection software, new hardware, and the inclusion of the ratings criteria on the inspectors' field computers have led to more accurate and consistent ratings - which are provided by the inspectors themselves. The inspection criteria used in the field can be seen in Table G-1 of Appendix G. Further, the new methodology of determining overall unit and Area ratings, described in Table F-1 and Figure F-5, has resulted in more consistent and objective overall ratings.

### *Levee Inspection Reporting*

Individual levee mile inspection reports that summarize findings and identify deficiencies are distributed to each LMA after the spring and fall DWR inspection cycles. These reports are to be used by LMAs to scope and prioritize maintenance and improvement efforts, and the LMAs have been instructed to use these reports as a baseline for their summer and winter inspections. When requested, DWR levee inspectors may accompany LMAs on joint summer or winter inspections to discuss non-compliance and needed improvements. Spring and fall levee mile reports are submitted to USACE and the CVFPB. Monthly presentation updates and an annual report are also submitted to the CVFPB.

## *F-5.3 Channel Inspection Criteria*

The Sacramento River, San Joaquin River, and other river and stream basins have 26 project channels that are inspected annually by the Flood Project Integrity and Inspection Branch of the Division of Flood Management during the summer months.

The purpose of the annual inspection is to identify and report on any condition which may diminish channel design capacities. Such conditions include: vegetation & obstructions, encroachments, sediment deposition (shoaling), revetments, and erosion / bank caving. Concrete lined channels are further evaluated with respect to the condition of the concrete and other structural appurtenances. Appendix G, Table G-2 Channel Inspection Rating Categories outlines the channel inspection criteria used in the field.

In general, maintaining the channels to the condition that existed after completion of the initial construction will preserve their design capacities. The standard of comparison for the inspection is, therefore, the condition immediately after construction. Design capacities, if applicable, can be found in the operations and maintenance (O&M) manuals for each project channel.

The annual inspections rely upon a qualitative rating system that has been developed based on the USACE O&M manuals. As the annual inspections are qualitative in nature, the existing channel capacities are not evaluated in this report. Ultimately, a single overall rating is assigned to each channel by the DWR. This overall rating is a relative indication of how well maintained each channel is.

The USACE and the State of California constructed the channels included in this report. Local agencies or the State of California agreed to be responsible for the maintenance of these channels at the time of construction or at a later time. The USACE issued the O&M manuals referenced above to each maintaining agency at the time of construction. The results of these annual inspections are shown in Appendix I and are made available to the maintaining agencies, USACE, the CVFPB, and the public.

## *F-5.4 Channel Inspection Rating Methodology*

This section outlines the methodology by which an overall rating is developed from the field applied category ratings for the project channels of the flood protection system:

**Step 1).** The inspector must assess an initial rating of A (Acceptable), M (Minimally Acceptable), U (Unacceptable), or N (Not Rated) to each category for the flood protection work under inspection. Each of the five categories is weighted equally as a threat to the flood protection works' capacity.

**Step 2).** In the office, a numeric total is obtained for each flood protection work by valuing each rating given to each of the designated categories. The ratings are valued as follows: A is given zero points, M is given one point, U is given four points and N is given zero points. Note that if a category is not applicable to a flood protection work, then it should not be detrimental to the overall rating; hence, the zero point value for the N rating.

**Step 3).** This total is then divided by the total number of categories that were found to be applicable (A, M or U) in the field to calculate the average value.

**Step 4).** Lastly, an overall rating of A, M, or U is found by determining which range that average value falls within. The ranges are: $A \leq 0.2$, $0.2 < M \leq 1.0.$, $1.0 < U \leq 4.0$.

Channel inspection results are shown in Appendix I.

## *F-5.5 Structures Inspection Criteria*

The maintenance effort expended on structures has been the subject of an annual report dating back to 1959. A report entitled, *Location, Description and Inventory of Miscellaneous Project Structures, Sacramento River Flood Control Project, and American River Flood Control Project*, was issued and was followed shortly thereafter by a maintenance status report. Maintenance status reports on flood protection structures have since been made on an annual basis. It was in this Structures Report that the State of California made its inspection results (formerly maintenance status reports) available to the LMAs, the USACE, the CVFPB, and the public. In 2008 the structures report was incorporated into the annual Inspection Report. These inspections are made on behalf of the CVFPB by DWR, Division of Flood Management, Flood Project Inspection Section.

Structures are inspected once annually during the summer months and include forty three flood protection structures and thirteen pumping plants. The summer inspections of these structures and pumping plants are visual field inspections and are based on USACE inspection categories. Category names and rating descriptions are provided in Appendix G; Table G-3 Structure Rating Categories and Table G-4 Pump Station Rating Categories. The inspector must assess an initial rating of A (Acceptable), M (Minimally Acceptable), U (Unacceptable), or N (Not Rated) to each category that is applicable to the flood protection work under inspection.

## *F-5.6 Structure Inspection Rating Methodology*

This section outlines the methodology by which an overall rating is developed from the field applied category ratings for the structural components of the flood protection system:

**Step 1).** The inspector must assess an initial rating of A (Acceptable), M (Minimally Acceptable), U (Unacceptable), or N (Not Rated) to each category for the flood protection work under inspection. Each category is weighted equally as a threat to the flood protection works' capacity.

**Step 2).** In the office, a numeric total is obtained for each flood protection work by valuing each rating given to each of the USACE designated categories. The ratings are valued as follows: A is given zero points, M is given one point, U is given four points and N is given zero points. Note that if a category is not applicable to a flood protection work, then it should not be detrimental to the overall rating; hence, the zero point value for the N rating.

**Step 3).** This total is then divided by the total number of categories that were found to be applicable (rated A, M or U) in the field to calculate the average value.

**Step 4).** Lastly, an overall rating of A, M, or U is found by determining which range that average value falls within. The ranges are: $A \leq 0.2$, $0.2 < M \leq 1.0$., $1.0 < U \leq 4.0$.

Structure inspection results are shown in Appendix J. Pump Station inspection results are shown in Appendix K.

# F-6 SAN JOAQUIN RIVER FLOOD CONTROL SYSTEM RANKING CRITERIA FOR WATERSIDE EROSION

## *F-6.1 Field Investigation*

Field investigations cover some of the major extents of the San Joaquin River system, and include natural channels and manmade diversions. River Miles and Levee Miles used in this report are based on the estimates performed by FPIIB staff, and may be slightly different from the U.S. Army Corps of Engineer (USACE) river mile alignment. All results presented in this report are based upon the 2010 and previous field survey, and DO NOT reflect changes of conditions past the field survey date unless otherwise noted.

## *F-6.2 Procedure*

Prior to the field investigations, a master list of the current inventory of erosion sites was reviewed. This list was used to locate previously identified erosion sites. The most current Levee Inspection report was also reviewed for previously identified erosion sites. Erosion sites reported to have been repaired or scheduled for repair were noted and inspected for verification.

Land-based survey was conducted with FPIIB staff inspecting the waterside levee and berm on a 4x4 vehicle. In waterways where view of the waterside levee was obstructed by wide berm or by thick vegetation and where waterway access was permissible, a jet-driven boat was used to conduct the survey. In both instances, observation and measurements were taken with the use of a portable Trimble GeoXT GPS handheld receiver.

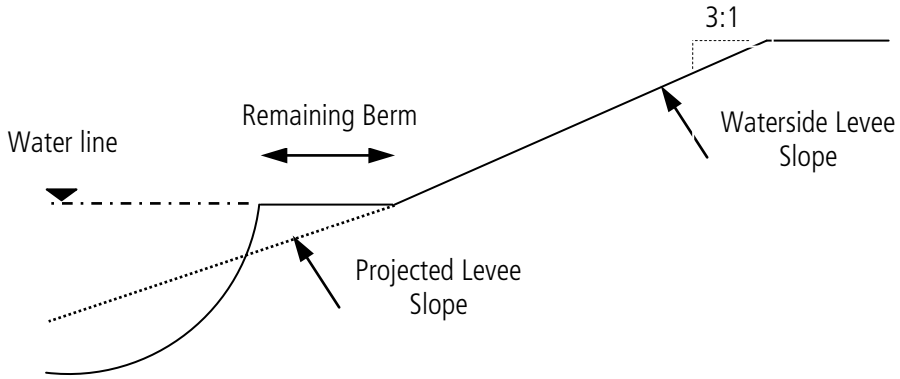
Data collected at each site includes, but are not limited to:

a) GPS coordinates of the levee crown at the midpoint of the erosion site
b) Estimated length of erosion, in feet
c) Estimated height of erosion, in feet
d) Location of erosion relative to the levee slope
e) Estimated waterside berm width, in feet
f) Estimated levee slope (H:V)
g) Animal burrow hole activity
h) Existing vegetation
i) Soil type at the eroded face
j) Condition of surrounding trees
k) Digital photographs of the site

Inclusion of a bank erosion site into the inventory takes into account the severity of the erosion and the threat to the levee integrity. Figure F-7 shows a typical cross section of a levee on the waterside. The following criteria are used as a reference to consider a site as being susceptible to erosion:

a) Bank erosion in the projection of the levee slope
b) Berm width of less than 30 feet

**Figure F-7: Typical Cross Section of a Waterside Levee**




## *F-6.3 Rating Methodology*

The 2010 SJRFC System Rating Criteria can be found in Table F-2. The criteria reflect quantitative and qualitative analysis used to determine the severity of an erosion site. It is separated into three categories–physical levee characteristics, erosion characteristics, and hydraulics. Each category is further subdivided into factors related to erosion failure, and are used to calculate a final normalized score. Each factor has a potential score of 0, 1, 2, 3, 4, or 5 and is multiplied by a weighted multiplier ranging from 1 to 5. The weighted multiplier reflects qualitative assumptions relating each factor to erosion failure. The total score for an erosion site is collected by summing all the weighted points. It is then normalized to a 100 point scale and is determined by dividing the total score by the maximum possible score of 91. Once all the erosion sites have been assigned a normalized score, they are ranked from highest to lowest. A high score is associated with a high erosion potential, and a low score is associated with a low erosion potential.

## Table F-2: San Joaquin River Flood Control System Ranking Criteria for Waterside Erosion

| Criteria | Score Definition | | Weight | Weighted Score |
|---|---|---|---|---|
| **Physical Levee Characteristics (waterside)** | | | | |
| **Berm Width** | 0 – Greater than 30 feet<br>1 – 20 to 30 feet<br>2 – 15 to 20 feet | 3 – 10 to 15 feet<br>4 – 5 to 10 feet<br>5 – Less than 5 feet | 1 | 5 |
| **Vegetation Cover** | 0 – Ground surrounding site fully covered<br>1 – 2/3 of ground covered | 2 – 1/3 of ground covered<br>3 – No vegetation | 2 | 6 |
| **Burrow Holes** | 0 – No signs of activity | 5 – Signs of activity | 1 | 5 |
| **Levee Slope (H:V)** | 0 – 3:1 or greater<br>1 – 2.5:1<br>2 – 2:1 | 3 – 1.5:1<br>4 – 1: or less<br>5 – Near vertical | 3 | 15 |
| **Soil Type** | 1 – Cobbles<br>2 – Gravel (GP-GW)<br>3 – Clay (CL, CH, SC, GC) | 4 – Sand (SP, SM and mixtures)<br>5 – Silt (ML) | 4 | 20 |
| **Hydraulic Characteristics** | | | | |
| **Site Relative to Bend** | 0 – Inside of bend<br>1 – Straight reach<br>2 – immediately downstream of bend | 3 – Outside of bend > 90 degrees<br>4 – Outside of bend @ 90 degree turn<br>5 – Outside of bend < 90 degrees | 1 | 5 |
| **Radius of Curvature (Rc/W)** | 0 – Greater than 5 or no curve<br>1 – 4 to 5<br>2 – 3 to 4 | 3 – 2 to 3<br>4 – 1 to 2<br>5 – less than 1 | 1 | 5 |
| **Erosion Characteristics** | | | | |
| **Length** | 1 – Less than 50 feet<br>2 – 50 to 100 feet<br>3 – 100 to 200 feet | 4 – 200 to 300 feet<br>5 – Greater than 300 feet | 2 | 10 |
| **Scarp Height** | 1 – Less than 50 feet<br>2 – 50 to 100 feet<br>3 – 2 to 5 feet & near-vertical | 4 – Greater than 5 feet<br>5 – Greater than 5 feet & near vertical | 3 | 15 |
| **Location** | 1 – Erosion on berm | 5 – Erosion affecting levee toe | 1 | 5 |
| | | | **Total Weighted Score:** | 91 |

## *F-6.4 Overall Rating*

Overall rating was assigned to each site based on their normalized score. First, an average was found by adding all the scores and dividing them by the number of non-repaired erosion sites in the inventory. The average score is established to be the group threshold and determines the overall rating as described by the following: If the normalized score of a site falls at or below the average, the site is given a rating of M. If it is greater than the average, the site is given a rating of U. Table F-3 summarizes the definition of ratings.

**Table F-3: Definition of Ratings**

| Minimally Acceptable (M) | Unacceptable (U) |
|---|---|
| If Normalized Score ≤ Average Normalized Score, then Overall Rating = **M** | If Normalized Score > Average Normalized Score, then Overall Rating = **U** |
| A site that receives a Normalized Score equal to or less than the Average Normalized Score is rated as M, or Minimally Acceptable. This site should be monitored closely and annually, as it may become a serious deficiency in the near future. | A site that receives a Normalized Score greater than the Average Normalized Score is rated as U, or Unacceptable. This site may require immediate attention and corrective action, as it may be a serious deficiency that can fail during normal flow or in the next high water event. |

# Appendix G: Inspection Category Rating Descriptions

## Table G-1: Levee Inspection Rating Categories

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Earthen Levee | Animal Control | A | A1 | Rodent holes have been backfilled in a manner that adequately addresses the void created in the levee. A continuous animal burrow control program is in place that includes elimination of active burrowing and the filling of existing burrows. Less than 5 holes (holes that penetrate the levee prism more than 6") in any 25' length of levee, and less than 2 cubic feet of material observed beside any hole. All holes are less than 6" in diameter. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Animal Control | M | A1 | Either more than 5 holes were observed in a 25' length of levee or at least one hole greater than 6" in diameter was observed. No rodent activity was observed on opposing slope and holes penetrate the levee prism more than 6". | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Animal Control | U | A1 | More than 2 cubic feet of material was observed beside at least one hole. Either 5 or more holes were observed in a 25' length of levee or a hole 6" in diameter or more was observed with rodent activity on the opposing slope. Holes penetrate the levee prism more than 6". | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Animal Control | W | A1 | The animal burrow control program has produced results per the standard, but the area should be monitored and the control program continued to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Animal Control | C | A1 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Animal Control | A | A2 | Rodent holes have been backfilled in a manner that adequately addresses the void created in the levee. A continuous animal burrow control program is in place that includes elimination of active burrowing and the filling of existing burrows. Less than 5 holes (holes that penetrate the levee prism more than 6") in any 25' length of levee, and less than 2 cubic feet of material observed beside any hole. All holes are less than 6" in diameter. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Animal Control | M | A2 | Either more than 5 holes were observed in a 25' length of levee or at least one hole greater than 6" in diameter was observed. No rodent activity was observed on opposing slope and holes penetrate the levee prism more than 6". | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Animal Control | U | A2 | More than 2 cubic feet of material was observed beside at least one hole. Either 5 or more holes were observed in a 25' length of levee or a hole 6" in diameter or more was observed with rodent activity on the opposing slope. Holes penetrate the levee prism more than 6". | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Animal Control | W | A2 | The animal burrow control program has produced results per the standard, but the area should be monitored and the control program continued to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Animal Control | C | A2 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Animal Control | A | A3 | Rodent holes have been backfilled in a manner that adequately addresses the void created in the levee. A continuous animal burrow control program is in place that includes elimination of active burrowing and the filling of existing burrows. Less than 5 holes (holes that penetrate the levee prism more than 6") in any 25' length of levee, and less than 2 cubic feet of material observed beside any hole. All holes are less than 6" in diameter. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Animal Control | M | A3 | Either more than 5 holes were observed in a 25' length of levee or at least one hole greater than 6" in diameter was observed. No rodent activity was observed on opposing slope and holes penetrate the levee prism more than 6". | Maintenance Deficiency | Maintenance Deficiency |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Earthen Levee | Animal Control | U | A3 | More than 2 cubic feet of material was observed beside at least one hole. Either 5 or more holes were observed in a 25' length of levee or a hole 6" in diameter or more was observed with rodent activity on the opposing slope. Holes penetrate the levee prism more than 6". | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Animal Control | W | A3 | The animal burrow control program has produced results per the standard, but the area should be monitored and the control program continued to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Animal Control | C | A3 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Closure Structures | A | | Closure structure in good repair. Placing equipment, stoplogs, and other materials are readily available at all times. Components of closure clearly marked and installation instructions / procedures readily available. Trial erections have been accomplished in accordance with the O&M manual. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Closure Structures | U | | Closure structure in poor condition. Parts missing or corroded. Placing equipment may not be available within normal warning time. Trial erections have not been accomplished in accordance with the O&M manual. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Closure Structures | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Cracking | A | CR1 | No cracks were observed that are present year round that are greater than 2" deep and transverse more than 1/3 of the levee crown or longitudinal length with a length of 1/3 the height of the levee . | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Cracking | M | CR1 | Cracks were observed that are between 2" and 6" deep, transverse between 1/3 and the full levee crown width, or have a longitudinal length of between 1/3 and the full height of the levee. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Cracking | U | CR1 | Cracks were observed that are 6" or deeper, have transverse cracks extending the entire levee width, or have a longitudinal length greater than the height of the levee. Signs of vertical movement may have been observed. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Cracking | W | CR1 | No cracks were observed that violate standards, but the area should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Cracking | C | CR1 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Cracking | A | CR2 | No cracks were observed that are present year round that are greater than 2" deep and transverse more than 1/3 of the levee crown or longitudinal length with a length of 1/3 the height of the levee . | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Cracking | M | CR2 | Cracks were observed that are between 2" and 6" deep, transverse between 1/3 and the full levee crown width, or have a longitudinal length of between 1/3 and the full height of the levee. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Cracking | U | CR2 | Cracks were observed that are 6" or deeper, have transverse cracks extending the entire levee width, or have a longitudinal length greater than the height of the levee. Signs of vertical movement may have been observed. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Cracking | W | CR2 | No cracks were observed that violate standards, but the area should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Cracking | C | CR2 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Crown Surface / Depressions / Rutting | A | C1 | The crown is at or above the design elevation. | Maintenance Deficiency | Design & System Obsolescence |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Earthen Levee | Crown Surface / Depressions / Rutting | M | C1 | Sections of the crown have settled below the design elevation for distances less than 100'. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Crown Surface / Depressions / Rutting | U | C1 | Sections of the crown have settled below the design elevation for distances greater than 100'. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Crown Surface / Depressions / Rutting | W | C1 | Sections of the crown may have settled below the design elevation and may need maintenance in the future. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Crown Surface / Depressions / Rutting | C | C1 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Crown Surface / Depressions / Rutting | A | C2 | There are no ruts, pot holes, or other depressions on the levee crown or embankments. The levee crown and access roads are well established and drain properly without any ponded water. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Crown Surface / Depressions / Rutting | M | C2 | Some ruts, holes, settlement or other depressions on the levee less than 6" deep were observed. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Crown Surface / Depressions / Rutting | U | C2 | There are depressions greater than 6" deep that will pond water or a large amount of additional road material is needed to ensure all-weather access. The levee may have settled below the design elevation for a distance greater than 100'. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Crown Surface / Depressions / Rutting | W | C2 | The crown surface complies with standards but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Crown Surface / Depressions / Rutting | C | C2 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Crown Surface / Depressions / Rutting | A | C3 | The road is in all-weather condition and drain properly without any ponded water. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Crown Surface / Depressions / Rutting | M | C3 | The all-weather surface requires some maintenance but will not prevent access during the coming flood season. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Crown Surface / Depressions / Rutting | U | C3 | The all-weather surface will not able to be used during the coming flood season. Material should be added or the roadway re-graded before the next flood season. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Crown Surface / Depressions / Rutting | W | C3 | The crown surface complies with standards but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Crown Surface / Depressions / Rutting | C | C3 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Emergency Supplies & Equipment | A | | The LMA maintains a stockpile of sandbags, shovels, and other flood fight supplies from a centralized location which will adequately supply all needs for the initial days of a flood fight. The LMA determines the required quantity of supplies after consulting with inspector. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Emergency Supplies & Equipment | M | | The LMA does not maintain an adequate supply of flood fighting materials as part of their preparedness activities. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Encroachments | A | AD | The ditch within the landside easement appears to be maintained per permit conditions and does not appear to create a slope instability or inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | M | AD | An ditch blocking visibility or access along the levee or within the landside easement were observed but will not inhibit slope stability or operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | U | AD | An ditch blocking visibility or access along the levee or within the landside easement were observed that may inhibit slope stability or operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Earthen Levee | Encroachments | W | AD | No ditch was observed, but has been observed in the past and the location should be monitored. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | C | AD | The deficiency noted previously has been corrected. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | A | AT | The levee and soil along the levee or within the landside easement is not being disced or tilled. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | M | AT | Evidence of or active discing or tilling along the levee or within the landward easement was observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | U | AT | Evidence of or active discing or tilling along the levee or within the landside easement was observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | W | AT | Evidence of past active discing or tilling along the levee, within the landside easement, or nearby was observed that should be monitored. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | C | AT | The deficiency noted previously has been corrected. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | A | AV | No abandoned vehicles blocking visibility or access along the levee or within the landside easement were observed. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | M | AV | Abandoned vehicles blocking visibility or access along the levee or within the landside easement were observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | U | AV | Abandoned vehicles blocking visibility or access along the levee or within the landside easement were observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | W | AV | No vehicles were observed, but have been in the past and the location should be monitored. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | C | AV | The deficiency noted previously has been corrected. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | A | BU | Buildings along the levee or within the landside easement appear to be maintained per permit conditions and do not appear to inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | M | BU | A building blocking visibility or access along the levee or within the landside easement were observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | U | BU | A building blocking visibility or access along the levee or within the landside easement were observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | W | BU | No building was observed, but has been observed in the past and the location should be monitored. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | C | BU | The deficiency noted previously has been corrected. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | A | CR | No agricultural crops or related features blocking visibility or access along the levee or within the landside easement were observed. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | M | CR | Agricultural crops or related features blocking visibility or access along the levee or within the landside easement were observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Earthen Levee | Encroachments | U | CR | Agricultural crops or related features blocking visibility or access along the levee or within the landside easement were observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | W | CR | Agricultural crops or related features were observed, but have been observed in the past and the location should be monitored. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | C | CR | The deficiency noted previously has been corrected. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | A | DE | No trash or debris blocking visibility or access along the levee or within the landside easement were observed. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | M | DE | Trash or debris blocking visibility and access along the levee or within the landside easement were observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | U | DE | Trash or debris blocking visibility and access along the levee or within the landside easement were observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | W | DE | No trash or debris were observed, but has been in the past and the location should be monitored. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | C | DE | The deficiency noted previously has been corrected. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | A | EQ | No construction or agricultural equipment blocking visibility or access along the levee or within the landside easement was observed. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | M | EQ | Construction or agricultural equipment blocking visibility and access along the levee or within the landside easement were observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | U | EQ | Construction or agricultural equipment blocking visibility and access along the levee or within the landside easement were observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | W | EQ | No construction or agricultural equipment were observed, but has been observed in the past and the location should be monitored. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | C | EQ | The deficiency noted previously has been corrected. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | A | FE | Fences along the levee or within the landside easement appear to be maintained per permit conditions and do not appear to inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | M | FE | Fences blocking visibility or access along the levee or within the landside easement were observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | U | FE | Fences blocking visibility or access along the levee or within the landside easement were observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | W | FE | No fence was observed, but has been observed in the past and the location should be monitored. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | C | FE | The deficiency noted previously has been corrected. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | A | FW | No firewood blocking visibility or access was along the levee or within the landside easement observed. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | M | FW | Firewood blocking visibility and access along the levee or within the landside easement was observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Earthen Levee | Encroachments | U | FW | Firewood blocking visibility and access along the levee or within the landside easement was observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | W | FW | No firewood was observed, but has been observed in the past and the location should be monitored. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | C | FW | The deficiency noted previously has been corrected. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | A | GA | No trash or garbage blocking visibility or access along the levee or within the landside easement was observed. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | M | GA | Trash or garbage blocking visibility and access along the levee or within the landside easement was observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | U | GA | Trash or garbage blocking visibility and access along the levee or within the landside easement was observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | W | GA | No garbage was observed, but has been observed in the past and the location should be monitored. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | C | GA | The deficiency noted previously has been corrected. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | A | LI | Landscape irrigation along the levee or within the landside easement appear to be maintained per permit conditions and do not appear to inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | M | LI | Landscape irrigation blocking visibility or access along the levee or within the landside easement were observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | U | LI | Landscape irrigation blocking visibility or access along the levee or within the landside easement were observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | W | LI | No landscape irrigation was observed, but has been observed in the past and the location should be monitored. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | C | LI | The deficiency noted previously has been corrected. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | A | MA | No material blocking visibility or access along the levee or within the landside easement was observed. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | M | MA | Material blocking visibility and access along the levee or within the landside easement was observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | U | MA | Material blocking visibility and access along the levee or within the landside easement was observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | W | MA | No material was observed, but has been observed in the past and the location should be monitored. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | C | MA | The deficiency noted previously has been corrected. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | A | PI | Pipes through the levee at this location have been inspected and appear to be intact. No evidence of leakage has been observed and the pipe appears to be maintained per permit conditions. | Enforcement | Maintenance Deficiency |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Earthen Levee | Encroachments | M | PI | A pipe through the levee at this location is not maintained per permit conditions or may not be authorized but will not inhibit the operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | U | PI | A pipe through the levee at this location is not maintained per permit conditions or may not be authorized that may inhibit the operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | W | PI | A pipe through the levee was observed that appears to be leak free and maintained per permit conditions but should be monitored. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | C | PI | The deficiency noted previously has been corrected. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | A | PO | A pole along the levee or within the landside easement appear to be maintained per permit conditions and do not appear to inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | M | PO | A pole blocking visibility or access along the levee or within the landside easement were observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | U | PO | A pole blocking visibility or access along the levee or within the landside easement were observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | W | PO | No pole was observed, but has been observed in the past and the location should be monitored. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | C | PO | The deficiency noted previously has been corrected. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | A | PR | No prunings blocking visibility or access along the levee or within the landside easement were observed. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | M | PR | Prunings blocking visibility or access along the levee or within the landside easement were observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | U | PR | Prunings blocking visibility or access along the levee or within the landside easement were observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | W | PR | No prunings were observed, but have been observed in the past and the location should be monitored. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | C | PR | The deficiency noted previously has been corrected. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | A | RA | A ramp along the levee or within the landside easement appear to be maintained per permit conditions and do not appear to inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | M | RA | A ramp blocking visibility or access along the levee or within the landside easement were observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | U | RA | A ramp blocking visibility or access along the levee or within the landside easement were observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | W | RA | No ramp was observed, but has been observed in the past and the location should be monitored. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | C | RA | The deficiency noted previously has been corrected. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | A | SI | A sign along the levee or within the landside easement appear to be maintained per permit conditions and do not appear to inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Earthen Levee | Encroachments | M | SI | A sign blocking visibility or access along the levee or within the landside easement were observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | U | SI | A sign blocking visibility or access along the levee or within the landside easement were observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | W | SI | No sign was observed, but has been observed in the past and the location should be monitored. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | C | SI | The deficiency noted previously has been corrected. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | A | ST | No unauthorized stairways were observed along the levee or within the landside easement. Stairs found appear to be maintained per permit conditions. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | M | ST | A stairway on the levee or within the landside easement was observed that is not maintained per permit conditions or may not be authorized but will not inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | U | ST | A stairway on the levee or within the landside easement was observed that is not maintained per permit conditions or may not be authorized that may inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | W | ST | A stairway was observed that appears to be maintained per permit conditions but should be monitored. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | C | ST | The deficiency noted previously has been corrected. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | A | TA | A tank along the levee or within the landside easement appear to be maintained per permit conditions and do not appear to inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | M | TA | A tank blocking visibility or access along the levee or within the landside easement were observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | U | TA | A tank blocking visibility or access along the levee or within the landside easement were observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | W | TA | No tank was observed, but has been observed in the past and the location should be monitored. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | C | TA | The deficiency noted previously has been corrected. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | A | TR | No discarded tree branches or limbs blocking visibility or access along the levee or within the landside easement were observed. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | M | TR | Discarded tree branches or limbs blocking visibility or access along the levee or within the landside easement were observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | U | TR | Discarded tree branches or limbs blocking visibility or access along the levee or within the landside easement were observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | W | TR | No discarded tree branches or limbs were observed, but have been observed in the past and the location should be monitored. | Enforcement | Maintenance Deficiency |
| Earthen Levee | Encroachments | C | TR | The deficiency noted previously has been corrected. | Enforcement | Maintenance Deficiency |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Earthen Levee | Encroachments | A | UR | Multiple encroachments of various types along the levee or within the landside easement appear to be maintained per permit conditions and do not appear to inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | M | UR | Multiple encroachments of various types blocking visibility or access along the levee or within the landside easement were observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | U | UR | Multiple encroachments of various types blocking visibility or access along the levee or within the landside easement were observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | W | UR | Multiple encroachments of various types were not currently observed, but have been observed in the past and the location should be monitored. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | C | UR | The deficiency noted previously has been corrected. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | A | WL | Walls along the levee or within the landside easement appear to be maintained per permit conditions and do not appear to inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | M | WL | Walls blocking visibility or access along the levee or within the landside easement were observed but will not inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | U | WL | Walls blocking visibility or access along the levee or within the landside easement were observed that may inhibit operations and maintenance or emergency operations. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | W | WL | No wall was observed, but has been observed in the past and the location should be monitored. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Encroachments | C | WL | The deficiency noted previously has been corrected. | Enforcement | Design & System Obsolescence |
| Earthen Levee | Erosion / Bank Caving | A | E1 | No erosion greater than 3" in depth was observed in the levee prism or stability berm. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Erosion / Bank Caving | M | E1 | Erosion with a depth greater than 3" but less than 1' and less than 3' in length was observed in the levee prism or stability berm. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Erosion / Bank Caving | U | E1 | Erosion with a depth of 1' or greater and a length of 3' or greater was observed in the levee prism or stability berm or overbuilt section. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Erosion / Bank Caving | W | E1 | No erosion greater than 3" in depth was observed in the levee prism or stability berm, but the area should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Erosion / Bank Caving | C | E1 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Erosion / Bank Caving | A | E2 | No erosion greater than 3" in depth was observed in the levee prism or stability berm. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Erosion / Bank Caving | M | E2 | Erosion with a depth greater than 3" but less than 1' and less than 3' in length was observed in the levee prism or stability berm. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Erosion / Bank Caving | U | E2 | Erosion with a depth of 1' or greater and a length of 3' or greater was observed in the levee prism or stability berm or overbuilt section. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Erosion / Bank Caving | W | E2 | No erosion greater than 3" in depth was observed in the levee prism or stability berm, but the area should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Erosion / Bank Caving | C | E2 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Earthen Levee | Flood Preparedness & Training | A | | The LMA has a written system-specific flood response plan and a solid understanding of how to operate, maintain, and staff the Flood Protection System during a flood. LMA maintains a list of emergency contact information for appropriate personnel and other emergency response activities. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Flood Preparedness & Training | M | | The LMA maintains a good working knowledge of flood response activities, but documentation of system-specific emergency procedures and emergency contact personnel is insufficient or out of date. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Operations & Maintenance Manuals | A | | Levee Owner's Manual, O&M Manuals, and/or manufacturer's operating instructions are present. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Operations & Maintenance Manuals | M | | Manuals are lost or missing or out of date. The LMA will obtain the documents prior to next scheduled inspection | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Operations & Maintenance Manuals | U | | LMA has not obtained lost or missing manuals identified during previous inspection. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Repair Gates | A | | Gates open and close freely, locks are in place and there is little corrosion on metal parts. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Repair Gates | M | | Gates are damaged or corroded but appear to be operable. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Repair Gates | U | | Gates are damaged, corroded or impassable and require replacement. District or pass key is not accepted by attached locks. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Repair Gates | W | | The gate complies with standards but should be monitored and maintained to avoid a maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Repair Gates | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Riprap Revetments | A | | Existing riprap protection has not been displaced and is properly maintained and undamaged. No voids exist under the riprap / grout. Riprap adequately functions as slope protection. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Riprap Revetments | M | | Existing riprap protection has been displaced but the subgrade is not exposed and there is no evidence of scour, erosion, or voids. Riprap adequately functions as slope protection. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Riprap Revetments | U | | Scour activity is undercutting banks, eroding embankments, or impairing channel flows by causing turbulence or shoaling. Slope protection is needed. Or significant riprap displacement has occurred exposing the subgrade or fabric or there are voids under the riprap. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Riprap Revetments | W | | Riprap revetments comply with standards but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Riprap Revetments | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Seepage / Sandboils | A | | No evidence of unrepaired seepage, continuous saturated areas, or sandboils was observed at the time of the inspection. | Design & System Obsolescence | Maintenance Deficiency |
| Earthen Levee | Seepage / Sandboils | U | | Evidence of unrepaired seepage, continuous saturated areas, and/or and boils were observed. Records indicate that unrepaired seepage or sandboils exist. | Design & System Obsolescence | Maintenance Deficiency |
| Earthen Levee | Seepage / Sandboils | C | | The deficiency noted previously has been corrected. | Design & System Obsolescence | Maintenance Deficiency |
| Earthen Levee | Slope Stability | A | S1 | The slope does not show any separation of soil, any caving, soil movement, or other signs of an unstable slope. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Slope Stability | M | S1 | Either a separation of soil can be seen, caving was observed on the slope or crown, tension cracks due to a slip or slide, or depressions in the slope were observed. | Maintenance Deficiency | Design & System Obsolescence |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Earthen Levee | Slope Stability | U | S1 | A crack or depression with a depth greater than 1" and a length of 200' was observed. A bulge in the slope or at the toe due to upward movement of the soil was observed. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Slope Stability | W | S1 | The area complies with the slope stability standard but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Slope Stability | C | S1 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Slope Stability | A | S2 | The slope does not show any separation of soil, any caving, soil movement, or other signs of an unstable slope. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Slope Stability | M | S2 | Either a separation of soil can be seen, caving was observed on the slope or crown, tension cracks due to a slip or slide, or depressions in the slope were observed. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Slope Stability | U | S2 | A crack or depression with a depth greater than 1" and a length of 200' was observed. A bulge in the slope or at the toe due to upward movement of the soil was observed. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Slope Stability | W | S2 | The area complies with the slope stability standard but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Slope Stability | C | S2 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Slope Stability | A | S3 | The slope does not show any separation of soil, any caving, soil movement, or other signs of an unstable slope. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Slope Stability | M | S3 | Either a separation of soil can be seen, caving was observed on the slope or crown, tension cracks due to a slip or slide, or depressions in the slope were observed. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Slope Stability | U | S3 | A crack or depression with a depth greater than 1" and a length of 200' was observed. A bulge in the slope or at the toe due to upward movement of the soil was observed. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Slope Stability | W | S3 | The area complies with the slope stability standard but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Slope Stability | C | S3 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Trim / Thin Trees | A | T1 | Any trees on the levee or the landside easement are trimmed up at least 5 feet above the levee slope to allow visibility and flood fight access. All trees are maintained per the Interim Vegetation Criteria. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | M | T1 | Moderate density of limbs, leaves, or the trees themselves are partially obstructing visibility and flood fight access to the levee slope and/or beyond the landside easement. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | U | T1 | Significant density of limbs, leaves, or the trees themselves are completely obstructing visibility and flood fight access to the levee slope and/or within the landside easement. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | W | T1 | Trees comply with standards but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | C | T1 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | A | T2 | Any trees on the levee or the landside easement are spaced enough to allow visibility and flood fight access. All trees are maintained per the Interim Vegetation Criteria. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | M | T2 | Moderate density of limbs, leaves, or the trees themselves are partially obstructing visibility and flood fight access to the levee slope and/or beyond the landside easement. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | U | T2 | Significant density of limbs, leaves, or the trees themselves are completely obstructing visibility and flood fight access to the levee slope and/or within the landside easement. | Maintenance Deficiency | Maintenance Deficiency |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Earthen Levee | Trim / Thin Trees | W | T2 | Trees comply with standards but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | C | T2 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | A | T3 | Any trees on the levee or the landside easement are trimmed up at least 5 feet above the levee slope and spaced enough to allow visibility and flood fight access. All trees are maintained per the Interim Vegetation Criteria. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | M | T3 | Moderate density of limbs, leaves, or the trees themselves are partially obstructing visibility and flood fight access to the levee slope and/or within the landside easement. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | U | T3 | Significant density of limbs, leaves, or the trees themselves are completely obstructing visibility and flood fight access to the levee slope and/or within the landside easement. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | W | T3 | Trees comply with standards but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | C | T3 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | A | T4 | Any trees on the levee or the landside easement are trimmed up at least 5 feet above the levee slope and spaced enough to allow visibility and flood fight access. All trees are maintained per the Interim Vegetation Criteria. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | M | T4 | Moderate density of limbs, leaves, or the trees themselves are partially obstructing visibility and flood fight access to the levee slope and/or within the landside easement. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | U | T4 | Significant density of limbs, leaves, or the trees themselves are completely obstructing access along the roadway. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | W | T4 | Trees comply with standards but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | C | T4 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | U | T5 | There are tree stumps visibly decomposing that may pose a risk to the integrity of the levee. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | N | T5 | Tree stumps with diameters of 2" or greater were observed on the levee or within the landside easement. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Trim / Thin Trees | C | T5 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Underseepage Relief Wells | A | | Toe drainage system and pressure relief wells necessary for maintaining levee stability during flood events functioned properly during the last flood event and no sediment is observed in the horizontal system. Nothing is observed which would indicate that the system won't function properly during the next flood and is maintained per the O&M Manual. Maintenance records are available for review. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Underseepage Relief Wells | M | | Toe drainage system or pressure relief wells are not maintained in accordance with the O&M Manual but maintenance records are available, the well has maintained at least 80% efficiency, and has not fallen into disrepair or become clogged. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Underseepage Relief Wells | U | | Toe drainage systems or pressure relief wells have observable issues that would indicate that they wouldn't function properly in the next event, OR maintenance records were not available, OR cracks were observed between the ditch and well or in the ditch, OR the system is in disrepair and the pump is operating at less than 80% efficiency. | Maintenance Deficiency | Design & System Obsolescence |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Earthen Levee | Underseepage Relief Wells | W | | The toe drainage system or pressure relief wells comply with standards but should be monitored and maintained to avoid a maintenance issue. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Underseepage Relief Wells | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |
| Earthen Levee | Vegetation | A | V1 | The levee has no unwanted vegetation (brush, bushes, and undesirable weeds) blocking visibility or access; vegetation is maintained per the DWR's vegetation criteria. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | M | V1 | Tall grass, weeds, brush or other vegetation partially block visibility of or access to the levee and/or 15 feet or the limit of the easement at the landside toe and 20 feet from shoulder to the waterside of the levee. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | U | V1 | Tall grass, weeds, brush or other vegetation completely block visibility of or access to the levee and/or to 15 feet or the limit of the easement at the landside toe and also 20 feet from shoulder to the waterside of the levee. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | W | V1 | The vegetation complies with standards but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | C | V1 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | A | V2 | The levee has no unwanted vegetation (brush, bushes, and undesirable weeds) blocking visibility or access; vegetation is maintained per the DWR's vegetation criteria. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | M | V2 | Tall grass, weeds, brush or other vegetation partially block visibility of or access to the levee and/or 15 feet or the limit of the easement at the landside toe and 20 feet from shoulder to the waterside of the levee. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | U | V2 | Tall grass, weeds, brush or other vegetation completely block visibility of or access to the levee and/or to 15 feet or the limit of the easement at the landside toe and also 20 feet from shoulder to the waterside of the levee. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | W | V2 | The vegetation complies with standards but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | C | V2 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | A | V4 | The levee has no unwanted vegetation (brush, bushes, and undesirable weeds) blocking visibility or access; vegetation is maintained per the DWR's vegetation criteria. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | M | V4 | Tall grass, weeds, brush or other vegetation partially block visibility of or access to the levee and/or 15 feet or the limit of the easement at the landside toe and 20 feet from shoulder to the waterside of the levee. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | U | V4 | Tall grass, weeds, brush or other vegetation completely block visibility of or access to the levee and/or to 15 feet or the limit of the easement at the landside toe and also 20 feet from shoulder to the waterside of the levee. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | W | V4 | The vegetation complies with standards but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | C | V4 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | 1 | V5 | Between 75% and 50% of the levee slope (both sides) is covered with grass or sod. | Design & System Obsolescence | Design & System Obsolescence |
| Earthen Levee | Vegetation | 2 | V5 | 75% or more of the levee slope (both sides) is covered with grass or sod. | Design & System Obsolescence | Design & System Obsolescence |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Earthen Levee | Vegetation | 3 | V5 | Plants greater than 2 inches in diameter exist but do not obstruct visibility. | Design & System Obsolescence | Design & System Obsolescence |
| Earthen Levee | Vegetation | 4 | V5 | Brush and/or weeds exist on the waterside side of the levee beyond the top 20 feet that obstruct visibility. | Design & System Obsolescence | Design & System Obsolescence |
| Earthen Levee | Vegetation | 5 | V5 | This area complies with the USACE ETL 1110-2-571 vegetation standards. | Design & System Obsolescence | Design & System Obsolescence |
| Earthen Levee | Vegetation | C | V5 | The deficiency noted previously has been corrected. | Design & System Obsolescence | Design & System Obsolescence |
| Earthen Levee | Vegetation | A | V6 | The Levee has no unwanted vegetation (brush, bushes, and undesirable weeds) blocking visibility or access; vegetation is maintained per the Interim Vegetation Criteria. | Enforcement | Enforcement |
| Earthen Levee | Vegetation | M | V6 | Landowner maintained vegetation partially block visibility of or access to the levee and/or 15 feet or the limit of the easement at the landside toe and 20 feet from shoulder to the waterside of the levee. | Enforcement | Enforcement |
| Earthen Levee | Vegetation | U | V6 | Landowner maintained vegetation completely block visibility of or access to the levee and/or to 15 feet or the limit of the easement at the landside toe and also 20 feet from shoulder to the waterside of the levee. | Enforcement | Enforcement |
| Earthen Levee | Vegetation | W | V6 | The vegetation complies with standards but should be monitored and maintained to avoid a future maintenance issue. | Enforcement | Enforcement |
| Earthen Levee | Vegetation | C | V6 | The deficiency noted previously has been corrected. | Enforcement | Enforcement |
| Earthen Levee | Vegetation | A | V7 | No trees or woody vegetation have been identified that currently pose an unacceptable threat to the integrity of the levee. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | U | V7 | Trees or woody vegetation exist that pose an unacceptable threat to the integrity of the levee. Identified trees shall be removed and associated root balls and roots shall be appropriately removed in coordination with the resource agencies. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | W | V7 | Monitor trees or woody vegetation which may pose a future unacceptable threat to the integrity of the levee. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | C | V7 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | W | V8 | Vegetation was introduced, allowed, required as mitigation, or endorsed by a previous DWR or USACE action as necessary to comply with environmental requirements. | Design & System Obsolescence | Design & System Obsolescence |
| Earthen Levee | Vegetation | A | V9 | The roadway has no unwanted vegetation (brush, bushes, and undesirable weeds) blocking visibility or access. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | M | V9 | Tall grass, weeds, brush or other vegetation partially block visibility of or access along the roadway. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | U | V9 | Tall grass, weeds, brush or other vegetation completely block visibility of or access along the roadway. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | W | V9 | The roadway does not have any vegetation blocking visibility or access currently, but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Earthen Levee | Vegetation | C | V9 | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Concrete Foundations | A | | No scouring / erosion or undermining near the structure. | Maintenance Deficiency | Design & System Obsolescence |
| Interior Drainage & Piping Systems | Concrete Foundations | M | | Scouring / erosion near the footing of the structure but not close enough to affect structure stability during the next flood. | Maintenance Deficiency | Design & System Obsolescence |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Interior Drainage & Piping Systems | Concrete Foundations | U | | Scouring or undermining at the foundation that has affected structural integrity. | Maintenance Deficiency | Design & System Obsolescence |
| Interior Drainage & Piping Systems | Concrete Foundations | W | | There was no scouring / erosion or undermining observed but the area should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Design & System Obsolescence |
| Interior Drainage & Piping Systems | Concrete Foundations | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |
| Interior Drainage & Piping Systems | Concrete Surfaces | A | | Negligible spalling, scaling or cracking. If the concrete surface is weathered, rough to the touch or holds moisture, it is still satisfactory but should be seal coated to prevent freeze / thaw damage. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Concrete Surfaces | M | | Spalling, scaling, and open cracking present, but the immediate integrity or performance of the project is not threatened. Reinforcing steel may be exposed. Repairs / sealing is necessary to prevent additional damage during periods of thawing and freeze. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Concrete Surfaces | U | | Surface deterioration or deep cracks present that result in an threaten the integrity of the project. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Concrete Surfaces | W | | Concrete surfaces were intact but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Concrete Surfaces | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Concrete Tilting / Settlement | A | | There are no significant areas of tilting, sliding or settlement that would endanger the integrity of the project. | Maintenance Deficiency | Design & System Obsolescence |
| Interior Drainage & Piping Systems | Concrete Tilting / Settlement | M | | There are areas of tilting, sliding or settlement (either active or inactive) that need to be repaired. The integrity of the structure is not in danger. | Maintenance Deficiency | Design & System Obsolescence |
| Interior Drainage & Piping Systems | Concrete Tilting / Settlement | U | | There are areas of tilting, sliding or settlement (either active or inactive) that threaten the structure's integrity and performance. | Maintenance Deficiency | Design & System Obsolescence |
| Interior Drainage & Piping Systems | Concrete Tilting / Settlement | W | | There was no concrete tilting or settlement observed but the area should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Design & System Obsolescence |
| Interior Drainage & Piping Systems | Concrete Tilting / Settlement | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |
| Interior Drainage & Piping Systems | Culverts: Breaks / Holes / Cracks | A | | There are no breaks, holes, cracks in the culvert that would result in significant water leakage. Pipes are in good condition or have been relined with appropriate material, which is still in good condition. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Culverts: Breaks / Holes / Cracks | M | | There are breaks, holes, cracks in the culvert that would result in water leakage and need to be repaired, but do not threaten the integrity of the project. Pipes may showing deterioration but do not threaten the integrity of the project. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Culverts: Breaks / Holes / Cracks | U | | Culvert has deterioration and/or has significant leakage such that it threatens the integrity of the project. Pipes are in danger of collapsing or have already begun to collapse. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Culverts: Breaks / Holes / Cracks | W | | The culvert does not currently have any significant integrity issues but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Culverts: Breaks / Holes / Cracks | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Culverts: Inlets / Outlets | A | | There is little or no debris, sediment or vegetation blocking the culverts, inlets, sump or discharge areas. The channel capacity for designed flow is not affected. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Culverts: Inlets / Outlets | M | | Debris, sediment or vegetation blocks less than 10% of the culvert opening, but must be removed. | Maintenance Deficiency | Maintenance Deficiency |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Interior Drainage & Piping Systems | Culverts: Inlets / Outlets | U | | Accumulated debris, sediment or vegetation blocks more than 10% of the culvert opening, impairing the culvert's capacity and hydraulic effectiveness. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Culverts: Inlets / Outlets | W | | No material was observed blocking the culvert, but has been observed in the past and the location should be monitored and maintained. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Culverts: Inlets / Outlets | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Electric Gate Operators | A | | All electric gate operators are in good working condition and are adequately powered, and are capable of opening and closing the gate properly. Preventative maintenance is being performed and the system is tested periodically. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Electric Gate Operators | M | | All electric gate operators are operational with minor deficiencies, but should perform through the next period of usage. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Electric Gate Operators | U | | The electric gate operators are not operational, or the power source is not considered reliable to sustain operations during flood conditions. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Electric Gate Operators | W | | Electric gate operators functioned as designed but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Electric Gate Operators | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Encroachments | A | | No trash, debris, excavation, structures, or other obstructions present within the project easement area was observed. Encroachments which do not diminish proper functioning of the project have been previously approved by the CVFPB and are maintained per permit conditions. | Maintenance Deficiency | Enforcement |
| Interior Drainage & Piping Systems | Encroachments | M | | Trash, debris, excavations, structures, or other obstructions present, or inappropriate activities that will not inhibit project operations and maintenance or emergency operations was observed. Encroachments have been approved by the CVFPB but may need maintenance. | Maintenance Deficiency | Enforcement |
| Interior Drainage & Piping Systems | Encroachments | U | | Trash, debris, excavation, structures, or other obstructions present, or inappropriate activities that will inhibit project operations and maintenance or emergency operation was observed. | Maintenance Deficiency | Enforcement |
| Interior Drainage & Piping Systems | Encroachments | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Enforcement |
| Interior Drainage & Piping Systems | Encroachments | W | | Encroachments were not currently observed, but have been observed in the past and the location should be monitored. Permitted encroachments should be monitored and maintained for compliance with permit conditions. | Maintenance Deficiency | Enforcement |
| Interior Drainage & Piping Systems | Erosion Areas | A | | No erosion greater than 3" in depth was observed in the levee prism or stability berm. | Maintenance Deficiency | Design & System Obsolescence |
| Interior Drainage & Piping Systems | Erosion Areas | M | | Erosion with a depth greater than 3" but less than 1' and less than 3' in length was observed in the levee prism or stability berm. | Maintenance Deficiency | Design & System Obsolescence |
| Interior Drainage & Piping Systems | Erosion Areas | U | | Erosion with a depth of 1' or greater and a length of 3' or greater was observed in the levee prism or stability berm or overbuilt section. | Maintenance Deficiency | Design & System Obsolescence |
| Interior Drainage & Piping Systems | Erosion Areas | W | | No erosion greater than 3" in depth was observed in the levee prism or stability berm, but the area should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Design & System Obsolescence |
| Interior Drainage & Piping Systems | Erosion Areas | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |
| Interior Drainage & Piping Systems | Flap Gates | A | | Flap gates open and close easily with minimal leakage. Gates show no corrosion damage and have been maintained. | Maintenance Deficiency | Enforcement |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Interior Drainage & Piping Systems | Flap Gates | M | | Gates will not fully open or close because of obstructions that can be easily removed or have corrosion damage that requires maintenance. | Maintenance Deficiency | Enforcement |
| Interior Drainage & Piping Systems | Flap Gates | U | | Gate is missing, has been damaged or has deteriorated and needs repair. Gate will not prevent flow from the channel toward the landside. | Maintenance Deficiency | Enforcement |
| Interior Drainage & Piping Systems | Flap Gates | W | | Flap gates open and close with minimal leakage and function as designed but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Enforcement |
| Interior Drainage & Piping Systems | Flap Gates | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Enforcement |
| Interior Drainage & Piping Systems | Manual Gate Operators | A | | All manual gate operators are in good working condition and are capable of opening and closing the gate properly. Preventative maintenance is being performed and the system is tested periodically. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Manual Gate Operators | M | | Manual gate operators are operational with minor deficiencies, but should perform through the next period of usage. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Manual Gate Operators | U | | Manual gate operators are not operational. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Manual Gate Operators | W | | Manual gate operators functioned as designed but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Manual Gate Operators | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Metal Pipes | A | | There are no breaks, holes, cracks in the pipe that would result in significant water leakage. Pipes are in good condition or have been relined with appropriate material, which is still in good condition. | Maintenance Deficiency | Enforcement |
| Interior Drainage & Piping Systems | Metal Pipes | M | | There are breaks, holes, cracks in the pipe that would result in water leakage and need to be repaired, but do not threaten the integrity of the project. Pipes may showing deterioration but do not threaten the integrity of the project. | Maintenance Deficiency | Enforcement |
| Interior Drainage & Piping Systems | Metal Pipes | U | | Pipe has deterioration and/or has significant leakage such that it threatens the integrity of the project. Pipes are in danger of collapsing or have already begun to collapse. | Maintenance Deficiency | Enforcement |
| Interior Drainage & Piping Systems | Metal Pipes | W | | The Pipe does not currently have any significant integrity issues but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Enforcement |
| Interior Drainage & Piping Systems | Metal Pipes | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Enforcement |
| Interior Drainage & Piping Systems | Revetments | A | | Existing riprap protection has not been displaced and is properly maintained and undamaged. No voids exist under the riprap / grout. Riprap has been engineered. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Revetments | M | | Existing riprap protection has been displaced but the subgrade is not exposed and there is no evidence of scour, erosion, or voids. Riprap adequately functions as slope protection. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Revetments | U | | Scour activity is undercutting banks, eroding embankments, or impairing channel flows by causing turbulence or shoaling. Slope protection is needed. Or significant riprap displacement has occurred exposing the subgrade or fabric or there are voids under the riprap. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Revetments | W | | Riprap revetments comply with standards but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Revetments | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Interior Drainage & Piping Systems | Security Fencing | A | | Safety / security fencing is good condition and provides protection against falling or unauthorized access. Gates open and close freely, locks are in place, and there is little corrosion on metal parts. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Security Fencing | M | | Safety / security fencing or gates are damaged or corroded but appear to be maintainable. Locks may be missing or damaged. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Security Fencing | U | | Safety / security fencing and gates are damaged or corroded to the point that replacement is required, or potentially dangerous project features are not secured. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Security Fencing | W | | Security fencing was adequate but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Security Fencing | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Sluice / Slide Gates | A | | Gates open and close freely with minor leakage. Sill is free of sediment and other obstructions. Gates and lifters have been maintained. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Sluice / Slide Gates | M | | Gates have been damaged or have deteriorated, and open and close with resistance or binding. Leakage quantity is controllable and is not a threat to project performance. Maintenance is required. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Sluice / Slide Gates | U | | Gates do not open or close. Gate, stem, lifter and/or guides are damaged or corroded. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Sluice / Slide Gates | W | | Gates functioned as designed but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Sluice / Slide Gates | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Trash Racks | A | | Trash racks are fastened in place and properly maintained. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Trash Racks | M | | Trash racks are in place but are unfastened or have bent bars that allow debris to enter into the pipe or pump station. Repair or replacement is required. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Trash Racks | U | | Trash rack is missing, damaged or not operational, or deficiencies will inhibit operations during the next flood event. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Trash Racks | W | | The trash rack was in place and functioning as designed but should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Trash Racks | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Vegetation & Obstructions | A | | Minimal, scattered obstructions or vegetation. The flow is not impeded. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Vegetation & Obstructions | M | | Log jams, snags, vegetation growth (such as cat tails, bull rushes, bushes or saplings) or other obstructions block approximately 25% of the designed channel capacity. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Vegetation & Obstructions | U | | Log jams, snags, vegetation growth (such as cat tails, bull rushes, bushes or saplings) or other obstructions block approximately 50% of the designed channel capacity. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Vegetation & Obstructions | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Interior Drainage & Piping Systems | Vegetation & Obstructions | W | | Vegetation does not currently impede flow significantly, but the area should be monitored and maintained to avoid a future maintenance issue. | Maintenance Deficiency | Maintenance Deficiency |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Concrete Floodwalls | Closure Structures | A | | The closure structure for lower areas of floodwalls is in good repair. Placing equipment, stoplogs, and other materials are readily available at all times. Components of closure clearly marked and installation instructions / procedures readily available. Trial erections have been accomplished in accordance with the O&M Manual. | Maintenance Deficiency | Maintenance Deficiency |
| Concrete Floodwalls | Closure Structures | U | | The closure structure for lower areas of floodwalls is in poor condition. Parts missing or corroded. Placing equipment may not be available within normal warning time. Trial erections have not been accomplished in accordance with the O&M Manual. | Maintenance Deficiency | Maintenance Deficiency |
| Concrete Floodwalls | Closure Structures | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Concrete Floodwalls | Concrete Foundations | A | | No scouring / erosion or undermining near the floodwall. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Concrete Foundations | M | | Scouring / erosion near the footing of the floodwall but not close enough to affect project stability during the next flood. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Concrete Foundations | U | | Scouring or undermining at the foundation that has affected integrity of the floodwall. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Concrete Foundations | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Concrete Surfaces | A | | Negligible spalling, scaling or cracking. If the concrete surface is weathered, rough to the touch or holds moisture, it is still satisfactory but should be seal coated to prevent freeze / thaw damage. | Maintenance Deficiency | Maintenance Deficiency |
| Concrete Floodwalls | Concrete Surfaces | M | | Spalling, scaling, and open cracking present, but the immediate integrity or performance of the floodwall is not threatened. Reinforcing steel may be exposed. Repairs / sealing is necessary to prevent additional damage during periods of thawing and freeze. | Maintenance Deficiency | Maintenance Deficiency |
| Concrete Floodwalls | Concrete Surfaces | U | | Surface deterioration or deep cracks present that result in an threaten the integrity of the floodwall. | Maintenance Deficiency | Maintenance Deficiency |
| Concrete Floodwalls | Concrete Surfaces | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Concrete Floodwalls | Concrete Tilting / Settlement | A | | There are no significant areas of tilting, sliding or settlement that would endanger the integrity of the floodwall. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Concrete Tilting / Settlement | M | | There are areas of tilting, sliding or settlement (either active or inactive) that need to be repaired. The integrity of the floodwall is not in danger. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Concrete Tilting / Settlement | U | | There are areas of tilting, sliding or settlement (either active or inactive) that threaten the integrity of the floodwall. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Concrete Tilting / Settlement | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Encroachments | A | | No trash, debris, excavations, structure, or other obstructions that block visibility or access was along the floodwall or within the easement observed. No inappropriate activities that inhibit project operations and maintenance or emergency operations we observed. | Maintenance Deficiency | Enforcement |
| Concrete Floodwalls | Encroachments | M | | Trash, debris, excavations, structure, or other obstructions blocking visibility or access along the floodwall or within the easement was observed but will not inhibit operations and maintenance or emergency operations. | Maintenance Deficiency | Enforcement |
| Concrete Floodwalls | Encroachments | U | | Trash, debris, excavation, structures, or other obstructions along the floodwall or within the easement was observed that may inhibit operations and maintenance or emergency operations. | Maintenance Deficiency | Enforcement |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Concrete Floodwalls | Encroachments | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Enforcement |
| Concrete Floodwalls | Erosion / Bank Caving | A | | No active erosion or bank caving observed on the landward or on the waterside of the floodwall. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Erosion / Bank Caving | M | | There are areas where active erosion is occurring or has occurred on or near the floodwall, but project integrity is not threatened. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Erosion / Bank Caving | U | | Erosion or caving is occurring or has occurred that threatens the stability and integrity of the floodwall. The erosion or caving has compromised project integrity. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Erosion / Bank Caving | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Monolith Joints | A | | The monolith joint material is in good condition. | Maintenance Deficiency | Maintenance Deficiency |
| Concrete Floodwalls | Monolith Joints | M | | The monolith joint material is deteriorating and needs to be repaired or replaced to prevent spalling and cracking during freeze / thaw cycles. | Maintenance Deficiency | Maintenance Deficiency |
| Concrete Floodwalls | Monolith Joints | U | | The monolith joint material is severely deteriorated and the concrete has spalled and cracked, damaging the water stop to the point where it will not provide the intended level of protection during a flood. | Maintenance Deficiency | Maintenance Deficiency |
| Concrete Floodwalls | Monolith Joints | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |
| Concrete Floodwalls | Underseepage Relief Wells | A | | Toe drainage system and pressure relief wells necessary for maintaining project stability during flood events functioned properly during the last flood event and no sediment is observed in horizontal system. Nothing is observed which would indicate that the system won't function properly during the next flood and is maintained per the O&M Manual. Maintenance records are available for review. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Underseepage Relief Wells | M | | Toe drainage system or pressure relief wells are not maintained in accordance with the O&M Manual but maintenance records are available, the well has maintained at least 80% efficiency, and has not fallen into disrepair or become clogged. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Underseepage Relief Wells | U | | Toe drainage systems or pressure relief wells have observable issues that would indicate that they wouldn't function properly in the next event. Maintenance records are be available. Cracks were observed between the ditch and well or in the ditch. The system is in disrepair and the well is operating at less than 80% efficiency. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Underseepage Relief Wells | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Design & System Obsolescence |
| Concrete Floodwalls | Vegetation | A | | No vegetation blocking visibility or access was along the floodwall or within the easement observed. | Maintenance Deficiency | Maintenance Deficiency |
| Concrete Floodwalls | Vegetation | M | | Vegetation blocking visibility or access along the floodwall or within the easement was observed but will not inhibit operations and maintenance or emergency operations. | Maintenance Deficiency | Maintenance Deficiency |
| Concrete Floodwalls | Vegetation | U | | Vegetation along the floodwall or within the easement was observed that may inhibit operations and maintenance or emergency operations. | Maintenance Deficiency | Maintenance Deficiency |
| Concrete Floodwalls | Vegetation | C | | The deficiency noted previously has been corrected. | Maintenance Deficiency | Maintenance Deficiency |

