

**Flood Control Project Maintenance
Levee Inspections**

Fall 2012 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including DWR Erosion Survey

San Joaquin River Basin

| RD2091 | Overall LMA Rating | Total LMA Miles | | | | | | |
|--|------------------------|------------------|--------------|-------------|-------------|---------|------------------------------|---------|
| Reclamation District No. 2091 Chase | A | 7.92 | | | | | | |
| Rated Item | Maintenance Deficiency | | | | Enforcement | | Design & System Obsolescence | |
| | M Miles | U Miles | M + 4U Miles | Threshold % | M Miles | U Miles | M Miles | U Miles |
| <i>Earthen Levee</i> | | | | | | | | |
| Vegetation | 0.04 | | 0.04 | 0.51% | | | | |
| Trim / Thin Trees | 0.04 | | 0.04 | 0.51% | | | | |
| Encroachments | | | | | | | 0.05 | |
| Animal Control | 0.08 | | 0.08 | 1.01% | | | | |
| <i>LMA Totals:</i> | 0.16 | 0.00 | 0.16 | 2.02% | 0.00 | 0.00 | 0.05 | 0.00 |
| Unit No. 01 San Joaquin River RB | Overall Unit Rating | Total Unit Miles | | | | | | |
| RD2091 | A | 7.59 | | | | | | |
| Rated Item | Maintenance Deficiency | | | | Enforcement | | Design & System Obsolescence | |
| | M Miles | U Miles | M + 4U Miles | Threshold % | M Miles | U Miles | M Miles | U Miles |
| <i>Earthen Levee</i> | | | | | | | | |
| Encroachments | | | | | | | 0.05 | |
| Animal Control | 0.08 | | 0.08 | 1.05% | | | | |
| <i>Unit Totals:</i> | 0.08 | 0.00 | 0.08 | 1.05% | 0.00 | 0.00 | 0.05 | 0.00 |
| Unit No. 02 San Joaquin River NA | Overall Unit Rating | Total Unit Miles | | | | | | |
| RD2091 | U | 0.33 | | | | | | |
| Rated Item | Maintenance Deficiency | | | | Enforcement | | Design & System Obsolescence | |
| | M Miles | U Miles | M + 4U Miles | Threshold % | M Miles | U Miles | M Miles | U Miles |
| <i>Earthen Levee</i> | | | | | | | | |
| Vegetation | 0.04 | | 0.04 | 12.12% | | | | |
| Trim / Thin Trees | 0.04 | | 0.04 | 12.12% | | | | |
| <i>Unit Totals:</i> | 0.08 | 0.00 | 0.08 | 24.24% | 0.00 | 0.00 | 0.00 | 0.00 |

**Flood Control Project Maintenance
Levee Inspections****LMA District Cover Sheet
Fall 2012 Levee Inspection Results****Reclamation District No. 2091 Chase**

| | Spring (March - May) | Summer ** (June - August) | Fall (September - November) | Winter ** (December - February) |
|----------------------------------|-------------------------|------------------------------|--------------------------------|------------------------------------|
| * Overall LMA Rating (Fall Only) | | | A | |

** Non-receipt of Summer or Winter Inspection Reports may effect overall annual rating.

*
SPRING INSPECTIONS: Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports.

Comments

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**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2012 Levee Inspection Results

Reclamation District No. 2091 Chase

| Waterway | | | Bank | Unit Miles |
|--|-------------------------|---------------------------|--------------------------------|---------------------------------|
| Unit No. 01 San Joaquin River | | | Right | 7.59 |
| | Spring (March - May) | Summer (June - August) | (September - November) Fall | Winter (December - February) |
| Unit Maintenance Rating (Fall Only) | | | A | |
| Date of Inspection | 04/17/2012 - 04/17/2012 | | 11/13/2012 - 11/13/2012 | |
| DWR Inspector | Richard Willoughby | | Richard Willoughby | |
| Accompanied By | Mike Alves RD 2091 | | Mike Alves RD 2091 | |

Summer & Winter Inspections

The Local Maintaining Agency (LMA) is responsible for summer and winter inspections. The LMA is required to submit a report regarding summer and winter inspections to the California Department of Water Resources (DWR).

DWR must be informed on the:

- a) completion of the inspection
- b) any changes other than the results of normal maintenance
- c) corrections to deficiencies noted in this report

If additional items are noted, further documentation of those items must also be submitted.

