

**Flood Control Project Maintenance
Levee Inspections**

Fall 2012 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including USACE Erosion Survey

Sacramento River Basin

RD0827	Overall LMA Rating	Total LMA Miles						
Reclamation District No. 0827 Elkhorn	A	4.19						
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	0.02		0.02	0.48%	0.52			
Animal Control	0.03		0.03	0.72%				
Slope Stability	0.01		0.01	0.24%				
Erosion / Bank Caving	0.02		0.02	0.48%				
Cracking	0.01		0.01	0.24%				
<i>LMA Totals:</i>	0.09	0.00	0.09	2.15%	0.52	0.00	0.00	0.00

Unit No. 01 Sacramento River RB	Overall Unit Rating	Total Unit Miles						
RD0827	A	1.35						
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	0.02		0.02	1.48%				
Animal Control	0.01		0.01	0.74%				
Erosion / Bank Caving	0.01		0.01	0.74%				
<i>Unit Totals:</i>	0.04	0.00	0.04	2.96%	0.00	0.00	0.00	0.00

Unit No. 02 Yolo Bypass LB	Overall Unit Rating	Total Unit Miles						
RD0827	A	2.84						
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					0.52			
Animal Control	0.02		0.02	0.70%				
Slope Stability	0.01		0.01	0.35%				
Erosion / Bank Caving	0.01		0.01	0.35%				
Cracking	0.01		0.01	0.35%				
<i>Unit Totals:</i>	0.05	0.00	0.05	1.76%	0.52	0.00	0.00	0.00

**Flood Control Project Maintenance
Levee Inspections**
LMA District Cover Sheet
Fall 2012 Levee Inspection Results

Reclamation District No. 0827 Elkhorn

	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

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2012 Levee Inspection Results

Reclamation District No. 0827 Elkhorn

Waterway			Bank	Unit Miles
Unit No. 01 Sacramento River			Right	1.35
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	04/20/2012 - 04/20/2012		10/18/2012 - 10/18/2012	
DWR Inspector	John Williamson		John Williamson	
Accompanied By	Dan Ramos Ramco, RD 827		Dan Ramos Ramco, RD 827	

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. 0827 Elkhorn

Waterway					Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River					Right	1.35	10/18/2012 10/18/2012	John Williamson

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	WS A Ma		°	°	25
DWR ID: DWR_RD0827_01_s_2012_25									
2			Earthen Levee	Emergency Supplies & Equipment	WS A Ma	Inspector Comments: Supplies are stored at the Elkhorn Firehouse.	°	°	26
DWR ID: DWR_RD0827_01_s_2012_26									
3			Earthen Levee	Flood Preparedness & Training	WS A Ma		°	°	27
DWR ID: DWR_RD0827_01_s_2012_27									
4	0.27	0.27	Earthen Levee	Animal Control	LS M Ma	A1 : Exterminate rodents and backfill and compact or grout burrows.	38.672294 ° -121.627237 °	38.672294 ° -121.627237 °	4 Y
DWR ID: DWR_RD0827_01_f_2012_4									
5	0.27	0.27	Earthen Levee	Erosion / Bank Caving	WS M Ma	E2 : Schedule repair of erosion site prior to the next inspection.	38.672436 ° -121.626851 °	38.672436 ° -121.626851 °	3 Y
DWR ID: DWR_RD0827_01_s_2012_3									
6	0.31	0.37	Earthen Levee	Trim / Thin Trees	WSA/W Ma	T2 : Thin trees to allow visibility of the ground and room to flood fight.	38.671959 ° -121.626305 °	38.671376 ° -121.625608 °	2 Y
DWR ID: DWR_RD0827_01_s_2012_2									
7	0.54	0.54	Earthen Levee	Trim / Thin Trees	LS N Ma	T5 : Tree stumps.	38.669445 ° -121.623574 °	38.669445 ° -121.623574 °	13 Y
DWR ID: DWR_RD0827_01_s_2012_13									
8	0.60	0.60	Earthen Levee	Encroachments	LS M Ma	PR : Prunings	38.668820 ° -121.622829 °	38.668820 ° -121.622829 °	8 Y
DWR ID: DWR_RD0827_01_s_2012_8									
9	0.61	0.92	Earthen Levee	Vegetation	WSA/W Ob	V8 : Environmental Requirements.	38.668873 ° -121.622513 °	38.665750 ° -121.618523 °	22 Y
DWR ID: DWR_RD0827_01_s_2012_22									
10	0.83	0.83	Earthen Levee	Encroachments	LS M Ma	PR : Prunings	38.666475 ° -121.619835 °	38.666475 ° -121.619835 °	6 Y
DWR ID: DWR_RD0827_01_s_2012_6									
11	0.92	1.33	Earthen Levee	Vegetation	WSA/W Ma	V7 : Trees / Woody Vegetation	38.665777 ° -121.618523 °	38.661267 ° -121.613803 °	23 Y
DWR ID: DWR_RD0827_01_s_2012_23									
12	0.93	0.93	Earthen Levee	Erosion / Bank Caving	WS C Ma	E2 : Schedule repair of erosion site prior to the next inspection.	38.665663 ° -121.618408 °	38.665663 ° -121.618408 °	24
DWR ID: DWR_RD0827_01_s_2012_24									
13	1.13	1.13	Earthen Levee	Erosion / Bank Caving	WS C Ma	E2 : Schedule repair of erosion site prior to the next inspection.	38.663553 ° -121.616044 °	38.663553 ° -121.616044 °	5
DWR ID: DWR_RD0827_01_s_2012_5									