## Table G-2: Channel Inspection Rating Categories

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Channels | Concrete Foundations | A | | No scouring / erosion or undermining near the channel. | Maintenance Deficiency | Design & System Obsolescence, Enforcement |
| Channels | Concrete Foundations | M | | Scouring / erosion near the footing of the structure but not close enough to affect channel integrity or capacity during the next flood. | Maintenance Deficiency | Design & System Obsolescence, Enforcement |
| Channels | Concrete Foundations | U | | Scouring or undermining at the foundation that threaten the channel's integrity and capacity. | Maintenance Deficiency | Design & System Obsolescence, Enforcement |
| Channels | Concrete Surfaces | A | | Negligible spalling, scaling or cracking. If the concrete surface is weathered, rough to the touch or holds moisture, it is still satisfactory but should be seal coated to prevent freeze / thaw damage. | Maintenance Deficiency | Enforcement |
| Channels | Concrete Surfaces | M | | Spalling, scaling, and open cracking present, but the immediate integrity or capacity of the channel is not threatened. Reinforcing steel may be exposed. Repairs / sealing is necessary to prevent additional damage during periods of thawing and freeze. | Maintenance Deficiency | Enforcement |
| Channels | Concrete Surfaces | U | | Surface deterioration or deep cracks present that result in an threaten the channel's integrity and capacity. | Maintenance Deficiency | Enforcement |
| Channels | Concrete Tilting / Settlement | A | | There are no significant areas of tilting, sliding or settlement that would endanger the integrity of the project. | Maintenance Deficiency | Design & System Obsolescence, Enforcement |
| Channels | Concrete Tilting / Settlement | M | | There are areas of tilting, sliding or settlement (either active or inactive) that need to be repaired. The integrity and capacity of the channel is not affected. | Maintenance Deficiency | Design & System Obsolescence, Enforcement |
| Channels | Concrete Tilting / Settlement | U | | There are areas of tilting, sliding or settlement (either active or inactive) that threaten the channel's integrity and capacity. | Maintenance Deficiency | Design & System Obsolescence, Enforcement |
| Channels | Encroachments | A | | No trash, debris, excavation, structures, or other obstructions present within the easement. Encroachments which do not diminish proper functioning of the project have been previously approved by the Central Valley Flood Protection Board. | Maintenance Deficiency | Enforcement |
| Channels | Encroachments | M | | Trash, debris, excavations, structures, or other obstructions present, or inappropriate activities that will not inhibit project operations and maintenance or emergency operations were observed. Encroachments have been approved by the Central Valley Flood Protection Board. | Maintenance Deficiency | Enforcement |
| Channels | Encroachments | U | | Trash, debris, excavation, structures, or other obstructions present, or inappropriate activities that will inhibit project operations and maintenance or emergency operation were observed. | Maintenance Deficiency | Enforcement |
| Channels | Erosion / Bank Caving | A | | No erosion encroaching into the channel bank that would endanger the capacity of the channel was observed. | Maintenance Deficiency | Design & System Obsolescence, Enforcement |
| Channels | Erosion / Bank Caving | M | | Erosion encroaching into the channel bank less than 1 foot into the designed grade or cross section was observed. | Maintenance Deficiency | Design & System Obsolescence, Enforcement |
| Channels | Erosion / Bank Caving | U | | Erosion encroaching into the channel bank more than 1 foot into the designed grade or cross section was observed. Corrective actions required to stop or slow erosion. | Maintenance Deficiency | Design & System Obsolescence, Enforcement |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Channels | Gates | A | | Gates open and close easily with minimal leakage. Gates show no corrosion damage and have been maintained. | Maintenance Deficiency | Enforcement |
| Channels | Gates | M | | Gates will not fully open or close because of obstructions that can be easily removed or have corrosion damage. Gate operators may need lubrication or other maintenance but do not threaten the integrity of capacity of the channel. | Maintenance Deficiency | Enforcement |
| Channels | Gates | U | | Gate is missing, has been damaged or has deteriorated and needs repair. Gate will not prevent flow from the channel toward the landside. | Maintenance Deficiency | Enforcement |
| Channels | Revetments | A | | Existing riprap protection is properly maintained and is undamaged. Riprap clearly visible. | Maintenance Deficiency | Maintenance Deficiency, Enforcement |
| Channels | Revetments | M | | Riprap displacement or scouring activity that could undercut banks, erode embankments, or restrict desired flow was observed, but the integrity and capacity of the channel is not affected. Unwanted vegetation must be cleared and sprayed with an appropriate herbicide. | Maintenance Deficiency | Enforcement |
| Channels | Revetments | U | | Dense brush, trees, or grasses hide the rock protection, or meandering and/or scour activity is undercutting banks, eroding embankments, or impairing channel flows by causing turbulence or shoaling. Cavities may exist under the revetment. | Maintenance Deficiency | Enforcement |
| Channels | Revetments | N | | There is no revetment at this location and is not needed. | Maintenance Deficiency | Enforcement |
| Channels | Shoaling / Sedimentation | A | | No shoaling or sedimentation present. | Maintenance Deficiency | Maintenance Deficiency |
| Channels | Shoaling / Sedimentation | M | | Non-aquatic grasses present on shoal. No trees or brush is present on shoal, and channel flow is not impeded. | Maintenance Deficiency | Maintenance Deficiency |
| Channels | Shoaling / Sedimentation | U | | Shoaling is well established, stabilized by trees, brush or other vegetation. Shoals are diverting flow to channel bank causing bank erosion and undercutting. | Maintenance Deficiency | Maintenance Deficiency |
| Channels | Vegetation & Obstructions | A | | Minimal, scattered obstructions or vegetation. The flow is not impeded. | Maintenance Deficiency | Maintenance Deficiency |
| Channels | Vegetation & Obstructions | M | | Log jams, snags, vegetation growth (such as cat tails, bull rushes, bushes or saplings) or other obstructions block approximately 25% of the capacity. | Maintenance Deficiency | Maintenance Deficiency |
| Channels | Vegetation & Obstructions | U | | Log jams, snags, vegetation growth (such as cat tails, bull rushes, bushes or saplings) or other obstructions block approximately 50% of the capacity. | Maintenance Deficiency | Maintenance Deficiency |

## Table G-3: Structure Rating Categories

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Structures | Closure Structures | A | | Closure structures for lower areas of floodwall or levee are in good repair. Placing equipment, stoplogs, and other materials are readily available at all times. Components of closure clearly marked and installation instructions / procedures readily available. Trial erections have been accomplished in accordance with the O&M manual. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Closure Structures | U | | Closure structures for lower areas of floodwall or levee in poor condition. Parts missing or corroded. Placing equipment may not be available within normal warning time. Trial erections have not been accomplished in accordance with the O&M manual. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Closure Structures | N | | This structure does not have a closure structure. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Concrete Foundations | A | | No scouring / erosion or undermining near the structure. | Maintenance Deficiency | Design & System Obsolescence |
| Structures | Concrete Foundations | M | | Scouring / erosion near the footing of the structure but not close enough to affect structure stability during the next flood. | Maintenance Deficiency | Design & System Obsolescence |
| Structures | Concrete Foundations | U | | Scouring or undermining at the foundation that has affected structural integrity. | Maintenance Deficiency | Design & System Obsolescence |
| Structures | Concrete Foundations | N | | There are no concrete foundations at this structure. | Maintenance Deficiency | Design & System Obsolescence |
| Structures | Concrete Surfaces | A | | Negligible spalling, scaling or cracking. If the concrete surface is weathered, rough to the touch or holds moisture, it is still satisfactory but should be seal coated to prevent freeze / thaw damage. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Concrete Surfaces | M | | Spalling, scaling, and open cracking present, but the immediate integrity or performance of the structure is not threatened. Reinforcing steel may be exposed. Repairs / sealing is necessary to prevent additional damage during periods of thawing and freeze. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Concrete Surfaces | U | | Surface deterioration or deep cracks present that result in an threaten the integrity of the structure. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Concrete Surfaces | N | | There are no concrete surfaces on this structure. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Concrete Tilting / Settlement | A | | There are no significant areas of tilting, sliding or settlement that would endanger the integrity of the project. | Maintenance Deficiency | Design & System Obsolescence |
| Structures | Concrete Tilting / Settlement | M | | There are areas of tilting, sliding or settlement (either active or inactive) that need to be repaired. The integrity of the structure is not in danger. | Maintenance Deficiency | Design & System Obsolescence |
| Structures | Concrete Tilting / Settlement | U | | There are areas of tilting, sliding or settlement (either active or inactive) that threaten the structure's integrity and performance. | Maintenance Deficiency | Design & System Obsolescence |
| Structures | Concrete Tilting / Settlement | N | | There is no concrete at this structure. | Maintenance Deficiency | Design & System Obsolescence |
| Structures | Culverts: Breaks / Holes / Cracks | A | | There are no breaks, holes, cracks in the culvert that would result in significant water leakage. Pipes are in good condition or have been relined with appropriate material, which is still in good condition. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Culverts: Breaks / Holes / Cracks | M | | There are breaks, holes, cracks in the culvert that would result in water leakage and need to be repaired, but do not threaten the integrity of the project. Pipes may showing deterioration but do not threaten the integrity of the project. | Maintenance Deficiency | Maintenance Deficiency |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Structures | Culverts: Breaks / Holes / Cracks | U | | Culvert has deterioration and/or has significant leakage such that it threatens the integrity of the project. Pipes are in danger of collapsing or have already begun to collapse. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Culverts: Breaks / Holes / Cracks | N | | There are no culverts at this structure that were able to be inspected. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Culverts: Inlets / Outlets | A | | There is little or no debris, sediment or vegetation blocking the culverts, inlets, sump or discharge areas. The channel capacity for designed flow is not affected. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Culverts: Inlets / Outlets | M | | Debris, sediment or vegetation blocks less than 10% of the culvert opening, but must be removed. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Culverts: Inlets / Outlets | U | | Accumulated debris, sediment or vegetation blocks more than 10% of the culvert opening, impairing the culvert's capacity and hydraulic effectiveness. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Culverts: Inlets / Outlets | N | | There are no culverts at this structure that were able to be inspected. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Electric Gate Operators | A | | All electric gate operators are in good working condition and are adequately powered, and are capable of opening and closing the gate properly. Preventative maintenance is being performed and the system is tested periodically. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Electric Gate Operators | M | | All electric gate operators are operational with minor deficiencies, but should perform through the next period of usage. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Electric Gate Operators | U | | The electric gate operators are not operational, or the power source is not considered reliable to sustain operations during flood conditions. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Electric Gate Operators | N | | No electric gate operators exist on this structure. Gates are only opened manually or do not exist at this structure. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Encroachments | A | | No trash, debris, excavation, structures, or other obstructions present within the easement. Encroachments which do not diminish proper functioning of the project have been previously approved by the Central Valley Flood Protection Board. | Maintenance Deficiency | Enforcement |
| Structures | Encroachments | M | | Trash, debris, excavations, structures, or other obstructions present, or inappropriate activities that will not inhibit project operations and maintenance or emergency operations were observed. Encroachments have been approved by the Central Valley Flood Protection Board. | Maintenance Deficiency | Enforcement |
| Structures | Encroachments | U | | Trash, debris, excavation, structures, or other obstructions present, or inappropriate activities that will inhibit project operations and maintenance or emergency operation were observed. | Maintenance Deficiency | Enforcement |
| Structures | Erosion / Bank Caving | A | | No active erosion or bank caving observed on the landward or on the waterside of the levee / channel. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Erosion / Bank Caving | M | | There are areas where active erosion is occurring or has occurred on or near the levee / bank, but project integrity is not threatened. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Erosion / Bank Caving | U | | Erosion or caving is occurring or has occurred that threatens the stability and integrity of the project. The erosion or caving has compromised project integrity. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Flap Gates | A | | Flap gates open and close easily with minimal leakage. Gates show no corrosion damage and have been maintained. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Flap Gates | M | | Gates will not fully open or close because of obstructions that can be easily removed or have corrosion damage that requires maintenance. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Flap Gates | U | | Gate is missing, has been damaged or has deteriorated and needs repair. Gate will not prevent flow from the channel toward the landside. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Flap Gates | N | | There are no flap gates on this structure that were able to be inspected and are not needed to ensure water does not flow from the channel toward the landside. | Maintenance Deficiency | Maintenance Deficiency |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Structures | Manual Gate Operators | A | | All manual gate operators are in good working condition and are capable of opening and closing the gate properly. Preventative maintenance is being performed and the system is tested periodically. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Manual Gate Operators | M | | Manual gate operators are operational with minor deficiencies, but should perform through the next period of usage. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Manual Gate Operators | U | | Manual gate operators are not operational. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Manual Gate Operators | N | | There are no sluice/slide gates on this structure. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Metal Pipes | A | | There are no breaks, holes, cracks in the culvert that would result in significant water leakage. Metal pipes are in good condition or have been relined with appropriate material, which is still in good condition. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Metal Pipes | M | | There are breaks, holes, cracks in the pipe that would result in water leakage and need to be repaired, but do not threaten the integrity of the project. Pipes may showing deterioration but do not threaten the integrity of the project. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Metal Pipes | U | | Pipe has deterioration and/or has significant leakage such that it threatens the integrity of the structure. Pipes are in danger of collapsing or have already begun to collapse. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Metal Pipes | N | | There are no pipes at this structure that were able to be inspected. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Monolith Joints | A | | The monolith joint material is in good condition. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Monolith Joints | M | | The monolith joint material is deteriorating and needs to be repaired or replaced to prevent spalling and cracking during freeze / thaw cycles. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Monolith Joints | U | | The monolith joint material is severely deteriorated and the concrete has spalled and cracked, damaging the water stop to the point where it will not provide the intended level of protection during a flood. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Monolith Joints | N | | There are no monolith joints at this structure. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Other Metallic Items | A | | All metal parts are protected from corrosion damage, and show no rust or deterioration that would cause a safety concern. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Other Metallic Items | M | | Corrosion seen on metallic parts (except equipment anchors) appears maintainable. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Other Metallic Items | U | | Metallic parts are severely corroded and require replacement to prevent failure, equipment damage, or safety issues. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Other Metallic Items | N | | There are no metallic parts at this structure. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Revetments | A | | Existing riprap protection is properly maintained and is undamaged. Riprap clearly visible. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Revetments | M | | No riprap displacement or scouring activity that could undercut banks, erode embankments, or restrict desired flow. Unwanted vegetation must be cleared and sprayed with an appropriate herbicide. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Revetments | U | | Dense brush, trees, or grasses hide the rock protection, or meandering and/or scour activity is undercutting banks, eroding embankments, or impairing channel flows by causing turbulence or shoaling. Cavities may exist under the revetment. | Maintenance Deficiency | Maintenance Deficiency |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Structures | Revetments | N | | There is no revetment at this location and is not needed. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Safety | A | | No exhaust leaks in building. Fuel storage/distribution meets state/local requirement. Fire extinguishers on hand, of sufficient quantity, and properly charged. Safety hardware installed. Required safety items used (hearing, eyes, etc.). | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Safety | M | | Minor safety hazards are present, but do not pose an immediate threat to the pumping plant or personnel at the plant. Corrections should be made prior to the next annual inspection. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Safety | U | | Safety issues exist that could cause injury or loss of life. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Security Fencing | A | | Safety / security fencing is good condition and provides protection against falling or unauthorized access. Gates open and close freely, locks are in place, and there is little corrosion on metal parts. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Security Fencing | M | | Safety / security fencing or gates are damaged or corroded but appear to be maintainable. Locks may be missing or damaged. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Security Fencing | U | | Safety / security fencing and gates are damaged or corroded to the point that replacement is required, or potentially dangerous project features are not secured. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Security Fencing | N | | No safety / security fencing or gates exist or are needed. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Shoaling / Sedimentation | A | | No shoaling or sedimentation present. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Shoaling / Sedimentation | M | | Non-aquatic grasses present on shoal. No trees or brush are present on shoal, and structure operation and channel flows are not impeded. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Shoaling / Sedimentation | U | | Shoaling is well established, stabilized by trees, brush or other vegetation. Shoals are obstructing structure operation or diverting flow to channel bank causing bank erosion and undercutting. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Sluice/Slide Gates | A | | Gates open and close freely with minor leakage. Sill is free of sediment and other obstructions. Gates and lifters have been maintained. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Sluice/Slide Gates | M | | Gates have been damaged or have deteriorated, and open and close with resistance or binding. Leakage quantity is controllable and is not a threat to project performance. Maintenance is required. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Sluice/Slide Gates | U | | Gates do not open or close. Gate, stem, lifter and/or guides are damaged or corroded. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Sluice/Slide Gates | N | | There are no sluice / slide gates on this structure and are not needed to ensure water does not flow from the channel toward the landside. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Trash Racks | A | | Trash racks are fastened in place and properly maintained. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Trash Racks | M | | Trash racks are in place but are unfastened or have bent bars that allow debris to enter into the pipe or pump station. Repair or replacement is required. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Trash Racks | U | | Trash rack is missing, damaged or not operational, or deficiencies will inhibit operations during the next flood event. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Trash Racks | N | | There are no trash racks that were able to be inspected at this structure. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Trash Rakes | A | | Drive chain, bearings, gear reducers, and other components are in good operating condition and are being properly maintained. | Maintenance Deficiency | Maintenance Deficiency |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Structures | Trash Rakes | M | | The trash rake is in need of maintenance, but is still operational. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Trash Rakes | U | | Trash rake is not operational or deficiencies will inhibit operations during the next flood event. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Trash Rakes | N | | There are no trash rakes at the structure. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Vegetation & Obstructions | A | | Minimal, scattered obstructions or vegetation. The flow is not impeded. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Vegetation & Obstructions | M | | Log jams, snags, vegetation growth (such as cat tails, bull rushes, bushes or saplings) or other obstructions block approximately 25% of the capacity. | Maintenance Deficiency | Maintenance Deficiency |
| Structures | Vegetation & Obstructions | U | | Log jams, snags, vegetation growth (such as cat tails, bull rushes, bushes or saplings) or other obstructions block approximately 50% of the capacity. | Maintenance Deficiency | Maintenance Deficiency |