The LMA should submit this information to DWR using the LMA web application tool available at:

<http://cdec.water.ca.gov/lma.html>

If the LMA is unable to submit information on this webpage, please contact DWR for assistance.

The LMA should submit the information and any associated documentation by September 30 for summer inspections and March 31 for winter inspections.

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 2091 Chase

| Waterway | | | | | Bank | Unit Miles | Inspection Start/End | | Inspector |
|-------------------------------|--|--|--|--|-------|------------|--------------------------|--|--------------------|
| Unit No. 01 San Joaquin River | | | | | Right | 7.59 | 11/13/2012 11/13/2012 | | Richard Willoughby |

| LMR No. | Levee Mile | | Category | Item | Location | Rating | Action/Comment | GPS Latitude/Longitude | | Issue No. |
|---------------------------------|------------|------|---------------|----------------------------------|----------|-----------|---|------------------------------|------------------------------|-----------|
| | Start | End | | | | | | Start | End | Photo |
| 1 | | | Earthen Levee | Operations & Maintenance Manuals | LS | A Ma | | ° | ° | 2 |
| DWR ID: DWR_RD2091_01_s_2012_2 | | | | | | | | | | |
| 2 | | | Earthen Levee | Emergency Supplies & Equipment | LS | A Ma | | ° | ° | 4 |
| DWR ID: DWR_RD2091_01_s_2012_4 | | | | | | | | | | |
| 3 | | | Earthen Levee | Flood Preparedness & Training | LS | A Ma | | ° | ° | 5 |
| DWR ID: DWR_RD2091_01_s_2012_5 | | | | | | | | | | |
| 4 | 0.00 | 7.59 | Earthen Levee | Vegetation | LS | A Ma | V7 : Trees / Woody Vegetation | ° | ° | 7 |
| DWR ID: DWR_RD2091_01_f_2012_7 | | | | | | | | | | |
| 5 | 2.23 | 2.30 | Earthen Levee | Animal Control | LS | M Ma | A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows. | ° | ° | 54 |
| DWR ID: DWR_RD2091_01_s_2012_54 | | | | | | | | | | |
| 6 | 4.20 | 4.20 | Earthen Levee | Animal Control | LS | M Ma | A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows. | 37.503555 ° -121.081932 ° | 37.503555 ° -121.081932 ° | 1 |
| DWR ID: DWR_RD2091_01_s_2012_1 | | | | | | | | | | |
| 7 | 4.46 | 4.51 | Earthen Levee | Encroachments | LS | M Ob | DT : Ditch | 37.500087 ° -121.081347 ° | 37.499579 ° -121.080847 ° | 6 Y |
| DWR ID: DWR_RD2091_01_f_2012_6 | | | | | | | | | | |
| 8 | 7.55 | 7.55 | Earthen Levee | Slope Stability | LS | A/W Ma | S1 : Repair slope instability. Inspector Comments: Slide appears to be 100' + feet long on landside slope. Cracks are approx. 4-9" wide and 12-18" deep. Slide extends from the middle of the landside slope to landside toe. District indicated that the landowner repaired erosion/slip with no supervisor from LMA or State. No compaction results was provided. Site does appear to be stable at time of inspection, but should be monitored by LMA. | 37.479203 ° -121.044695 ° | 37.479203 ° -121.044695 ° | 3 Y |
| DWR ID: DWR_RD2091_01_s_2012_3 | | | | | | | | | | |

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable
N : Not Inspected/Rated
C : Corrected
A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiency
Ob : Design & System Obsolescence
En : Enforcement

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 2091 Chase

| Waterway | Bank | Unit Miles | Inspection Start/End | Inspector |
|-------------------------------|-------|------------|--------------------------|--------------------|
| Unit No. 01 San Joaquin River | Right | 7.59 | 11/13/2012 11/13/2012 | Richard Willoughby |

| | |
|------------------------|---------------|
| Levee Mile Report Line | 4 |
| Start Levee Mile | 0.00 |
| End Levee Mile | 7.59 |
| Location | Land Side |
| Category | Earthen Levee |
| Item | Vegetation |

Looking south at typical view of levee slopes.

richard_f_20121115_912.JPG



| | |
|------------------------|---------------|
| Levee Mile Report Line | 7 |
| Start Levee Mile | 4.46 |
| End Levee Mile | 4.51 |
| Location | Land Side |
| Category | Earthen Levee |
| Item | Encroachments |