* 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
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 0827 Elkhorn

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Right	1.35	10/18/2012 10/18/2012	John Williamson

Levee Mile Report Line	4
Start Levee Mile	0.27
End Levee Mile	0.27
Location	Land Side
Category	Earthen Levee
Item	Animal Control

A large rodent hole on the levee slope. Photo fall 2012.

johngw_f_20121022_807.jpg



Levee Mile Report Line	5
Start Levee Mile	0.27
End Levee Mile	0.27
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

There is erosion on the waterside shoulder. Fall 2011

johngw_f_20120911_406.jpg



Levee Mile Report Line	5
Start Levee Mile	0.27
End Levee Mile	0.27
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

A current view of the erosion caused by surface run off. Photo taken spring 2012.

johngw_f_20120911_407.jpg



*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

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A/W : Acceptable but Monitor & Maintain

+ Issue Type

Ma : Maintenance Deficiency
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 0827 Elkhorn

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Right	1.35	10/18/2012 10/18/2012	John Williamson

Levee Mile Report Line	6
Start Levee Mile	0.31
End Levee Mile	0.37
Location	Water Side
Category	Earthen Levee
Item	Trim / Thin Trees

Thick vegetation on the waterside. Fall 2011

johngw_f_20120911_405.jpg



Levee Mile Report Line	7
Start Levee Mile	0.54
End Levee Mile	0.54
Location	Land Side
Category	Earthen Levee
Item	Trim / Thin Trees

A tree stump on the levee slope. Photo fall 2012.

johngw_f_20121022_806.jpg



Levee Mile Report Line	8
Start Levee Mile	0.60
End Levee Mile	0.60
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Prunings along the toe of the levee. Fall 2011

johngw_f_20120911_412.jpg



*** Location**

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CR : Crown

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 0827 Elkhorn

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Right	1.35	10/18/2012 10/18/2012	John Williamson

Levee Mile Report Line	9
Start Levee Mile	0.61
End Levee Mile	0.92
Location	Water Side
Category	Earthen Levee
Item	Vegetation
Revegetaion site with fencing, irrigation and stakes to hold netting. Photo taken spring 2012.	
johngw_f_20120911_413.jpg	



Levee Mile Report Line	9
Start Levee Mile	0.61
End Levee Mile	0.92
Location	Water Side
Category	Earthen Levee
Item	Vegetation
Revegetation site spring 2012.	
johngw_f_20120911_414.jpg	



Levee Mile Report Line	9
Start Levee Mile	0.61
End Levee Mile	0.92
Location	Water Side
Category	Earthen Levee
Item	Vegetation
This view shows some of the larger trees in the site. Photo taken spring 2012.	
johngw_f_20120911_415.jpg	



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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 0827 Elkhorn

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Right	1.35	10/18/2012 10/18/2012	John Williamson

Levee Mile Report Line	10
Start Levee Mile	0.83
End Levee Mile	0.83
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Piles of prunings along the roadside at the toe.
Fall 2011

johngw_f_20120911_411.jpg



Levee Mile Report Line	11
Start Levee Mile	0.92
End Levee Mile	1.33
Location	Water Side
Category	Earthen Levee
Item	Vegetation

Trees on the very wide waterside berm. Photo
taken spring 2012.

johngw_f_20120911_416.jpg



*** Location**

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A/W : Acceptable but Monitor & Maintain

+ Issue Type

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**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2012 Levee Inspection Results

Reclamation District No. 0827 Elkhorn

Waterway			Bank	Unit Miles
Unit No. 02 Yolo Bypass			Left	2.84
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	05/18/2012 - 05/18/2012		10/17/2012 - 10/17/2012	
DWR Inspector	John Williamson		John Williamson	
Accompanied By	Dan Ramos Ramco		Dan Ramos Ramco	

Summer & Winter Inspections

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Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 0827 Elkhorn

Waterway				Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Yolo Bypass				Left	2.84	10/17/2012 10/17/2012	John Williamson