## Table G-4: Pump Station Rating Categories

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Pump Stations | Closure Structures | A | | Closure structures for lower areas of floodwall or levee are in good repair. Placing equipment, stoplogs, and other materials are readily available at all times. Components of closure clearly marked and installation instructions / procedures readily available. Trial erections have been accomplished in accordance with the O&M manual. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Closure Structures | U | | Closure structure for lower areas of floodwall or levee in poor condition. Parts missing or corroded. Placing equipment may not be available within normal warning time. Trial erections have not been accomplished in accordance with the O&M manual. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Closure Structures | N | | This plant does not have a closure structure. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Communications | A | | Telephone, cellular telephone, two-way radio, or similar device is available to pumping plant operator or maintenance personnel. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Communications | U | | Pumping plant operator or maintenance personnel required to leave the plant and drive to access communications. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Cranes | A | | Crane operational, and has been inspected and load tested in accordance with OSHA requirements. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Cranes | M | | Crane has not been inspected or operationally tested within the past year, or there are visible signs of corrosion, oil leakage, etc., requiring maintenance. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Cranes | U | | Crane not operational, or tagged out of service. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Cranes | N | | There is no crane is located at this station. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Electric Gate Operators | A | | All electric gate operators are in good working condition and are adequately powered, and are capable of opening and closing the gate properly. Preventative maintenance is being performed and the system is tested periodically. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Electric Gate Operators | M | | All electric gate operators are operational with minor deficiencies, but should perform through the next period of usage. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Electric Gate Operators | U | | The electric gate operators are not operational, or the power source is not considered reliable to sustain operations during flood conditions. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Electric Gate Operators | N | | No electric gate operators exist on this plant. Gates are only opened manually or do not exist at this plant. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Flap Gates | A | | Flap gates open and close easily with minimal leakage. Gates show no corrosion damage and have been maintained. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Flap Gates | M | | Gates will not fully open or close because of obstructions that can be easily removed or have corrosion damage that requires maintenance. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Flap Gates | U | | Gate is missing, has been damaged or has deteriorated and needs repair. Gate will not prevent flow from the channel toward the landside. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Flap Gates | N | | There are no flap gates on this plant and are not needed to ensure water does not flow from the channel toward the landside. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Intake and Discharge Pipes | A | | There are no breaks, holes, corrosion or cracks in the pipe that would result in significant water leakage. The pipe shape is essentially circular. All joints appear to be closed and the soil tight. | Maintenance Deficiency | Maintenance Deficiency |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Pump Stations | Intake and Discharge Pipes | M | | Pipe is not leaking significantly but shows signs of corrosion, deformation, or joint damage and requires maintenance. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Intake and Discharge Pipes | U | | Pipe has deterioration and/or leakage. Immediate repair or replacement required. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Manual Gate Operators | A | | All manual gate operators are in good working condition and are capable of opening and closing the gate properly. Preventative maintenance is being performed and the system is tested periodically. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Manual Gate Operators | M | | Manual gate operators are operational with minor deficiencies, but should perform through the next period of usage. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Manual Gate Operators | U | | Manual gate operators are not operational. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Manual Gate Operators | N | | There are no sluice/slide gates on this plant. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Motors, Engines, Fans & Gear Reducers | A | | All items are operational. Preventive maintenance and lubrication is being performed and the system is periodically subjected to performance testing. Instrumentation, alarms, and auto shutdowns are operational. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Motors, Engines, Fans & Gear Reducers | M | | Systems have minor deficiencies, but are operational and will function adequately through the next flood. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Motors, Engines, Fans & Gear Reducers | U | | One or more primary motors or systems are not operational. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Motors, Engines, Fans & Gear Reducers | N | | There are no motors or auxiliary mechanical equipment as part of this station. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Operating Log | A | | Operation and Maintenance log is present at the pumping plant and is being used and updated. Personnel have been trained in pumping plant operations. Names and last training date shown in the log book. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Operating Log | U | | No operating log present, or refresher training for personnel has not been conducted. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Operation & Maintenance Manual | A | | Operation and Maintenance (O&M) Manual and/or posted operating instructions are present and adequately covers all pertinent pumping plant features. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Operation & Maintenance Manual | U | | Operation and Maintenance (O&M) Manual and/or posted operating instructions are missing or sponsor is unsure of location. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Other Metallic Items | A | | All metal parts are protected from corrosion damage, and show no rust or deterioration that would cause a safety concern. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Other Metallic Items | M | | Corrosion seen on metallic parts (except equipment anchors) appears maintainable. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Other Metallic Items | U | | Metallic parts are severely corroded and require replacement to prevent failure, equipment damage, or safety issues. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Other Metallic Items | N | | There are no metallic parts at this plant other than pumps and associated pressure pipes. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Plant Building | A | | Plant structure is in good structural condition with no major cracks in concrete or brick. The roof is not leaking, exhaust fans are operational, there are no exposed electrical components, and the working environment is safe. | Maintenance Deficiency | Design & System Obsolescence |
| Pump Stations | Plant Building | M | | There is significant cracking in the building structure, or the building is damaged in other ways such that it needs repair but does not threaten pumping operations. | Maintenance Deficiency | Design & System Obsolescence |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Pump Stations | Plant Building | U | | The structural integrity or stability of the structure is threatened, or there is other damage to the building such that pumping operations can not be performed as intended. | Maintenance Deficiency | Design & System Obsolescence |
| Pump Stations | Power | A | | The power source is adequate, safe, and reliable. Backup generators are on hand or there is a reliable backup power plan in place. Backup units are properly sized, operational, periodically exercised, and properly maintained. | Maintenance Deficiency | Design & System Obsolescence |
| Pump Stations | Power | U | | Power source not considered safe or reliable to sustain operations during flood conditions. | Maintenance Deficiency | Design & System Obsolescence |
| Pump Stations | Power | N | | Pumping plant does not need electricity to operate. Pumping capacity can be maintained without power. | Maintenance Deficiency | Design & System Obsolescence |
| Pump Stations | Pump Control Systems | A | | Operational and maintained free of damage, corrosion, or other debris. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Pump Control Systems | M | | Operational with minor discrepancies. Will function adequately during the next flood event. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Pump Control Systems | U | | Pump controls not operational. May not function adequately during the next flood season. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Pumps | A | | All pumps appear to be properly maintained and lubricated. System is periodically tested. There is no evidence of cavitation, vibration, or unusual sounds. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Pumps | M | | Minor deficiencies exist which need to be closely monitored or repaired, such as the presence of minor vibrations or the corrosion of the pump shaft housing. However the pumps are operational and are expected to perform through the next expected period of usage. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Pumps | U | | One or more of the pumps are not operational, or the pump capacity has degraded to the point where project performance is in question. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Safety | A | | No exhaust leaks in building. Fuel storage/distribution meets state/local requirement. Fire extinguishers on hand, of sufficient quantity, and properly charged. Safety hardware installed. Required safety items used (hearing, eyes, etc.). | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Safety | M | | Minor safety hazards are present, but do not pose an immediate threat to the pumping plant or personnel at the plant. Corrections should be made prior to the next annual inspection. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Safety | U | | Safety issues exist that could cause injury or loss of life. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Security Fencing | A | | Safety / security fencing is good condition and provides protection against falling or unauthorized access. Gates open and close freely, locks are in place, and there is little corrosion on metal parts. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Security Fencing | M | | Safety / security fencing or gates are damaged or corroded but appear to be maintainable. Locks may be missing or damaged. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Security Fencing | U | | Safety / security fencing and gates are damaged or corroded to the point that replacement is required, or potentially dangerous project features are not secured. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Security Fencing | N | | No safety / security fencing or gates exist or are needed. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Sluice / Slide Gates | A | | Gates open and close freely with minor leakage. Sill is free of sediment and other obstructions. Gates and lifters have been maintained. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Sluice / Slide Gates | M | | Gates have been damaged or have deteriorated, and open and close with resistance or binding. Leakage quantity is controllable and is not a threat to project performance. Maintenance is required. | Maintenance Deficiency | Maintenance Deficiency |

| Category | Item | Rating | Comment Code | Rating Description | Default Issue Type | Alternate Issue Type |
|---|---|---|---|---|---|---|
| Pump Stations | Sluice / Slide Gates | U | | Gates do not open or close. Gate, stem, lifter and/or guides are damaged or corroded. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Sluice / Slide Gates | N | | There are no sluice / slide gates on this plant and are not needed to ensure water does not flow from the channel toward the landside. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Sumps/Wet Well | A | | Sumps / Wet wells are clear of excessive debris, sediment, or other obstructions. Procedures are in place to move debris accumulation during operation. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Sumps/Wet Well | M | | Debris, sediment, or other obstructions are present and must be removed, but the sump/wet well will function as intended during the next flood event. Procedures are in place to remove debris accumulation during operation. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Sumps/Wet Well | U | | Large debris or excessive silt present which will hinder or damage pumps during operation, or no procedures have been established to remove debris accumulation during operation. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Trash Racks | A | | Trash racks are fastened in place and properly maintained. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Trash Racks | M | | Trash racks are in place but are unfastened or have bent bars that allow debris to enter into the pipe or pump station. Repair or replacement is required. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Trash Racks | U | | Trash rack is missing, damaged or not operational, or deficiencies will inhibit operations during the next flood event. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Trash Rakes | A | | Drive chain, bearings, gear reducers, and other components are in good operating condition and are being properly maintained. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Trash Rakes | M | | The trash rake is in need of maintenance, but is still operational. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Trash Rakes | U | | Trash rake is not operational or deficiencies will inhibit operations during the next flood event. | Maintenance Deficiency | Maintenance Deficiency |
| Pump Stations | Trash Rakes | N | | There are no trash rakes for this pumping plant. | Maintenance Deficiency | Maintenance Deficiency |

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin*

| LD0001G | Total LMA Miles | 12.45 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Levee District No. 0001 (Glenn County) | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | M | | Overall LMA Rating | | A | | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.45 | | 0.45 | **3.61** | 0.06 | | 0.06 | **0.48** | -0.39 | | -0.39 | **-3.13** |
| Trim / Thin Trees | 0.11 | | 0.11 | **0.88** | 0.11 | | 0.11 | **0.88** | | | | **0.00** |
| Encroachments | 0.31 | | 0.31 | **2.49** | 0.05 | | 0.05 | **0.40** | -0.26 | | -0.26 | **-2.09** |
| Animal Control | 0.34 | | 0.34 | **2.73** | 0.23 | | 0.23 | **1.85** | -0.11 | | -0.11 | **-0.88** |
| Erosion / Bank Caving | | 0.01 | 0.04 | **0.32** | | | | | | -0.01 | -0.04 | **-0.32** |
| *LMA Totals:* | 1.21 | 0.01 | 1.25 | **10.04** | 0.45 | 0.00 | 0.45 | **3.61** | -0.76 | -0.01 | -0.80 | **-6.43** |

| LD0001S | Total LMA Miles | 16.65 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Levee District No. 0001 (Sutter County) | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | A | | Overall LMA Rating | | A | | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Encroachments | 0.01 | | 0.01 | **0.06** | | | | | -0.01 | | -0.01 | **-0.06** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Metal Pipes | 0.01 | | 0.01 | **0.06** | 0.01 | | 0.01 | **0.06** | | | | **0.00** |
| *LMA Totals:* | 0.02 | 0.00 | 0.02 | **0.12** | 0.01 | 0.00 | 0.01 | **0.06** | -0.01 | 0.00 | -0.01 | **-0.06** |

| LD0002 | Total LMA Miles | 4.89 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Levee District No. 0002 (Glenn County) | Fall 2011 | | | | Fall 2012 | | | | Change | | | |
| | Overall LMA Rating | | A | | Overall LMA Rating | | A | | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.01 | | 0.01 | **0.20** | | | | | -0.01 | | -0.01 | **-0.20** |
| Animal Control | 0.16 | | 0.16 | **3.27** | 0.25 | | 0.25 | **5.11** | 0.09 | | 0.09 | **1.84** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.20** | 0.01 | | 0.01 | **0.20** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.20** | 0.01 | | 0.01 | **0.20** | | | | **0.00** |
| *LMA Totals:* | 0.18 | 0.00 | 0.18 | **3.68** | 0.27 | 0.00 | 0.27 | **5.52** | 0.09 | 0.00 | 0.09 | **1.84** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| LD0003 | Total LMA Miles | 12.24 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Levee District No. 0003 (Glenn County)** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Trim / Thin Trees | 0.32 | | 0.32 | **2.61** | 0.19 | | 0.19 | **1.55** | -0.13 | | -0.13 | **-1.06** |
| Encroachments | 0.24 | | 0.24 | **1.96** | 0.20 | | 0.20 | **1.63** | -0.04 | | -0.04 | **-0.33** |
| Animal Control | 2.17 | | 2.17 | **17.73** | 1.79 | | 1.79 | **14.62** | -0.38 | | -0.38 | **-3.11** |
| Slope Stability | 0.04 | | 0.04 | **0.33** | 0.06 | | 0.06 | **0.49** | 0.02 | | 0.02 | **0.16** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.08** | | | | | -0.01 | | -0.01 | **-0.08** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.54 | | 0.54 | **4.41** | 0.03 | | 0.03 | **0.25** | -0.51 | | -0.51 | **-4.17** |
| *LMA Totals:* | 3.32 | 0.00 | 3.32 | **27.12** | 2.27 | 0.00 | 2.27 | **18.55** | -1.05 | 0.00 | -1.05 | **-8.58** |

| LD0009 | Total LMA Miles | 6.24 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Levee District No. 0009 (Sutter County)** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Encroachments | 0.01 | | 0.01 | **0.16** | 0.02 | | 0.02 | **0.32** | 0.01 | | 0.01 | **0.16** |
| Animal Control | 0.01 | | 0.01 | **0.16** | | | | | -0.01 | | -0.01 | **-0.16** |
| *LMA Totals:* | 0.02 | 0.00 | 0.02 | **0.32** | 0.02 | 0.00 | 0.02 | **0.32** | 0.00 | 0.00 | 0.00 | **0.00** |

| MA0001 | Total LMA Miles | 17.12 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sutter Maintenance Yard Maintenance Area 0001** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.04 | | 0.04 | **0.23** | 0.04 | | 0.04 | **0.23** | | | | **0.00** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.06** | | | | | -0.01 | | -0.01 | **-0.06** |
| Encroachments | 0.01 | | 0.01 | **0.06** | | | | | -0.01 | | -0.01 | **-0.06** |
| Animal Control | 0.23 | | 0.23 | **1.34** | 0.08 | | 0.08 | **0.47** | -0.15 | | -0.15 | **-0.88** |
| Slope Stability | 0.01 | | 0.01 | **0.06** | | | | | -0.01 | | -0.01 | **-0.06** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.39 | | 0.39 | **2.28** | 0.66 | | 0.66 | **3.86** | 0.27 | | 0.27 | **1.58** |
| *LMA Totals:* | 0.69 | 0.00 | 0.69 | **4.03** | 0.78 | 0.00 | 0.78 | **4.56** | 0.09 | 0.00 | 0.09 | **0.53** |

| MA0003 | Total LMA Miles | 5.19 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sutter Maintenance Yard Maintenance Area 0003** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Slope Stability | 0.13 | | 0.13 | **2.51** | | | | | -0.13 | | -0.13 | **-2.51** |
| Crown Surface / Depressions / Rutting | 0.13 | | 0.13 | **2.51** | | | | | -0.13 | | -0.13 | **-2.51** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Sluice / Slide Gates | 0.01 | | 0.01 | **0.19** | 0.01 | | 0.01 | **0.19** | | | | **0.00** |
| *LMA Totals:* | 0.27 | 0.00 | 0.27 | **5.20** | 0.01 | 0.00 | 0.01 | **0.19** | -0.26 | 0.00 | -0.26 | **-5.01** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| MA0004 | Total LMA Miles | 3.40 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sacramento Maintenance Yard Maintenance Area 0004** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | A | | Overall LMA Rating | | A | | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.01 | | 0.01 | **0.29** | 0.01 | | 0.01 | **0.29** | | | | **0.00** |
| Trim / Thin Trees | 0.16 | | 0.16 | **4.71** | 0.16 | | 0.16 | **4.71** | | | | **0.00** |
| Animal Control | 0.04 | | 0.04 | **1.18** | 0.02 | | 0.02 | **0.59** | -0.02 | | -0.02 | **-0.59** |
| *LMA Totals:* | 0.21 | 0.00 | 0.21 | **6.18** | 0.19 | 0.00 | 0.19 | **5.59** | -0.02 | 0.00 | -0.02 | **-0.59** |

| MA0005 | Total LMA Miles | 33.32 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sutter Maintenance Yard Maintenance Area 0005** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | A | | Overall LMA Rating | | A | | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.02 | | 0.02 | **0.06** | 0.02 | | 0.02 | **0.06** | | | | **0.00** |
| Encroachments | 0.10 | | 0.10 | **0.30** | 0.09 | | 0.09 | **0.27** | -0.01 | | -0.01 | **-0.03** |
| Animal Control | 0.01 | | 0.01 | **0.03** | 0.01 | | 0.01 | **0.03** | | | | **0.00** |
| Slope Stability | 0.01 | | 0.01 | **0.03** | 0.05 | | 0.05 | **0.15** | 0.04 | | 0.04 | **0.12** |
| Repair Gates | 0.02 | | 0.02 | **0.06** | 0.02 | | 0.02 | **0.06** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.03** | | | | | -0.01 | | -0.01 | **-0.03** |
| *LMA Totals:* | 0.17 | 0.00 | 0.17 | **0.51** | 0.19 | 0.00 | 0.19 | **0.57** | 0.02 | 0.00 | 0.02 | **0.06** |

| MA0007 | Total LMA Miles | 12.07 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sutter Maintenance Yard Maintenance Area 0007** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | A | | Overall LMA Rating | | A | | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Encroachments | 0.04 | | 0.04 | **0.33** | | | | | -0.04 | | -0.04 | **-0.33** |
| Slope Stability | 0.38 | | 0.38 | **3.15** | 0.36 | | 0.36 | **2.98** | -0.02 | | -0.02 | **-0.17** |
| Erosion / Bank Caving | 0.04 | | 0.04 | **0.33** | | | | | -0.04 | | -0.04 | **-0.33** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.08** | 0.02 | | 0.02 | **0.17** | 0.01 | | 0.01 | **0.08** |
| *LMA Totals:* | 0.47 | 0.00 | 0.47 | **3.89** | 0.38 | 0.00 | 0.38 | **3.15** | -0.09 | 0.00 | -0.09 | **-0.75** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| MA0009 | Total LMA Miles | 19.61 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sacramento Maintenance Yard Maintenance Area 0009** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.76 | | 0.76 | **3.88** | 0.01 | | 0.01 | **0.05** | -0.75 | | -0.75 | **-3.83** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.05** | 0.01 | | 0.01 | **0.05** | | | | **0.00** |
| Encroachments | 1.82 | | 1.82 | **9.28** | 0.01 | | 0.01 | **0.05** | -1.81 | | -1.81 | **-9.23** |
| Animal Control | 0.01 | | 0.01 | **0.05** | | | | | -0.01 | | -0.01 | **-0.05** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.59 | | 0.59 | **3.01** | 0.30 | | 0.30 | **1.53** | -0.29 | | -0.29 | **-1.48** |
| *LMA Totals:* | 3.19 | 0.00 | 3.19 | **16.27** | 0.33 | 0.00 | 0.33 | **1.68** | -2.86 | 0.00 | -2.86 | **-14.58** |

| MA0012 | Total LMA Miles | 11.31 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sutter Maintenance Yard Maintenance Area 0012** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Animal Control | 0.02 | | 0.02 | **0.18** | | | | | -0.02 | | -0.02 | **-0.18** |
| Slope Stability | 0.01 | | 0.01 | **0.09** | | | | | -0.01 | | -0.01 | **-0.09** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.09** | 0.01 | | 0.01 | **0.09** | | | | **0.00** |
| *LMA Totals:* | 0.04 | 0.00 | 0.04 | **0.35** | 0.01 | 0.00 | 0.01 | **0.09** | -0.03 | 0.00 | -0.03 | **-0.27** |

| MA0013 | Total LMA Miles | 41.97 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sutter Maintenance Yard Maintenance Area 0013** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Trim / Thin Trees | 0.03 | | 0.03 | **0.07** | 0.03 | | 0.03 | **0.07** | | | | **0.00** |
| Encroachments | 0.59 | | 0.59 | **1.41** | 0.59 | | 0.59 | **1.41** | | | | **0.00** |
| Animal Control | 0.03 | | 0.03 | **0.07** | | | | | -0.03 | | -0.03 | **-0.07** |
| Erosion / Bank Caving | 0.02 | | 0.02 | **0.05** | 0.02 | | 0.02 | **0.05** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.02** | 0.01 | | 0.01 | **0.02** | | | | **0.00** |
| *LMA Totals:* | 0.68 | 0.00 | 0.68 | **1.62** | 0.65 | 0.00 | 0.65 | **1.55** | -0.03 | 0.00 | -0.03 | **-0.07** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| MA0016 | Total LMA Miles | 4.09 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sutter Maintenance Yard Maintenance Area 0016** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M * | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Encroachments | 0.01 | | 0.01 | **0.24** | | | | | -0.01 | | -0.01 | **-0.24** |
| Animal Control | 0.02 | | 0.02 | **0.49** | | | | | -0.02 | | -0.02 | **-0.49** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Metal Pipes | | 0.01 | 0.04 | **0.98** | | | | | | -0.01 | -0.04 | **-0.98** |
| *LMA Totals:* | 0.03 | 0.01 | 0.07 | **1.71*** | 0.00 | 0.00 | 0.00 | **0.00** | -0.03 | -0.01 | -0.07 | **-1.71** |

| MA0017 | Total LMA Miles | 3.90 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sutter Maintenance Yard Maintenance Area 0017** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | 3.13 | 12.52 | **321.03** | | 3.13 | 12.52 | **321.03** | | | | **0.00** |
| Trim / Thin Trees | | 3.12 | 12.48 | **320.00** | | 3.12 | 12.48 | **320.00** | | | | **0.00** |
| *LMA Totals:* | 0.00 | 6.25 | 25.00 | **641.03** | 0.00 | 6.25 | 25.00 | **641.03** | 0.00 | 0.00 | 0.00 | **0.00** |

| NA0001 | Total LMA Miles | 32.51 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **American River Flood Control District** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.04 | | 0.04 | **0.12** | 0.06 | | 0.06 | **0.19** | 0.02 | | 0.02 | **0.06** |
| Encroachments | 0.31 | | 0.31 | **0.95** | 0.20 | | 0.20 | **0.62** | -0.11 | | -0.11 | **-0.34** |
| Animal Control | 0.27 | | 0.27 | **0.83** | 0.20 | | 0.20 | **0.62** | -0.07 | | -0.07 | **-0.22** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.03** | 0.01 | | 0.01 | **0.03** |
| Erosion / Bank Caving | 0.06 | | 0.06 | **0.19** | 0.03 | | 0.03 | **0.09** | -0.03 | | -0.03 | **-0.09** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.02 | | 0.02 | **0.06** | 0.01 | | 0.01 | **0.03** | -0.01 | | -0.01 | **-0.03** |
| *LMA Totals:* | 0.70 | 0.00 | 0.70 | **2.15** | 0.51 | 0.00 | 0.51 | **1.57** | -0.19 | 0.00 | -0.19 | **-0.58** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| NA0002 | Total LMA Miles | 19.32 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Brannan Andrus Levee Maintenance District** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.36 | 0.01 | 0.40 | **2.07** | 0.41 | | 0.41 | **2.12** | 0.05 | -0.01 | 0.01 | **0.05** |
| Trim / Thin Trees | 1.04 | | 1.04 | **5.38** | 0.61 | | 0.61 | **3.16** | -0.43 | | -0.43 | **-2.23** |
| Encroachments | 0.04 | | 0.04 | **0.21** | 0.03 | | 0.03 | **0.16** | -0.01 | | -0.01 | **-0.05** |
| Animal Control | 0.01 | | 0.01 | **0.05** | 0.01 | | 0.01 | **0.05** | | | | **0.00** |
| Flood Preparedness & Training | | | | | 0.19 | | 0.19 | **0.98** | 0.19 | | 0.19 | **0.98** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 1.08 | 0.25 | 2.08 | **10.77** | 0.60 | 0.50 | 2.60 | **13.46** | -0.48 | 0.25 | 0.52 | **2.69** |
| *LMA Totals:* | 2.53 | 0.26 | 3.57 | **18.48** | 1.85 | 0.50 | 3.85 | **19.93** | -0.68 | 0.24 | 0.28 | **1.45** |

| NA0003 | Total LMA Miles | 24.71 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Butte County Public Works Department Butte County Public Works** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Encroachments | 0.05 | | 0.05 | **0.20** | 0.05 | | 0.05 | **0.20** | | | | **0.00** |
| Animal Control | 0.04 | | 0.04 | **0.16** | | | | | -0.04 | | -0.04 | **-0.16** |
| Slope Stability | 0.01 | | 0.01 | **0.04** | 0.01 | | 0.01 | **0.04** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.04** | 0.05 | | 0.05 | **0.20** | 0.04 | | 0.04 | **0.16** |
| *LMA Totals:* | 0.11 | 0.00 | 0.11 | **0.45** | 0.11 | 0.00 | 0.11 | **0.45** | 0.00 | 0.00 | 0.00 | **0.00** |

| NA0004 | Total LMA Miles | 11.38 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Marysville Levee Commission** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Encroachments | | | | | 1.29 | | 1.29 | **11.34** | 1.29 | | 1.29 | **11.34** |
| Slope Stability | 0.01 | | 0.01 | **0.09** | | | | | -0.01 | | -0.01 | **-0.09** |
| *LMA Totals:* | 0.01 | 0.00 | 0.01 | **0.09** | 1.29 | 0.00 | 1.29 | **11.34** | 1.28 | 0.00 | 1.28 | **11.25** |

| NA0005 | Total LMA Miles | 3.63 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **City of Sacramento** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.15 | | 0.15 | **4.13** | 0.12 | | 0.12 | **3.31** | -0.03 | | -0.03 | **-0.83** |
| *LMA Totals:* | 0.15 | 0.00 | 0.15 | **4.13** | 0.12 | 0.00 | 0.12 | **3.31** | -0.03 | 0.00 | -0.03 | **-0.83** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| NA0006 | Total LMA Miles | 1.50 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Eastern Honcut Creek** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | U | | Overall LMA Rating | | U | | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 2.94 | | 2.94 | **196.00** | 2.94 | | 2.94 | **196.00** | | | | **0.00** |
| Crown Surface / Depressions / Rutting | 0.67 | | 0.67 | **44.67** | | | | | -0.67 | | -0.67 | **-44.67** |
| Operations & Maintenance Manuals | | | | | 0.02 | | 0.02 | **1.33** | 0.02 | | 0.02 | **1.33** |
| Flood Preparedness & Training | | | | | 0.02 | | 0.02 | **1.33** | 0.02 | | 0.02 | **1.33** |
| *LMA Totals:* | 3.61 | 0.00 | 3.61 | **240.67** | 2.97 | 0.00 | 2.97 | **198.00** | -0.64 | 0.00 | -0.63 | **-42.67** |

| NA0008 | Total LMA Miles | 12.57 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Knights Landing Ridge Drainage District** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | A | | Overall LMA Rating | | A | | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | 0.01 | | 0.01 | **0.08** | 0.01 | | 0.01 | **0.08** |
| Encroachments | 0.24 | | 0.24 | **1.91** | 0.24 | | 0.24 | **1.91** | | | | **0.00** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.08** | 0.01 | | 0.01 | **0.08** |
| Cracking | 0.01 | | 0.01 | **0.08** | 0.01 | | 0.01 | **0.08** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.07 | | 0.07 | **0.56** | 0.07 | | 0.07 | **0.56** | | | | **0.00** |
| *LMA Totals:* | 0.32 | 0.00 | 0.32 | **2.55** | 0.34 | 0.00 | 0.34 | **2.71** | 0.02 | 0.00 | 0.02 | **0.16** |

| NA0009 | Total LMA Miles | 10.47 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Lake County Watershed Protection District** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | A | | Overall LMA Rating | | A | | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.20 | | 0.20 | **1.91** | 0.27 | | 0.27 | **2.58** | 0.07 | | 0.07 | **0.67** |
| Trim / Thin Trees | 0.13 | | 0.13 | **1.24** | 0.13 | | 0.13 | **1.24** | | | | **0.00** |
| Encroachments | 0.04 | | 0.04 | **0.38** | 0.01 | | 0.01 | **0.10** | -0.03 | | -0.03 | **-0.29** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.10** | 0.01 | | 0.01 | **0.10** |
| *LMA Totals:* | 0.37 | 0.00 | 0.37 | **3.53** | 0.42 | 0.00 | 0.42 | **4.01** | 0.05 | 0.00 | 0.05 | **0.48** |

| NA0012 | Total LMA Miles | 0.59 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Solano County Public Works Mellin Levee** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | A | | Overall LMA Rating | | A | | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.01 | | 0.01 | **1.70** | 0.01 | | 0.01 | **1.70** | | | | **0.00** |
| Encroachments | 0.01 | | 0.01 | **1.70** | | | | | -0.01 | | -0.01 | **-1.70** |
| *LMA Totals:* | 0.02 | 0.00 | 0.02 | **3.39** | 0.01 | 0.00 | 0.01 | **1.70** | -0.01 | 0.00 | -0.01 | **-1.70** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| NA0014 | Total LMA Miles | 0.78 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Murphy Slough at M&T Ranch** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.70 | | 0.70 | **89.74** | 0.49 | | 0.49 | **62.82** | -0.21 | | -0.21 | **-26.92** |
| *LMA Totals:* | 0.70 | 0.00 | 0.70 | **89.74** | 0.49 | 0.00 | 0.49 | **62.82** | -0.21 | 0.00 | -0.21 | **-26.92** |

| NA0015 | Total LMA Miles | 3.22 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Plumas County** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | 1.20 | | 1.20 | **37.27** | 1.20 | | 1.20 | **37.27** |
| Encroachments | 0.01 | | 0.01 | **0.31** | | | | | -0.01 | | -0.01 | **-0.31** |
| Slope Stability | 0.04 | 0.16 | 0.68 | **21.12** | 0.04 | 0.16 | 0.68 | **21.12** | | | | **0.00** |
| *LMA Totals:* | 0.05 | 0.16 | 0.69 | **21.43** | 1.24 | 0.16 | 1.88 | **58.39** | 1.19 | 0.00 | 1.19 | **36.96** |

| NA0016 | Total LMA Miles | 50.21 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sacramento River West Side Levee District** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.21 | | 0.21 | **0.42** | | | | | -0.21 | | -0.21 | **-0.42** |
| Trim / Thin Trees | 0.02 | | 0.02 | **0.04** | 0.01 | | 0.01 | **0.02** | -0.01 | | -0.01 | **-0.02** |
| Encroachments | 0.06 | | 0.06 | **0.12** | 0.02 | | 0.02 | **0.04** | -0.04 | | -0.04 | **-0.08** |
| Animal Control | 0.04 | | 0.04 | **0.08** | | | | | -0.04 | | -0.04 | **-0.08** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 1.60 | | 1.60 | **3.19** | 0.26 | | 0.26 | **0.52** | -1.34 | | -1.34 | **-2.67** |
| *LMA Totals:* | 1.93 | 0.00 | 1.93 | **3.84** | 0.29 | 0.00 | 0.29 | **0.58** | -1.64 | 0.00 | -1.64 | **-3.27** |

| NA0018 | Total LMA Miles | 0.30 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **California Department of Fish and Game Shea Levee** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.09 | | 0.09 | **30.00** | 0.22 | | 0.22 | **73.33** | 0.13 | | 0.13 | **43.33** |
| Trim / Thin Trees | | | | | 0.14 | | 0.14 | **46.67** | 0.14 | | 0.14 | **46.67** |
| Flood Preparedness & Training | | | | | 0.00 | | | | 0.00 | | | **0.00** |
| *LMA Totals:* | 0.09 | 0.00 | 0.09 | **30.00** | 0.36 | 0.00 | 0.36 | **120.00** | 0.27 | 0.00 | 0.27 | **90.00** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| NA0019 | Total LMA Miles | 13.64 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Tehama County Flood Control and Water Conservation District** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.67 | | 0.67 | **4.91** | 1.40 | | 1.40 | **10.26** | 0.73 | | 0.73 | **5.35** |
| Encroachments | 0.18 | | 0.18 | **1.32** | 0.09 | | 0.09 | **0.66** | -0.09 | | -0.09 | **-0.66** |
| Animal Control | 0.03 | | 0.03 | **0.22** | 0.03 | | 0.03 | **0.22** | | | | **0.00** |
| Slope Stability | 0.30 | | 0.30 | **2.20** | 0.31 | | 0.31 | **2.27** | 0.01 | | 0.01 | **0.07** |
| Erosion / Bank Caving | 0.02 | | 0.02 | **0.15** | 0.01 | | 0.01 | **0.07** | -0.01 | | -0.01 | **-0.07** |
| Crown Surface / Depressions / Rutting | 0.22 | | 0.22 | **1.61** | | | | | -0.22 | | -0.22 | **-1.61** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.32 | | 0.32 | **2.35** | 0.16 | | 0.16 | **1.17** | -0.16 | | -0.16 | **-1.17** |
| *LMA Totals:* | 1.74 | 0.00 | 1.74 | **12.76** | 2.00 | 0.00 | 2.00 | **14.66** | 0.26 | 0.00 | 0.26 | **1.91** |

| NA0020 | Total LMA Miles | 4.76 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sutter Maintenance Yard East-West Interceptor** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 3.17 | | 3.17 | **66.60** | 3.88 | | 3.88 | **81.51** | 0.71 | | 0.71 | **14.92** |
| Encroachments | 0.27 | | 0.27 | **5.67** | 0.26 | | 0.26 | **5.46** | -0.01 | | -0.01 | **-0.21** |
| Erosion / Bank Caving | 0.43 | 0.03 | 0.55 | **11.55** | 0.61 | 0.03 | 0.73 | **15.34** | 0.18 | | 0.18 | **3.78** |
| *Channels* | | | | | | | | | | | | |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.21** | 0.01 | | 0.01 | **0.21** | | | | **0.00** |
| *LMA Totals:* | 3.88 | 0.03 | 4.00 | **84.03** | 4.76 | 0.03 | 4.88 | **102.52** | 0.88 | 0.00 | 0.88 | **18.49** |

| NA0021 | Total LMA Miles | 0.29 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Yolo County Planning Resources and Public Works** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | 0.51 | 2.04 | **703.45** | | 0.43 | 1.72 | **593.10** | | -0.08 | -0.32 | **-110.34** |
| Trim / Thin Trees | 0.09 | | 0.09 | **31.03** | 0.09 | | 0.09 | **31.03** | | | | **0.00** |
| Encroachments | 0.02 | | 0.02 | **6.90** | 0.01 | | 0.01 | **3.45** | -0.01 | | -0.01 | **-3.45** |
| Crown Surface / Depressions / Rutting | 0.23 | | 0.23 | **79.31** | | | | | -0.23 | | -0.23 | **-79.31** |
| Operations & Maintenance Manuals | | | | | 0.00 | | | | 0.00 | | | **0.00** |
| Emergency Supplies & Equipment | | | | | 0.00 | | | | 0.00 | | | **0.00** |
| Flood Preparedness & Training | | | | | 0.00 | | | | 0.00 | | | **0.00** |
| *LMA Totals:* | 0.34 | 0.51 | 2.38 | **820.69** | 0.11 | 0.43 | 1.83 | **631.03** | -0.23 | -0.08 | -0.56 | **-189.66** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| NA0022 | Total LMA Miles | 5.97 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Yolo County Service Area 6** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.88 | | 0.88 | **14.74** | 0.54 | | 0.54 | **9.05** | -0.34 | | -0.34 | **-5.70** |
| Trim / Thin Trees | 0.03 | 0.01 | 0.07 | **1.17** | 0.03 | 0.01 | 0.07 | **1.17** | | | | **0.00** |
| Encroachments | 0.07 | | 0.07 | **1.17** | 0.30 | | 0.30 | **5.03** | 0.23 | | 0.23 | **3.85** |
| Animal Control | 0.07 | | 0.07 | **1.17** | 0.06 | | 0.06 | **1.01** | -0.01 | | -0.01 | **-0.17** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.17** | 0.01 | | 0.01 | **0.17** | | | | **0.00** |
| Emergency Supplies & Equipment | | | | | 0.06 | | 0.06 | **1.01** | 0.06 | | 0.06 | **1.01** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.45 | | 0.45 | **7.54** | 0.39 | | 0.39 | **6.53** | -0.06 | | -0.06 | **-1.01** |
| *LMA Totals:* | 1.51 | 0.01 | 1.55 | **25.96** | 1.39 | 0.01 | 1.43 | **23.95** | -0.12 | 0.00 | -0.12 | **-2.01** |

| RD0003 | Total LMA Miles | 29.08 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0003 Grand Island** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M * | Overall LMA Rating | | | M * | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.03 | 0.01 | 0.07 | **0.24** | 0.92 | 0.01 | 0.96 | **3.30** | 0.89 | | 0.89 | **3.06** |
| Trim / Thin Trees | 0.33 | 0.02 | 0.41 | **1.43** | 0.41 | | 0.41 | **1.41** | 0.08 | -0.02 | | **-0.02** |
| Encroachments | 0.06 | | 0.06 | **0.21** | 0.06 | | 0.06 | **0.21** | | | | **0.00** |
| Slope Stability | 0.01 | | 0.01 | **0.04** | | | | | -0.01 | | -0.01 | **-0.04** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.04** | | | | | -0.01 | | -0.01 | **-0.04** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.39 | 0.01 | 0.43 | **1.50** | 0.31 | | 0.31 | **1.07** | -0.08 | -0.01 | -0.12 | **-0.43** |
| *LMA Totals:* | 0.83 | 0.04 | 0.99 | **3.46*** | 1.70 | 0.01 | 1.74 | **5.98*** | 0.87 | -0.03 | 0.75 | **2.53** |

| RD0010 | Total LMA Miles | 21.93 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0010 Honcut** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 35.94 | | 35.94 | **163.89** | 3.51 | 0.11 | 3.95 | **18.01** | -32.43 | 0.11 | -31.99 | **-145.87** |
| Encroachments | 0.12 | | 0.12 | **0.55** | 0.01 | | 0.01 | **0.05** | -0.11 | | -0.11 | **-0.50** |
| Animal Control | 0.11 | | 0.11 | **0.50** | 0.03 | | 0.03 | **0.14** | -0.08 | | -0.08 | **-0.37** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.05** | | | | | -0.01 | | -0.01 | **-0.05** |
| Crown Surface / Depressions / Rutting | 3.75 | | 3.75 | **17.10** | | | | | -3.75 | | -3.75 | **-17.10** |
| *LMA Totals:* | 39.93 | 0.00 | 39.93 | **182.08** | 3.55 | 0.11 | 3.99 | **18.19** | -36.38 | 0.11 | -35.94 | **-163.88** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| RD0070 | Total LMA Miles | 23.57 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0070 Meridian** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Encroachments | 0.05 | | 0.05 | **0.21** | 0.06 | | 0.06 | **0.26** | 0.01 | | 0.01 | **0.04** |
| Animal Control | 0.26 | | 0.26 | **1.10** | | | | | -0.26 | | -0.26 | **-1.10** |
| Slope Stability | | | | | 0.03 | | 0.03 | **0.13** | 0.03 | | 0.03 | **0.13** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 1.16 | | 1.16 | **4.92** | 0.83 | | 0.83 | **3.52** | -0.33 | | -0.33 | **-1.40** |
| *LMA Totals:* | 1.47 | 0.00 | 1.47 | **6.24** | 0.92 | 0.00 | 0.92 | **3.90** | -0.55 | 0.00 | -0.55 | **-2.33** |

| RD0108 | Total LMA Miles | 20.87 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0108 River Farms** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.01 | | 0.01 | **0.05** | | | | | -0.01 | | -0.01 | **-0.05** |
| Animal Control | 0.01 | | 0.01 | **0.05** | 0.02 | | 0.02 | **0.10** | 0.01 | | 0.01 | **0.05** |
| Cracking | 0.07 | | 0.07 | **0.34** | 0.01 | | 0.01 | **0.05** | -0.06 | | -0.06 | **-0.29** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.05** | 0.01 | | 0.01 | **0.05** | | | | **0.00** |
| *LMA Totals:* | 0.10 | 0.00 | 0.10 | **0.49** | 0.04 | 0.00 | 0.04 | **0.19** | -0.06 | 0.00 | -0.06 | **-0.29** |

| RD0150 | Total LMA Miles | 18.07 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0150 Merrit Island** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.11 | | 0.11 | **0.61** | 0.21 | | 0.21 | **1.16** | 0.10 | | 0.10 | **0.55** |
| Trim / Thin Trees | 0.28 | | 0.28 | **1.55** | 0.46 | | 0.46 | **2.55** | 0.18 | | 0.18 | **1.00** |
| Encroachments | 0.27 | | 0.27 | **1.49** | 0.15 | | 0.15 | **0.83** | -0.12 | | -0.12 | **-0.66** |
| Animal Control | 0.03 | | 0.03 | **0.17** | 0.02 | | 0.02 | **0.11** | -0.01 | | -0.01 | **-0.06** |
| Slope Stability | 0.09 | | 0.09 | **0.50** | 0.08 | | 0.08 | **0.44** | -0.01 | | -0.01 | **-0.06** |
| Erosion / Bank Caving | 0.07 | | 0.07 | **0.39** | 0.06 | | 0.06 | **0.33** | -0.01 | | -0.01 | **-0.06** |
| Crown Surface / Depressions / Rutting | 0.07 | | 0.07 | **0.39** | 0.04 | | 0.04 | **0.22** | -0.03 | | -0.03 | **-0.17** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.06** | 0.01 | | 0.01 | **0.06** | | | | **0.00** |
| *LMA Totals:* | 0.93 | 0.00 | 0.93 | **5.15** | 1.03 | 0.00 | 1.03 | **5.70** | 0.10 | 0.00 | 0.10 | **0.55** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| RD0307 | Total LMA Miles | 6.65 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0307 Lisbon** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.21 | | 0.21 | **3.16** | 0.51 | | 0.51 | **7.67** | 0.30 | | 0.30 | **4.51** |
| Trim / Thin Trees | 0.09 | | 0.09 | **1.35** | 0.07 | | 0.07 | **1.05** | -0.02 | | -0.02 | **-0.30** |
| Encroachments | 0.01 | | 0.01 | **0.15** | 0.09 | | 0.09 | **1.35** | 0.08 | | 0.08 | **1.20** |
| Animal Control | 0.08 | | 0.08 | **1.20** | 1.99 | | 1.99 | **29.93** | 1.91 | | 1.91 | **28.72** |
| Erosion / Bank Caving | | 0.02 | 0.08 | **1.20** | | 0.02 | 0.08 | **1.20** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.37 | | 0.37 | **5.56** | 0.44 | | 0.44 | **6.62** | 0.07 | | 0.07 | **1.05** |
| *LMA Totals:* | 0.76 | 0.02 | 0.84 | **12.63** | 3.10 | 0.02 | 3.18 | **47.82** | 2.34 | 0.00 | 2.34 | **35.19** |

| RD0341 | Total LMA Miles | 9.62 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0341 Sherman Island** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M * | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | 1.87 | | 1.87 | **19.44** | 1.87 | | 1.87 | **19.44** |
| Trim / Thin Trees | 0.03 | | 0.03 | **0.31** | | | | | -0.03 | | -0.03 | **-0.31** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.28 | 0.05 | 0.48 | **4.99** | 0.04 | 0.29 | 1.20 | **12.47** | -0.24 | 0.24 | 0.72 | **7.48** |
| *LMA Totals:* | 0.31 | 0.05 | 0.51 | **5.30*** | 1.91 | 0.29 | 3.07 | **31.91** | 1.60 | 0.24 | 2.56 | **26.61** |