Looking northeast at irrigation ditch on landside toe.

richard_f_20121115_913.JPG



| | |
|------------------------|---------------|
| Levee Mile Report Line | 7 |
| Start Levee Mile | 4.46 |
| End Levee Mile | 4.51 |
| Location | Land Side |
| Category | Earthen Levee |
| Item | Encroachments |

Looking southeast at irrigation ditch on landside toe.

richard_f_20121115_914.JPG



*** Location**

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 2091 Chase

| Waterway | Bank | Unit Miles | Inspection Start/End | Inspector |
|-------------------------------|-------|------------|--------------------------|--------------------|
| Unit No. 01 San Joaquin River | Right | 7.59 | 11/13/2012 11/13/2012 | Richard Willoughby |

| | |
|--|-----------------|
| Levee Mile Report Line | 8 |
| Start Levee Mile | 7.55 |
| End Levee Mile | 7.55 |
| Location | Land Side |
| Category | Earthen Levee |
| Item | Slope Stability |
| Looking south at slide on landside slope next to irrigation ditch. | |
| richard_f_20121101_853.jpg | |



| | |
|--|-----------------|
| Levee Mile Report Line | 8 |
| Start Levee Mile | 7.55 |
| End Levee Mile | 7.55 |
| Location | Land Side |
| Category | Earthen Levee |
| Item | Slope Stability |
| Looking southwest a slide on landside slope. | |
| richard_f_20121101_854.jpg | |



| | |
|--------------------------------|-----------------|
| Levee Mile Report Line | 8 |
| Start Levee Mile | 7.55 |
| End Levee Mile | 7.55 |
| Location | Land Side |
| Category | Earthen Levee |
| Item | Slope Stability |
| Looking at south end of slide. | |
| richard_f_20121101_855.jpg | |



| | | |
|--|---|---|
| * Location LS : Land Side WS : Water Side CR : Crown | ** Rating A : Acceptable M : Minimally Acceptable U : Unacceptable N : Not Inspected/Rated C : Corrected A/W : Acceptable but Monitor & Maintain | + Issue Type Ma : Maintenance Deficiency Ob : Design & System Obsolescence En : Enforcement |
|--|---|---|

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 2091 Chase

| Waterway | Bank | Unit Miles | Inspection Start/End | Inspector |
|-------------------------------|-------|------------|--------------------------|--------------------|
| Unit No. 01 San Joaquin River | Right | 7.59 | 11/13/2012 11/13/2012 | Richard Willoughby |

| | |
|------------------------|-----------------|
| Levee Mile Report Line | 8 |
| Start Levee Mile | 7.55 |
| End Levee Mile | 7.55 |
| Location | Land Side |
| Category | Earthen Levee |
| Item | Slope Stability |

Looking at north end of slide next to irrigation ditch.

richard_f_20121101_856.jpg



| | |
|------------------------|-----------------|
| Levee Mile Report Line | 8 |
| Start Levee Mile | 7.55 |
| End Levee Mile | 7.55 |
| Location | Land Side |
| Category | Earthen Levee |
| Item | Slope Stability |

Looking south at irrigation ditch at landside toe.

richard_f_20121101_857.jpg



| | |
|------------------------|-----------------|
| Levee Mile Report Line | 8 |
| Start Levee Mile | 7.55 |
| End Levee Mile | 7.55 |
| Location | Land Side |
| Category | Earthen Levee |
| Item | Slope Stability |

Looking south at repaired erosion/slip on landside slope.

richard_f_20121101_858.jpg



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Reclamation District No. 2091 Chase

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|-------------------------------|-------|------------|--------------------------|--------------------|
| Unit No. 01 San Joaquin River | Right | 7.59 | 11/13/2012 11/13/2012 | Richard Willoughby |

| | |
|------------------------|-----------------|
| Levee Mile Report Line | 8 |
| Start Levee Mile | 7.55 |
| End Levee Mile | 7.55 |
| Location | Land Side |
| Category | Earthen Levee |
| Item | Slope Stability |

Looking southeast at repaired erosion/slip on landside slope next to irrigation canal.

richard_f_20121101_859.jpg



| | |
|------------------------|-----------------|
| Levee Mile Report Line | 8 |
| Start Levee Mile | 7.55 |
| End Levee Mile | 7.55 |
| Location | Land Side |
| Category | Earthen Levee |
| Item | Slope Stability |