LMR No.	Levee Mile		Category	Item	Location *	Rating **	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
1	0.01	0.53	Earthen Levee	Encroachments	LS	M En	DT : Ditch	38.676440 ° -121.642747 °	38.669401 ° -121.641417 °	2 Y
DWR ID: DWR_RD0827_02_f_2012_2										
2	0.11	0.11	Earthen Levee	Trim / Thin Trees	CR	N Ma	T5 : Tree stumps.	38.675236 ° -121.642985 °	38.675236 ° -121.642985 °	4 Y
DWR ID: DWR_RD0827_02_s_2012_4										
3	0.80	2.41	Earthen Levee	Crown Surface / Depressions / Rutting	CR	A Ma	C3 : Add appropriate gravel or road base. Grade and compact.	38.665917 ° -121.639188 °	38.646564 ° -121.623705 °	6 Y
DWR ID: DWR_RD0827_02_s_2012_6										
4	1.98	1.98	Earthen Levee	Animal Control	LS	M Ma	A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.	38.652099 ° -121.627137 °	38.652099 ° -121.627137 °	1 Y
DWR ID: DWR_RD0827_02_f_2012_1										
5	2.08	2.08	Earthen Levee	Animal Control	LS	M Ma	A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.	38.650867 ° -121.626385 °	38.650867 ° -121.626385 °	5 Y
DWR ID: DWR_RD0827_02_f_2012_5										
6	2.16	2.16	Earthen Levee	Cracking	LS	M Ma	CR1 : Monitor and have inspected by geotechnical engineer.	38.649765 ° -121.625699 °	38.649765 ° -121.625699 °	7 Y
DWR ID: DWR_RD0827_02_f_2012_7										
7	2.31	2.31	Earthen Levee	Slope Stability	LS	M Ma	S1 : Repair slope instability. Inspector Comments: There is cracking along the levee slope not greater than 200 feet. Need to monitor.	38.647703 ° -121.624450 °	38.647703 ° -121.624450 °	24 Y
DWR ID: DWR_RD0827_02_s_2012_24										
8	2.76	2.76	Earthen Levee	Erosion / Bank Caving	CR	M Ma	Inspector Comments: Hole in crown at pipe crossing maybe leak in pipe.	38.641904 ° -121.620859 °	38.641904 ° -121.620859 °	8 Y
DWR ID: DWR_RD0827_02_f_2012_8										

*** Location**

LS : Land Side
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CR : Crown

**** Rating**

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U : Unacceptable
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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. 0827 Elkhorn

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Yolo Bypass	Left	2.84	10/17/2012 10/17/2012	John Williamson

Levee Mile Report Line	1
Start Levee Mile	0.01
End Levee Mile	0.53
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Ditch runs along the landside toe. Photo fall 2012.

johngw_f_20121022_793.jpg



Levee Mile Report Line	2
Start Levee Mile	0.11
End Levee Mile	0.11
Location	Crown
Category	Earthen Levee
Item	Trim / Thin Trees

A tree stump on the levee shoulder. Photo fall 2012.

johngw_f_20121022_795.jpg



Levee Mile Report Line	3
Start Levee Mile	0.80
End Levee Mile	2.41
Location	Crown
Category	Earthen Levee
Item	Crown Surface / Depressions / Rutting

Crown needs grading and AB added.

johngw_f_20120911_418.jpg



*** Location**

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CR : Crown

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 0827 Elkhorn

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Yolo Bypass	Left	2.84	10/17/2012 10/17/2012	John Williamson

Levee Mile Report Line	3
Start Levee Mile	0.80
End Levee Mile	2.41
Location	Crown
Category	Earthen Levee
Item	Crown Surface / Depressions / Rutting

The crown has been graded and gravel has been added.

johngw_f_20121128_803.jpg



Levee Mile Report Line	4
Start Levee Mile	1.98
End Levee Mile	1.98
Location	Land Side
Category	Earthen Levee
Item	Animal Control

Rodent hole on the levee slope. Photo fall 2012.

johngw_f_20121022_797.jpg



Levee Mile Report Line	5
Start Levee Mile	2.08
End Levee Mile	2.08
Location	Land Side
Category	Earthen Levee
Item	Animal Control

Rodent holes on the levee slope. Photo fall 2012.

johngw_f_20121022_798.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
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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 0827 Elkhorn

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Yolo Bypass	Left	2.84	10/17/2012 10/17/2012	John Williamson

Levee Mile Report Line	6
Start Levee Mile	2.16
End Levee Mile	2.16
Location	Land Side
Category	Earthen Levee
Item	Cracking
Some deep cracking along the shoulder. Photo fall 2012.	
johngw_f_20121022_799.jpg	



Levee Mile Report Line	6
Start Levee Mile	2.16
End Levee Mile	2.16
Location	Land Side
Category	Earthen Levee
Item	Cracking
Deep cracking along the shoulder of the levee. Photo fall 2012.	
johngw_f_20121022_800.jpg	



Levee Mile Report Line	7
Start Levee Mile	2.31
End Levee Mile	2.31
Location	Land Side
Category	Earthen Levee
Item	Slope Stability
A buldge in the levee slope. Photo fall 2012.	
johngw_f_20121022_801.jpg	



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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2012

Reclamation District No. 0827 Elkhorn

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Yolo Bypass	Left	2.84	10/17/2012 10/17/2012	John Williamson

Levee Mile Report Line	8
Start Levee Mile	2.76
End Levee Mile	2.76
Location	Crown
Category	Earthen Levee
Item	Erosion / Bank Caving

A hole in the crown above the irrigation pipe may have a leak. Photo fall 2012.

johngw_f_20121022_802.jpg



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