| RD0349 | Total LMA Miles | 12.49 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0349 Sutter Island** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 3.21 | 0.20 | 4.01 | **32.11** | 5.89 | 0.13 | 6.41 | **51.32** | 2.68 | -0.07 | 2.40 | **19.22** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.08** | 0.26 | | 0.26 | **2.08** | 0.25 | | 0.25 | **2.00** |
| Encroachments | 0.53 | 0.04 | 0.69 | **5.52** | 0.11 | 0.01 | 0.15 | **1.20** | -0.42 | -0.03 | -0.54 | **-4.32** |
| Crown Surface / Depressions / Rutting | | | | | 1.81 | 1.01 | 5.85 | **46.84** | 1.81 | 1.01 | 5.85 | **46.84** |
| Operations & Maintenance Manuals | | | | | 0.12 | | 0.12 | **0.96** | 0.12 | | 0.12 | **0.96** |
| Emergency Supplies & Equipment | | | | | 0.12 | | 0.12 | **0.96** | 0.12 | | 0.12 | **0.96** |
| Flood Preparedness & Training | | | | | 0.12 | | 0.12 | **0.96** | 0.12 | | 0.12 | **0.96** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.65 | 0.01 | 0.69 | **5.52** | 0.59 | 0.18 | 1.31 | **10.49** | -0.06 | 0.17 | 0.62 | **4.96** |
| *LMA Totals:* | 4.40 | 0.25 | 5.40 | **43.23** | 9.03 | 1.33 | 14.35 | **114.89** | 4.63 | 1.08 | 8.94 | **71.66** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| RD0369 | Total LMA Miles | 0.80 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0369 Libby McNeil** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.14 | | 0.14 | **17.50** | 0.67 | | 0.67 | **83.75** | 0.53 | | 0.53 | **66.25** |
| Trim / Thin Trees | 0.01 | | 0.01 | **1.25** | 0.01 | | 0.01 | **1.25** | | | | **0.00** |
| Operations & Maintenance Manuals | | | | | 0.01 | | 0.01 | **1.25** | 0.01 | | 0.01 | **1.25** |
| Emergency Supplies & Equipment | | | | | 0.01 | | 0.01 | **1.25** | 0.01 | | 0.01 | **1.25** |
| Flood Preparedness & Training | | | | | 0.01 | | 0.01 | **1.25** | 0.01 | | 0.01 | **1.25** |
| *LMA Totals:* | 0.15 | 0.00 | 0.15 | **18.75** | 0.70 | 0.00 | 0.70 | **87.50** | 0.55 | 0.00 | 0.56 | **68.75** |

| RD0501 | Total LMA Miles | 20.48 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0501 Ryer Island** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 11.30 | 1.77 | 18.38 | **89.75** | 20.95 | 1.08 | 25.27 | **123.39** | 9.65 | -0.69 | 6.89 | **33.64** |
| Trim / Thin Trees | 3.58 | 0.20 | 4.38 | **21.39** | 1.62 | 0.07 | 1.90 | **9.28** | -1.96 | -0.13 | -2.48 | **-12.11** |
| Encroachments | 0.02 | 0.01 | 0.06 | **0.29** | 0.02 | 0.02 | 0.10 | **0.49** | | 0.01 | 0.04 | **0.20** |
| Animal Control | 0.52 | | 0.52 | **2.54** | 0.53 | | 0.53 | **2.59** | 0.01 | | 0.01 | **0.05** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.05** | 0.01 | | 0.01 | **0.05** |
| Erosion / Bank Caving | 0.06 | 0.01 | 0.10 | **0.49** | 0.07 | 0.01 | 0.11 | **0.54** | 0.01 | | 0.01 | **0.05** |
| Operations & Maintenance Manuals | | | | | 0.20 | | 0.20 | **0.98** | 0.20 | | 0.20 | **0.98** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.14 | | 0.14 | **0.68** | 0.23 | | 0.23 | **1.12** | 0.09 | | 0.09 | **0.44** |
| *LMA Totals:* | 15.62 | 1.99 | 23.58 | **115.14** | 23.63 | 1.18 | 28.35 | **138.43** | 8.01 | -0.81 | 4.77 | **23.29** |

| RD0536 | Total LMA Miles | 10.63 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0536 Egbert** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 9.86 | 5.71 | 32.70 | **307.62** | 14.27 | 12.97 | 66.15 | **622.30** | 4.41 | 7.26 | 33.45 | **314.68** |
| Trim / Thin Trees | | | | | 0.01 | | 0.01 | **0.09** | 0.01 | | 0.01 | **0.09** |
| Encroachments | 0.12 | | 0.12 | **1.13** | 0.06 | | 0.06 | **0.56** | -0.06 | | -0.06 | **-0.57** |
| Erosion / Bank Caving | 0.02 | | 0.02 | **0.19** | 0.01 | 0.01 | 0.05 | **0.47** | -0.01 | 0.01 | 0.03 | **0.28** |
| Cracking | 0.62 | | 0.62 | **5.83** | 0.62 | | 0.62 | **5.83** | 0.00 | | | **0.00** |
| Crown Surface / Depressions / Rutting | 2.24 | | 2.24 | **21.07** | 6.61 | 2.66 | 17.25 | **162.28** | 4.37 | 2.66 | 15.01 | **141.20** |
| Repair Gates | | | | | | 0.01 | 0.04 | **0.38** | | 0.01 | 0.04 | **0.38** |
| Operations & Maintenance Manuals | | | | | 0.11 | | 0.11 | **1.04** | 0.11 | | 0.11 | **1.04** |
| Emergency Supplies & Equipment | | | | | 0.11 | | 0.11 | **1.04** | 0.11 | | 0.11 | **1.04** |
| Flood Preparedness & Training | | | | | 0.11 | | 0.11 | **1.04** | 0.11 | | 0.11 | **1.04** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.52 | | 0.52 | **4.89** | 0.38 | | 0.38 | **3.58** | -0.14 | | -0.14 | **-1.32** |
| *LMA Totals:* | 13.38 | 5.71 | 36.22 | **340.73** | 22.28 | 15.65 | 84.88 | **798.49** | 8.90 | 9.94 | 48.67 | **457.76** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| RD0537 | Total LMA Miles | 5.95 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0537 Lovdal** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | M * | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Trim / Thin Trees | | | | | 0.01 | | 0.01 | **0.17** | 0.01 | | 0.01 | **0.17** |
| Encroachments | 0.02 | | 0.02 | **0.34** | | | | | -0.02 | | -0.02 | **-0.34** |
| Animal Control | 0.03 | | 0.03 | **0.50** | 0.02 | 0.01 | 0.06 | **1.01** | -0.01 | 0.01 | 0.03 | **0.50** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.17** | 0.01 | | 0.01 | **0.17** |
| Erosion / Bank Caving | 0.03 | | 0.03 | **0.50** | 0.04 | | 0.04 | **0.67** | 0.01 | | 0.01 | **0.17** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.06 | | 0.06 | **1.01** | 0.07 | | 0.07 | **1.18** | 0.01 | | 0.01 | **0.17** |
| *LMA Totals:* | 0.14 | 0.00 | 0.14 | **2.35** | 0.15 | 0.01 | 0.19 | **3.19*** | 0.01 | 0.01 | 0.05 | **0.84** |

| RD0551 | Total LMA Miles | 6.84 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0551 Pearson** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | M * | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Encroachments | 0.04 | | 0.04 | **0.59** | | | | | -0.04 | | -0.04 | **-0.59** |
| Animal Control | 0.02 | | 0.02 | **0.29** | 0.02 | | 0.02 | **0.29** | | | | **0.00** |
| Erosion / Bank Caving | | | | | | 0.01 | 0.04 | **0.58** | | 0.01 | 0.04 | **0.58** |
| *LMA Totals:* | 0.06 | 0.00 | 0.06 | **0.88** | 0.02 | 0.01 | 0.06 | **0.88*** | -0.04 | 0.01 | 0.00 | **0.00** |

| RD0554 | Total LMA Miles | 1.09 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0554 Walnut Grove** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | 0.05 | | 0.05 | **4.59** | 0.05 | | 0.05 | **4.59** |
| Encroachments | | | | | 0.01 | | 0.01 | **0.92** | 0.01 | | 0.01 | **0.92** |
| Emergency Supplies & Equipment | | | | | 0.01 | | 0.01 | **0.92** | 0.01 | | 0.01 | **0.92** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.11 | | 0.11 | **10.09** | 0.09 | | 0.09 | **8.26** | -0.02 | | -0.02 | **-1.84** |
| *LMA Totals:* | 0.11 | 0.00 | 0.11 | **10.09** | 0.16 | 0.00 | 0.16 | **14.68** | 0.05 | 0.00 | 0.05 | **4.59** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| RD0556 | Total LMA Miles | 11.19 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0556 Upper Andrus** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 4.07 | 0.03 | 4.19 | **37.44** | 21.96 | 1.40 | 27.56 | **246.29** | 17.89 | 1.37 | 23.37 | **208.85** |
| Trim / Thin Trees | 3.27 | 0.02 | 3.35 | **29.94** | 4.55 | 0.03 | 4.67 | **41.73** | 1.28 | 0.01 | 1.32 | **11.80** |
| Encroachments | 0.02 | 0.22 | 0.90 | **8.04** | 0.01 | 0.09 | 0.37 | **3.31** | -0.01 | -0.13 | -0.53 | **-4.74** |
| Animal Control | 0.27 | | 0.27 | **2.41** | 3.58 | | 3.58 | **31.99** | 3.31 | | 3.31 | **29.58** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.09** | 0.06 | | 0.06 | **0.54** | 0.05 | | 0.05 | **0.45** |
| Closure Structures | | | | | 0.30 | | 0.30 | **2.68** | 0.30 | | 0.30 | **2.68** |
| Operations & Maintenance Manuals | | | | | 0.11 | | 0.11 | **0.98** | 0.11 | | 0.11 | **0.98** |
| Emergency Supplies & Equipment | | | | | 0.11 | | 0.11 | **0.98** | 0.11 | | 0.11 | **0.98** |
| Flood Preparedness & Training | | | | | 0.11 | | 0.11 | **0.98** | 0.11 | | 0.11 | **0.98** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 1.19 | | 1.19 | **10.63** | 1.15 | | 1.15 | **10.28** | -0.04 | | -0.04 | **-0.36** |
| *LMA Totals:* | 8.83 | 0.27 | 9.91 | **88.56** | 31.95 | 1.52 | 38.03 | **339.86** | 23.12 | 1.25 | 28.11 | **251.30** |

| RD0563 | Total LMA Miles | 12.38 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0563 Tyler Island** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.43 | 0.25 | 1.43 | **11.55** | 0.61 | 0.23 | 1.53 | **12.36** | 0.18 | -0.02 | 0.10 | **0.81** |
| Trim / Thin Trees | 0.22 | 0.04 | 0.38 | **3.07** | 0.28 | 0.05 | 0.48 | **3.88** | 0.06 | 0.01 | 0.10 | **0.81** |
| Encroachments | 0.25 | 0.01 | 0.29 | **2.34** | 0.22 | | 0.22 | **1.78** | -0.03 | -0.01 | -0.07 | **-0.57** |
| Animal Control | 0.05 | 0.04 | 0.21 | **1.70** | 0.16 | | 0.16 | **1.29** | 0.11 | -0.04 | -0.05 | **-0.40** |
| Slope Stability | 0.02 | 0.01 | 0.06 | **0.48** | 0.02 | 0.01 | 0.06 | **0.48** | | | | **0.00** |
| Erosion / Bank Caving | | | | | 0.01 | | 0.01 | **0.08** | 0.01 | | 0.01 | **0.08** |
| Crown Surface / Depressions / Rutting | | | | | 0.07 | | 0.07 | **0.57** | 0.07 | | 0.07 | **0.57** |
| Operations & Maintenance Manuals | | | | | 0.12 | | 0.12 | **0.97** | 0.12 | | 0.12 | **0.97** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 2.26 | 1.37 | 7.74 | **62.52** | 2.92 | 1.10 | 7.32 | **59.13** | 0.66 | -0.27 | -0.42 | **-3.39** |
| *LMA Totals:* | 3.23 | 1.72 | 10.11 | **81.66** | 4.41 | 1.39 | 9.97 | **80.53** | 1.18 | -0.33 | -0.14 | **-1.13** |

| RD0755 | Total LMA Miles | 1.86 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0755 Randall** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.01 | | 0.01 | **0.54** | 1.94 | | 1.94 | **104.30** | 1.93 | | 1.93 | **103.76** |
| Animal Control | 1.23 | | 1.23 | **66.13** | 2.40 | | 2.40 | **129.03** | 1.17 | | 1.17 | **62.90** |
| Operations & Maintenance Manuals | | | | | 0.02 | | 0.02 | **1.08** | 0.02 | | 0.02 | **1.08** |
| Emergency Supplies & Equipment | | | | | 0.02 | | 0.02 | **1.08** | 0.02 | | 0.02 | **1.08** |
| Flood Preparedness & Training | | | | | 0.02 | | 0.02 | **1.08** | 0.02 | | 0.02 | **1.08** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.09 | | 0.09 | **4.84** | 0.08 | | 0.08 | **4.30** | -0.01 | | -0.01 | **-0.54** |
| *LMA Totals:* | 1.33 | 0.00 | 1.33 | **71.51** | 4.48 | 0.00 | 4.48 | **240.86** | 3.15 | 0.00 | 3.15 | **169.36** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| RD0765 | Total LMA Miles | 1.74 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0765 Glide** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.03 | 0.04 | 0.19 | **10.92** | 0.03 | 0.37 | 1.51 | **86.78** | | 0.33 | 1.32 | **75.86** |
| Trim / Thin Trees | 0.84 | 0.21 | 1.68 | **96.55** | 0.91 | 0.19 | 1.67 | **95.98** | 0.07 | -0.02 | -0.01 | **-0.57** |
| Encroachments | 0.01 | | 0.01 | **0.58** | 0.01 | | 0.01 | **0.58** | | | | **0.00** |
| Operations & Maintenance Manuals | | | | | 0.02 | | 0.02 | **1.15** | 0.02 | | 0.02 | **1.15** |
| Flood Preparedness & Training | | | | | 0.02 | | 0.02 | **1.15** | 0.02 | | 0.02 | **1.15** |
| *LMA Totals:* | 0.88 | 0.25 | 1.88 | **108.05** | 0.98 | 0.56 | 3.22 | **185.06** | 0.10 | 0.31 | 1.35 | **77.01** |

| RD0784 | Total LMA Miles | 44.16 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0784 Plumas Lake** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.93 | | 0.93 | **2.11** | 2.68 | 1.03 | 6.80 | **15.40** | 1.75 | 1.03 | 5.87 | **13.29** |
| Erosion / Bank Caving | | | | | 0.01 | | 0.01 | **0.02** | 0.01 | | 0.01 | **0.02** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Culverts: Inlets / Outlets | | | | | 0.07 | | 0.07 | **0.16** | 0.07 | | 0.07 | **0.16** |
| Culverts: Breaks / Holes / Cracks | | | | | | 0.02 | 0.08 | **0.18** | | 0.02 | 0.08 | **0.18** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.35 | | 0.35 | **0.79** | 0.43 | | 0.43 | **0.97** | 0.08 | | 0.08 | **0.18** |
| *LMA Totals:* | 1.28 | 0.00 | 1.28 | **2.90** | 3.19 | 1.05 | 7.39 | **16.73** | 1.91 | 1.05 | 6.11 | **13.84** |

| RD0785 | Total LMA Miles | 5.61 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0785 Driver** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | 1.16 | 4.64 | **82.71** | | 1.16 | 4.64 | **82.71** |
| Trim / Thin Trees | | | | | 0.01 | | 0.01 | **0.18** | 0.01 | | 0.01 | **0.18** |
| Encroachments | 0.02 | | 0.02 | **0.36** | | | | | -0.02 | | -0.02 | **-0.36** |
| Animal Control | | | | | 0.02 | 0.02 | 0.10 | **1.78** | 0.02 | 0.02 | 0.10 | **1.78** |
| Slope Stability | | | | | 0.02 | | 0.02 | **0.36** | 0.02 | | 0.02 | **0.36** |
| Erosion / Bank Caving | | | | | 0.01 | | 0.01 | **0.18** | 0.01 | | 0.01 | **0.18** |
| Crown Surface / Depressions / Rutting | 2.29 | | 2.29 | **40.82** | | | | | -2.29 | | -2.29 | **-40.82** |
| Operations & Maintenance Manuals | | | | | 0.06 | | 0.06 | **1.07** | 0.06 | | 0.06 | **1.07** |
| *LMA Totals:* | 2.31 | 0.00 | 2.31 | **41.18** | 0.12 | 1.18 | 4.84 | **86.27** | -2.19 | 1.18 | 2.53 | **45.10** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| RD0787 | Total LMA Miles | 4.40 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0787 Fair** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.05 | | 0.05 | **1.14** | | | | | -0.05 | | -0.05 | **-1.14** |
| Animal Control | 0.02 | | 0.02 | **0.46** | 0.02 | | 0.02 | **0.46** | | | | **0.00** |
| Flood Preparedness & Training | | | | | 0.04 | | 0.04 | **0.91** | 0.04 | | 0.04 | **0.91** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.02 | | 0.02 | **0.46** | 0.13 | | 0.13 | **2.96** | 0.11 | | 0.11 | **2.50** |
| *LMA Totals:* | 0.09 | 0.00 | 0.09 | **2.05** | 0.19 | 0.00 | 0.19 | **4.32** | 0.10 | 0.00 | 0.10 | **2.27** |

| RD0817 | Total LMA Miles | 7.69 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0817 Carlin** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.07 | | 0.07 | **0.76** | 3.16 | 0.03 | 3.28 | **42.65** | 3.09 | 0.03 | 3.21 | **41.89** |
| Slope Stability | 1.11 | | 1.11 | **12.08** | 1.11 | | 1.11 | **14.43** | | | | **2.36** |
| Flood Preparedness & Training | | | | | 0.08 | | 0.08 | **1.04** | 0.08 | | 0.08 | **1.04** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Metal Pipes | | 0.01 | 0.04 | **0.44** | | | | | | -0.01 | -0.04 | **-0.44** |
| Flap Gates | | 0.01 | 0.04 | **0.44** | | | | | | -0.01 | -0.04 | **-0.44** |
| *LMA Totals:* | 1.18 | 0.02 | 1.26 | **13.71** | 4.35 | 0.03 | 4.47 | **58.13** | 3.17 | 0.01 | 3.21 | **44.42** |

| RD0827 | Total LMA Miles | 4.19 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0827 Elkhorn** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Encroachments | 0.02 | | 0.02 | **0.48** | 0.02 | | 0.02 | **0.48** | | | | **0.00** |
| Animal Control | 0.01 | | 0.01 | **0.24** | 0.03 | | 0.03 | **0.72** | 0.02 | | 0.02 | **0.48** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.24** | 0.01 | | 0.01 | **0.24** |
| Erosion / Bank Caving | 0.02 | | 0.02 | **0.48** | 0.02 | | 0.02 | **0.48** | | | | **0.00** |
| Cracking | | | | | 0.01 | | 0.01 | **0.24** | 0.01 | | 0.01 | **0.24** |
| Crown Surface / Depressions / Rutting | 1.61 | | 1.61 | **38.43** | | | | | -1.61 | | -1.61 | **-38.43** |
| *LMA Totals:* | 1.66 | 0.00 | 1.66 | **39.62** | 0.09 | 0.00 | 0.09 | **2.15** | -1.57 | 0.00 | -1.57 | **-37.47** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| RD0900 | Total LMA Miles | 13.57 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0900 West Sacramento** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 1.83 | | 1.83 | **13.49** | 7.94 | | 7.94 | **58.51** | 6.11 | | 6.11 | **45.03** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.07** | 0.90 | | 0.90 | **6.63** | 0.89 | | 0.89 | **6.56** |
| Encroachments | 0.17 | | 0.17 | **1.25** | 0.09 | | 0.09 | **0.66** | -0.08 | | -0.08 | **-0.59** |
| Animal Control | 0.06 | | 0.06 | **0.44** | 0.06 | | 0.06 | **0.44** | | | | **0.00** |
| Slope Stability | 0.09 | | 0.09 | **0.66** | 0.05 | | 0.05 | **0.37** | -0.04 | | -0.04 | **-0.30** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.43 | | 0.43 | **3.17** | 0.44 | | 0.44 | **3.24** | 0.01 | | 0.01 | **0.07** |
| *LMA Totals:* | 2.59 | 0.00 | 2.59 | **19.09** | 9.48 | 0.00 | 9.48 | **69.86** | 6.89 | 0.00 | 6.89 | **50.77** |

| RD0999 | Total LMA Miles | 32.37 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0999 Netherlands** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.54 | 0.05 | 0.74 | **2.29** | 0.46 | 0.06 | 0.70 | **2.16** | -0.08 | 0.01 | -0.04 | **-0.12** |
| Trim / Thin Trees | 2.64 | 0.17 | 3.32 | **10.26** | 1.37 | 0.02 | 1.45 | **4.48** | -1.27 | -0.15 | -1.87 | **-5.78** |
| Encroachments | 0.38 | 0.29 | 1.54 | **4.76** | 0.52 | | 0.52 | **1.61** | 0.14 | -0.29 | -1.02 | **-3.15** |
| Animal Control | 1.43 | | 1.43 | **4.42** | 1.44 | | 1.44 | **4.45** | 0.01 | | 0.01 | **0.03** |
| Slope Stability | | 0.03 | 0.12 | **0.37** | 0.03 | | 0.03 | **0.09** | 0.03 | -0.03 | -0.09 | **-0.28** |
| Erosion / Bank Caving | | | | | 0.01 | | 0.01 | **0.03** | 0.01 | | 0.01 | **0.03** |
| Crown Surface / Depressions / Rutting | 3.12 | 0.07 | 3.40 | **10.50** | 5.54 | | 5.54 | **17.12** | 2.42 | -0.07 | 2.14 | **6.61** |
| Repair Gates | 0.01 | | 0.01 | **0.03** | 0.01 | | 0.01 | **0.03** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.29 | | 0.29 | **0.90** | 0.07 | | 0.07 | **0.22** | -0.22 | | -0.22 | **-0.68** |
| *LMA Totals:* | 8.41 | 0.61 | 10.85 | **33.52** | 9.45 | 0.08 | 9.77 | **30.18** | 1.04 | -0.53 | -1.08 | **-3.34** |

| RD1000 | Total LMA Miles | 42.48 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 1000 Natomas** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.13 | | 0.13 | **0.31** | 0.01 | | 0.01 | **0.02** | -0.12 | | -0.12 | **-0.28** |
| Trim / Thin Trees | 0.02 | | 0.02 | **0.05** | | | | | -0.02 | | -0.02 | **-0.05** |
| Encroachments | 0.01 | | 0.01 | **0.02** | 0.01 | | 0.01 | **0.02** | | | | **0.00** |
| Slope Stability | 0.01 | | 0.01 | **0.02** | 0.01 | | 0.01 | **0.02** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.25 | | 0.25 | **0.59** | 0.10 | | 0.10 | **0.24** | -0.15 | | -0.15 | **-0.35** |
| *LMA Totals:* | 0.42 | 0.00 | 0.42 | **0.99** | 0.13 | 0.00 | 0.13 | **0.31** | -0.29 | 0.00 | -0.29 | **-0.68** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| RD1001 | Total LMA Miles | 44.03 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 1001 Nicolaus** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | **M** | Overall LMA Rating | | | **U** | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 4.71 | | 4.71 | **10.70** | 20.66 | | 20.66 | **46.92** | 15.95 | | 15.95 | **36.23** |
| Trim / Thin Trees | | | | | 0.17 | | 0.17 | **0.39** | 0.17 | | 0.17 | **0.39** |
| Encroachments | 0.14 | 0.20 | 0.94 | **2.13** | 0.02 | | 0.02 | **0.05** | -0.12 | -0.20 | -0.92 | **-2.09** |
| Animal Control | 0.01 | | 0.01 | **0.02** | | | | | -0.01 | | -0.01 | **-0.02** |
| Slope Stability | 0.06 | | 0.06 | **0.14** | 0.05 | | 0.05 | **0.11** | -0.01 | | -0.01 | **-0.02** |
| Erosion / Bank Caving | | | | | 0.01 | | 0.01 | **0.02** | 0.01 | | 0.01 | **0.02** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 1.71 | | 1.71 | **3.88** | 1.94 | | 1.94 | **4.41** | 0.23 | | 0.23 | **0.52** |
| *LMA Totals:* | 6.63 | 0.20 | 7.43 | **16.87** | 22.85 | 0.00 | 22.85 | **51.90** | 16.22 | -0.20 | 15.42 | **35.02** |

| RD1500 | Total LMA Miles | 54.35 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 1500 Sutter Basin** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | **A** | Overall LMA Rating | | | **M** | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Trim / Thin Trees | 0.46 | | 0.46 | **0.85** | 0.01 | 0.01 | 0.05 | **0.09** | -0.45 | 0.01 | -0.41 | **-0.75** |
| Encroachments | 0.15 | | 0.15 | **0.28** | 0.10 | | 0.10 | **0.18** | -0.05 | | -0.05 | **-0.09** |
| Animal Control | 0.11 | | 0.11 | **0.20** | 0.54 | 0.02 | 0.62 | **1.14** | 0.43 | 0.02 | 0.51 | **0.94** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.02** | 0.04 | | 0.04 | **0.07** | 0.03 | | 0.03 | **0.06** |
| Cracking | | | | | 0.01 | | 0.01 | **0.02** | 0.01 | | 0.01 | **0.02** |
| Crown Surface / Depressions / Rutting | 0.02 | | 0.02 | **0.04** | 5.70 | | 5.70 | **10.49** | 5.68 | | 5.68 | **10.45** |
| Underseepage Relief Wells | | | | | | 0.01 | 0.04 | **0.07** | | 0.01 | 0.04 | **0.07** |
| *Concrete Floodwalls* | | | | | | | | | | | | |
| Underseepage Relief Wells | 0.01 | | 0.01 | **0.02** | | | | | -0.01 | | -0.01 | **-0.02** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.40 | | 0.40 | **0.74** | 0.10 | | 0.10 | **0.18** | -0.30 | | -0.30 | **-0.55** |
| *LMA Totals:* | 1.16 | 0.00 | 1.16 | **2.13** | 6.50 | 0.04 | 6.66 | **12.25** | 5.34 | 0.04 | 5.50 | **10.12** |

| RD1600 | Total LMA Miles | 14.73 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 1600 Mull** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | **U** | Overall LMA Rating | | | **U** | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.85 | | 0.85 | **5.77** | 11.79 | | 11.79 | **80.04** | 10.94 | | 10.94 | **74.27** |
| Trim / Thin Trees | 0.01 | 0.01 | 0.05 | **0.34** | 0.01 | | 0.01 | **0.07** | | -0.01 | -0.04 | **-0.27** |
| Encroachments | 0.02 | | 0.02 | **0.14** | | | | | -0.02 | | -0.02 | **-0.14** |
| Erosion / Bank Caving | 0.73 | | 0.73 | **4.96** | 0.73 | 0.02 | 0.81 | **5.50** | | 0.02 | 0.08 | **0.54** |
| Crown Surface / Depressions / Rutting | 1.74 | | 1.74 | **11.81** | 0.01 | | 0.01 | **0.07** | -1.73 | | -1.73 | **-11.75** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.05 | | 0.05 | **0.34** | 0.05 | | 0.05 | **0.34** | | | | **0.00** |
| *LMA Totals:* | 3.40 | 0.01 | 3.44 | **23.35** | 12.59 | 0.02 | 12.67 | **86.01** | 9.19 | 0.01 | 9.23 | **62.66** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| RD1601 | Total LMA Miles | 2.47 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 1601 Twitchell** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| No Items | | | | | | | | | | | | **0.00** |
| *LMA Totals:* | 0.00 | 0.00 | 0.00 | **0.00** | 0.00 | 0.00 | 0.00 | **0.00** | 0.00 | 0.00 | 0.00 | **0.00** |

| RD1660 | Total LMA Miles | 12.14 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 1660 Tisdale** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Encroachments | 0.01 | | 0.01 | **0.08** | 0.01 | | 0.01 | **0.08** | | | | **0.00** |
| Animal Control | 0.13 | | 0.13 | **1.07** | | | | | -0.13 | | -0.13 | **-1.07** |
| Slope Stability | 0.05 | | 0.05 | **0.41** | 0.05 | | 0.05 | **0.41** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.01 | | 0.01 | **0.08** | 0.03 | | 0.03 | **0.25** | 0.02 | | 0.02 | **0.17** |
| *LMA Totals:* | 0.20 | 0.00 | 0.20 | **1.65** | 0.09 | 0.00 | 0.09 | **0.74** | -0.11 | 0.00 | -0.11 | **-0.91** |

| RD2035 | Total LMA Miles | 12.09 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2035 Conaway** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 2.54 | | 2.54 | **21.01** | | | | | -2.54 | | -2.54 | **-21.01** |
| Crown Surface / Depressions / Rutting | 0.01 | | 0.01 | **0.08** | | | | | -0.01 | | -0.01 | **-0.08** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.39 | | 0.39 | **3.23** | 1.27 | | 1.27 | **10.51** | 0.88 | | 0.88 | **7.28** |
| *LMA Totals:* | 2.94 | 0.00 | 2.94 | **24.32** | 1.27 | 0.00 | 1.27 | **10.51** | -1.67 | 0.00 | -1.67 | **-13.81** |

| RD2060 | Total LMA Miles | 15.67 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2060 Hastings** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | 0.11 | | 0.11 | **0.70** | 0.11 | | 0.11 | **0.70** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.06** | 0.01 | | 0.01 | **0.06** | | | | **0.00** |
| Cracking | | | | | | | | | | | | **0.00** |
| Repair Gates | 0.01 | | 0.01 | **0.06** | 0.01 | | 0.01 | **0.06** | | | | **0.00** |
| Operations & Maintenance Manuals | | | | | 0.16 | | 0.16 | **1.02** | 0.16 | | 0.16 | **1.02** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.63 | | 0.63 | **4.02** | 0.66 | | 0.66 | **4.21** | 0.03 | | 0.03 | **0.19** |
| *LMA Totals:* | 0.65 | 0.00 | 0.65 | **4.15** | 0.95 | 0.00 | 0.95 | **6.06** | 0.30 | 0.00 | 0.30 | **1.92** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| RD2068 | Total LMA Miles | 8.73 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2068 Yolano** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | M | | Overall LMA Rating | | A | | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.02 | | 0.02 | **0.23** | | | | | -0.02 | | -0.02 | **-0.23** |
| Animal Control | 0.99 | | 0.99 | **11.34** | | | | | -0.99 | | -0.99 | **-11.34** |
| *LMA Totals:* | 1.01 | 0.00 | 1.01 | **11.57** | 0.00 | 0.00 | 0.00 | **0.00** | -1.01 | 0.00 | -1.01 | **-11.57** |

| RD2098 | Total LMA Miles | 10.96 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2098 Cache and Haas Slough** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | U | | Overall LMA Rating | | A | | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 3.29 | | 3.29 | **30.02** | 0.01 | | 0.01 | **0.09** | -3.28 | | -3.28 | **-29.93** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.09** | | | | | -0.01 | | -0.01 | **-0.09** |
| Erosion / Bank Caving | | | | | 0.04 | | 0.04 | **0.37** | 0.04 | | 0.04 | **0.37** |
| *Channels* | | | | | | | | | | | | |
| Shoaling / Sedimentation | | | | | 0.23 | | 0.23 | **2.10** | 0.23 | | 0.23 | **2.10** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.02 | | 0.02 | **0.18** | 0.02 | | 0.02 | **0.18** | | | | **0.00** |
| *LMA Totals:* | 3.32 | 0.00 | 3.32 | **30.29** | 0.30 | 0.00 | 0.30 | **2.74** | -3.02 | 0.00 | -3.02 | **-27.56** |

| RD2103 | Total LMA Miles | 9.77 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2103 Wheatland Vicinity** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | A | | Overall LMA Rating | | A | | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Animal Control | 0.01 | | 0.01 | **0.10** | | | | | -0.01 | | -0.01 | **-0.10** |
| Flood Preparedness & Training | | | | | 0.10 | | 0.10 | **1.02** | 0.10 | | 0.10 | **1.02** |
| *LMA Totals:* | 0.01 | 0.00 | 0.01 | **0.10** | 0.10 | 0.00 | 0.10 | **1.02** | 0.09 | 0.00 | 0.09 | **0.92** |

| RD2104 | Total LMA Miles | 7.40 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2104 Peters Pocket Tract** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | U | | Overall LMA Rating | | U | | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 15.86 | 1.64 | 22.42 | **302.97** | 15.85 | 1.60 | 22.25 | **300.68** | -0.01 | -0.04 | -0.17 | **-2.30** |
| Trim / Thin Trees | 0.05 | 0.05 | 0.25 | **3.38** | 0.05 | | 0.05 | **0.68** | | -0.05 | -0.20 | **-2.70** |
| Encroachments | 0.01 | | 0.01 | **0.14** | 0.01 | | 0.01 | **0.14** | | | | **0.00** |
| Erosion / Bank Caving | 0.05 | | 0.05 | **0.68** | 0.06 | | 0.06 | **0.81** | 0.01 | | 0.01 | **0.14** |
| Crown Surface / Depressions / Rutting | 2.19 | | 2.19 | **29.60** | 10.35 | 6.00 | 34.35 | **464.19** | 8.16 | 6.00 | 32.16 | **434.59** |
| Operations & Maintenance Manuals | | | | | 0.07 | | 0.07 | **0.95** | 0.07 | | 0.07 | **0.95** |
| Emergency Supplies & Equipment | | | | | 0.07 | | 0.07 | **0.95** | 0.07 | | 0.07 | **0.95** |
| Flood Preparedness & Training | | | | | 0.07 | | 0.07 | **0.95** | 0.07 | | 0.07 | **0.95** |
| *LMA Totals:* | 18.16 | 1.69 | 24.92 | **336.76** | 26.54 | 7.60 | 56.94 | **769.46** | 8.38 | 5.91 | 32.01 | **432.70** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| ST0001 | Total LMA Miles | 25.52 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sacramento Maintenance Yard Cache Creek** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M * | Overall LMA Rating | | | M * | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Trim / Thin Trees | | | | | 0.01 | | 0.01 | **0.04** | 0.01 | | 0.01 | **0.04** |
| Encroachments | 0.26 | | 0.26 | **1.02** | 0.09 | | 0.09 | **0.35** | -0.17 | | -0.17 | **-0.67** |
| Animal Control | 0.01 | | 0.01 | **0.04** | 0.02 | | 0.02 | **0.08** | 0.01 | | 0.01 | **0.04** |
| Erosion / Bank Caving | | | | | 0.01 | | 0.01 | **0.04** | 0.01 | | 0.01 | **0.04** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.29 | 0.19 | 1.05 | **4.11** | 0.21 | 0.32 | 1.49 | **5.84** | -0.08 | 0.13 | 0.44 | **1.72** |
| *LMA Totals:* | 0.56 | 0.19 | 1.32 | **5.17*** | 0.34 | 0.32 | 1.62 | **6.35*** | -0.22 | 0.13 | 0.30 | **1.18** |

| ST0002 | Total LMA Miles | 22.12 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sutter Maintenance Yard East Levee Sutter Bypass** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Animal Control | 0.04 | | 0.04 | **0.18** | 0.05 | | 0.05 | **0.23** | 0.01 | | 0.01 | **0.05** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.07 | | 0.07 | **0.32** | 0.03 | | 0.03 | **0.14** | -0.04 | | -0.04 | **-0.18** |
| *LMA Totals:* | 0.11 | 0.00 | 0.11 | **0.50** | 0.08 | 0.00 | 0.08 | **0.36** | -0.03 | 0.00 | -0.03 | **-0.14** |

| ST0003 | Total LMA Miles | 27.17 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sutter Maintenance Yard East Levee Sacramento River** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.05 | | 0.05 | **0.18** | 0.05 | | 0.05 | **0.18** | | | | **0.00** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.04** | 0.01 | | 0.01 | **0.04** | | | | **0.00** |
| Encroachments | 0.25 | | 0.25 | **0.92** | 0.25 | | 0.25 | **0.92** | 0.00 | | | **0.00** |
| Animal Control | 0.95 | | 0.95 | **3.50** | 0.08 | | 0.08 | **0.29** | -0.87 | | -0.87 | **-3.20** |
| Erosion / Bank Caving | 0.19 | | 0.19 | **0.70** | 0.19 | | 0.19 | **0.70** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.45 | | 0.45 | **1.66** | 0.07 | | 0.07 | **0.26** | -0.38 | | -0.38 | **-1.40** |
| *LMA Totals:* | 1.90 | 0.00 | 1.90 | **6.99** | 0.65 | 0.00 | 0.65 | **2.39** | -1.25 | 0.00 | -1.25 | **-4.60** |

| ST0004 | Total LMA Miles | 2.00 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sacramento Maintenance Yard East Levee Yolo Bypass** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Erosion / Bank Caving | | | | | 0.06 | | 0.06 | **3.00** | 0.06 | | 0.06 | **3.00** |
| *LMA Totals:* | 0.00 | 0.00 | 0.00 | **0.00** | 0.06 | 0.00 | 0.06 | **3.00** | 0.06 | 0.00 | 0.06 | **3.00** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| ST0005 | Total LMA Miles | 3.22 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sutter Maintenance Yard Hamilton Bend** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| No Items | | | | | | | | | | | | **0.00** |
| *LMA Totals:* | 0.00 | 0.00 | 0.00 | **0.00** | 0.00 | 0.00 | 0.00 | **0.00** | 0.00 | 0.00 | 0.00 | **0.00** |

| ST0006 | Total LMA Miles | 0.50 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sutter Maintenance Yard Nelson Bend** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.99 | | 0.99 | **198.00** | 0.55 | | 0.55 | **110.00** | -0.44 | | -0.44 | **-88.00** |
| Trim / Thin Trees | 0.44 | | 0.44 | **88.00** | 0.44 | | 0.44 | **88.00** | | | | **0.00** |
| *LMA Totals:* | 1.43 | 0.00 | 1.43 | **286.00** | 0.99 | 0.00 | 0.99 | **198.00** | -0.44 | 0.00 | -0.44 | **-88.00** |

| ST0007 | Total LMA Miles | 16.29 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sacramento Maintenance Yard Putah Creek** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 1.68 | | 1.68 | **10.31** | 0.13 | | 0.13 | **0.80** | -1.55 | | -1.55 | **-9.52** |
| Trim / Thin Trees | 0.04 | | 0.04 | **0.25** | 0.08 | | 0.08 | **0.49** | 0.04 | | 0.04 | **0.25** |
| Encroachments | 0.19 | | 0.19 | **1.17** | 0.18 | | 0.18 | **1.11** | -0.01 | | -0.01 | **-0.06** |
| Animal Control | 0.06 | | 0.06 | **0.37** | 3.07 | | 3.07 | **18.85** | 3.01 | | 3.01 | **18.48** |
| Erosion / Bank Caving | 0.02 | | 0.02 | **0.12** | 0.01 | | 0.01 | **0.06** | -0.01 | | -0.01 | **-0.06** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.02 | | 0.02 | **0.12** | 0.02 | | 0.02 | **0.12** | | | | **0.00** |
| *LMA Totals:* | 2.01 | 0.00 | 2.01 | **12.34** | 3.49 | 0.00 | 3.49 | **21.42** | 1.48 | 0.00 | 1.48 | **9.09** |

| ST0008 | Total LMA Miles | 3.51 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sacramento Maintenance Yard Sacramento Bypass** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.29** | 0.01 | | 0.01 | **0.29** |
| *LMA Totals:* | 0.00 | 0.00 | 0.00 | **0.00** | 0.01 | 0.00 | 0.01 | **0.29** | 0.01 | 0.00 | 0.01 | **0.29** |

| ST0009 | Total LMA Miles | 8.93 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sutter Maintenance Yard Tisdale Bypass** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Animal Control | | | | | 0.01 | | 0.01 | **0.11** | 0.01 | | 0.01 | **0.11** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.11** | 0.01 | | 0.01 | **0.11** | | | | **0.00** |
| *LMA Totals:* | 0.01 | 0.00 | 0.01 | **0.11** | 0.02 | 0.00 | 0.02 | **0.22** | 0.01 | 0.00 | 0.01 | **0.11** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *Sacramento River Basin (cont.)*

| ST0010 | Total LMA Miles | 9.32 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sutter Maintenance Yard Wadsworth Canal** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Animal Control | 0.07 | | 0.07 | **0.75** | 0.03 | | 0.03 | **0.32** | -0.04 | | -0.04 | **-0.43** |
| Slope Stability | 0.01 | | 0.01 | **0.11** | 0.01 | | 0.01 | **0.11** | | | | **0.00** |
| Erosion / Bank Caving | 0.48 | | 0.48 | **5.15** | 0.51 | | 0.51 | **5.47** | 0.03 | | 0.03 | **0.32** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.05 | | 0.05 | **0.54** | 0.05 | | 0.05 | **0.54** | | | | **0.00** |
| *LMA Totals:* | 0.61 | 0.00 | 0.61 | **6.55** | 0.60 | 0.00 | 0.60 | **6.44** | -0.01 | 0.00 | -0.01 | **-0.11** |

| ST0011 | Total LMA Miles | 9.33 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sacramento Maintenance Yard West Levee Yolo Bypass** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Animal Control | 0.01 | | 0.01 | **0.11** | | | | | -0.01 | | -0.01 | **-0.11** |
| *Supplemental* | | | | | | | | | | | | |
| USACE Erosion Survey | 0.15 | | 0.15 | **1.61** | 0.15 | | 0.15 | **1.61** | | | | **0.00** |
| *LMA Totals:* | 0.16 | 0.00 | 0.16 | **1.72** | 0.15 | 0.00 | 0.15 | **1.61** | -0.01 | 0.00 | -0.01 | **-0.11** |