Looking north at repaired erosion/slip on landside slope next to irrigation canal.

richard_f_20121101_860.jpg



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Unit Cover Sheet

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|--|-------------------------|---------------------------|--------------------------------|---------------------------------|
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| | Spring (March - May) | Summer (June - August) | (September - November) Fall | Winter (December - February) |
| Unit Maintenance Rating (Fall Only) | | | U | |
| Date of Inspection | 04/17/2012 - 04/17/2012 | | 11/13/2012 - 11/13/2012 | |
| DWR Inspector | Richard Willoughby | | Richard Willoughby | |
| Accompanied By | | | | |

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Reclamation District No. 2091 Chase

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|-------------------------------|--|--|--|--|--|------|------------|--------------------------|--------------------|--|
| Unit No. 02 San Joaquin River | | | | | | | 0.33 | 11/13/2012 11/13/2012 | Richard Willoughby | |

| LMR No. | Levee Mile | | Category | Item | Location * | Rating ** | Action/Comment | GPS Latitude/Longitude | | Issue No. Photo |
|---------------------------------|------------|------|---------------|-------------------|---------------|--------------|--|------------------------------|------------------------------|--------------------|
| | Start | End | | | | | | Start | End | |
| 1 | 0.03 | 0.03 | Earthen Levee | Trim / Thin Trees | WS | M Ma | T2 : Thin trees to allow visibility of the ground and room to flood fight. | 37.482523 ° -121.051103 ° | 37.482523 ° -121.051103 ° | 1 Y |
| DWR ID: DWR_RD2091_02_s_ 2012_1 | | | | | | | | | | |
| 2 | 0.06 | 0.10 | Earthen Levee | Vegetation | LS | M Ma | V2 : Remove the wild growth other than native grasses from the levee slopes. | 37.482815 ° -121.050849 ° | 37.483306 ° -121.050302 ° | 2 Y |
| DWR ID: DWR_RD2091_02_f_ 2012_2 | | | | | | | | | | |
| 3 | 0.18 | 0.18 | Earthen Levee | Trim / Thin Trees | WS | M Ma | T1 : Trim trees to at least five feet above ground level. | 37.484342 ° -121.049848 ° | 37.484342 ° -121.049848 ° | 3 |
| DWR ID: DWR_RD2091_02_f_ 2012_3 | | | | | | | | | | |
| 4 | 0.27 | 0.27 | Earthen Levee | Trim / Thin Trees | WS | M Ma | T1 : Trim trees to at least five feet above ground level. | 37.485370 ° -121.050099 ° | 37.485370 ° -121.050099 ° | 5 |
| DWR ID: DWR_RD2091_02_f_ 2012_5 | | | | | | | | | | |
| 5 | 0.29 | 0.29 | Earthen Levee | Trim / Thin Trees | LS | M Ma | T1 : Trim trees to at least five feet above ground level. | 37.485447 ° -121.049750 ° | 37.485447 ° -121.049750 ° | 4 |
| DWR ID: DWR_RD2091_02_f_ 2012_4 | | | | | | | | | | |

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+ Issue Type

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 2091 Chase

| Waterway | Bank | Unit Miles | Inspection Start/End | Inspector |
|-------------------------------|------|------------|--------------------------|--------------------|
| Unit No. 02 San Joaquin River | | 0.33 | 11/13/2012 11/13/2012 | Richard Willoughby |

| | |
|------------------------|-------------------|
| Levee Mile Report Line | 1 |
| Start Levee Mile | 0.03 |
| End Levee Mile | 0.03 |
| Location | Water Side |
| Category | Earthen Levee |
| Item | Trim / Thin Trees |

Looking west at tree on waterside toe and berm.

richard_f_20121101_861.jpg



| | |
|------------------------|-------------------|
| Levee Mile Report Line | 1 |
| Start Levee Mile | 0.03 |
| End Levee Mile | 0.03 |
| Location | Water Side |
| Category | Earthen Levee |
| Item | Trim / Thin Trees |

Looking west at untrimmed tree on waterside slope.

richard_f_20121101_862.jpg



| | |
|------------------------|---------------|
| Levee Mile Report Line | 2 |
| Start Levee Mile | 0.06 |
| End Levee Mile | 0.10 |
| Location | Land Side |
| Category | Earthen Levee |
| Item | Vegetation |

Looking east at typical view of tumble weeds on levee slopes.

richard_f_20121115_915.JPG



*** Location**

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