| ST0012 | Total LMA Miles | 12.46 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Sacramento Maintenance Yard Willow Slough Bypass** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | | | | | | | | **0.00** |
| Erosion / Bank Caving | 0.05 | | 0.05 | **0.40** | 0.05 | | 0.05 | **0.40** | | | | **0.00** |
| Cracking | | | | | 0.02 | | 0.02 | **0.16** | 0.02 | | 0.02 | **0.16** |
| *LMA Totals:* | 0.05 | 0.00 | 0.05 | **0.40** | 0.07 | 0.00 | 0.07 | **0.56** | 0.02 | 0.00 | 0.02 | **0.16** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *San Joaquin River Basin*

| NA0010 | Total LMA Miles | 191.36 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Lower San Joaquin Levee District** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 19.91 | | 19.91 | **10.40** | 145.00 | | 145.00 | **75.77** | 125.09 | | 125.09 | **65.37** |
| Trim / Thin Trees | 0.08 | | 0.08 | **0.04** | 0.02 | | 0.02 | **0.01** | -0.06 | | -0.06 | **-0.03** |
| Encroachments | 0.06 | 0.01 | 0.10 | **0.05** | 0.61 | | 0.61 | **0.32** | 0.55 | -0.01 | 0.51 | **0.27** |
| Animal Control | 1.09 | | 1.09 | **0.57** | 2.68 | | 2.68 | **1.40** | 1.59 | | 1.59 | **0.83** |
| Slope Stability | 0.76 | | 0.76 | **0.40** | 0.76 | | 0.76 | **0.40** | | | | **0.00** |
| Erosion / Bank Caving | 0.02 | 0.01 | 0.06 | **0.03** | 0.13 | 0.01 | 0.17 | **0.09** | 0.11 | | 0.11 | **0.06** |
| Crown Surface / Depressions / Rutting | 3.78 | | 3.78 | **1.98** | 43.08 | | 43.08 | **22.51** | 39.30 | | 39.30 | **20.54** |
| Repair Gates | 0.01 | 0.01 | 0.05 | **0.03** | | | | | -0.01 | -0.01 | -0.05 | **-0.03** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Vegetation & Obstructions | | | | | | 0.01 | 0.04 | **0.02** | | 0.01 | 0.04 | **0.02** |
| *Channels* | | | | | | | | | | | | |
| Encroachments | 0.02 | | 0.02 | **0.01** | | | | | -0.02 | | -0.02 | **-0.01** |
| Concrete Foundations | 0.01 | | 0.01 | **0.01** | 0.01 | | 0.01 | **0.01** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | 0.16 | 0.64 | **0.33** | | | | | | -0.16 | -0.64 | **-0.33** |
| *LMA Totals:* | 25.74 | 0.19 | 26.50 | **13.85** | 192.29 | 0.02 | 192.37 | **100.53** | 166.55 | -0.17 | 165.87 | **86.68** |

| NA0011 | Total LMA Miles | 26.65 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Madera County FCWCA** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 21.73 | 1.58 | 28.05 | **105.25** | 52.77 | 13.25 | 105.77 | **396.89** | 31.04 | 11.67 | 77.72 | **291.63** |
| Trim / Thin Trees | 0.50 | | 0.50 | **1.88** | 0.50 | | 0.50 | **1.88** | | | | **0.00** |
| Encroachments | 0.44 | 0.03 | 0.56 | **2.10** | 0.43 | 0.04 | 0.59 | **2.21** | -0.01 | 0.01 | 0.03 | **0.11** |
| Animal Control | 12.24 | 0.08 | 12.56 | **47.13** | 16.61 | 1.29 | 21.77 | **81.69** | 4.37 | 1.21 | 9.21 | **34.56** |
| Slope Stability | | 0.01 | 0.04 | **0.15** | | 0.01 | 0.04 | **0.15** | | | | **0.00** |
| Erosion / Bank Caving | 0.01 | | 0.01 | **0.04** | 0.01 | | 0.01 | **0.04** | | | | **0.00** |
| Crown Surface / Depressions / Rutting | 0.44 | | 0.44 | **1.65** | 0.80 | | 0.80 | **3.00** | 0.36 | | 0.36 | **1.35** |
| *Channels* | | | | | | | | | | | | |
| Vegetation & Obstructions | | 0.01 | 0.04 | **0.15** | | | | | | -0.01 | -0.04 | **-0.15** |
| Encroachments | | | | | 0.01 | | 0.01 | **0.04** | 0.01 | | 0.01 | **0.04** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.12 | | 0.12 | **0.45** | 0.12 | | 0.12 | **0.45** | | | | **0.00** |
| *LMA Totals:* | 35.48 | 1.71 | 42.32 | **158.80** | 71.25 | 14.59 | 129.61 | **486.34** | 35.77 | 12.88 | 87.29 | **327.54** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *San Joaquin River Basin (cont.)*

| NA0013 | Total LMA Miles | 6.40 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Merced Streams Group** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.46 | 0.32 | 1.74 | **27.19** | 0.61 | | 0.61 | **9.53** | 0.15 | -0.32 | -1.13 | **-17.66** |
| Trim / Thin Trees | 0.02 | | 0.02 | **0.31** | 0.01 | 0.17 | 0.69 | **10.78** | -0.01 | 0.17 | 0.67 | **10.47** |
| Encroachments | 0.03 | | 0.03 | **0.47** | 0.02 | | 0.02 | **0.31** | -0.01 | | -0.01 | **-0.16** |
| Animal Control | 1.48 | 0.02 | 1.56 | **24.38** | 1.70 | 0.64 | 4.26 | **66.56** | 0.22 | 0.62 | 2.70 | **42.19** |
| Erosion / Bank Caving | | | | | 0.01 | | 0.01 | **0.16** | 0.01 | | 0.01 | **0.16** |
| Crown Surface / Depressions / Rutting | 0.51 | | 0.51 | **7.97** | 0.52 | | 0.52 | **8.13** | 0.01 | | 0.01 | **0.16** |
| *Channels* | | | | | | | | | | | | |
| Encroachments | 2.52 | | 2.52 | **39.38** | 0.40 | | 0.40 | **6.25** | -2.12 | | -2.12 | **-33.13** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.15 | 0.01 | 0.19 | **2.97** | 0.16 | | 0.16 | **2.50** | 0.01 | -0.01 | -0.03 | **-0.47** |
| *LMA Totals:* | 5.17 | 0.35 | 6.57 | **102.66** | 3.43 | 0.81 | 6.67 | **104.22** | -1.74 | 0.46 | 0.10 | **1.56** |

| NA0017 | Total LMA Miles | 103.96 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **San Joaquin County Flood Control and Water Conservation District** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.66 | | 0.66 | **0.64** | 0.82 | | 0.82 | **0.79** | 0.16 | | 0.16 | **0.15** |
| Trim / Thin Trees | 0.04 | | 0.04 | **0.04** | 0.03 | | 0.03 | **0.03** | -0.01 | | -0.01 | **-0.01** |
| Encroachments | 3.93 | 0.39 | 5.49 | **5.28** | 1.68 | 0.01 | 1.72 | **1.65** | -2.25 | -0.38 | -3.77 | **-3.63** |
| Animal Control | 0.62 | 0.02 | 0.70 | **0.67** | 0.59 | 0.03 | 0.71 | **0.68** | -0.03 | 0.01 | 0.01 | **0.01** |
| Slope Stability | 0.81 | 0.09 | 1.17 | **1.13** | 0.72 | 0.01 | 0.76 | **0.73** | -0.09 | -0.08 | -0.41 | **-0.39** |
| Erosion / Bank Caving | 0.32 | | 0.32 | **0.31** | 0.11 | | 0.11 | **0.11** | -0.21 | | -0.21 | **-0.20** |
| Cracking | 0.01 | | 0.01 | **0.01** | 0.02 | | 0.02 | **0.02** | 0.01 | | 0.01 | **0.01** |
| Crown Surface / Depressions / Rutting | 0.19 | | 0.19 | **0.18** | 0.17 | | 0.17 | **0.16** | -0.02 | | -0.02 | **-0.02** |
| Repair Gates | 0.01 | | 0.01 | **0.01** | | | | | -0.01 | | -0.01 | **-0.01** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Culverts: Inlets / Outlets | 0.02 | | 0.02 | **0.02** | | | | | -0.02 | | -0.02 | **-0.02** |
| Flap Gates | 0.01 | 0.02 | 0.09 | **0.09** | 0.01 | 0.01 | 0.05 | **0.05** | | -0.01 | -0.04 | **-0.04** |
| *Concrete Floodwalls* | | | | | | | | | | | | |
| Concrete Surfaces | 0.01 | | 0.01 | **0.01** | | | | | -0.01 | | -0.01 | **-0.01** |
| Monolith Joints | 0.06 | | 0.06 | **0.06** | 0.06 | | 0.06 | **0.06** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.01 | 0.92 | 3.69 | **3.55** | 0.17 | 1.68 | 6.89 | **6.63** | 0.16 | 0.76 | 3.20 | **3.08** |
| *LMA Totals:* | 6.70 | 1.44 | 12.46 | **11.99** | 4.38 | 1.74 | 11.34 | **10.91** | -2.32 | 0.30 | -1.12 | **-1.08** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *San Joaquin River Basin (cont.)*

| RD0001 | Total LMA Miles | 1.15 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0001 Union Island** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | M * | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.01 | | 0.01 | **0.87** | 0.01 | | 0.01 | **0.87** | | | | **0.00** |
| Animal Control | 0.04 | | 0.04 | **3.48** | 0.03 | | 0.03 | **2.61** | -0.01 | | -0.01 | **-0.87** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | | | | | 0.01 | 0.04 | **3.48** | | 0.01 | 0.04 | **3.48** |
| *LMA Totals:* | 0.05 | 0.00 | 0.05 | **4.35** | 0.04 | 0.01 | 0.08 | **6.96*** | -0.01 | 0.01 | 0.03 | **2.61** |

| RD0017 | Total LMA Miles | 16.24 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0017 Mossdale** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | M * | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.03 | | 0.03 | **0.19** | 0.03 | | 0.03 | **0.19** | | | | **0.00** |
| Trim / Thin Trees | 0.05 | | 0.05 | **0.31** | 0.01 | | 0.01 | **0.06** | -0.04 | | -0.04 | **-0.25** |
| Encroachments | 0.01 | | 0.01 | **0.06** | | 0.01 | 0.04 | **0.25** | -0.01 | 0.01 | 0.03 | **0.18** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | | | | 0.01 | 0.02 | 0.09 | **0.55** | 0.01 | 0.02 | 0.09 | **0.55** |
| *LMA Totals:* | 0.09 | 0.00 | 0.09 | **0.55** | 0.05 | 0.03 | 0.17 | **1.05*** | -0.04 | 0.03 | 0.08 | **0.49** |

| RD0404 | Total LMA Miles | 4.12 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0404 Boggs** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.04 | | 0.04 | **0.97** | 0.22 | | 0.22 | **5.34** | 0.18 | | 0.18 | **4.37** |
| Trim / Thin Trees | 0.08 | | 0.08 | **1.94** | 0.08 | 0.07 | 0.36 | **8.74** | | 0.07 | 0.28 | **6.80** |
| Encroachments | 0.06 | | 0.06 | **1.46** | 0.07 | 0.01 | 0.11 | **2.67** | 0.01 | 0.01 | 0.05 | **1.21** |
| Animal Control | 0.34 | | 0.34 | **8.25** | 0.12 | | 0.12 | **2.91** | -0.22 | | -0.22 | **-5.34** |
| Slope Stability | 0.02 | | 0.02 | **0.49** | 0.10 | | 0.10 | **2.43** | 0.08 | | 0.08 | **1.94** |
| Erosion / Bank Caving | 0.03 | | 0.03 | **0.73** | 0.03 | | 0.03 | **0.73** | | | | **0.00** |
| Crown Surface / Depressions / Rutting | | | | | 0.69 | | 0.69 | **16.75** | 0.69 | | 0.69 | **16.75** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | 0.04 | 0.16 | **3.88** | | 0.10 | 0.40 | **9.71** | | 0.06 | 0.24 | **5.83** |
| *LMA Totals:* | 0.57 | 0.04 | 0.73 | **17.72** | 1.31 | 0.18 | 2.03 | **49.27** | 0.74 | 0.14 | 1.30 | **31.55** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *San Joaquin River Basin (cont.)*

| RD0524 | Total LMA Miles | 6.26 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0524 Middle Roberts Island** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.07 | 0.28 | 1.19 | **19.01** | 0.27 | 0.29 | 1.43 | **22.84** | 0.20 | 0.01 | 0.24 | **3.83** |
| Trim / Thin Trees | 0.77 | 0.08 | 1.09 | **17.41** | 0.73 | 0.22 | 1.61 | **25.72** | -0.04 | 0.14 | 0.52 | **8.31** |
| Encroachments | 0.24 | 0.01 | 0.28 | **4.47** | 0.22 | 0.02 | 0.30 | **4.79** | -0.02 | 0.01 | 0.02 | **0.32** |
| Animal Control | 0.35 | | 0.35 | **5.59** | 0.35 | | 0.35 | **5.59** | 0.00 | | | **0.00** |
| Slope Stability | 0.10 | | 0.10 | **1.60** | 0.14 | 0.02 | 0.22 | **3.51** | 0.04 | 0.02 | 0.12 | **1.92** |
| Erosion / Bank Caving | 0.22 | | 0.22 | **3.51** | 0.19 | 0.33 | 1.51 | **24.12** | -0.03 | 0.33 | 1.29 | **20.61** |
| Crown Surface / Depressions / Rutting | 0.02 | | 0.02 | **0.32** | 0.01 | | 0.01 | **0.16** | -0.01 | | -0.01 | **-0.16** |
| Operations & Maintenance Manuals | | | | | 0.06 | | 0.06 | **0.96** | 0.06 | | 0.06 | **0.96** |
| Flood Preparedness & Training | | | | | 0.06 | | 0.06 | **0.96** | 0.06 | | 0.06 | **0.96** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Metal Pipes | | | | | 0.01 | | 0.01 | **0.16** | 0.01 | | 0.01 | **0.16** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.02 | 0.35 | 1.42 | **22.68** | 0.07 | 0.29 | 1.23 | **19.65** | 0.05 | -0.06 | -0.19 | **-3.04** |
| *LMA Totals:* | 1.79 | 0.72 | 4.67 | **74.60** | 2.12 | 1.17 | 6.80 | **108.63** | 0.33 | 0.45 | 2.12 | **34.03** |

| RD0544 | Total LMA Miles | 10.33 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 0544 Upper Roberts Island** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 5.32 | 0.41 | 6.96 | **67.38** | 4.88 | 0.10 | 5.28 | **51.11** | -0.44 | -0.31 | -1.68 | **-16.26** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.10** | 0.02 | | 0.02 | **0.19** | 0.01 | | 0.01 | **0.10** |
| Encroachments | 0.21 | 0.01 | 0.25 | **2.42** | 0.17 | 0.01 | 0.21 | **2.03** | -0.04 | | -0.04 | **-0.39** |
| Animal Control | 0.23 | | 0.23 | **2.23** | 0.27 | | 0.27 | **2.61** | 0.04 | | 0.04 | **0.39** |
| Slope Stability | 0.01 | 0.02 | 0.09 | **0.87** | 0.04 | 0.02 | 0.12 | **1.16** | 0.03 | | 0.03 | **0.29** |
| Erosion / Bank Caving | 0.02 | 0.02 | 0.10 | **0.97** | 0.03 | 0.01 | 0.07 | **0.68** | 0.01 | -0.01 | -0.03 | **-0.29** |
| Crown Surface / Depressions / Rutting | | 0.01 | 0.04 | **0.39** | 0.71 | 0.01 | 0.75 | **7.26** | 0.71 | | 0.71 | **6.87** |
| Flood Preparedness & Training | | | | | 0.10 | | 0.10 | **0.97** | 0.10 | | 0.10 | **0.97** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Erosion Areas | | 0.01 | 0.04 | **0.39** | | 0.01 | 0.04 | **0.39** | | | | **0.00** |
| *Channels* | | | | | | | | | | | | |
| Erosion / Bank Caving | | | | | | 0.01 | 0.04 | **0.39** | | 0.01 | 0.04 | **0.39** |
| Encroachments | | 0.01 | 0.04 | **0.39** | | 0.01 | 0.04 | **0.39** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | 0.04 | 0.16 | **1.55** | | 0.05 | 0.20 | **1.94** | | 0.01 | 0.04 | **0.39** |
| *LMA Totals:* | 5.80 | 0.53 | 7.92 | **76.67** | 6.22 | 0.23 | 7.14 | **69.12** | 0.42 | -0.30 | -0.78 | **-7.55** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *San Joaquin River Basin (cont.)*

| RD1602 | Total LMA Miles | 6.29 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 1602 Del Puerto** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | **U** | Overall LMA Rating | | | **U** | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 4.54 | | 4.54 | **72.18** | 2.10 | | 2.10 | **33.39** | -2.44 | | -2.44 | **-38.79** |
| Trim / Thin Trees | 0.03 | | 0.03 | **0.48** | | | | | -0.03 | | -0.03 | **-0.48** |
| Encroachments | 0.05 | | 0.05 | **0.80** | 0.04 | | 0.04 | **0.64** | -0.01 | | -0.01 | **-0.16** |
| Animal Control | 0.29 | | 0.29 | **4.61** | 0.55 | | 0.55 | **8.74** | 0.26 | | 0.26 | **4.13** |
| Slope Stability | 0.04 | | 0.04 | **0.64** | 0.04 | | 0.04 | **0.64** | | | | **0.00** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Encroachments | 0.01 | | 0.01 | **0.16** | 0.01 | | 0.01 | **0.16** | | | | **0.00** |
| Flap Gates | 0.01 | | 0.01 | **0.16** | 0.01 | | 0.01 | **0.16** | | | | **0.00** |
| Concrete Tilting / Settlement | 0.01 | | 0.01 | **0.16** | 0.01 | | 0.01 | **0.16** | | | | **0.00** |
| *LMA Totals:* | 4.98 | 0.00 | 4.98 | **79.17** | 2.76 | 0.00 | 2.76 | **43.88** | -2.22 | 0.00 | -2.22 | **-35.29** |

| RD2031 | Total LMA Miles | 13.19 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2031 Elliot** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | **M *** | Overall LMA Rating | | | **M** | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.02 | | 0.02 | **0.15** | 0.02 | | 0.02 | **0.15** | | | | **0.00** |
| Trim / Thin Trees | 0.62 | | 0.62 | **4.70** | 0.61 | | 0.61 | **4.63** | -0.01 | | -0.01 | **-0.08** |
| Encroachments | 0.01 | | 0.01 | **0.08** | 0.52 | | 0.52 | **3.94** | 0.51 | | 0.51 | **3.87** |
| Animal Control | 0.03 | 0.01 | 0.07 | **0.53** | 0.14 | 0.03 | 0.26 | **1.97** | 0.11 | 0.02 | 0.19 | **1.44** |
| Erosion / Bank Caving | 0.03 | 0.01 | 0.07 | **0.53** | 0.03 | 0.01 | 0.07 | **0.53** | | | | **0.00** |
| Crown Surface / Depressions / Rutting | 0.02 | | 0.02 | **0.15** | 0.07 | | 0.07 | **0.53** | 0.05 | | 0.05 | **0.38** |
| Seepage / Sandboils | | 0.01 | 0.04 | **0.30** | | | | | | -0.01 | -0.04 | **-0.30** |
| *Interior Drainage & Piping Systems* | | | | | | | | | | | | |
| Flap Gates | | | | | | 0.01 | 0.04 | **0.30** | | 0.01 | 0.04 | **0.30** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.04 | | 0.04 | **0.30** | 0.04 | | 0.04 | **0.30** | | | | **0.00** |
| *LMA Totals:* | 0.77 | 0.03 | 0.89 | **6.75*** | 1.43 | 0.05 | 1.63 | **12.36** | 0.66 | 0.02 | 0.74 | **5.61** |

| RD2058 | Total LMA Miles | 6.71 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2058 Pescadaro** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | **U** | Overall LMA Rating | | | **A** | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 4.17 | 0.02 | 4.25 | **63.34** | 0.06 | | 0.06 | **0.89** | -4.11 | -0.02 | -4.19 | **-62.44** |
| Trim / Thin Trees | 0.19 | | 0.19 | **2.83** | | | | | -0.19 | | -0.19 | **-2.83** |
| Encroachments | 0.01 | 0.01 | 0.05 | **0.75** | 0.01 | | 0.01 | **0.15** | | -0.01 | -0.04 | **-0.60** |
| Animal Control | | | | | 0.01 | | 0.01 | **0.15** | 0.01 | | 0.01 | **0.15** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.05 | | 0.05 | **0.75** | 0.05 | | 0.05 | **0.75** | | | | **0.00** |
| *LMA Totals:* | 4.42 | 0.03 | 4.54 | **67.66** | 0.13 | 0.00 | 0.13 | **1.94** | -4.29 | -0.03 | -4.41 | **-65.72** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *San Joaquin River Basin (cont.)*

| RD2062 | Total LMA Miles | 12.35 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2062 Stewart** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.01 | | 0.01 | **0.08** | 1.26 | | 1.26 | **10.20** | 1.25 | | 1.25 | **10.12** |
| Trim / Thin Trees | | | | | 0.02 | | 0.02 | **0.16** | 0.02 | | 0.02 | **0.16** |
| Encroachments | 1.81 | | 1.81 | **14.66** | 1.80 | | 1.80 | **14.58** | -0.01 | | -0.01 | **-0.08** |
| Animal Control | 0.09 | | 0.09 | **0.73** | 0.10 | | 0.10 | **0.81** | 0.01 | | 0.01 | **0.08** |
| Slope Stability | 0.01 | | 0.01 | **0.08** | 0.02 | | 0.02 | **0.16** | 0.01 | | 0.01 | **0.08** |
| Erosion / Bank Caving | 0.03 | | 0.03 | **0.24** | 0.03 | | 0.03 | **0.24** | | | | **0.00** |
| Crown Surface / Depressions / Rutting | 0.01 | 0.22 | 0.89 | **7.21** | | 0.22 | 0.88 | **7.13** | -0.01 | | -0.01 | **-0.08** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.15 | 0.21 | 0.99 | **8.02** | 0.17 | 0.19 | 0.93 | **7.53** | 0.02 | -0.02 | -0.06 | **-0.49** |
| *LMA Totals:* | 2.11 | 0.43 | 3.83 | **31.01** | 3.40 | 0.41 | 5.04 | **40.81** | 1.29 | -0.02 | 1.21 | **9.80** |

| RD2063 | Total LMA Miles | 10.63 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2063 Crows Landing** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 2.03 | | 2.03 | **19.10** | 1.10 | | 1.10 | **10.35** | -0.93 | | -0.93 | **-8.75** |
| Trim / Thin Trees | 0.03 | | 0.03 | **0.28** | | | | | -0.03 | | -0.03 | **-0.28** |
| Encroachments | 0.12 | 0.01 | 0.16 | **1.51** | | | | | -0.12 | -0.01 | -0.16 | **-1.51** |
| Animal Control | 0.11 | | 0.11 | **1.04** | 0.11 | | 0.11 | **1.04** | 0.00 | | | **0.00** |
| Slope Stability | 0.01 | | 0.01 | **0.09** | | | | | -0.01 | | -0.01 | **-0.09** |
| Erosion / Bank Caving | | 0.16 | 0.64 | **6.02** | 0.02 | 0.01 | 0.06 | **0.56** | 0.02 | -0.15 | -0.58 | **-5.46** |
| Crown Surface / Depressions / Rutting | 10.58 | | 10.58 | **99.53** | 10.58 | | 10.58 | **99.53** | | | | **0.00** |
| *LMA Totals:* | 12.88 | 0.17 | 13.56 | **127.56** | 11.81 | 0.01 | 11.85 | **111.48** | -1.07 | -0.16 | -1.71 | **-16.09** |

| RD2064 | Total LMA Miles | 11.90 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2064 River Junction** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 6.93 | | 6.93 | **58.24** | | | | | -6.93 | | -6.93 | **-58.24** |
| Encroachments | 0.09 | 0.20 | 0.89 | **7.48** | | | | | -0.09 | -0.20 | -0.89 | **-7.48** |
| Crown Surface / Depressions / Rutting | | | | | 0.97 | | 0.97 | **8.15** | 0.97 | | 0.97 | **8.15** |
| *LMA Totals:* | 7.02 | 0.20 | 7.82 | **65.71** | 0.97 | 0.00 | 0.97 | **8.15** | -6.05 | -0.20 | -6.85 | **-57.56** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *San Joaquin River Basin (cont.)*

| RD2075 | Total LMA Miles | 7.52 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2075 McMullin** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.71 | | 0.71 | **9.44** | 14.41 | 0.02 | 14.49 | **192.69** | 13.70 | 0.02 | 13.78 | **183.25** |
| Trim / Thin Trees | 0.04 | | 0.04 | **0.53** | 0.03 | | 0.03 | **0.40** | -0.01 | | -0.01 | **-0.13** |
| Crown Surface / Depressions / Rutting | 0.01 | | 0.01 | **0.13** | | | | | -0.01 | | -0.01 | **-0.13** |
| Operations & Maintenance Manuals | | | | | 0.08 | | 0.08 | **1.06** | 0.08 | | 0.08 | **1.06** |
| Flood Preparedness & Training | | | | | 0.08 | | 0.08 | **1.06** | 0.08 | | 0.08 | **1.06** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | 0.01 | 0.04 | **0.53** | 0.01 | | 0.01 | **0.13** | 0.01 | -0.01 | -0.03 | **-0.40** |
| *LMA Totals:* | 0.76 | 0.01 | 0.80 | **10.64** | 14.60 | 0.02 | 14.68 | **195.21** | 13.84 | 0.01 | 13.89 | **184.57** |

| RD2085 | Total LMA Miles | 6.18 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2085 Kasson** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 5.26 | | 5.26 | **85.11** | 2.60 | | 2.60 | **42.07** | -2.66 | | -2.66 | **-43.04** |
| Trim / Thin Trees | 0.25 | | 0.25 | **4.05** | 0.25 | | 0.25 | **4.05** | | | | **0.00** |
| Encroachments | 0.34 | 0.01 | 0.38 | **6.15** | 0.04 | 0.01 | 0.08 | **1.29** | -0.30 | | -0.30 | **-4.85** |
| Animal Control | 0.07 | | 0.07 | **1.13** | 0.08 | | 0.08 | **1.29** | 0.01 | | 0.01 | **0.16** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | | | | | 0.02 | 0.08 | **1.29** | | 0.02 | 0.08 | **1.29** |
| *LMA Totals:* | 5.92 | 0.01 | 5.96 | **96.44** | 2.97 | 0.03 | 3.09 | **50.00** | -2.95 | 0.02 | -2.87 | **-46.44** |

| RD2089 | Total LMA Miles | 2.90 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2089 Stark** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 1.20 | 1.30 | 6.40 | **220.69** | 1.20 | 1.30 | 6.40 | **220.69** | | | | **0.00** |
| Trim / Thin Trees | 0.27 | 0.15 | 0.87 | **30.00** | 0.28 | 0.14 | 0.84 | **28.97** | 0.01 | -0.01 | -0.03 | **-1.03** |
| Encroachments | 0.06 | 0.01 | 0.10 | **3.45** | 0.07 | 0.01 | 0.11 | **3.79** | 0.01 | | 0.01 | **0.34** |
| Animal Control | 0.08 | 0.06 | 0.32 | **11.03** | 0.09 | 0.06 | 0.33 | **11.38** | 0.01 | | 0.01 | **0.34** |
| Crown Surface / Depressions / Rutting | 0.05 | | 0.05 | **1.72** | 0.05 | | 0.05 | **1.72** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.01 | 0.02 | 0.09 | **3.10** | 0.01 | 0.02 | 0.09 | **3.10** | | | | **0.00** |
| *LMA Totals:* | 1.67 | 1.54 | 7.83 | **270.00** | 1.70 | 1.53 | 7.82 | **269.66** | 0.03 | -0.01 | -0.01 | **-0.34** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *San Joaquin River Basin (cont.)*

| RD2091 | Total LMA Miles | 7.92 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2091 Chase** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M * | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | 0.04 | | 0.04 | **0.51** | 0.04 | | 0.04 | **0.51** |
| Trim / Thin Trees | 0.01 | | 0.01 | **0.13** | 0.04 | | 0.04 | **0.51** | 0.03 | | 0.03 | **0.38** |
| Animal Control | 0.01 | | 0.01 | **0.13** | 0.08 | | 0.08 | **1.01** | 0.07 | | 0.07 | **0.88** |
| Slope Stability | | 0.01 | 0.04 | **0.51** | | | | | | -0.01 | -0.04 | **-0.51** |
| *LMA Totals:* | 0.02 | 0.01 | 0.06 | **0.76*** | 0.16 | 0.00 | 0.16 | **2.02** | 0.14 | -0.01 | 0.10 | **1.26** |

| RD2092 | Total LMA Miles | 3.76 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2092 Dos Rios** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M * | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Encroachments | | | | | 0.01 | | 0.01 | **0.27** | 0.01 | | 0.01 | **0.27** |
| Animal Control | 0.12 | | 0.12 | **3.19** | 0.04 | | 0.04 | **1.06** | -0.08 | | -0.08 | **-2.13** |
| Slope Stability | 0.05 | | 0.05 | **1.33** | 0.01 | | 0.01 | **0.27** | -0.04 | | -0.04 | **-1.06** |
| Crown Surface / Depressions / Rutting | 0.01 | | 0.01 | **0.27** | | | | | -0.01 | | -0.01 | **-0.27** |
| Seepage / Sandboils | | 0.01 | 0.04 | **1.06** | | | | | | -0.01 | -0.04 | **-1.06** |
| Emergency Supplies & Equipment | | | | | 0.04 | | 0.04 | **1.06** | 0.04 | | 0.04 | **1.06** |
| Flood Preparedness & Training | | | | | 0.04 | | 0.04 | **1.06** | 0.04 | | 0.04 | **1.06** |
| *LMA Totals:* | 0.18 | 0.01 | 0.22 | **5.85*** | 0.14 | 0.00 | 0.14 | **3.72** | -0.04 | -0.01 | -0.08 | **-2.13** |

| RD2094 | Total LMA Miles | 3.28 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2094 Wathal** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *LMA Totals:* | 0.00 | 0.00 | 0.00 | **0.00** | 0.00 | 0.00 | 0.00 | **0.00** | 0.00 | 0.00 | 0.00 | **0.00** |

| RD2095 | Total LMA Miles | 4.83 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2095 Paradise Cut** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | M * | Overall LMA Rating | | | M | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 0.05 | 0.01 | 0.09 | **1.86** | 0.05 | 0.01 | 0.09 | **1.86** | | | | **0.00** |
| Trim / Thin Trees | | | | | 0.01 | | 0.01 | **0.21** | 0.01 | | 0.01 | **0.21** |
| Encroachments | | | | | 0.01 | | 0.01 | **0.21** | 0.01 | | 0.01 | **0.21** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.21** | 0.01 | | 0.01 | **0.21** |
| Crown Surface / Depressions / Rutting | | | | | 0.33 | | 0.33 | **6.83** | 0.33 | | 0.33 | **6.83** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | 0.05 | 0.05 | 0.25 | **5.18** | 0.09 | 0.01 | 0.13 | **2.69** | 0.04 | -0.04 | -0.12 | **-2.48** |
| *LMA Totals:* | 0.10 | 0.06 | 0.34 | **7.04*** | 0.50 | 0.02 | 0.58 | **12.01** | 0.40 | -0.04 | 0.24 | **4.97** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**
**Levee Inspections**

# Fall 2012 Levee Maintenance Deficiency Summary Report

## Overall LMA Ratings, Compare 2011 & 2012

### *San Joaquin River Basin (cont.)*

| RD2096 | Total LMA Miles | 0.17 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2096 Wetherbee Lake** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Encroachments | | | | | | 0.01 | 0.04 | **23.53** | | 0.01 | 0.04 | **23.53** |
| Animal Control | | | | | 0.02 | | 0.02 | **11.77** | 0.02 | | 0.02 | **11.77** |
| *LMA Totals:* | 0.00 | 0.00 | 0.00 | **0.00** | 0.02 | 0.01 | 0.06 | **35.29** | 0.02 | 0.01 | 0.06 | **35.29** |

| RD2101 | Total LMA Miles | 3.51 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2101 Blewett** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | U | Overall LMA Rating | | | U | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | 2.98 | | 2.98 | **84.90** | 0.08 | | 0.08 | **2.28** | -2.90 | | -2.90 | **-82.62** |
| Trim / Thin Trees | 0.24 | | 0.24 | **6.84** | 0.02 | | 0.02 | **0.57** | -0.22 | | -0.22 | **-6.27** |
| Encroachments | | | | | 0.01 | | 0.01 | **0.29** | 0.01 | | 0.01 | **0.29** |
| Animal Control | 0.03 | 0.21 | 0.87 | **24.79** | 0.24 | 0.02 | 0.32 | **9.12** | 0.21 | -0.19 | -0.55 | **-15.67** |
| Erosion / Bank Caving | 0.02 | | 0.02 | **0.57** | 0.02 | | 0.02 | **0.57** | | | | **0.00** |
| *Supplemental* | | | | | | | | | | | | |
| DWR Erosion Survey | | 0.10 | 0.40 | **11.40** | | 0.10 | 0.40 | **11.40** | | | | **0.00** |
| *LMA Totals:* | 3.27 | 0.31 | 4.51 | **128.49** | 0.37 | 0.12 | 0.85 | **24.22** | -2.90 | -0.19 | -3.66 | **-104.27** |

| RD2107 | Total LMA Miles | 4.21 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Reclamation District No. 2107 Mossdale Island** | **Fall 2011** | | | | **Fall 2012** | | | | **Change** | | | |
| | Overall LMA Rating | | | A | Overall LMA Rating | | | A | | | | |
| Rated Item | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % | M Miles | U Miles | M+4U Miles | Thresh. % |
| *Earthen Levee* | | | | | | | | | | | | |
| Vegetation | | | | | 0.02 | | 0.02 | **0.48** | 0.02 | | 0.02 | **0.48** |
| Encroachments | | | | | 0.01 | | 0.01 | **0.24** | 0.01 | | 0.01 | **0.24** |
| Animal Control | | | | | 0.01 | | 0.01 | **0.24** | 0.01 | | 0.01 | **0.24** |
| Slope Stability | | | | | 0.01 | | 0.01 | **0.24** | 0.01 | | 0.01 | **0.24** |
| *LMA Totals:* | 0.00 | 0.00 | 0.00 | **0.00** | 0.05 | 0.00 | 0.05 | **1.19** | 0.05 | 0.00 | 0.05 | **1.19** |

* Overall LMA Threshold Percent is less than 10.00%; however, U Rated Miles are present, so the Overall LMA Rating is M instead of A.

**Flood Control Project Maintenance**

# 2012 Channel Summary Report

## Overall Unit and Item Ratings

# Adin Community Service District

## Ash Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | A |

## Dry Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | A |

**Flood Control Project Maintenance**

# 2012 Channel Summary Report

## Overall Unit and Item Ratings

# DWR Sutter Maintenance Yard

## Big Chico Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | M |

## Lindo Channel & Sandy Gulch

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | M |

## Little Chico Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | A |

**Flood Control Project Maintenance**

# 2012 Channel Summary Report

## Overall Unit and Item Ratings

# Fairfield Suisun Sewer District

## Laurel Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **M** | Vegetation & Obstructions | U |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | A |

## Ledgewood Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **M** * | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | M * |

* *Overall channel rating average is less than 0.2, however, U rated issues are present, so the overall rating is M instead of A.*

## McCoy Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | A |

## Union Avenue Diversion

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | A |

**Flood Control Project Maintenance**

# 2012 Channel Summary Report

## Overall Unit and Item Ratings

# Madera County FCWCA

## Ash Slough

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | N |

## Berenda Slough

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| U | Vegetation & Obstructions | U |
| | Shoaling / Sedimentation | U |
| | Erosion / Bank Caving | U |
| | Encroachments | M |
| | Revetments & Other Structural Appurtenances | U |

## Chowchilla River

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | M |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | N |

## Fresno River

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| M | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | U |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | M |

# 2012 Channel Summary Report

## Overall Unit and Item Ratings

# Merced Streams Group

### Bear Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **M** | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | M |
| | Erosion / Bank Caving | M |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | M |

### Black Rascal Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **M** | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | M |
| | Erosion / Bank Caving | M |
| | Encroachments | M |
| | Revetments & Other Structural Appurtenances | A |

### Burns Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | N |

### Mariposa Creek & Duck Slough

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **M** | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | M |
| | Erosion / Bank Caving | M |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | A |

### Miles Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | A |

### Owens Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **M** | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | M |
| | Revetments & Other Structural Appurtenances | A |

# 2012 Channel Summary Report

## Overall Unit and Item Ratings

# Placer County

### Truckee River

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | A |

**Flood Control Project Maintenance**

# 2012 Channel Summary Report

## Overall Unit and Item Ratings

# San Joaquin County Flood Control and Water Conservation District

### Duck Creek Diversion Channel

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | A |

### North Littlejohn Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| M | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | M |
| | Revetments & Other Structural Appurtenances | A |

### South Littlejohn Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | M |
| | Revetments & Other Structural Appurtenances | A |

### South Littlejohn Creek North Branch

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | M |
| | Revetments & Other Structural Appurtenances | A |

**Flood Control Project Maintenance**

# 2012 Channel Summary Report

## Overall Unit and Item Ratings

# Tehama County Flood Control and Water Conservation District

## McClure Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | N |

## Salt Creek

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Encroachments | A |
| | Revetments & Other Structural Appurtenances | A |

**Flood Control Project Maintenance**

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Butte County Public Works Department Butte County Public Works

## Big Chico Creek Diversion Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | A |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

## 2012 Structure Summary Report

### Overall Unit and Item Ratings

# Butte County Public Works Department Butte County Public Works (cont.)

## Lindo Channel Control Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | A |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Butte County Public Works Department Butte County Public Works (cont.)

### Lindo Channel Diversion Weir

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

**Flood Control Project Maintenance**

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# City of Sacramento

## El Camino Avenue Bridge

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

**Flood Control Project Maintenance**

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# DWR Sacramento Maintenance Yard

## Cache Creek Setting Basin Weir And Drainage Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | A |
| | Flap Gates | A |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | N |
| | Concrete Foundations | A |
| | Security Fencing | A |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | N |
| | Safety | A |

## Fremont Weir

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | A |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# DWR Sacramento Maintenance Yard (cont.)

## Knights Landing Outfall Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | N |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | A |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | M |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | N |
| | Concrete Foundations | A |
| | Security Fencing | A |
| | Closure Structures | A |
| | Trash Rakes | N |
| | Other Metallic Items | M |
| | Monolith Joints | N |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# DWR Sacramento Maintenance Yard (cont.)

### Paradise Dam

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **M** | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | N |
| | Concrete Tilting / Settlement | N |
| | Concrete Foundations | N |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | N |
| | Safety | M |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# DWR Sacramento Maintenance Yard (cont.)

### Sacramento Weir

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | N |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | M |
| | Concrete Tilting / Settlement | N |
| | Concrete Foundations | A |
| | Security Fencing | A |
| | Closure Structures | A |
| | Trash Rakes | N |
| | Other Metallic Items | A |
| | Monolith Joints | N |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# DWR Sutter Maintenance Yard

## Butte Slough Drainage Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | A |
| | Trash Racks | N |
| | Flap Gates | A |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | N |
| | Concrete Tilting / Settlement | N |
| | Concrete Foundations | N |
| | Security Fencing | N |
| | Closure Structures | A |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | N |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# DWR Sutter Maintenance Yard (cont.)

## Butte Slough Outfall Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | A |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# DWR Sutter Maintenance Yard (cont.)

## Colusa Weir

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | A |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# DWR Sutter Maintenance Yard (cont.)

## Little Chico Creek Control And Weir Structures

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | N |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | A |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# DWR Sutter Maintenance Yard (cont.)

## Moulton Weir

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | A |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# DWR Sutter Maintenance Yard (cont.)

## Nelson Bend

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | N |
| | Concrete Tilting / Settlement | N |
| | Concrete Foundations | N |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | N |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# DWR Sutter Maintenance Yard (cont.)

## Sutter Bypass Weir No. 2

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | A |
| | Closure Structures | A |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# DWR Sutter Maintenance Yard (cont.)

### Tisdale Weir

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# DWR Sutter Maintenance Yard (cont.)

## Wadsworth Canal Weir No. 4

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | M |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | A |
| | Closure Structures | A |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lake County Watershed Protection District

## Clover Creek Diversion Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **M** | Photo Documentation | N |
| | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | M |
| | Erosion / Bank Caving | A |
| | Revetments | N |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | M |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | A |
| | Trash Racks | N |
| | Flap Gates | A |
| | Sluice/Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | N |
| | Concrete Tilting / Settlement | N |
| | Concrete Foundations | N |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | N |
| | Safety | M |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lake County Watershed Protection District (cont.)

## Highland Canal Diversion Weir And Drainage Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | N |
| | Encroachments | M |
| | Culverts: Inlets / Outlets | M |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | A |
| | Trash Racks | N |
| | Flap Gates | A |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | A |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

**Flood Control Project Maintenance**

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lower San Joaquin Levee District

## Ash Slough Drop Structure No. 1

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | M |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lower San Joaquin Levee District (cont.)

## Ash Slough Drop Structure No. 2

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | M |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lower San Joaquin Levee District (cont.)

## Ash Slough Drop Structure No. 3

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lower San Joaquin Levee District (cont.)

## Ash Slough Drop Structure No. 4

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | M |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lower San Joaquin Levee District (cont.)

## Bear Creek Diversion Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | M |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lower San Joaquin Levee District (cont.)

## Eastside Bypass Control Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | A |
| | Electric Gate Operators | A |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | A |
| | Closure Structures | A |
| | Trash Rakes | N |
| | Other Metallic Items | A |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lower San Joaquin Levee District (cont.)

## Eastside Bypass Drop Structure No. 1

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | M |
| | Revetments | N |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | A |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lower San Joaquin Levee District (cont.)

## Eastside Bypass Drop Structure No. 2

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | M |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lower San Joaquin Levee District (cont.)

## Fresno River Drainage Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | A |
| | Sluice/Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | A |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lower San Joaquin Levee District (cont.)

## Mariposa Bypass Control Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | A |
| | Electric Gate Operators | A |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | A |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lower San Joaquin Levee District (cont.)

## Mariposa Bypass Drop Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lower San Joaquin Levee District (cont.)

## Owens Creek Control Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | M |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | M |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | A |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lower San Joaquin Levee District (cont.)

## Owens Creek Overflow Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | A |
| | Monolith Joints | N |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lower San Joaquin Levee District (cont.)

## San Joaquin River And Chowchilla Canal Bypass Control Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | N |
| | Trash Racks | A |
| | Flap Gates | N |
| | Sluice/Slide Gates | M |
| | Electric Gate Operators | A |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | A |
| | Closure Structures | N |
| | Trash Rakes | A |
| | Other Metallic Items | A |
| | Monolith Joints | A |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Lower San Joaquin Levee District (cont.)

## San Joaquin River Structure And Sand Slough Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | M |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | A |
| | Monolith Joints | M |
| | Safety | A |

**Flood Control Project Maintenance**

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Madera County FCWCA

## Ash And Berenda Slough Control Structures

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | M |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | A |
| | Closure Structures | A |
| | Trash Rakes | N |
| | Other Metallic Items | A |
| | Monolith Joints | N |
| | Safety | M |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Madera County FCWCA (cont.)

## Fresno River Diversion Weir

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | A |
| | Sluice/Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | A |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | N |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Merced Streams Group

## Black Rascal Creek Drop Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Photo Documentation | N |
| | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | M |
| | Revetments | N |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | A |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | N |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Merced Streams Group (cont.)

## Owens Creek Siphon Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **M** | Photo Documentation | N |
| | Vegetation & Obstructions | M |
| | Shoaling / Sedimentation | U |
| | Erosion / Bank Caving | A |
| | Revetments | N |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | U |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | N |
| | Safety | A |

**Flood Control Project Maintenance**

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Reclamation District No. 0999 Netherlands

## Elk Slough Inlet Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | N |
| | Culverts: Breaks / Holes / Cracks | N |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | A |
| | Monolith Joints | N |
| | Safety | A |

**Flood Control Project Maintenance**

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Plumas County

## North Fork Feather River Diversion Channel Drop Structure No. 1 Through 7

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | N |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | N |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | N |
| | Safety | A |

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# Plumas County (cont.)

## North Fork Feather River Diversion Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Photo Documentation | N |
| | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | A |
| | Trash Racks | A |
| | Flap Gates | N |
| | Sluice/Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | A |
| | Closure Structures | A |
| | Trash Rakes | N |
| | Other Metallic Items | N |
| | Monolith Joints | A |
| | Safety | A |

**Flood Control Project Maintenance**

# 2012 Structure Summary Report

## Overall Unit and Item Ratings

# San Joaquin County Flood Control and Water Conservation District

## Duck Creek Diversion Weir And Control Structure

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Vegetation & Obstructions | A |
| | Shoaling / Sedimentation | A |
| | Erosion / Bank Caving | A |
| | Revetments | A |
| | Encroachments | A |
| | Culverts: Inlets / Outlets | A |
| | Culverts: Breaks / Holes / Cracks | A |
| | Metal Pipes | A |
| | Trash Racks | N |
| | Flap Gates | N |
| | Sluice/Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Concrete Surfaces | A |
| | Concrete Tilting / Settlement | A |
| | Concrete Foundations | A |
| | Security Fencing | N |
| | Closure Structures | N |
| | Trash Rakes | N |
| | Other Metallic Items | A |
| | Monolith Joints | A |
| | Safety | A |

**Flood Control Project Maintenance**

# 2012 Pumping Plant Summary Report

## Overall Unit and Item Ratings

# City of Sacramento

## Magpie Creek Pumping Plant

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Operating Log | A |
| | Operation & Maintenance Manual | A |
| | Plant Building | A |
| | Communications | A |
| | Safety | A |
| | Cranes | A |
| | Pumps | A |
| | Power | A |
| | Motors, Engines, Fans & Gear Reducers | A |
| | Pump Control Systems | A |
| | Sumps/Wet Well | A |
| | Trash Racks | A |
| | Trash Rakes | N |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Other Metallic Items | A |
| | Flap Gates | A |
| | Closure Structures | A |
| | Security Fencing | A |
| | Intake and Discharge Pipes | A |

**Flood Control Project Maintenance**

# 2012 Pumping Plant Summary Report

## Overall Unit and Item Ratings

# Reclamation District No. 2063 Crows Landing

## Reclamation District No. 2063 Pumping Plant (Nelson Drain)

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| U | Operating Log | U |
| | Operation & Maintenance Manual | U |
| | Plant Building | A |
| | Communications | U |
| | Safety | A |
| | Cranes | N |
| | Pumps | U |
| | Power | A |
| | Motors, Engines, Fans & Gear Reducers | U |
| | Pump Control Systems | U |
| | Sumps/Wet Well | A |
| | Trash Racks | A |
| | Trash Rakes | N |
| | Sluice / Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Flap Gates | N |
| | Security Fencing | A |
| | Intake and Discharge Pipes | A |
| | Photo Documentation | N |

# 2012 Pumping Plant Summary Report

## Overall Unit and Item Ratings

# DWR Sutter Maintenance Yard

## Middle Creek Pumping Plant

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Operating Log | A |
| | Operation & Maintenance Manual | A |
| | Plant Building | M |
| | Communications | A |
| | Safety | A |
| | Cranes | N |
| | Pumps | A |
| | Power | A |
| | Motors, Engines, Fans & Gear Reducers | N |
| | Pump Control Systems | A |
| | Sumps/Wet Well | A |
| | Trash Racks | A |
| | Trash Rakes | N |
| | Sluice / Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Other Metallic Items | A |
| | Flap Gates | N |
| | Closure Structures | N |
| | Security Fencing | A |
| | Intake and Discharge Pipes | A |

## Sutter Bypass Pumping Plant No. 1

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Operating Log | N |
| | Operation & Maintenance Manual | N |
| | Plant Building | N |
| | Communications | A |
| | Safety | N |
| | Cranes | N |
| | Pumps | A |
| | Power | A |
| | Motors, Engines, Fans & Gear Reducers | A |
| | Pump Control Systems | A |
| | Sumps/Wet Well | A |
| | Trash Racks | A |
| | Trash Rakes | N |
| | Sluice / Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Other Metallic Items | A |
| | Flap Gates | A |
| | Closure Structures | N |
| | Security Fencing | A |
| | Intake and Discharge Pipes | A |

# 2012 Pumping Plant Summary Report

## Overall Unit and Item Ratings

# DWR Sutter Maintenance Yard (cont.)

### Sutter Bypass Pumping Plant No. 2

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Operating Log | N |
| | Operation & Maintenance Manual | N |
| | Plant Building | N |
| | Communications | A |
| | Safety | N |
| | Cranes | N |
| | Pumps | N |
| | Power | A |
| | Motors, Engines, Fans & Gear Reducers | N |
| | Pump Control Systems | N |
| | Sumps/Wet Well | A |
| | Trash Racks | A |
| | Trash Rakes | N |
| | Sluice / Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Other Metallic Items | A |
| | Flap Gates | A |
| | Closure Structures | N |
| | Security Fencing | A |
| | Intake and Discharge Pipes | A |

### Sutter Bypass Pumping Plant No. 3

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Operating Log | N |
| | Operation & Maintenance Manual | N |
| | Plant Building | N |
| | Communications | A |
| | Safety | N |
| | Cranes | N |
| | Pumps | A |
| | Power | A |
| | Motors, Engines, Fans & Gear Reducers | A |
| | Pump Control Systems | A |
| | Sumps/Wet Well | A |
| | Trash Racks | A |
| | Trash Rakes | N |
| | Sluice / Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Other Metallic Items | A |
| | Flap Gates | A |
| | Closure Structures | N |
| | Security Fencing | A |
| | Intake and Discharge Pipes | A |

**Flood Control Project Maintenance**

# 2012 Pumping Plant Summary Report

## Overall Unit and Item Ratings

# Turlock Irrigation District Gomes Lake

## Gomes Lake Pumping Plant

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Operating Log | A |
| | Operation & Maintenance Manual | A |
| | Plant Building | A |
| | Communications | A |
| | Safety | A |
| | Cranes | N |
| | Pumps | A |
| | Power | A |
| | Motors, Engines, Fans & Gear Reducers | N |
| | Pump Control Systems | A |
| | Sumps/Wet Well | A |
| | Trash Racks | A |
| | Trash Rakes | N |
| | Sluice / Slide Gates | A |
| | Electric Gate Operators | A |
| | Manual Gate Operators | A |
| | Other Metallic Items | A |
| | Flap Gates | A |
| | Closure Structures | N |
| | Security Fencing | A |
| | Intake and Discharge Pipes | A |

# 2012 Pumping Plant Summary Report

## Overall Unit and Item Ratings

# Sacramento County

### American River Pumping Plant No. 1 Howe Avenue Storm Drain D - 05

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Operating Log | A |
| | Operation & Maintenance Manual | A |
| | Plant Building | A |
| | Communications | A |
| | Safety | A |
| | Cranes | A |
| | Pumps | A |
| | Power | A |
| | Motors, Engines, Fans & Gear Reducers | A |
| | Pump Control Systems | A |
| | Sumps/Wet Well | A |
| | Trash Racks | A |
| | Trash Rakes | A |
| | Sluice / Slide Gates | N |
| | Electric Gate Operators | A |
| | Manual Gate Operators | A |
| | Other Metallic Items | A |
| | Flap Gates | A |
| | Closure Structures | N |
| | Security Fencing | A |
| | Intake and Discharge Pipes | A |

### American River Pumping Plant No. 2 Willhaggin Storm Drain D - 43

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Operating Log | A |
| | Operation & Maintenance Manual | A |
| | Plant Building | A |
| | Communications | A |
| | Safety | A |
| | Cranes | A |
| | Pumps | A |
| | Power | A |
| | Motors, Engines, Fans & Gear Reducers | A |
| | Pump Control Systems | A |
| | Sumps/Wet Well | A |
| | Trash Racks | A |
| | Trash Rakes | N |
| | Sluice / Slide Gates | N |
| | Electric Gate Operators | A |
| | Manual Gate Operators | A |
| | Other Metallic Items | A |
| | Flap Gates | A |
| | Closure Structures | N |
| | Security Fencing | A |
| | Intake and Discharge Pipes | A |

# 2012 Pumping Plant Summary Report

## Overall Unit and Item Ratings

# San Joaquin County Flood Control and Water Conservation District

## Mormon Slough Pumping Plant No. 1

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Operating Log | A |
| | Operation & Maintenance Manual | A |
| | Plant Building | A |
| | Communications | A |
| | Safety | A |
| | Cranes | N |
| | Pumps | A |
| | Power | A |
| | Motors, Engines, Fans & Gear Reducers | A |
| | Pump Control Systems | A |
| | Sumps/Wet Well | A |
| | Trash Racks | A |
| | Trash Rakes | N |
| | Sluice / Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Other Metallic Items | A |
| | Flap Gates | A |
| | Closure Structures | N |
| | Security Fencing | M |
| | Intake and Discharge Pipes | A |

## Mormon Slough Pumping Plant No. 2

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| A | Operating Log | A |
| | Operation & Maintenance Manual | A |
| | Plant Building | A |
| | Communications | A |
| | Safety | A |
| | Cranes | N |
| | Pumps | A |
| | Power | A |
| | Motors, Engines, Fans & Gear Reducers | A |
| | Pump Control Systems | A |
| | Sumps/Wet Well | A |
| | Trash Racks | A |
| | Trash Rakes | N |
| | Sluice / Slide Gates | M |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Other Metallic Items | A |
| | Flap Gates | A |
| | Closure Structures | A |
| | Security Fencing | A |
| | Intake and Discharge Pipes | A |

# 2012 Pumping Plant Summary Report

## Overall Unit and Item Ratings

# San Joaquin County Flood Control and Water Conservation District (cont.)

### Mormon Slough Pumping Plant No. 3

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **A** | Operating Log | A |
| | Operation & Maintenance Manual | A |
| | Plant Building | A |
| | Communications | A |
| | Safety | A |
| | Cranes | N |
| | Pumps | A |
| | Power | A |
| | Motors, Engines, Fans & Gear Reducers | A |
| | Pump Control Systems | A |
| | Sumps/Wet Well | A |
| | Trash Racks | A |
| | Trash Rakes | N |
| | Sluice / Slide Gates | A |
| | Electric Gate Operators | N |
| | Manual Gate Operators | A |
| | Other Metallic Items | A |
| | Flap Gates | A |
| | Closure Structures | N |
| | Security Fencing | A |
| | Intake and Discharge Pipes | A |

**Flood Control Project Maintenance**

# 2012 Pumping Plant Summary Report

## Overall Unit and Item Ratings

# Reclamation District No. 2096 Wetherbee Lake

## Wetherbee Lake Pumping Plant & Navigation Gate

| Overall Unit Rating | Rated Item | Item Rating |
|---|---|---|
| **M** | Operating Log | A |
| | Operation & Maintenance Manual | U |
| | Plant Building | A |
| | Communications | A |
| | Safety | A |
| | Cranes | N |
| | Pumps | A |
| | Power | A |
| | Motors, Engines, Fans & Gear Reducers | A |
| | Pump Control Systems | A |
| | Sumps/Wet Well | A |
| | Trash Racks | M |
| | Trash Rakes | N |
| | Sluice / Slide Gates | N |
| | Electric Gate Operators | A |
| | Manual Gate Operators | A |
| | Other Metallic Items | A |
| | Flap Gates | A |
| | Closure Structures | A |
| | Security Fencing | A |
| | Intake and Discharge Pipes | A |

| | |
|---|---|
| LMA: | **NA0010 U23 Lower San Joaquin Levee District** |
| Waterway: | **RB San Joaquin River** |
| Site ID: | **NA0010U23RM224.27** |
| Status: | **Repaired Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **36.802116** | **-120.173847** | **224.27** | **9.15** | |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **555** |
| Scarp Height (ft): | **14** |
| Location of Erosion: | **Levee Toe** |
| WS Berm Width (ft): | **12** |
| WS Vegetation: | **Ground surrounding site fully covere** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | **3:1 or greater** |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Outside of bend > 90 deg** |
| Radius of Curvature(Rc/W): | **10.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **0** | x2 | **0** |
| Scarp Height (ft): | **0** | x3 | **0** |
| Location of Erosion: | **0** | x1 | **0** |
| WS Berm Width (ft): | **0** | x1 | **0** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **0** | x4 | **0** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 0

Normalized Score (out of 100%):

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **12** |
| Crown Type: | **Gravel** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **7/24/2012** |
| Comments: | |

07/24/2012: Site has been repaired with riprap rocks and broken concrete blocks, but loose material and cracking are visible at the top of the repaired site. The site needs close monitoring for performance evaluation.
08/16/2011: This site is immediately downstream of the riparian protection section. Dense vegetation growing on the toe and slope of the bank seems to indicate the most part of the erosion occurred prior to last winter. The closest spot is 12 feet away from the levee toe.

Looking downstream at the repaired site

Looking downstream standing at the middle of the erosion site. Note the cracking and losen material

Close look at the repaired site.

Looking downstream.

| | |
|---|---|
| LMA: | **NA0010 U23 Lower San Joaquin Levee District** |
| Waterway: | **RB San Joaquin River** |
| Site ID: | **NA0010U23RM224.33** |
| Status: | **Repaired Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **36.802898** | **-120.173278** | **224.33** | **9.23** | |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **280** |
| Scarp Height (ft): | **16** |
| Location of Erosion: | **Levee Toe** |
| WS Berm Width (ft): | |
| WS Vegetation: | **Ground surrounding site fully covere** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | **3:1 or greater** |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Outside of bend > 90 deg** |
| Radius of Curvature(Rc/W): | **1.90** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **0** | x2 | **0** |
| Scarp Height (ft): | **0** | x3 | **0** |
| Location of Erosion: | **0** | x1 | **0** |
| WS Berm Width (ft): | **0** | x1 | **0** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **0** | x4 | **0** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 0

Normalized Score (out of 100%):

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **12** |
| Crown Type: | **Gravel** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **7/24/2012** |
| Comments: | |

07/24/2012: The site has been repaired with clay material, riprap rocks, and broken concrete blocks, but the loose material and large crackings at the repaired site are visible. Need monitoring for the performance during the coming high flow envents.
08/16/2011: The erosion is cutting into the levee. The site is located at the outside of a river bend, and the erosions were caused by river flows during the last flooding season. The ground was covered by dense grasses. Animal burrow holes are visible.

Looking upstream at the repaired site.

A close view at the repaired site at the corner of the river bend. Note the losen material and cracking

Looking downat the cracking at the repaired site

Looking upstream

| | |
|---|---|
| LMA: | **NA0011 U01 Madera County FCWCA** |
| Waterway: | **RB Ash Slough** |
| Site ID: | **NA0011U01RM2.57** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.055596** | **-120.412647** | **2.57** | **1.15** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **460** |
| Scarp Height (ft): | **3** |
| Location of Erosion: | **Levee Toe** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2.5:1** |
| WS Soil Type: | **Sand (SP, SM and mixtures)** |
| Site Relative to Bend: | **Outside of bend > 90 deg** |
| Radius of Curvature(Rc/W): | **8.90** |

## II. Criteria

| | Score: | Weighted Score: | |
|---|---|---|---|
| Length (ft): | **5** | x2 | **10** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **1** | x3 | **3** |
| WS Soil Type: | **4** | x4 | **16** |
| Site Relative to Bend: | **3** | x1 | **3** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 50

Normalized Score (out of 100%): **55**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **Trees on site and with visible roots and leaning** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **7/24/2012** |
| Comments: | |

07/31/2012: Site was visited on 07/24/2012. No significant change observed. Dense vegetation around the site
08/09/2011: Site was inspected. No visible change was observed from the previous condition. A fallen tree was seen at the levee toe about 20 feet upstream, and tree root exposed. There has been no report from the district that this site was corrected.
11/30/2010: Site was not inspected due to time constraints. There have been no reports from the district that the site was corrected. Continue to monitor site during flood events.
08/05/2010: Recommended for annual assessment and monitoring during flood events, per CLRO.
2009: Site is recommended as a local maintenance issue, per Critical Levee Repair Office, Critical Erosion Sites Evaluation 2008 Report; site was prevously rated "M"
9/6/2007: Undercutting of the toe; several trees along the WS slope with roots exposed.

Close-in view at the erosion site

View from the riverbed

Tree roots exposed

Looking upstream standing on the riverbed

| | |
|---|---|
| LMA: | **NA0011 U01 Madera County FCWCA** |
| Waterway: | **RB Ash Slough** |
| Site ID: | **NA0011U01RM3.8** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.06857** | **-120.39862** | **3.80** | **2.38** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **100** |
| Scarp Height (ft): | **5** |
| Location of Erosion: | **Toe & Slope** |
| WS Berm Width (ft): | **10** |
| WS Vegetation: | **Ground surrounding site fully covere** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | **3:1 or greater** |
| WS Soil Type: | **Sand (SP, SM and mixtures)** |
| Site Relative to Bend: | **Immediately Downstream of Bend** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **2** | x2 | **4** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **4** | x1 | **4** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **5** | x1 | **5** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **4** | x4 | **16** |
| Site Relative to Bend: | **2** | x1 | **2** |
| Radius of Curvature(Rc/W): | **5** | x1 | **5** |

Total Score (out of 91): 47

Normalized Score (out of 100%): **52**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Earthen** |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **7/24/2012** |
| Comments: | |

07/31/2012: Site was visited on 07/26/2012. No significant changes observed
08/09/2011: Site was inspected. No visible change was observed from the previous condition.There have been no reports from the district that this site was corrected.
11/30/2010: Site was not inspected this year due to time constraints. There have been no reports from the district that this site was corrected. Continue monitor during flood events.
08/05/2010: Recommended for annual assessment and monitoring during flood events, per CLRO.
2009: Site is recommended as a local maintenance issue, per CLRO CES Evaluation 2008 Report; it was previously rated "M".
8/26/2008: Undulating waterside slope surface; vehicular damage along the waterside slope possibly caused by farming equipment; levee crown is composed of sandy material; there is a collection of concrete rubble on the waterside crown hinge; vehicular damage extends from levee toe to crown surface.
9/6/2007: Farmer degraded levee on waterward slope and crown.

Close look at the site

New dirt added to the levee

Notice the trash on the site

Vegetation on the levee

| | |
|---|---|
| LMA: | **NA0013 U03 Merced Streams Group** |
| Waterway: | **RB Owens Creek Diversion** |
| Site ID: | **NA0013U03RM1** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.2708** | **-120.28418** | **1.00** | **1** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **10** |
| Scarp Height (ft): | **7** |
| Location of Erosion: | **Toe & Slope** |
| WS Berm Width (ft): | |
| WS Vegetation: | **No Ground Coverage** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **3:1 or greater** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Outside of bend > 90 deg** |
| Radius of Curvature(Rc/W): | **11.60** |

## II. Criteria

| | Score: | Weighted Score: | |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **4** | x3 | **12** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **3** | x2 | **6** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **3** | x1 | **3** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 53

Normalized Score (out of 100%): **58**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **7/31/2012** |
| Comments: | |

07/31/2012: Site was visited on 07/26/2012. No significant changes observed. Dense vegetation presents at the site.
08/16/2011: No visible change. 100 percent vegetation coverage with star thistles. Minor cracking visible on the waterside slope.
11/30/2010: Site was not inspected this year due to time constraint. There have been no reports from the district that this site was corrected. Continue to monitor during flood events.
2009: Site is recommended as local maintenance issue, per CLRO CES Evaluation 2008 Report; it was previously rated "U".
8/26/2008: Terracetting erosion; frequent livestock traversing the slopes has caused deformation of the waterside levee slope.
9/11/2007: GPS extended from opposite bank using Google Earth.

A close look at the site, which is covered by thick vegetation

Site covered with dense vegetation.

Wooden posts and fense on site

Dense vegetation

| | |
|---|---|
| LMA: | **NA0013 U03 Merced Streams Group** |
| Waterway: | **RB Owens Creek Diversion** |
| Site ID: | **NA0013U03RM1.25** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.27263** | **-120.28039** | **1.25** | **1.25** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **10** |
| Scarp Height (ft): | **3** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **2** |
| WS Vegetation: | **No Ground Coverage** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **3:1 or greater** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **3.80** |

## II. Criteria

| | Score: | Weighted Score: | |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **3** | x2 | **6** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **2** | x1 | **2** |

Total Score (out of 91): 46

Normalized Score (out of 100%): **51**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **7/24/2012** |
| Comments: | |

07/31/2012: Site was visited on 07/24/2012. No significant changes observed. Dried grass covered the site. Dense vegetation.
08/16/2011: No visible change. 100 percent vegetation coverage with star thistles. Minor cracking visible on the waterside slope. Burrow holes visible.
11/30/2010: Site was not inspected this year due to time contstraint. There have been no reports from the district that the site was repaired. Continue to monitor during flood events.
2009: Bank erosion scour that is immediately downstream of Mission Avenue bridge; noticeable terracetting damage from livestock traversing the slope; site is recommended as local maintenance issue, per CLRO Evaluation 2008 Report; site was previously rated "M".
8/26/2008: Terracetting damage from livestock; there is now a pocket erosion developing on the levee toe; site is 100 feet downstream of Mission Avenue bridge.

The site is covered with dense thistles.

No significant change visible from the levee top

The site is covered with dense thistles.

Minor cracking observed last year at the levee shoulder not visible because of the dried grass

| | |
|---|---|
| LMA: | NA0013 U04 Merced Streams Group |
| Waterway: | LB Owens Creek Diversion |
| Site ID: | NA0013U04RM0.21 |
| Status: | Existing Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.272283 | -120.280869 | 0.21 | 0.21 | M |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 700 |
| Scarp Height (ft): | 4 |
| Location of Erosion: | On berm |
| WS Berm Width (ft): | 20 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 3:1 or greater |
| WS Soil Type: | Silt (ML) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 5 | x2 | 10 |
| Scarp Height (ft): | 2 | x3 | 6 |
| Location of Erosion: | 1 | x1 | 1 |
| WS Berm Width (ft): | 2 | x1 | 2 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 0 | x3 | 0 |
| WS Soil Type: | 5 | x4 | 20 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 44

Normalized Score (out of 100%): 48

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 7/24/2012 |
| Comments: | |

07/31/2012: No significant changes observed
08/16/2011: No significant change was visible. Minor cracking on the waterside levee slope was spotted. 100 percent vegetation coverage with star thistles.
11/30/2010: Site was not inspected this year due to time constraints. There have been no reports from the district that the site has been corrected.
2009: Site recommended as local maintenance issue, per CLRO CES Evaluation 2008 Report; previously rated "U".
9/10/2007: GPS extended from opposite bank using Google Earth; signs of vehicular damage on levee.

The site is covered with dense star thistles. No significant changes visible

The site is covered with dense star thistles

The site is covered with dense star thistles

Minor cracking visible on the site

| | |
|---|---|
| LMA: | **NA0013 U04 Merced Streams Group** |
| Waterway: | **LB Owens Creek Diversion** |
| Site ID: | **NA0013U04RM0.42** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.27063** | **-120.28397** | **0.42** | **0.42** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **50** |
| Scarp Height (ft): | **4** |
| Location of Erosion: | **Toe & Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **No Ground Coverage** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **3:1 or greater** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **26.50** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **3** | x2 | **6** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 44

Normalized Score (out of 100%): **48**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **7/24/2012** |
| Comments: | |

07/24/2012: No significant changes observed.
08/16/2011: No visible significant changes. 100 percent vegetation coverage with star thistles. Minor cracking visible on the waterside slope.
11/30/2010: Site was not inspected this year due to time constraints. There have been no reports from the district that the site has been corrected.
2009: Site is recommended as local maintenance issue, per CLRO CES Evaluation 2008 Report; terracetting damage from livestock traversing; there is a wooden platform installed on site; landside is on high ground; site was previously rated "M".
9/10/2007: GPS extended from opposite bank using Google Earth; GPS on file is correct.

Direct look at the site

The site is covered with thick vegetation

Direct look at the site

The site is covered with thick vegetation

| | |
|---|---|
| LMA: | NA0017 U15 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | RB Mormon Slough |
| Site ID: | NA0017U15RM0.86 |
| Status: | Existing Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.045818 | -121.023955 | 0.86 | 0.86 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 4800 |
| Scarp Height (ft): | 12 |
| Location of Erosion: | Toe & Slope |
| WS Berm Width (ft): | 11 |
| WS Vegetation: | 2/3 of ground covered |
| WS Burrow Hole Activity: | Signs of activity |
| WS Levee Slope (H:V): | 2:1 |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 5 | x2 | 10 |
| Scarp Height (ft): | 5 | x3 | 15 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 3 | x1 | 3 |
| WS Vegetation: | 1 | x2 | 2 |
| WS Burrow Hole Activity: | 5 | x1 | 5 |
| WS Levee Slope (H:V): | 2 | x3 | 6 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 59

Normalized Score (out of 100%): 65

## III. Misc

| | |
|---|---|
| Crown Width (ft): | 12 |
| Crown Type: | Earthen |
| Tree Hazard: | Trees on site and with visible roots |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |

Comments:

08/22/2012: Site has been revisited. No signficant changes observed on erosion site
09/02/2011: No signficant changes observed on site.
11/02/2010: No signficant changes observed on site. The mile-long erosion continues to degrade the bank. There are a few trees along the mile-long stretch on the lower bank slope that are affected by the scarp. WS Levee Slope was changed to 2:1. As a result, normalized score increased from 62 to 65.
08/05/2010: Recommended for waterside repair, per CLRO; "water velocity is a major factor for accelerating bank slope erosion."
8/12/2009: Near-vertical bank erosion; degrading channel is incising the banks; recommend annual assessment and monitoring of critical erosion site, per CLRO CES Evaluation 2008 Report; district is monitoring site for changes in condition; site was previously rated "U".
2007: Visited site 02/06/2007; possible critical site.

Looking upstream

Close view of the erosion. Note the dense vegetation and tree on site.

Close view of erosion site. Note the sloughing soil at the shoulder.

Closer look at the site. Sliding soil at upper slope.

| | |
|---|---|
| LMA: | **NA0017 U15 San Joaquin County Flood Control and Water Conservation Distri** |
| Waterway: | **RB Mormon Slough** |
| Site ID: | **NA0017U15RM1.58** |
| Status: | **Repaired Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **38.04017** | **-121.0338** | **1.58** | **1.58** | |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **350** |
| Scarp Height (ft): | **5** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **1.5:1** |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Outside of bend > 90 deg** |
| Radius of Curvature(Rc/W): | **15.10** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **0** | x2 | **0** |
| Scarp Height (ft): | **0** | x3 | **0** |
| Location of Erosion: | **0** | x1 | **0** |
| WS Berm Width (ft): | **0** | x1 | **0** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **0** | x4 | **0** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 0

Normalized Score (out of 100%):

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **12** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/22/2012** |
| Comments: | |

08/22/2012: Site was visited. No new ersoion has been found. Dense vegetation developed at the repaired site.
09/02/2011: Site was repaired in 2011 summer by the district. Needs to monitor during the next flood season for performance. The site was previously rated "U".
11/02/2010: No significant changes observed on site. Bank erosion extends approximately 100 feet downstream and 250 feet upstream of the drop structure.
8/12/2009: No major change observed; erosion is upstream and downstream of drop structure; bank erosion is associated with high velocities; it is recommended for annual assessment and monitoring of critical erosion site per CLRO CES Evaluation 2008 Report; it was previously rated "U".
2007: Visited site 02/06/2007.

Looking at the repaired site. Dense vegetation covered the repaired slope.

Close look of the repaired site

Looking downsream to the drop structure.

Close view of the repaired site.

| | |
|---|---|
| LMA: | **NA0017 U15 San Joaquin County Flood Control and Water Conservation Distri** |
| Waterway: | **RB Mormon Slough** |
| Site ID: | **NA0017U15RM3.14** |
| Status: | **Repaired Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **38.026257** | **-121.054829** | **3.14** | **3.14** | |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **30** |
| Scarp Height (ft): | **6** |
| Location of Erosion: | **On berm** |
| WS Berm Width (ft): | **15** |
| WS Vegetation: | **No Ground Coverage** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2.5:1** |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **0** | x2 | **0** |
| Scarp Height (ft): | **0** | x3 | **0** |
| Location of Erosion: | **0** | x1 | **0** |
| WS Berm Width (ft): | **0** | x1 | **0** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **0** | x4 | **0** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 0

Normalized Score (out of 100%):

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **16** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **Concrete Lining** |
| Bank Protection Location: | **Slope** |
| Survey Date: | **8/22/2012** |
| Comments: | |

08/22/2012: Site is visited and no new erosion discovered.
09/02/2011: Site was fixed in April 2011 by the district. Suggest continue to monitor performance during flooding. The site was previously rated "M".
11/02/2010: No signficant changes observed on site. Upon further inspection, it appears that a slab of aging concrete lining on the bank slope has slipped, possibly due to a weakend subsoil layer. Fissure cracks have developed and now extend outward from where the initial slip occurred. Erosion of the subsoil layer could further weaken the bank and intrude into the levee prism. It could also affect the stability of the pump structure.
8/12/2009: Downward creep of the soil that was possibly caused during pipe installation; erosion is between 2 to 3 feet cut into the bank; vertical pump inlet is located adjacent to erosion; District personnel Jay Howdigi and Jim Caruso were present during the site visit.

Looking down at the repaired site.

Looking down at the repaired site.

Looking down at the repaired site.

Looking at the levee shoulder

| | |
|---|---|
| LMA: | **NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri** |
| Waterway: | **LB Mormon Slough** |
| Site ID: | **NA0017U16RM6.47** |
| Status: | **Repaired Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.986959** | **-121.087544** | **6.47** | **6.47** | |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **30** |
| Scarp Height (ft): | **4** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **No Ground Coverage** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **0** | x2 | **0** |
| Scarp Height (ft): | **0** | x3 | **0** |
| Location of Erosion: | **0** | x1 | **0** |
| WS Berm Width (ft): | **0** | x1 | **0** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **0** | x4 | **0** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 0

Normalized Score (out of 100%):

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **16** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/22/2012** |
| Comments: | |

08/22/2012: Site is visited and no new ersosion activity found at the repaired site, but new pocket erosion has developed at the toe downstream of the bridge.
09/02/2011: The site has been repaired by the district. The site was previously rated "M".
11/02/2010: No signficant changes observed on site. Bridge scour has created a pocket erosion, exposing a portion of the underlaying concrete padding.
8/11/2009: Site is adjacent to abutment on Milton Road Bridge; pocket erosion has developed and will continue to expose the bridge foundation; this erosion appears to be critical as it may affect the bridge foundation.

Looking at the site from right bank, immediately upstream of the bridge

Looking at the site from right bank, upstream of the bridge

Close view of the fixed site from upstream of the Milton Bridge.

The new developed erosion immediately downstream of the bridge. Viewed from the right bank.

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM11.81 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.99772 | -121.077807 | 11.81 | 5.54 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 250 |
| Scarp Height (ft): | 5 |
| Location of Erosion: | Levee Toe |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 4 | x2 | 8 |
| Scarp Height (ft): | 3 | x3 | 9 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 56

Normalized Score (out of 100%): 62

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: The site is located at the oppsite river bank of E. Tobacco Road.

Looking downstream at the site

Closer view of the site

Closer view of erosion

Front view of erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM12.95 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.964735 | -121.142503 | 12.95 | 10.17 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 100 |
| Scarp Height (ft): | 12 |
| Location of Erosion: | Toe & Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 2/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 2 | x2 | 4 |
| Scarp Height (ft): | 5 | x3 | 15 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 1 | x2 | 2 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 56

Normalized Score (out of 100%): 62

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: Dense vegetation on site

Front view of erosion

Front viewof erosion

Closer view of erosion

Close loot at the erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM13.53 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.96719 | -121.13308 | 13.53 | 9.59 | M |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 120 |
| Scarp Height (ft): | 15 |
| Location of Erosion: | On berm |
| WS Berm Width (ft): | 10 |
| WS Vegetation: | 2/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 3 | x2 | 6 |
| Scarp Height (ft): | 4 | x3 | 12 |
| Location of Erosion: | 1 | x1 | 1 |
| WS Berm Width (ft): | 4 | x1 | 4 |
| WS Vegetation: | 1 | x2 | 2 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 5 | x3 | 15 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 53

Normalized Score (out of 100%): 58

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: Erosion is on berm. The berm width is estimated.

Looking downstream at the erosion

front view of erosion

Front view of erosion

Front of view of erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM13.72 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.966922 | -121.129533 | 13.72 | 9.4 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 80 |
| Scarp Height (ft): | 10 |
| Location of Erosion: | Levee Toe |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 2/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 2 | x2 | 4 |
| Scarp Height (ft): | 5 | x3 | 15 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 1 | x2 | 2 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 56

Normalized Score (out of 100%): 62

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: Erosion is covered with dense vegetation.

Looking downstream at the erosion

Close view of erosion

Another close view of erosion

Front view of erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM13.86 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.966615 | -121.127328 | 13.86 | 8.99 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 12 |
| Scarp Height (ft): | 8 |
| Location of Erosion: | Toe & Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 4 | x3 | 12 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 5 | x3 | 15 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 56

Normalized Score (out of 100%): 62

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: Pocket erosion at the levee toe and slope. The erosion is covered with dense vegetation.

Front view of erosion

Front view of erosion

Closer view of erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM14.48 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.969213 | -121.116574 | 14.48 | 8.63 | M |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 200 |
| Scarp Height (ft): | 5 |
| Location of Erosion: | On berm |
| WS Berm Width (ft): | 25 |
| WS Vegetation: | Ground surrounding site fully covere |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 3 | x2 | 6 |
| Scarp Height (ft): | 3 | x3 | 9 |
| Location of Erosion: | 1 | x1 | 1 |
| WS Berm Width (ft): | 1 | x1 | 1 |
| WS Vegetation: | 0 | x2 | 0 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 42

Normalized Score (out of 100%): 46

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: Erosion occured on a berm of approximately 25 ft wide. Site is covered with dense vegetation.

Front view of erosion

Front view of erosion

Front view of erosion

Closer view of erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM16.27 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.983279 | -121.090843 | 16.27 | 6.81 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 1000 |
| Scarp Height (ft): | 25 |
| Location of Erosion: | Toe & Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 5 | x2 | 10 |
| Scarp Height (ft): | 5 | x3 | 15 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 64

Normalized Score (out of 100%): 70

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: Discontinuous scarp or pocket erosions occurred along a long stretch of the river , with a highest height larger than 25 ft at certain points.

Looking at the most downstream erosion at the site.

Closer view of the erosion

Front view of the erosion

Front view of erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM17.99 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.00373 | -121.07308 | 17.99 | 5.03 | M |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 12 |
| Scarp Height (ft): | 10 |
| Location of Erosion: | Toe & Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 4 | x3 | 12 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 53

Normalized Score (out of 100%): 58

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: A pocket erosion at the levee toe and on lower slope. The levee surface at the upper slope alos shows signs of erosion due to poor maintenance.

Front view of erosion

Close look at the erosion

A close look at the upper levee slope above the pocket erosion

Front view of erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM18.69 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.012792 | -121.068073 | 18.69 | 4.33 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 110 |
| Scarp Height (ft): | 20 |
| Location of Erosion: | Toe & Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 3 | x2 | 6 |
| Scarp Height (ft): | 5 | x3 | 15 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 60

Normalized Score (out of 100%): 66

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | Trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: A irrigation pipe presents at the site, but not likely has caused the erosion.

Front view of erosion. Note the irrigation pipe and the tree

Front view of erosion.

Closer look at erosion

Closer look at erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM19.18 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.0181 | -121.06517 | 19.18 | 3.9 | M |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 100 |
| Scarp Height (ft): | 6 |
| Location of Erosion: | On berm |
| WS Berm Width (ft): | 5 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1.5:1 |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 2 | x2 | 4 |
| Scarp Height (ft): | 4 | x3 | 12 |
| Location of Erosion: | 1 | x1 | 1 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 3 | x3 | 9 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 48

Normalized Score (out of 100%): 53

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: River-induced erosion occured on the berm, while the runoff-induced erosion on the levee slope. Site is covered with vegetation

Close look at the erosion. Note the erosion at the levee slope as well as berm.

A closer look at the erosion

Front view of erosion at berm

Another closer look at the erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM19.23 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.0186 | -121.06439 | 19.23 | 3.84 | M |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 50 |
| Scarp Height (ft): | 12 |
| Location of Erosion: | Lower 1/2 Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 4 | x3 | 12 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 53

Normalized Score (out of 100%): 58

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: Erosion is covered with grass and shrubs.

Front view of erosion

Front view of erosion

A closer look at the erosion

Front view of erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM19.28 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.01929 | -121.06381 | 19.28 | 3.78 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 60 |
| Scarp Height (ft): | 8 |
| Location of Erosion: | Toe & Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 2 | x2 | 4 |
| Scarp Height (ft): | 4 | x3 | 12 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 55

Normalized Score (out of 100%): 60

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: Tow large-size pocket erosions. Site is covered with dense vegetation.

Looking upstream

Front view of erosion

front view of erosion

A closer look at the erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM20 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.02667 | -121.053031 | 20.00 | 3.03 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 300 |
| Scarp Height (ft): | 20 |
| Location of Erosion: | Toe & Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 4 | x2 | 8 |
| Scarp Height (ft): | 4 | x3 | 12 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 59

Normalized Score (out of 100%): 65

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: Site Comprised of series of pocket and scarp erosions. Some of erosions are covered by grass or shrubs.

Front view of the erosion.

Front view of erosion

Looking downstream

Close view of the scarp erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM20.62 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.032202 | -121.045226 | 20.62 | 2.37 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 50 |
| Scarp Height (ft): | 7 |
| Location of Erosion: | Levee Toe |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 5 | x3 | 15 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 56

Normalized Score (out of 100%): 62

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: The erosion was firstly reported in 2012 spring levee inspection report. Fresh soil exposed at the site as a result of possible effort for levee slope enhancement.

Front view of the site.

Close view of erosion. Note the vegetation at the site

Front view of erosion

Close look at the site.

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM20.71 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.033072 | -121.04497 | 20.71 | 2.31 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 40 |
| Scarp Height (ft): | 6 |
| Location of Erosion: | Levee Toe |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 2/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 5 | x3 | 15 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 1 | x2 | 2 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 54

Normalized Score (out of 100%): 59

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | Trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: Site is covered with dense vegetation.

Front view of the erosion.

Front view of the erosion. Site is covered with vegetaion and trees.

Closer view of the erosion

front of the erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM21.05 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.03715 | -121.04058 | 21.05 | 1.94 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 100 |
| Scarp Height (ft): | 6 |
| Location of Erosion: | Levee Toe |
| WS Berm Width (ft): | 5 |
| WS Vegetation: | 2/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 2 | x2 | 4 |
| Scarp Height (ft): | 5 | x3 | 15 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 1 | x2 | 2 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 56

Normalized Score (out of 100%): 62

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: Berm width is estimated as 5 ft.

Looking downstream at the erosion site

Looking downstream at the erosion

Front view of the erosion

Front view of the erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM21.94 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.037906 | -121.038949 | 21.94 | 1.77 | M |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 40 |
| Scarp Height (ft): | 6 |
| Location of Erosion: | On berm |
| WS Berm Width (ft): | 5 |
| WS Vegetation: | Ground surrounding site fully covere |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1.5:1 |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 5 | x3 | 15 |
| Location of Erosion: | 1 | x1 | 1 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 0 | x2 | 0 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 3 | x3 | 9 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 45

Normalized Score (out of 100%): 49

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: Site is covered by dense vegetation. Berm width is estimated as 5 ft.

Close view of the erosion

Looking downstream at the erosion

Front view of the erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM21.95 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.03808 | -121.038676 | 21.95 | 1.75 | M |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 30 |
| Scarp Height (ft): | 10 |
| Location of Erosion: | Levee Toe |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | Ground surrounding site fully covere |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 5 | x3 | 15 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 0 | x2 | 0 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 52

Normalized Score (out of 100%): 57

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | Trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: Erosion is covered by dense vegetation.

Front view of erosion site

Close view of erosion

close view of erosion. Note the dense vegetation at the site

Front view of erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM22.01 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.03911 | -121.03784 | 22.01 | 1.74 | M |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 50 |
| Scarp Height (ft): | 8 |
| Location of Erosion: | Levee Toe |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | Ground surrounding site fully covere |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 5 | x3 | 15 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 0 | x2 | 0 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 52

Normalized Score (out of 100%): 57

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: Site is covered with dense vegetation. A scarp erosion is adjacent to a pocket erosion at the downstream.

Front view of erosion site. A pocket erosion is at the downstream

Front view of the pocket erosion

Front of pocket erosion

Close view of the scarp erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM22.15 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.03994 | -121.03543 | 22.15 | 1.59 | M |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 25 |
| Scarp Height (ft): | 4 |
| Location of Erosion: | On berm |
| WS Berm Width (ft): | 10 |
| WS Vegetation: | Ground surrounding site fully covere |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Inside of Bend |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 2 | x3 | 6 |
| Location of Erosion: | 1 | x1 | 1 |
| WS Berm Width (ft): | 4 | x1 | 4 |
| WS Vegetation: | 0 | x2 | 0 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 0 | x1 | 0 |
| Radius of Curvature(Rc/W): | 5 | x1 | 5 |

Total Score (out of 91): 42

Normalized Score (out of 100%): 46

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |

Comments:

08/22/2012: The berm is estimated at 10 ft. Dense vegetation on site

Front view of erosion.

Close look at the erosion

Front view of erosion

Front view of erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM22.58 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.04126 | -121.02773 | 22.58 | 1.13 | M |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 20 |
| Scarp Height (ft): | 4 |
| Location of Erosion: | Levee Toe |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 2/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Outside of bend > 90 deg |
| Radius of Curvature(Rc/W): | 15.90 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 3 | x3 | 9 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 1 | x2 | 2 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 3 | x1 | 3 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 50

Normalized Score (out of 100%): 55

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | Trees on site |
| Bank Protection Type: | Broken Concrete |
| Bank Protection Location: | Slope |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: Erosion is at the outside corner of a river bend, and next to a tree at the levee toe. Irrigation structure presents at the site.

Front view of erosion. Erosion is next to a tree at the levee toe.

Front view of eroison. Note the irrigation pipe at the erosion site

Front view of erosion and broken concrete protection at levee slope

Closer view of erosion

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM22.74 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.04308 | -121.02628 | 22.74 | 0.98 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 100 |
| Scarp Height (ft): | 12 |
| Location of Erosion: | Toe & Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 2/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 1:1 or less |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 2 | x2 | 4 |
| Scarp Height (ft): | 5 | x3 | 15 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 1 | x2 | 2 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 4 | x3 | 12 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 56

Normalized Score (out of 100%): 62

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | Trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: The erosion was surveyed and documented for monitoring purpose. There is no levee structure on the site, only high ground protecting the land behind.. There is a drainage pipe at the site, which maight have caused the problem at one pocket erosion.

Front view of erosion. Note the drainage pipe at the site.

Looking downstream

Looking downstream

Front view of the site

| | |
|---|---|
| LMA: | NA0017 U16 San Joaquin County Flood Control and Water Conservation Distri |
| Waterway: | LB Mormon Slough |
| Site ID: | NA0017U16RM23.35 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 38.048159 | -121.016427 | 23.35 | 0.3 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 1800 |
| Scarp Height (ft): | 20 |
| Location of Erosion: | Toe & Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | Near vertical |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 5 | x2 | 10 |
| Scarp Height (ft): | 5 | x3 | 15 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 5 | x3 | 15 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 67

Normalized Score (out of 100%): 74

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | Trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/22/2012 |
| Comments: | |

08/22/2012: The erosion was surveyed and documented for monitoring purpose. There is no levee structure on the site, only high ground protecting the land behind.

Front vierw of erosion. Looking from the right side of the river.

Looking downstream standing on the right side river bank.

Looking downstream from right side of the river

close view of the erosin

| | |
|---|---|
| LMA: | RD0001 U01 Union Island |
| Waterway: | RB Old River |
| Site ID: | RD0001U01RM31.4 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.822306 | -121.375304 | 31.40 | 0 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 6 |
| Scarp Height (ft): | 6 |
| Location of Erosion: | Levee Toe |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Outside of bend > 90 deg |
| Radius of Curvature(Rc/W): | 2.50 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 4 | x3 | 12 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 5 | x3 | 15 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 3 | x1 | 3 |
| Radius of Curvature(Rc/W): | 3 | x1 | 3 |

Total Score (out of 91): 61

Normalized Score (out of 100%): 67

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Gravel |
| Tree Hazard: | Trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/7/2012 |
| Comments: | |

08/07/2012: The erosion is at the conflunence of Old River and one of its tributary.

Front view of the erosion

Close view of erosion

Close view of erosion

| | |
|---|---|
| LMA: | RD0017 U02 Mossdale |
| Waterway: | RB San Joaquin River |
| Site ID: | RD0017U02RM44.32 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.90253 | -121.32569 | 44.32 | 1.08 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 15 |
| Scarp Height (ft): | 10 |
| Location of Erosion: | Toe & Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | Signs of activity |
| WS Levee Slope (H:V): | |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 4 | x3 | 12 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 5 | x1 | 5 |
| WS Levee Slope (H:V): | 5 | x3 | 15 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 61

Normalized Score (out of 100%): 67

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Gravel |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/7/2012 |
| Comments: | |

08/07/2012: The erosion is nearly verticle, and has developed upward to halfway of the levee slope. The protecting concrete blocks have been washed away. Animal activities are visible.

Front view of erosion site. Note the concrete blocks and vegetation.

Close view of erosion. Animal holes are visible

Close view of erosion

Close view of erosion

| | |
|---|---|
| LMA: | RD0017 U02 Mossdale |
| Waterway: | RB San Joaquin River |
| Site ID: | RD0017U02RM45.97 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.88032 | -121.333266 | 45.97 | 5.43 | M |

Close view of the erosion and the pipe

Front view of the site

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 4 |
| Scarp Height (ft): | 3 |
| Location of Erosion: | Lower 1/2 Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 2/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | Weighted Score: | |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 2 | x3 | 6 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 1 | x2 | 2 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 5 | x3 | 15 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 48

Normalized Score (out of 100%): 53

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Gravel |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | Size Riprap |
| Bank Protection Location: | Toe |
| Survey Date: | 8/7/2012 |
| Comments: | |

08/07/2012: Erosion is underneath an irrigation pipe. The likely cause of the erosion is the pipe leakage.

| | |
|---|---|
| LMA: | RD0017 U02 Mossdale |
| Waterway: | RB San Joaquin River |
| Site ID: | RD0017U02RM46.73 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.87056 | -121.32912 | 46.73 | 3.46 | U |

Front view of the site. Note the riprap protection next to the site.

Close view of the site

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 5 |
| Scarp Height (ft): | 8 |
| Location of Erosion: | Upper 1/2 Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 2/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | Weighted Score: | |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 4 | x3 | 12 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 1 | x2 | 2 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 5 | x3 | 15 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 54

Normalized Score (out of 100%): 59

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/7/2012 |
| Comments: | |

08/07/2012: The erosion is immediately upstream of riprap protection section. The possible cause of the erosion is the rainfall runoff washout.

| | |
|---|---|
| LMA: | **RD0404 U01 Boggs** |
| Waterway: | **RB San Joaquin River** |
| Site ID: | **RD0404U01RM40.86** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.93948** | **-121.34273** | **40.86** | **0.23** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **250** |
| Scarp Height (ft): | **5** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | **2.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **2.10** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **4** | x2 | **8** |
| Scarp Height (ft): | **1** | x3 | **3** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **5** | x1 | **5** |
| WS Levee Slope (H:V): | **1** | x3 | **3** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **3** | x1 | **3** |

Total Score (out of 91): 54

Normalized Score (out of 100%): **59**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. The erosion has developed in size, and more pocket erosions found.
8/23/2011: Pockets erosions observed by last survey seem have progressed during the last food season. Continuous monitoring of this site suggested
9/07/2010: No significant change observed on site. There is emergent vegetation at the water line. Several pocket erosions lined along the lower slope that stretches from RM 40.86 to RM 41.14.
9/30/2009: No major change observed; the site was combined with other existing sites are RM's 40.93, 40.98, and 41.14 as one site; several pocket erosion just above non-uniform toe rip rap; previously rated "U"; bare spots along the upper slope.
2008: Possibly caused by wave wash erosion; several pocket erosion along the lower slope; site is inside of a bend.
2006: Visited site 09/12/06.

Downstream view of Site. Progressing pocket erosion visible.

Front view of the site

Front view of the site

Downstream view of the site

| | |
|---|---|
| LMA: | RD0404 U01 Boggs |
| Waterway: | RB San Joaquin River |
| Site ID: | RD0404U01RM41.11 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.93919 | -121.33828 | 41.11 | 0.48 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 18 |
| Scarp Height (ft): | 8 |
| Location of Erosion: | Toe & Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | No Ground Coverage |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | Weighted Score: | |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 4 | x3 | 12 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 3 | x2 | 6 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 5 | x3 | 15 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 58

Normalized Score (out of 100%): 64

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/7/2012 |
| Comments: | |

8/7/2012: The erosion is next to a repaired site and approximately 400 feet downstream of a river bend. There are broken concretes at the upper levee slope, but not visible at the levee toe or lower slope. Likely the protection concrete blocks have beed washed away

Donwstream view of the site.

A closer look at the site. Note the protected bank dwonstream and upstream of the erosion

Front view of the site

Front view of the site

| | |
|---|---|
| LMA: | **RD0404 U01 Boggs** |
| Waterway: | **RB San Joaquin River** |
| Site ID: | **RD0404U01RM41.22** |
| Status: | **New Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.939133** | **-121.3361** | **41.22** | **0.61** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **80** |
| Scarp Height (ft): | **10** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **No Ground Coverage** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **2** | x2 | **4** |
| Scarp Height (ft): | **4** | x3 | **12** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **3** | x2 | **6** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **5** | x3 | **15** |
| WS Soil Type: | **3** | x4 | **12** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 60

Normalized Score (out of 100%): **66**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Gravel** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **Broken Concrete** |
| Bank Protection Location: | **Slope** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site was first discovered by levee inspector in the spring inspection. Levee slope was protected with broken concrete blocks, but those blocks have been washed away during high flows.

Front view of the erosion. Note the slumping erosion at upper slope.

Close view of erosion

Front view of erosion. Note the broken concrete blocks at the slope.

Front view of the erosion.

| | |
|---|---|
| LMA: | RD0404 U01 Boggs |
| Waterway: | RB San Joaquin River |
| Site ID: | RD0404U01RM41.23 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.93881 | -121.33617 | 41.23 | 0.62 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 20 |
| Scarp Height (ft): | 15 |
| Location of Erosion: | Lower 1/2 Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | No Ground Coverage |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 4 | x3 | 12 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 3 | x2 | 6 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 5 | x3 | 15 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 58

Normalized Score (out of 100%): 64

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Gravel |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 8/7/2012 |
| Comments: | |

08/07/2012: The rootball of a fallen tree removed material from the levee. Immediately action needed to remove the fallen tree trunk and repair the damage.

Upstream view of the site

close view of the site

Closer view of the site

| | |
|---|---|
| LMA: | **RD0404 U02 Boggs** |
| Waterway: | **RB French Camp Slough** |
| Site ID: | **RD0404U02RM1.56** |
| Status: | **Repaired Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.91844** | **-121.29704** | **1.56** | **1.45** | |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **1350** |
| Scarp Height (ft): | **6** |
| Location of Erosion: | **Upper 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **No Ground Coverage** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Outside of bend > 90 deg** |
| Radius of Curvature(Rc/W): | **8.90** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **0** | x2 | **0** |
| Scarp Height (ft): | **0** | x3 | **0** |
| Location of Erosion: | **0** | x1 | **0** |
| WS Berm Width (ft): | **0** | x1 | **0** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **0** | x4 | **0** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 0

Normalized Score (out of 100%):

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **7/26/2012** |
| Comments: | |

07/26/2012: No new erosion has been observed.
09/02/2011: Site has been repaired with added soil and crashed rock. No new erosion activities found on site.
11/30/2010: Site was not inspected this year due to time constraints. There has been no reports from the district that the site was corrected. Continue to monitor during flood events.
08/05/2010: Recommended for annual assessment and monitoring during flood events, per CLRO.
2009: Erosion appears to be maintenance-related, and not caused by riverflow; recommend annual assessment and monitoring of erosion site, per Critical Erosion Sites Evaluation 2008 Report; previously rated "U".
9/12/2006: Headward erosion along the levee bank; erosion has created "notches" estimated to be about 12 feet in height; erosion appears to be maintenance related; DWR Inspector for the area says the erosion has been present for years.

Looking downstream of the repaired site.

Lookingdownstream

Close look at the repaired site.

Looking upstream from levee top

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM40.99** |
| Status: | **New Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.93887** | **-121.34046** | **40.99** | **0.4** | **U** |

Front view of erosion site. Note the vegetation at the levee toe and lower slope

Front view of the site

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **20** |
| Scarp Height (ft): | **4** |
| Location of Erosion: | **Upper 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **2** | x2 | **4** |
| WS Burrow Hole Activity: | **5** | x1 | **5** |
| WS Levee Slope (H:V): | **5** | x3 | **15** |
| WS Soil Type: | **3** | x4 | **12** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 55

Normalized Score (out of 100%): **60**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Gravel** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

8/7/2012: Erosion is at the upper levee slope, and likely caused by slope slip. The lower levee slope is covered with dense vegetation.

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM41.15** |
| Status: | **Repaired Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.938895** | **-121.337602** | **41.15** | **0.56** | |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **360** |
| Scarp Height (ft): | **6** |
| Location of Erosion: | **Toe & Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **1.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **6.30** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **0** | x2 | **0** |
| Scarp Height (ft): | **0** | x3 | **0** |
| Location of Erosion: | **0** | x1 | **0** |
| WS Berm Width (ft): | **0** | x1 | **0** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **0** | x4 | **0** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 0

Normalized Score (out of 100%):

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **Broken Concrete** |
| Bank Protection Location: | **Toe** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. The site seems to have been repaired.
08/23/2011: No signficant changes observed on site.
09/07/2010: No signficant changes observed on site. Some emergent vegetation at the lower and middle slope. Existing revetment is no longer adequately protecting the oversteepened slope. Some of the broken concrete used as revetment has slid, dragging levee materials away from the slope and creating notches.
09/29/2009: Erosion site extends from RM 41.11 to 41.18; existing revetment is no longer adequately protecting the oversteepened slope.
2008: Existing concrete slabs were placed as temporary fix; some of the slabs have started to slide, dragging levee materials away from the slope and creating notches; note that a sewage treatment plant is located on the landside of the levee.

Direct view of the site.

Direct view of the site.

Direct view of the site.

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM41.39** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.936821** | **-121.334582** | **41.39** | **0.77** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **35** |
| Scarp Height (ft): | **8** |
| Location of Erosion: | **Toe & Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **1.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | Weighted Score: | |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **3** | x3 | **9** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **2** | x2 | **4** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **3** | x3 | **9** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 55

Normalized Score (out of 100%): **60**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **12** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: The site is located immediately upstream of a Railroad bridge. Dense vegetation at the water line interfers the view of erosion.

Upstream view of the erosion site. Note the railroad bridge.

Front view of the erosion site. Vegetation visible

Front view of erosion

Front view of erosion

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM41.5** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.935576** | **-121.333202** | **41.50** | **0.91** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **15** |
| Scarp Height (ft): | **5** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **1.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **6.62** |

## II. Criteria

| | Score: | Weighted Score: | |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **3** | x3 | **9** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **3** | x3 | **9** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 52

Normalized Score (out of 100%): **57**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **12** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **Broken Concrete** |
| Bank Protection Location: | **Toe** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: The erosion site is immediately donstream of the riprap protection.

Front view of the erosion. Note the riprap protection near the site

A close view of the erosion

Front view of the site

Front view of the site

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM41.58** |
| Status: | **New Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.93541** | **-121.33156** | **41.58** | **1** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **19** |
| Scarp Height (ft): | **12** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **No Ground Coverage** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **4** | x3 | **12** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **3** | x2 | **6** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **5** | x3 | **15** |
| WS Soil Type: | **3** | x4 | **12** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 58

Normalized Score (out of 100%): **64**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Earthen** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The ersoion was discovered during the boat survey.

Front view of erosion

Front view of erosion

Front view of erosion

Front view of erosion

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM41.59** |
| Status: | **Repaired Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.935326** | **-121.331537** | **41.59** | **1** | |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **55** |
| Scarp Height (ft): | **10** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **1.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **6.62** |

## II. Criteria

| | Score: | Weighted Score: | |
|---|---|---|---|
| Length (ft): | **0** | x2 | **0** |
| Scarp Height (ft): | **0** | x3 | **0** |
| Location of Erosion: | **0** | x1 | **0** |
| WS Berm Width (ft): | **0** | x1 | **0** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **0** | x4 | **0** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 0

Normalized Score (out of 100%):

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **12** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **Size Riprap** |
| Bank Protection Location: | **Toe** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. Site has been repaired, but new erosion occurred at the levee slope and immediately upstream of the repaired site.
08/23/2011: The site is about 500 ft downstream of bridge. The levee toe seems to be protected, but the protection is being washed away.

Close view of site. New minor ersoion developed at the levee slope erosion.

Close view of the erosion. The protection has been losen and washed away.

Front view of the site

Front view of the erosion. New erosion has developed immediately upstream of the repaired site,

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM41.79** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.933347** | **-121.32911** | **41.79** | **1.2** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **400** |
| Scarp Height (ft): | **5** |
| Location of Erosion: | **Toe & Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **No Ground Coverage** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | **1.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **5** | x2 | **10** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **3** | x2 | **6** |
| WS Burrow Hole Activity: | **5** | x1 | **5** |
| WS Levee Slope (H:V): | **3** | x3 | **9** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 67

Normalized Score (out of 100%): **74**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **12** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **River Rock** |
| Bank Protection Location: | **Slope** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant changes observed
08/23/2011: No significant changes observed on site.
9/07/2010: No significant changes observed on site. Some emergent vegetation at the water line. There is an exposed pipe discharge partially hanging at the mid-slope, possibly still used for discharging irrigation/runoff water. There is minimal rip rap protection along the bank, and what's left of it is no longer adequately protecting the bank.
9/29/2009: Site consists of a 400-foot long eroding bank with minimal vegetation and protection; the existing rip rap has sloughed, rendering it useless; note that there is an exposed section of a pipe.
10/18/2006: There is extensive loss of rip rap on some sections; sewage disposal pond is on the landside of the levee; there is an exposed pipe outlet "hanging" from the upper slope.

Direct view of the site.

Direct view of the site.

Direct view of the site.

Direct view of the site.

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM41.92** |
| Status: | **New Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.931858** | **-121.3283** | **41.92** | **1.3** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **160** |
| Scarp Height (ft): | **12** |
| Location of Erosion: | **Toe & Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **3** | x2 | **6** |
| Scarp Height (ft): | **5** | x3 | **15** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **2** | x2 | **4** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **5** | x3 | **15** |
| WS Soil Type: | **3** | x4 | **12** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 63

Normalized Score (out of 100%): **69**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Gravel** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site was first reported in 2012 spring levee inspection report.

close view of the erosion

Front view of the erosion

Front view of the erosion

Front view of the erosion. Note the drainage pipe on the site. .

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM42.03** |
| Status: | **New Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.930575** | **-121.32809** | **42.03** | **1.39** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **6** |
| Scarp Height (ft): | **6** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **4** | x3 | **12** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **2** | x2 | **4** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **5** | x3 | **15** |
| WS Soil Type: | **3** | x4 | **12** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 56

Normalized Score (out of 100%): **62**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Gravel** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site was first reported in 2012 spring levee inspection report. The site is located about 750 ft downstream of SR 4 Bridge.

Upstream view of the erosion

Close view of the ersosion

Close view of the ersosion

Downstream view of the erosion

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM42.2** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.92777** | **-121.32787** | **42.20** | **1.61** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **300** |
| Scarp Height (ft): | **4** |
| Location of Erosion: | **Upper 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Outside of Bend < 90 deg** |
| Radius of Curvature(Rc/W): | **2.20** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **4** | x2 | **8** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **2** | x3 | **6** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **5** | x1 | **5** |
| Radius of Curvature(Rc/W): | **3** | x1 | **3** |

Total Score (out of 91): 60

Normalized Score (out of 100%): **66**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **Trees on site and with visible roots and leaning** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: : The site has been visited by boat survey. No significant change observed
08/23/2011: No signifcant changes observed on site. Trees concerned still in place.
09/07/2010: No signifcant changes observed on site. The concern here is the undermining of the levee toe where most of trees are. There are erosion pockets lined along the lower slope and at the base of the trees, exposing tree roots. There is minimal slope protection.
09/29/2009: The lower slope is lined with minor erosion pockets; some tree roots are exposed; there is visible undermining of the levee toe; site is immediately upstream of the Highway 4 Bridge; the bridge is possibly causing a scour to occur, eroding the bank.

Front view of the site where undermining has occurred.

Large trees along the levee toe. There is minimal slope protection. The erosion near tree visible.

Front view of erosion

Fallen tree near the site

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM42.79** |
| Status: | **New Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.920992** | **-121.32137** | **42.79** | **2.19** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **6** |
| Scarp Height (ft): | **4** |
| Location of Erosion: | **Levee Toe** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **3** | x3 | **9** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **2** | x2 | **4** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **5** | x3 | **15** |
| WS Soil Type: | **3** | x4 | **12** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 53

Normalized Score (out of 100%): **58**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Earthen** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site was first reported in 2012 spring levee inspection report.

Close view of the pocket erosion

Close view of the pocket erosion

Downstream viewof erosion.

front view of erosion

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM42.93** |
| Status: | **New Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.919885** | **-121.31971** | **42.93** | **2.32** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **12** |
| Scarp Height (ft): | **6** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **No Ground Coverage** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **4** | x3 | **12** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **3** | x2 | **6** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **5** | x3 | **15** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **5** | x1 | **5** |

Total Score (out of 91): 70

Normalized Score (out of 100%): **77**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Gravel** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site was first reported in 2012 spring levee inspection report. The site is located at the inside corner of a river bend.

Close look of the site.

Front view of the site

Front view fo the site. Note the soil type

closer view of the erosion

| | |
|---|---|
| LMA: | RD0524 U01 Middle Roberts Island |
| Waterway: | LB San Joaquin River |
| Site ID: | RD0524U01RM43.23 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.91665 | -121.32198 | 43.23 | 2.65 | M |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 10 |
| Scarp Height (ft): | 5 |
| Location of Erosion: | Levee Toe |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 2 | x3 | 6 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 5 | x3 | 15 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 50

Normalized Score (out of 100%): 55

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Gravel |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | Size Riprap |
| Bank Protection Location: | Slope |
| Survey Date: | 8/7/2012 |
| Comments: | |

08/07/2012: The site was first reported in 2012 spring levee inspection report.

Upstream view of erosion

Close view of erosion

closer view of erosion

Front view of erosion

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM43.52** |
| Status: | **New Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.91301** | **-121.32449** | **43.52** | **2.96** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **5** |
| Scarp Height (ft): | **5** |
| Location of Erosion: | **Upper 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **No Ground Coverage** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **3** | x2 | **6** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **5** | x3 | **15** |
| WS Soil Type: | **3** | x4 | **12** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 52

Normalized Score (out of 100%): **57**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Gravel** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site was first reported in 2012 spring levee inspection report.

Front view of erosion

Close view of erosion

Close view of erosion

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM43.83** |
| Status: | **Repaired Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.908544** | **-121.324894** | **43.83** | **3.27** | |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **400** |
| Scarp Height (ft): | **5** |
| Location of Erosion: | **Levee Toe** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **0** | x2 | **0** |
| Scarp Height (ft): | **0** | x3 | **0** |
| Location of Erosion: | **0** | x1 | **0** |
| WS Berm Width (ft): | **0** | x1 | **0** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **0** | x4 | **0** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 0

Normalized Score (out of 100%):

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Gravel** |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **Size Riprap** |
| Bank Protection Location: | **Toe** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been repaired. Protecting riprap revetment has been placed at the levee shoulder and slope, but minor erosions are visible at the levee toe.
08/23/2011: Sloughing rip rap is visible on the site

Direct view of the site.

A closer view of the erosion

Closer view of the erosion

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **RB San Joaquin River** |
| Site ID: | **RD0524U01RM44.13** |
| Status: | **New Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.90463** | **-121.32361** | **44.13** | **3.56** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **150** |
| Scarp Height (ft): | **6** |
| Location of Erosion: | **Levee Toe** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Outside of bend > 90 deg** |
| Radius of Curvature(Rc/W): | **2.35** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **3** | x2 | **6** |
| Scarp Height (ft): | **4** | x3 | **12** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **2** | x2 | **4** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **5** | x3 | **15** |
| WS Soil Type: | **3** | x4 | **12** |
| Site Relative to Bend: | **3** | x1 | **3** |
| Radius of Curvature(Rc/W): | **3** | x1 | **3** |

Total Score (out of 91): 65

Normalized Score (out of 100%): **71**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Gravel** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The levee toe has been cut off along a 150ft long river streach. The erosion is located just upstream of a river bend.

Front view of erosion

Front view of erosion

Front view of erosion

Front view of erosion

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM45.07** |
| Status: | **New Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.89223** | **-121.32793** | **45.07** | **4.53** | **U** |

Front view of the site. Note the loosely placed concrete blocks.

Front view of the site.

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **51** |
| Scarp Height (ft): | **15** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **2** | x2 | **4** |
| Scarp Height (ft): | **4** | x3 | **12** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **2** | x2 | **4** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **5** | x3 | **15** |
| WS Soil Type: | **3** | x4 | **12** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **5** | x1 | **5** |

Total Score (out of 91): 62

Normalized Score (out of 100%): **68**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: Erosion is located at the inside of a river bend. Site is covered with broken concrete blocks and other debris.

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM45.27** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.889809** | **-121.329342** | **45.27** | **4.71** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **12** |
| Scarp Height (ft): | **6** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | Weighted Score: | |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **4** | x3 | **12** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **2** | x2 | **4** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **1** | x3 | **3** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 52

Normalized Score (out of 100%): **57**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **16** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **Size Riprap** |
| Bank Protection Location: | **Toe** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: Cracking erosion along the levee bank. Erosion appears to be caused by river flows.

Front view of the erosion site

Front view of the erosion.

Front view of the site.

Close view of the site. Note the vegetation at the site

| | |
|---|---|
| LMA: | **RD0524 U01 Middle Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0524U01RM46.12** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.87788** | **-121.33255** | **46.12** | **5.65** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **30** |
| Scarp Height (ft): | **3** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **5.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **2** | x2 | **4** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **1** | x3 | **3** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **1** | x1 | **1** |

Total Score (out of 91): 46

Normalized Score (out of 100%): **51**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **16** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **Size Riprap** |
| Bank Protection Location: | **Slope** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: : The site has been visited by boat survey. No significant change observed
08/23/2011: No signficant changes observed on site.
09/07/2010: No signficant changes observed on site. Erosion site is located beneath Howard Road Bridge. Majority of the existing rip rap has slipped, dragging away levee materials and exposing the underlying soft soil.
08/06/2010: Recommend for annual assessment and monitoring during flood events, per CLRO.
09/30/2009: No major changes observed since the last visit; upper portion of existing revetment has slipped, exposing the degrading bank; note that site # is the same as RM46.30, LM5.69 found in the CLRO CES Evaluation 2008 Report; site was previously rated "M".
11/04/2008: Previously repaired using rock revetment; upper portion of th revetment is sliding, causing deformation on the levee slope; site is upstream of Howards Road Bridge.

Sloughing rip rap just below the Howard Bridge abutment.

Sloughing rip rap adjacent to Howard Bridge.

Front view of sloughing rip rap.

| | |
|---|---|
| LMA: | RD0524 U01 Middle Roberts Island |
| Waterway: | LB San Joaquin River |
| Site ID: | RD0524U01RM46.39 |
| Status: | New Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.87437 | -121.33285 | 46.39 | 5.86 | U |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 15 |
| Scarp Height (ft): | 4 |
| Location of Erosion: | Lower 1/2 Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | Signs of activity |
| WS Levee Slope (H:V): | |
| WS Soil Type: | Clay (CL, CH, SC, GC) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 2 | x3 | 6 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 5 | x1 | 5 |
| WS Levee Slope (H:V): | 5 | x3 | 15 |
| WS Soil Type: | 3 | x4 | 12 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 55

Normalized Score (out of 100%): 60

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Gravel |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | Size Riprap |
| Bank Protection Location: | Toe |
| Survey Date: | 8/7/2012 |
| Comments: | |

08/07/2012: The erosion is near a water-intake structure. Pipe leakage likely caused the erorsion.

Front view of the site

Closer look of the erosion and the pipe

Closer look of the erosion and the pipe

Closer look of the erosion and the pipe

| | |
|---|---|
| LMA: | **RD0544 U01 Upper Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0544U01RM47.12** |
| Status: | **Repaired Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.86482** | **-121.3272** | **47.12** | **0.43** | |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **200** |
| Scarp Height (ft): | **4** |
| Location of Erosion: | **Toe & Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Outside of Bend < 90 deg** |
| Radius of Curvature(Rc/W): | **3.10** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **0** | x2 | **0** |
| Scarp Height (ft): | **0** | x3 | **0** |
| Location of Erosion: | **0** | x1 | **0** |
| WS Berm Width (ft): | **0** | x1 | **0** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **0** | x4 | **0** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 0

Normalized Score (out of 100%):

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **16** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **Trees on site and with visible roots** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: :The site has been visited by boat survey. The site has been repaired with riprap protection. Rotten tree roots and minor erosion visiable immediately upstream of the site
08/23/2011: No significant changes observed on site.
09/07/2010: No significant changes observed on site. There are minor pockets of erosion lining the lower slope and undermining of the toe. There are annual grasses and emergent vegetation at the lower slope. Burrow holes were observed along the slope and persist throughout the 200-foot long site.
08/05/2010: Recommended for annual assessment and monitoring during flood events, per CLRO.
09/30/2009: No major change observed since last visit; despite dense vegetation, the bank contiues to erode and slough; the levee toe is being undermined; note the tree on site; the site was previously rated "U".
10/21/2008: Undermining of the levee toe; rodent holes in several location; trees with roots partially exposed; sloughing on slope.

Upstream view of the repaired site

Front view of the repaired site

Front view of the site. Rotten tree roots and minor erosion visiable immediately upstream of the site

View of the tree root

| | |
|---|---|
| LMA: | **RD0544 U01 Upper Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0544U01RM48.81** |
| Status: | **New Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.850534** | **-121.322285** | **48.81** | **2.01** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **10** |
| Scarp Height (ft): | **5** |
| Location of Erosion: | **Toe & Slope** |
| WS Berm Width (ft): | **10** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **3** | x3 | **9** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **4** | x1 | **4** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **5** | x3 | **15** |
| WS Soil Type: | **3** | x4 | **12** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **5** | x1 | **5** |

Total Score (out of 91): 54

Normalized Score (out of 100%): **59**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Earthen** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: Erosion is right at the inside of a river bend. Dense vegetation visible at the site.

Front view of erosion

Front view of erosion

Front view of erosion

| | |
|---|---|
| LMA: | **RD0544 U01 Upper Roberts Island** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD0544U01RM49.67** |
| Status: | **New Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.840697** | **-121.318252** | **49.67** | **2.94** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **15** |
| Scarp Height (ft): | **6** |
| Location of Erosion: | **Toe & Slope** |
| WS Berm Width (ft): | **5** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **4** | x3 | **12** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **2** | x2 | **4** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **5** | x3 | **15** |
| WS Soil Type: | **3** | x4 | **12** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **5** | x1 | **5** |

Total Score (out of 91): 60

Normalized Score (out of 100%): **66**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Gravel** |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: Erosion is immediately upstream of a river bend. Dense vegetaion is visible at the erosion site.

Front view of the erosion. The pumping machine unlikely the cause of the erosion.

Front view of the site. Note the dense vegetation and rocks immediately upstream of the erosion

Upstream of the site is protected by rocks and broken concrete

Close view of the site

| | |
|---|---|
| LMA: | **RD0544 U02 Upper Roberts Island** |
| Waterway: | **RB Old River** |
| Site ID: | **RD0544U02RM32.91** |
| Status: | **New Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.81776** | **-121.35085** | **32.91** | **2.66** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **100** |
| Scarp Height (ft): | **6** |
| Location of Erosion: | **Levee Toe** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **2** | x2 | **4** |
| Scarp Height (ft): | **4** | x3 | **12** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **5** | x3 | **15** |
| WS Soil Type: | **3** | x4 | **12** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 56

Normalized Score (out of 100%): **62**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Earthen** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: Series of pocket erosion were discovered at the levee toe during the boat survey. The area is covered with vegetation and riprap rocks, but the rocks have been washed away.

Front view of pocket erosion. Note the vegetation and riprap rocks at the site

Front view of pocket erosion

close look at the erosion

Front view of pocket erosions

| | |
|---|---|
| LMA: | **RD0544 U02 Upper Roberts Island** |
| Waterway: | **LB Old River** |
| Site ID: | **RD0544U02RM33.21** |
| Status: | **New Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.821763** | **-121.347275** | **33.21** | **2.34** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **10** |
| Scarp Height (ft): | **8** |
| Location of Erosion: | **Levee Toe** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Outside of bend > 90 deg** |
| Radius of Curvature(Rc/W): | **0.63** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **5** | x3 | **15** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **5** | x3 | **15** |
| WS Soil Type: | **3** | x4 | **12** |
| Site Relative to Bend: | **3** | x1 | **3** |
| Radius of Curvature(Rc/W): | **5** | x1 | **5** |

Total Score (out of 91): 64

Normalized Score (out of 100%): **70**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site was first reported in 2012 spring levee inspection report. The data were estimated as the site is underneath a irrigation pump station and inaccessible by boat or land survey. It's possible the pump station played a role in the erosion.

Front view of the erosion site. View is partialy blocked by the pump structure and vegetaion

Front view of the site

Close view a fallen tree neare the site

Front view of site

| | |
|---|---|
| LMA: | **RD2031 U01 Elliot** |
| Waterway: | **LB Stanislaus River** |
| Site ID: | **RD2031U01RM0.48** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.70474** | **-121.15914** | **0.48** | **0.48** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **150** |
| Scarp Height (ft): | **5** |
| Location of Erosion: | **Toe & Slope** |
| WS Berm Width (ft): | **10** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2.5:1** |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Outside of bend > 90 deg** |
| Radius of Curvature(Rc/W): | **5.90** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **3** | x2 | **6** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **4** | x1 | **4** |
| WS Vegetation: | **2** | x2 | **4** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **1** | x3 | **3** |
| WS Soil Type: | **3** | x4 | **12** |
| Site Relative to Bend: | **3** | x1 | **3** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 43

Normalized Score (out of 100%): **47**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **16** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **Trees on site and with visible roots and leaning** |
| Bank Protection Type: | **Broken Concrete** |
| Bank Protection Location: | **Slope** |
| Survey Date: | **7/18/2012** |
| Comments: | |

07/18/2012: No significant changes observed.
08/18/2011: No significant changes observed on site. Debris that blocks the irrigation outlet visible.
10/19/2010: No significant changes observed on site. Sloughing of the bank is occurring adjacent to an irrigation outlet structure. There is moderate to heavy vegetation along the bank that is well established. Broken chunks and slabs of concrete are used as rip rap and line the outside of the irrigation outlet structure. However, much of the rip rap along the slope is sloughing and could possibly lead to future slope instability.
08/05/2010: Recommended as a local maintenance issue, per CLRO.
08/20/2009: No major change observed since last visit; 1 inch fissure cracks developing on the slope; rip rap is showing signs of sloughing; recommend as local maintenance issue; site was previously rated "U".
2008: No change from previous year; irrigation outlet located on site; rip rap placed on river bank.
09/06/2007: Near agricultural diversion; only 3' landside height differential.

Direct view of the site.

Looking downstream of the site. The irrigation outlet operating. Debris at the outlet visible

View of the current condition of the levee slope just above the irrigation outlet.

Downstream view of the site.

| | |
|---|---|
| LMA: | **RD2031 U02 Elliot** |
| Waterway: | **RB San Joaquin River** |
| Site ID: | **RD2031U02RM78.7** |
| Status: | **Not Rated** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.631716** | **-121.18937** | **78.70** | **4.35** | |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **200** |
| Scarp Height (ft): | **10** |
| Location of Erosion: | **On berm** |
| WS Berm Width (ft): | **100** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Outside of bend > 90 deg** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **0** | x2 | **0** |
| Scarp Height (ft): | **0** | x3 | **0** |
| Location of Erosion: | **0** | x1 | **0** |
| WS Berm Width (ft): | **0** | x1 | **0** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **0** | x4 | **0** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 0

Normalized Score (out of 100%):

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **16** |
| Crown Type: | **Gravel** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **7/18/2012** |
| Comments: | |

07/18/2012: No significant change observed on the site.
08/18/2011: No significant changes observed on the site. Dead trees and animal activities visible. The closest point of the erosion site to the levee toe is about 100 ft.
10/19/2010: There is active scouring occurring on the bank due to the nature of the flow and the lack of armor protection. There is also a fallen log immediately downstream of where the erosion has occurred and is protruding outward, possibly creating an eddy and scouring the bank. With the remaining 100-foot wide berm, the levee prism is not yet affected. However, the bank will continue to degrade, and eventually intrude into the levee prism if no protection is put in place. Erosion site is recommended for annual assessment and monitoring during flood events.

From the berm looking downstream.

Close look at the erosion

Close look at the erosion

Close look at the erosion

| | |
|---|---|
| LMA: | **RD2058 U01 Pescadero** |
| Waterway: | **LB Paradise Cut** |
| Site ID: | **RD2058U01RM1.78** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.803769** | **-121.386341** | **1.78** | **2.15** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **20** |
| Scarp Height (ft): | **5** |
| Location of Erosion: | **Upper 1/2 Slope** |
| WS Berm Width (ft): | **25** |
| WS Vegetation: | **No Ground Coverage** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **1** | x1 | **1** |
| WS Vegetation: | **3** | x2 | **6** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **1** | x3 | **3** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 44

Normalized Score (out of 100%): **48**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **24** |
| Crown Type: | **Gravel** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **Broken Concrete** |
| Bank Protection Location: | **Berm** |
| Survey Date: | **7/26/2012** |
| Comments: | |

07/31/2012: Site was visited on 07/26/2012. No significant change observed. A new vertical pipe was installed and concrete blocks left on the site. Dense vegetation around the site. No signs of new leaks or spill from the siphon breaker.
09/02/2011: Site was not visited due to the time limit.
09/22/2010: No significant changes observed. Vegetation downstream, upstream and on the lower slope of the site have been recently sprayed. These areas were also fenced off during the site visit, making it difficult for us to examine the condition of the lower slope. Possible leak or spill from the siphon breaker is creating notches along the slope and devloping into a headward erosion. If the problem continues, it will erode the slope and fully expose the pipe to outside elements.
07/23/2009: A possible leak or spill from a siphon breaker is eroding the slope and developing into a headward erosion; a portion of the buried pipe is exposed; the lower slope seems to be lined with chunks of concrete debris or other rock material.

Close look at the site. Note the concrete blocks and vegetation.

Direct view of siphon breaker.

Direct view of siphon breaker. Recently placed vertical pipe

A close look at the site. Note the concrete debris.

| | |
|---|---|
| LMA: | **RD2058 U01 Pescadero** |
| Waterway: | **LB Paradise Cut** |
| Site ID: | **RD2058U01RM3.97** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.78981** | **-121.35249** | **3.97** | **4.51** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **200** |
| Scarp Height (ft): | **5** |
| Location of Erosion: | **On berm** |
| WS Berm Width (ft): | **10** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **5.20** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **3** | x2 | **6** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **1** | x1 | **1** |
| WS Berm Width (ft): | **4** | x1 | **4** |
| WS Vegetation: | **2** | x2 | **4** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **1** | x3 | **3** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 44

Normalized Score (out of 100%): **48**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **15** |
| Crown Type: | **Gravel** |
| Tree Hazard: | **Trees on site and with visible roots** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **7/26/2012** |
| Comments: | |

07/26/2012: The site has been visited, and no significant change has been observed.
09/02/2011: This site was not visited due to the time limit.
09/22/2010: No significant changes observed. Minor pocket erosions are lined at the lower bank. Two large Oak and Willow trees are on midslope and bench. The remaining bench was re-measured and found to be approximately 10 feet. There was no indication of active erosion on site during the site visit.
08/05/2010: Recommended for annual assessment and monitoring of site during flood events, per CLRO.
07/23/2009: No major change observed since last visit; site is a 200-ft. long near-vertical berm erosion; recommend annual assessment and monitoring of erosion site, per CLRO CES Evaluation 2008 Report; Site # is the same site previously reported as RM4.0,LM4.51; previously rated "U".
09/10/2008: Two large trees (2-3' DBH) with partial roots exposed.
2007: Visited site 03/13/2007.

Direct view at a pocket erosion site. Vegetation has developed and covered the erosion.

Direct view at a the erosion near a tree

Direct view at a the erosion near a tree

Direct view at a the erosion near a tree

| | |
|---|---|
| LMA: | **RD2062 U01 Stewart** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD2062U01RM54.14** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.80408** | **-121.31406** | **54.14** | **0.91** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **15** |
| Scarp Height (ft): | **4** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **2.10** |

## II. Criteria

| | Score: | Weighted Score: | |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **1** | x3 | **3** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **3** | x1 | **3** |

Total Score (out of 91): 46

Normalized Score (out of 100%): **51**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **Broken Concrete** |
| Bank Protection Location: | **Slope** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: No signficant changes observed on site. Vegetation on the slope. There is a bridge construction site just upstream of the erosion. The impact of the construction may need to be monitored.
09/07/2010: No signficant changes observed on site. Sloughing of the existing rip rap revetment on the lower slope has developed into an erosion pocket. There is moderate annual grass growth on the slope.
08/06/2010: Recommended as local maintenance issue, per CLRO.
03/09/2010: Per Michael Moncrief of MBK, site is scheduled for repair this year.
2009: Landside ground surface has been raised to the height of the levee crown; sloughing of the existing rip rap revetment on the lower slope that has created a pocket, exposing underlying soil; Site # is the same RM54.34,LM1.08; previously rated "M".
2006: Previously marked with stake.

Front view of the erosion site

Front view of the rip rap

Downstream view of the erosion site and riprap revetment

Front view of the site

| | |
|---|---|
| LMA: | **RD2062 U02 Stewart** |
| Waterway: | **RB Paradise Cut** |
| Site ID: | **RD2062U02RM1.94** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.805422** | **-121.383173** | **1.94** | **3.48** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **500** |
| Scarp Height (ft): | **1** |
| Location of Erosion: | **Levee Toe** |
| WS Berm Width (ft): | **30** |
| WS Vegetation: | **No Ground Coverage** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **3:1 or greater** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **5** | x2 | **10** |
| Scarp Height (ft): | **1** | x3 | **3** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **1** | x1 | **1** |
| WS Vegetation: | **3** | x2 | **6** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 46

Normalized Score (out of 100%): **51**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **16** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **7/26/2012** |
| Comments: | |

07/31/2012: Site was visited on 07/26/2012. No significant change observed.
09/02/2011: No significant changes observed on site from the previous visit.
09/22/2010: No significant changes observed on site. The foot-high near-vertical scarp still exists on levee toe. There is little to no vegetation on the slope.
03/09/2010: As discussed with Michael Moncrief of MBK, site will be addressed this year.
07/27/2009: 1 to 2 feet of near-vertical scarp on levee toe; damage was most likely caused by farming equipment during clearing or tilling operation; this is a maintenance-related issue.

Upstream view of site. Note the vertical scarp at the toe.

Direct view of site.

Downstream view of site.

A close view of site.

| | |
|---|---|
| LMA: | RD2062 U02 Stewart |
| Waterway: | RB Paradise Cut |
| Site ID: | RD2062U02RM2.14 |
| Status: | Existing Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.804604 | -121.379454 | 2.14 | 3.27 | M |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 50 |
| Scarp Height (ft): | 2 |
| Location of Erosion: | Levee Toe |
| WS Berm Width (ft): | 30 |
| WS Vegetation: | No Ground Coverage |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 3:1 or greater |
| WS Soil Type: | Silt (ML) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 1 | x3 | 3 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 1 | x1 | 1 |
| WS Vegetation: | 3 | x2 | 6 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 0 | x3 | 0 |
| WS Soil Type: | 5 | x4 | 20 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 38

Normalized Score (out of 100%): 42

## III. Misc

| | |
|---|---|
| Crown Width (ft): | 16 |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | None |
| Bank Protection Location: | None |
| Survey Date: | 7/26/2012 |

Comments:

07/26/2012: Site was visited on 07/26/2012. No significant changes observed.
09/02/2011: : No significant changes observed on site from last visit.
09/22/2010: No significant changes observed on site. The fencing located on the berm was removed. Levee slope and berm area 10 feet from the levee toe are bare of any vegetation. The 1- to 2 feet of near-vertical scarp on the levee toe is unchanged.
03/09/2010: As discussed with Michael Moncrief of MBK Engineer, the district will address the site this year.
7/27/2009: 1 to 2 feet of near-vertical scarp on the levee toe; damage was most likely caused by agricultural equipment during clearing or tilling operation; this is a maintenance-related issue.

Downstream view of scarp caused by a maintenance equipment.

Close view of scarp.

downstream view of site.

Upstream view of site.

| | |
|---|---|
| LMA: | **RD2062 U03 Stewart** |
| Waterway: | **LB Old River** |
| Site ID: | **RD2062U03RM29.93** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.809673** | **-121.390321** | **29.93** | **0.02** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **450** |
| Scarp Height (ft): | **4** |
| Location of Erosion: | **Levee Toe** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **5** | x2 | **10** |
| Scarp Height (ft): | **3** | x3 | **9** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **2** | x2 | **4** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **2** | x3 | **6** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 60

Normalized Score (out of 100%): **66**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **Size Riprap** |
| Bank Protection Location: | **Toe** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: Site is at the upstream of a drainage ditch.

Front view of erosion

Front view of the erosion

Upstream view of the erosion

Front view of the erosion. Note the dense vegetation.

| | |
|---|---|
| LMA: | **RD2062 U03 Stewart** |
| Waterway: | **LB Old River** |
| Site ID: | **RD2062U03RM30.02** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.810052** | **-121.388847** | **30.02** | **0.1** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **40** |
| Scarp Height (ft): | **3** |
| Location of Erosion: | **Levee Toe** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | Weighted Score: | |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **2** | x3 | **6** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 47

Normalized Score (out of 100%): **52**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Earthen** |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **Size Riprap** |
| Bank Protection Location: | **Slope** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: Hard to view the erosion because of the dense vegetation and trees on site. The site is under the bush, close to the tree.

close view of the site

Close view of the site

Front view of the site. Note the vegetation

| | |
|---|---|
| LMA: | RD2062 U03 Stewart |
| Waterway: | LB Old River |
| Site ID: | RD2062U03RM30.1 |
| Status: | Existing Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.810468 | -121.387492 | 30.10 | 0.18 | M |

Direct view of the site. The erosion is vertical

Front view of the erosion

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 20 |
| Scarp Height (ft): | 4 |
| Location of Erosion: | Levee Toe |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | 1/3 of ground covered |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 2:1 |
| WS Soil Type: | Silt (ML) |
| Site Relative to Bend: | Straight Reach |
| Radius of Curvature(Rc/W): | 0.00 |

## II. Criteria

| | Score: | Weighted Score: | |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 3 | x3 | 9 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 2 | x2 | 4 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 2 | x3 | 6 |
| WS Soil Type: | 5 | x4 | 20 |
| Site Relative to Bend: | 1 | x1 | 1 |
| Radius of Curvature(Rc/W): | 0 | x1 | 0 |

Total Score (out of 91): 52

Normalized Score (out of 100%): 57

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | Earthen |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | |
| Bank Protection Location: | Toe |
| Survey Date: | 8/7/2012 |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: The protection at the levee toe has been washed away.

| | |
|---|---|
| LMA: | **RD2062 U03 Stewart** |
| Waterway: | **LB Old River** |
| Site ID: | **RD2062U03RM30.19** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.810609** | **-121.385879** | **30.19** | **0.27** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **475** |
| Scarp Height (ft): | **4** |
| Location of Erosion: | **Toe & Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **5** | x2 | **10** |
| Scarp Height (ft): | **3** | x3 | **9** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **5** | x1 | **5** |
| WS Levee Slope (H:V): | **2** | x3 | **6** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 63

Normalized Score (out of 100%): **69**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **Size Riprap** |
| Bank Protection Location: | **Toe** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: No signficant changes observed on site. Dense vegetation visible along the water line.
09/07/2010: No signficant changes observed on site. Much of the upper slope was recently cleared of vegetation by spraying. 4- to 6-foot vertical scarp and pocket erosions are lined along a span of 475 feet. In some sections, the vertical scarp encroaches into the levee prism. There is a lack of berm along this reach, exposing the levee slope to high flow velocities during normal and flood events.
08/06/2010: Recommended as local maintenance issue, per CLRO.
03/09/2010: As discussed with Michael Moncrief of MBK Engineers, the site will be 'addressed' later this year.
09/29/2009: No major change observed since last visit; pocket erosion and a vertical scarp forming; this site was combined with Site RM30.13 and 30.02 with a combined total erosion length of 475 feet; recommended as annual assessment and monitoring of site, per CLRO CES Evaluation 2008 Report; previously rated "M".
11/05/2008: Top of vertical scarp has rip rap that appears to be sliding; rodent holes; existing toe rip rap.

Front view of the 5-ft vertical scarp .

Another view of the same 5-ft scarp.

Front view of the site with dense vegetation.

Front view of the site with dense vegetation

| | |
|---|---|
| LMA: | **RD2062 U03 Stewart** |
| Waterway: | **LB Old River** |
| Site ID: | **RD2062U03RM30.27** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.811281** | **-121.384461** | **30.27** | **0.35** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **16** |
| Scarp Height (ft): | **4** |
| Location of Erosion: | **Levee Toe** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Immediately Downstream of Bend** |
| Radius of Curvature(Rc/W): | **2.59** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **2** | x3 | **6** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **2** | x1 | **2** |
| Radius of Curvature(Rc/W): | **3** | x1 | **3** |

Total Score (out of 91): 51

Normalized Score (out of 100%): **56**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | |
| Bank Protection Location: | **Toe** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: The site is right at the downstream of a river bend.

Upstream view of the erosion.

Close view of the site

Front view of the erosion.

Front view of the site

| | |
|---|---|
| LMA: | **RD2062 U03 Stewart** |
| Waterway: | **LB Old River** |
| Site ID: | **RD2062U03RM30.43** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.81307** | **-121.3831** | **30.43** | **0.56** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **30** |
| Scarp Height (ft): | **4** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **1.90** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **5** | x1 | **5** |
| WS Levee Slope (H:V): | **2** | x3 | **6** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **4** | x1 | **4** |

Total Score (out of 91): 55

Normalized Score (out of 100%): **60**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **Broken Concrete** |
| Bank Protection Location: | **Slope** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: No significant changes observed on site.
09/07/2010: No significant changes observed on site. Much of the placed rip rap revetment has slid. It is no longer adequately protecting the slope.
08/06/2010: Recommended as local maintenance issue, per CLRO Report.
03/09/2010: As discussed with Michael Moncrief of MBK, site will be 'addressed' this year.
09/29/2009: No major change observed since last visit; a section of the rip rap has slipped, exposing a levee section that has eroded; recommended as local maintenance issue, per CLRO CES Evaluation 2008 Report; Site # is the same as RM30.43,LM0.63; previously rated "U".
11/05/2008: Site is located inside of a bend; scarp looks to be into the levee prism; piles of concrete chunks placed on the slope, with some of them already starting to slide.

Close view of the site.

Front view of the site. Previously placed rip rap slipped, exposing the underlaying soils and creating a pocket.

Front view of the site. Rip rap no longer adequately protecting levee slope.

Front view of the site.

| | |
|---|---|
| LMA: | RD2062 U03 Stewart |
| Waterway: | LB Old River |
| Site ID: | RD2062U03RM31.12 |
| Status: | Existing Site |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| 37.81929 | -121.37888 | 31.12 | 1.2 | M |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | 30 |
| Scarp Height (ft): | 2 |
| Location of Erosion: | Lower 1/2 Slope |
| WS Berm Width (ft): | 0 |
| WS Vegetation: | Ground surrounding site fully covere |
| WS Burrow Hole Activity: | No signs of activity |
| WS Levee Slope (H:V): | 2.5:1 |
| WS Soil Type: | Silt (ML) |
| Site Relative to Bend: | Outside of Bend < 90 deg |
| Radius of Curvature(Rc/W): | 1.80 |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | 1 | x2 | 2 |
| Scarp Height (ft): | 1 | x3 | 3 |
| Location of Erosion: | 5 | x1 | 5 |
| WS Berm Width (ft): | 5 | x1 | 5 |
| WS Vegetation: | 0 | x2 | 0 |
| WS Burrow Hole Activity: | 0 | x1 | 0 |
| WS Levee Slope (H:V): | 1 | x3 | 3 |
| WS Soil Type: | 5 | x4 | 20 |
| Site Relative to Bend: | 5 | x1 | 5 |
| Radius of Curvature(Rc/W): | 4 | x1 | 4 |

Total Score (out of 91): 47

Normalized Score (out of 100%): 52

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | No trees on site |
| Bank Protection Type: | Broken Concrete |
| Bank Protection Location: | Toe |
| Survey Date: | 8/7/2012 |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: No significant changes observed on site.
09/07/2010: No significant changes observed on site. Much of the seasonal grass along the slope was cleared. Site consists of an existing scalloped erosion approximately 30 feet long by 5 feet wide at its widest opening. The lateral crack is extended outwards along the middle slope. There is a 1 to 2 feet of differential settlement that could further develop into a shallow slide.
08/06/2010: Recommended as local maintenance issue, per CLRO.
03/09/2010: As discussed with Michael Moncrief of MBK Engineer, site will be 'addressed' this year.
09/28/2009: No major change observed; section of rip rap has slipped, creating a terraced effect; dense vegetation growth; recommended as a local maintenance issue, per CLRO CES Evaluation 2008 Report; Site # is the same as RM31.12,LM1.25; previously rated "U".
09/14/2006: 1-2' into prism.

Front view of the site. Existing scalloped erosion is immediately downstream of rip rap section.

close view of the site

Front view of the site. Note the lateral crack along the middle slope

Front view of the site just above existing rip rap.

| | |
|---|---|
| LMA: | **RD2062 U03 Stewart** |
| Waterway: | **LB Old River** |
| Site ID: | **RD2062U03RM31.28** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.82138** | **-121.3769** | **31.28** | **1.42** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **30** |
| Scarp Height (ft): | **2** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **2.70** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **1** | x3 | **3** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **1** | x3 | **3** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **3** | x1 | **3** |

Total Score (out of 91): 43

Normalized Score (out of 100%): **47**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **Trees on site and with visible roots and leaning** |
| Bank Protection Type: | **Broken Concrete** |
| Bank Protection Location: | **Slope** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: No signficant changes observed on site.
09/07/2010: No signficant changes observed on site. There is a small- to medium sized Oak tree on the mid-slope just above rip rap. Some of the rip rap has collapsed, creating a pocket erosion just above the existing toe rip rap and upstream of the Oak tree.
08/06/2010: Recommended as local maintenance issue, per CLRO.
03/09/2010: As discussed with Michael Moncrief of MBK Engineer, site will be 'adressed' in 2010.
09/29/2009: No major change since last visit; sliding of the rip rap at the base of the lone tree; there is noticeable man-made trail and foot traffic extending from the crown to the toe; much of the broken concrete used as temporary rip rap has slid, exposing portion of the bare levee slope; recommended as local maintenance issue, per CLRO CES Evaluation 2008 Report; Site # is the same as RM31.3,LM1.45; previously rated "M".
11/05/2008: Portion of rip rap collapsing.
09/14/2006: Portion of rip rap along the slope has collapsed; exposed levee section is starting to erode, exposing roots from the nearby tree.

Close view of the site where a small to medium sized Oak tree is located.

A closer look of the site near the oak tree

Front view of the site. Note existing broken concrete on the upper slope as well as on the lower slope and at the toe.

Front view of the site.

| | |
|---|---|
| LMA: | **RD2063 U01 Crows Landing** |
| Waterway: | **RB San Joaquin River** |
| Site ID: | **RD2063U01RM103.49** |
| Status: | **Repaired Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.442305** | **-121.022727** | **103.49** | **3.16** | |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **1000** |
| Scarp Height (ft): | **25** |
| Location of Erosion: | **On berm** |
| WS Berm Width (ft): | **32** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **1.5:1** |
| WS Soil Type: | **Sand (SP, SM and mixtures)** |
| Site Relative to Bend: | **Outside of bend > 90 deg** |
| Radius of Curvature(Rc/W): | **3.93** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **0** | x2 | **0** |
| Scarp Height (ft): | **0** | x3 | **0** |
| Location of Erosion: | **0** | x1 | **0** |
| WS Berm Width (ft): | **0** | x1 | **0** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **0** | x4 | **0** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 0

Normalized Score (out of 100%):

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | **Earthen** |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **7/24/2012** |
| Comments: | |

07/24/2012: Learned from the district that the upstream erosion has been repaired by placing broken concrete blocks. Visual inspection at the repaired site found no new erosion development. No significant change observed on the site at the downstream section of the repaired erosion site.
10/14/2011. This site was reported on Jan. 18. 2011. The first 100' of erosion appears to be a pervious cut with fresh activity. At station 2+00 the district president indicated that 60 - 80' of material eroded. The remainder berm width is at least 32 ft from the levee toe. As the levee is not at risk at this time, the site is not rated, but needs to be closely monitored for possible erosion failure during the upcoming flooding season.

Looking downstream at the erosion

Direct view of the erosion

Closer view of the erosion

Looking downstream at the erosion

| | |
|---|---|
| LMA: | **RD2075 U01 McMullin** |
| Waterway: | **RB San Joaquin River** |
| Site ID: | **RD2075U01RM64.34** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.727933** | **-121.274491** | **64.34** | **5.34** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **75** |
| Scarp Height (ft): | **10** |
| Location of Erosion: | **Toe & Slope** |
| WS Berm Width (ft): | **10** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Sand (SP, SM and mixtures)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **5.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **2** | x2 | **4** |
| Scarp Height (ft): | **4** | x3 | **12** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **4** | x1 | **4** |
| WS Vegetation: | **2** | x2 | **4** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **2** | x3 | **6** |
| WS Soil Type: | **4** | x4 | **16** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **1** | x1 | **1** |

Total Score (out of 91): 52

Normalized Score (out of 100%): **57**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **26** |
| Crown Type: | **Paved** |
| Tree Hazard: | **Trees on site and with visible roots and leaning** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **9/13/2012** |
| Comments: | |

09/13/2012: No significant changes observed on site.
08/18/2011: No significant changes observed on site. Some new material added to the water side levee slope, but the added material is loose and seems not helping the levee protection.
10/05/2010: No significant changes observed on site. Levee slope has minimal vegetation and lacks rip rap protection. Sandy material found on the lower and middle slope is an undesirable material to have on a levee.
08/05/2010: Recommended for annual assessment and monitoring during flood events, per CLRO.
08/20/2009: No major change since last visit; site is located in an oxbow; slope surface consists of very sandy material; there is a tree on site leaning and with exposed tree roots; site is recommended as a local maintenance issue, per CLRO CES Evaluation 2008 Report; Eddy Cordoza from the district is aware of the site and is looking for recommendation; site is previously rated "U".
08/17/2007: Site is close to an irrigation pump inlet.

Looking upstream of the site .

Looking up to the levee crown at the added material.

Looking upstream of the erosion site

Direct look at the levee slope.

| | |
|---|---|
| LMA: | **RD2085 U01 Kasson** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD2085U01RM66.5** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.703094** | **121.274894** | **66.50** | **2.25** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **85** |
| Scarp Height (ft): | **15** |
| Location of Erosion: | **On berm** |
| WS Berm Width (ft): | **17** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | **3:1 or greater** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **2** | x2 | **4** |
| Scarp Height (ft): | **5** | x3 | **15** |
| Location of Erosion: | **1** | x1 | **1** |
| WS Berm Width (ft): | **2** | x1 | **2** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **5** | x1 | **5** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **5** | x1 | **5** |

Total Score (out of 91): 54

Normalized Score (out of 100%): **59**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **13** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **12/4/2012** |

Comments:

12/04/2012: The erosion has progressed remarkably toward levee, extended to the up- and downstream of the original pocket erosion. Trees and dense bush present at the site. Animal burrow holes are visible, and possibly can cause seepage.
09/22/2010: No significant changes observed. There is little visibility due to seasonal grass on the berm and slope.
08/18/2009: Site is located on berm; pocket erosion has developed; the site is covered in dense vegetation; there are several relief wells on the landside of the levee; site is Not Rated because berm width is greater than 30 feet; site should be monitored to keep track of erosion progress.

Looking downstream

Looking upstream

Direct view at the erosion

View from levee top

| | |
|---|---|
| LMA: | **RD2085 U01 Kasson** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD2085U01RM67.7** |
| Status: | **Not Rated** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.688545** | **-121.276298** | **67.70** | **3.64** | |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **670** |
| Scarp Height (ft): | **17** |
| Location of Erosion: | **On berm** |
| WS Berm Width (ft): | **42** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | **3:1 or greater** |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Outside of Bend < 90 deg** |
| Radius of Curvature(Rc/W): | **1.04** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **0** | x2 | **0** |
| Scarp Height (ft): | **0** | x3 | **0** |
| Location of Erosion: | **0** | x1 | **0** |
| WS Berm Width (ft): | **0** | x1 | **0** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **0** | x4 | **0** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 0

Normalized Score (out of 100%):

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **15** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **12/4/2012** |
| Comments: | |

12/04/2012: This site has been documented before, and a cost estimate to repair has been prepared dated 05/09/2010. The fresh cut shows the erosion is developing. The berm width is at least 42 feet. Sticks were placed at three locations along the river bank, with 3 sticks 5 feet apart at each location.

Looking downstream. At the downstream end the erosion occuring at a spur levee.

Looking downstream at the erosion at the spur levee

Direct view of the erosion

Looking downstream standing at the water edge

| | |
|---|---|
| LMA: | **RD2089 U01 Stark** |
| Waterway: | **RB Old River** |
| Site ID: | **RD2089U01RM29.61** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.80978** | **-121.39623** | **29.61** | **0.66** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **20** |
| Scarp Height (ft): | **5** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Outside of bend > 90 deg** |
| Radius of Curvature(Rc/W): | **2.20** |

## II. Criteria

| | Score: | Weighted Score: | |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **5** | x1 | **5** |
| WS Levee Slope (H:V): | **2** | x3 | **6** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **3** | x1 | **3** |
| Radius of Curvature(Rc/W): | **3** | x1 | **3** |

Total Score (out of 91): 57

Normalized Score (out of 100%): **63**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: The 5-foot vertical scarp shows no significant change from the last year inspection. No new ersion activities observed. Dense white willow trees on site.
09/07/2010: It was difficult to view the erosion due to the thick Willow thickets and other vegetation at the water line. At the time of the inspection, there were no signs of repair on site. As noted during the last survey, there is a 5-foot vertical scarp along the lower slope that may be subjected to high flow velocities.
08/05/2010: Recommended for repair, per CLRO; "Erosion of this site may be subjective to rapid rates of erosion."
09/28/2009: No major change observed; 5-foot vertical scarp is immediately downstream of where berm has tapered; site is recommended as local maintenance issue, per CLRO CES Evaluation 2008 Report; Site # is the same as RM29.6,LM0.60; previously rated "U".
11/05/2008: No change observed; rodent holes on lower slope; wide levee crown.

Front view of the site. The scarp is visible on the slope.

Front view of the site. Note the very dense white willow thickets on site.

Front view of the site.

Front view of the site. Note the erosion invisible because of the dense vegetation

| | |
|---|---|
| LMA: | **RD2089 U01 Stark** |
| Waterway: | **RB Old River** |
| Site ID: | **RD2089U01RM29.8** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.809394** | **-121.392791** | **29.80** | **0.45** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **4** |
| Scarp Height (ft): | **2** |
| Location of Erosion: | **Upper 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **1** | x3 | **3** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **2** | x3 | **6** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **5** | x1 | **5** |

Total Score (out of 91): 48

Normalized Score (out of 100%): **53**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **Size Riprap** |
| Bank Protection Location: | **Slope** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: The site shows loose material around the pipe crossing. The operation of the pipe might have caused certain impact on the levee.

Front view of the site.

Front view of the site

Front view of the site

Front view of the site

| | |
|---|---|
| LMA: | **RD2089 U01 Stark** |
| Waterway: | **RB Old River** |
| Site ID: | **RD2089U01RM29.95** |
| Status: | **Repaired Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.81005** | **-121.39026** | **29.95** | **0.3** | |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **50** |
| Scarp Height (ft): | **7** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **0** | x2 | **0** |
| Scarp Height (ft): | **0** | x3 | **0** |
| Location of Erosion: | **0** | x1 | **0** |
| WS Berm Width (ft): | **0** | x1 | **0** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **0** | x4 | **0** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 0

Normalized Score (out of 100%):

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **Size Riprap** |
| Bank Protection Location: | **Slope** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: No significant changes observed on site.
09/07/2010: Site appears to have been repaired by placing shot rock along the entire slope as revetment. Seasonal grasses growing over the placed revetment. Emergent vegetation at the lower slope that could possibly be covering the vertical scarp that was previously observed. It is recommended that another inspection be conducted to verify status of site. It was previously rated "U".
08/06/2010: Recommended as local maintenance issue, per CLRO.
09/28/2009: Rock revetment placed on the upper slope; however, vertical scarp still exists; site is recommended for annual assessment and monitoring of erosion site, per CLRO CES Evaluation 2008 Report; Site # is the same as RM29.95, LM0.22; previously rated "M".
11/05/2008: Pocket erosion with vertical scarp; loss of rip rap; mild vegetation growth since previous survey.
10/20/2006: Site visited on 10/20/2006.

Front view of the site.

Front view of the site.

Front view of the site. Note the vegetation at the site

| | |
|---|---|
| LMA: | **RD2089 U02 Stark** |
| Waterway: | **RB Old River** |
| Site ID: | **RD2089U02RM28.35** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.80996** | **-121.4132** | **28.35** | **0.42** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **60** |
| Scarp Height (ft): | **6** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **Ground surrounding site fully covere** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | **2.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Inside of Bend** |
| Radius of Curvature(Rc/W): | **7.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **2** | x2 | **4** |
| Scarp Height (ft): | **4** | x3 | **12** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **5** | x1 | **5** |
| WS Levee Slope (H:V): | **1** | x3 | **3** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 54

Normalized Score (out of 100%): **59**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **Trees on site and with visible roots** |
| Bank Protection Type: | **Size Riprap** |
| Bank Protection Location: | **Slope** |
| Survey Date: | **8/7/2012** |
| Comments: | |

08/07/2012: The site has been visited by boat survey. No significant change observed
08/23/2011: No significant changes observed on site.
09/07/2010: Site consists of a jutting rip rap that has created an eddy, scouring the levee slope. Most sections of the toe and lower slope are lined with rip rap. However, the rip rap is sloughing on the mid slope and at the toe, exposing the underlaying soils and tree roots. The remaining revetment is no longer adequately protecting the slope. There are 3 Sycamore trees at the toe with exposed tree roots.
08/05/2010: Recommended for repair, per CLRO.
09/28/2009: Pocket erosion on lower slope just above the toe rip rap; protruding rip rap upstream is creating an eddy, scouring the levee slope; Site # is the same as RM28.40,LM0.30; previously rated "U"; pictures will be made available during the next survey.
11/05/2008: Cut into levee profile; riprap slide; rodent holes; pictures do not match GPS and current condition.

Close view of the site

Close look of the site

A closer look of the site

| | |
|---|---|
| LMA: | **RD2092 U01 Dos Rios** |
| Waterway: | **RB San Joaquin River** |
| Site ID: | **RD2092U01RM84.6** |
| Status: | **Repaired Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.58713** | **-121.16283** | **84.60** | **1.62** | |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **750** |
| Scarp Height (ft): | **2** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **1000** |
| WS Vegetation: | **No Ground Coverage** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2.5:1** |
| WS Soil Type: | **Clay (CL, CH, SC, GC)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **0** | x2 | **0** |
| Scarp Height (ft): | **0** | x3 | **0** |
| Location of Erosion: | **0** | x1 | **0** |
| WS Berm Width (ft): | **0** | x1 | **0** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **0** | x4 | **0** |
| Site Relative to Bend: | **0** | x1 | **0** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 0

Normalized Score (out of 100%):

## III. Misc

| | |
|---|---|
| Crown Width (ft): | |
| Crown Type: | |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **8/18/2011** |
| Comments: | |

09/26/2012: Site was not surveyed this year due to time constraints. There have been no reports from the levee inspectors or district that this site has new erosion.
08/18/2011: This site was repaired. No new erosion visible.
11/30/2010: Site was not surveyed this year due to time constraints. There have been no reports from the district that this site was corrected.
08/05/2010: Recommended for annual assessment and monitoring during flood events, per CLRO.
08/25/2009: No major change since last visit; sloughing of the lower slope that's created a terraced effect; damage could be caused by wave action during an extended flooding; site is recommended as local maintenance issue, per CLRO CES Evaluation 2008 Report; previously rated "M".
08/09/2007: Not as serious - use lower rating.

Upstream view of the site looking from the levee crown.

Upstream view of the site

Downstream view of the site.

Close-in view of the repaired site.

| | |
|---|---|
| LMA: | **RD2095 U01 Paradise Cut** |
| Waterway: | **LB Paradise Cut** |
| Site ID: | **RD2095U01RM6.74** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.76363** | **-121.319** | **6.74** | **0.73** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **50** |
| Scarp Height (ft): | **8** |
| Location of Erosion: | **On berm** |
| WS Berm Width (ft): | **10** |
| WS Vegetation: | **1/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **4** | x3 | **12** |
| Location of Erosion: | **1** | x1 | **1** |
| WS Berm Width (ft): | **4** | x1 | **4** |
| WS Vegetation: | **2** | x2 | **4** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **2** | x3 | **6** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 50

Normalized Score (out of 100%): **55**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **24** |
| Crown Type: | **Gravel** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **7/18/2012** |
| Comments: | |

07/18/2012: No significant changes observed on site.
09/02/2011: No significant changes observed on site.
09/22/2010: No significant changes observed on site. There is now considerable vegetation at the water line and along the lower berm slope. However, the erosion on the lower berm slope is still present and has not been corrected.
08/06/2010: Recommended for local maintenance issue, per CLRO.
07/29/2009: No major change since last visit; noticeable vegetation growth; erosion is on berm, but if left untreated, it will eventually erode into levee prism; site is recommended for annual assessment and monitoring of site, per CLRO CES 2008 Report; Site # is the same sa RM6.80,LM0.73; previously rated "U".
07/22/2008: Downstream of WPRR near siphon pipe & pump; sandy levee; visited by Jeff Van Gilder and LRO in 2008 for repair assessment; scouring downstream of RxR crossing, possibly caused by eddy effects.
03/13/2007: Site visited on 03/13/2007.

Direct view of the erosion at the downstream of RR bridge.

looking up at the erosion from the lower levee slope

Closer view of the erosion

Upstream side of RR bridge

| | |
|---|---|
| LMA: | **RD2095 U01 Paradise Cut** |
| Waterway: | **LB Paradise Cut** |
| Site ID: | **RD2095U01RM6.88** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.76196** | **-121.31814** | **6.88** | **0.86** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **25** |
| Scarp Height (ft): | **7** |
| Location of Erosion: | **Lower 1/2 Slope** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **Ground surrounding site fully covere** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **1.5:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Straight Reach** |
| Radius of Curvature(Rc/W): | **0.00** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **1** | x2 | **2** |
| Scarp Height (ft): | **4** | x3 | **12** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **3** | x3 | **9** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **1** | x1 | **1** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 54

Normalized Score (out of 100%): **59**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **16** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **Broken Concrete** |
| Bank Protection Location: | **Slope** |
| Survey Date: | **7/18/2012** |
| Comments: | |

07/18/2012: No significant changes observed.
09/02/2011: No significant changes observed.
09/22/2010: No significant changes observed. Sloughing of the existing rip rap possibly due to a combination of steep slope and undesirable flood conditions.
08/06/2010: Recommended as local maintenance issue, per CLRO.
07/29/2009: No major change observed since last visit; near-vertical slope that has rip rap sloughing; site is recommended as a local maintenance issue, per CLRO CES Evaluation 2008 Report; Site # is the same as RM6.90,LM0.86; previously rated "U".
07/22/2008: Previous erosion site that is partially protected with concrete rubble; erosion scarp is adjacent to the sloughing rip rap.
03/13/2007: Site visited on 03/13/2007.

Direct view of the site

Direct view of the site

Direct view of the site

| | |
|---|---|
| LMA: | **RD2095 U02 Paradise Cut** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD2095U02RM60.62** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.740196** | **-121.297662** | **60.62** | **1.78** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **150** |
| Scarp Height (ft): | **10** |
| Location of Erosion: | **On berm** |
| WS Berm Width (ft): | **25** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **Signs of activity** |
| WS Levee Slope (H:V): | **3:1 or greater** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Outside of bend > 90 deg** |
| Radius of Curvature(Rc/W): | **5.70** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **3** | x2 | **6** |
| Scarp Height (ft): | **5** | x3 | **15** |
| Location of Erosion: | **1** | x1 | **1** |
| WS Berm Width (ft): | **1** | x1 | **1** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **5** | x1 | **5** |
| WS Levee Slope (H:V): | **0** | x3 | **0** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **3** | x1 | **3** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 53

Normalized Score (out of 100%): **58**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **60** |
| Crown Type: | **Gravel** |
| Tree Hazard: | **No trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **9/13/2012** |
| Comments: | |

09/13/2012: The site has been visited by land survey. The vegetation on the site shows the erosion has not developed significantly from the last survey.
The site was not visited by boat survey due to the limitation of navigatable waterway.
08/23/2011: No signficant changes observed on the site.
9/22/2010: No signficant changes observed on site. There is moderate vegetation growth on the berm. Despite the erosion occurring on the berm, corrective action should be taken before the issue becomes severe.
9/29/2009: Site is immediately downstream of a section of existing rip rap; there is a 20-foot berm remaining; berm will continue to erode unless erosion is mitigated; Site# is the same as RM62.6, LM1.87; recommended for annual assessment, per CES Evaluation 2008 Report
2006: Visited 10/20/06

Looking upstream of the site. Note dense vegetation on the berm.

Looking downstream of the site.

Close view of the site.

Close view of the site.

| | |
|---|---|
| LMA: | **RD2095 U02 Paradise Cut** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD2095U02RM60.69** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.73888** | **-121.29826** | **60.69** | **1.87** | **M** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **200** |
| Scarp Height (ft): | **5** |
| Location of Erosion: | **Levee Toe** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **2/3 of ground covered** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Silt (ML)** |
| Site Relative to Bend: | **Outside of bend > 90 deg** |
| Radius of Curvature(Rc/W): | **5.70** |

## II. Criteria

| | Score: | | Weighted Score: |
|---|---|---|---|
| Length (ft): | **3** | x2 | **6** |
| Scarp Height (ft): | **2** | x3 | **6** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **1** | x2 | **2** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **2** | x3 | **6** |
| WS Soil Type: | **5** | x4 | **20** |
| Site Relative to Bend: | **3** | x1 | **3** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 53

Normalized Score (out of 100%): **58**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **60** |
| Crown Type: | **Gravel** |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **Size Riprap** |
| Bank Protection Location: | **Slope** |
| Survey Date: | **9/13/2012** |
| Comments: | |

09/13/2012: The site has been visited by land survey. The erosion is not visible from the levee slope because of dense vegetation at the site. Levee slope is protected by placed rocks. The site was not visited by boat survey due to the limitation of navigatable waterway.
08/23/2011: Dense vegetation makes it difficult to view the possible erosion. No new development was observed on site.
09/23/2010: At the time of the inspection, the erosion site was difficult to view from the levee. Erosion is located on the bank toe, below the existing rip rap. There were no signs of repair on site, nor has the site been reported to be repaired by the district. Images taken from last year indicate that existing rip rap at the bank toe has sloughed exposing the underlaying soils. Weakening of the toe could lead to future bank instability.
08/05/2010: Recommended for annual assessment and monitoring during flood events, per CLRO.
09/29/2009: No major change observed since last visit; sloughing of the rip rap above toe; erosion begins immedately downstream of existing rip rap revetment; roughly 15-foot berm remains; however, it will countinue to erode and eventually intrude into the levee profile if left untreated.
10/20/2006: Just upstream of where berm starts to widen.

View form levee slope. The dense vegetation on the site block the viwiew of the erosion

Front view of the erosion.

Direct view of the erosion.

A closer look at the site

| | |
|---|---|
| LMA: | **RD2101 U01 Blewett** |
| Waterway: | **LB San Joaquin River** |
| Site ID: | **RD2101U01RM73.92** |
| Status: | **Existing Site** |

| Latitude: | Longitude: | River Mile: | Levee Mile: | Overall Rating: |
|---|---|---|---|---|
| **37.650259** | **-121.228961** | **73.92** | **1.95** | **U** |

## I. Site Feature *WS - Waterside

| | |
|---|---|
| Length (ft): | **500** |
| Scarp Height (ft): | **17** |
| Location of Erosion: | **Toe & Beyond** |
| WS Berm Width (ft): | **0** |
| WS Vegetation: | **Ground surrounding site fully covere** |
| WS Burrow Hole Activity: | **No signs of activity** |
| WS Levee Slope (H:V): | **2:1** |
| WS Soil Type: | **Sand (SP, SM and mixtures)** |
| Site Relative to Bend: | **Immediately Downstream of Bend** |
| Radius of Curvature(Rc/W): | **7.90** |

## II. Criteria

| | Score: | Weighted Score: | |
|---|---|---|---|
| Length (ft): | **5** | x2 | **10** |
| Scarp Height (ft): | **5** | x3 | **15** |
| Location of Erosion: | **5** | x1 | **5** |
| WS Berm Width (ft): | **5** | x1 | **5** |
| WS Vegetation: | **0** | x2 | **0** |
| WS Burrow Hole Activity: | **0** | x1 | **0** |
| WS Levee Slope (H:V): | **2** | x3 | **6** |
| WS Soil Type: | **4** | x4 | **16** |
| Site Relative to Bend: | **2** | x1 | **2** |
| Radius of Curvature(Rc/W): | **0** | x1 | **0** |

Total Score (out of 91): 59

Normalized Score (out of 100%): **65**

## III. Misc

| | |
|---|---|
| Crown Width (ft): | **16** |
| Crown Type: | **Earthen** |
| Tree Hazard: | **Trees on site** |
| Bank Protection Type: | **None** |
| Bank Protection Location: | **None** |
| Survey Date: | **7/18/2012** |
| Comments: | |

07/18/2012: Erosion has further developed toward levee crown. Vegetation has been removed.
08/18/2011: Erosion progressed significantly during the past flood season. The levee toe along the erosion site was washed away, and the erosion has cut the levee structure up to the point about 1/3 of the levee slope. The scarp height is approximatly 17 feet. Very dense vegetation on the site. Trees visible.
10/19/2010: No significant changes observed on site. Remaining levee berm topsoil is of silty sand mixture. Erosion is near the downstream transition. An eddy has formed, and has scoured away a 100-foot section of the bank, possibly encroaching into the levee prism. Vegetation on site includes willows, oak, and cotton wood located from the bench to the toe. On the landside are rows of corn crop.
08/05/2010: Recommended for Repair, per CLRO.
2009: Site recommended as annual assessment and monitoring if critical erosion site, per CLRO CES Evaluation 2008 Report; an eddy has formed, eroding bank and intruding into the levee prism; Site # is the same as RM76.3,LM1.89; previously rated "U".
08/30/2007: Recommended for short list of immediate repair sites; silty sand levee material.

Looking downstream from levee top. The tree at the water edge is the visible starting point of the erosion.

A close look at the erosion.

Looking downstream at the scour site. It seems the erosion has further developed upward to the levee top since the last survey

Looking downstream at the scour site. The fresh scoring is visible.