

**Flood Control Project Maintenance
Levee Inspections**

Fall 2013 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including USACE Erosion Survey

Sacramento River Basin

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	0.24		0.24	1.91%	0.07			
Erosion / Bank Caving	0.01	0.02	0.09	0.72%				
Cracking	0.02	0.03	0.14	1.11%				
<i>Supplemental</i>								
USACE Erosion Survey	0.07		0.07	0.56%				
DWR UCIP Field Study					0.12	0.03		
<i>LMA Totals:</i>	0.34	0.05	0.54	4.30% *	0.19	0.03	0.00	0.00

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	0.24		0.24	3.73%				
Erosion / Bank Caving	0.01		0.01	0.16%				
Cracking	0.01		0.01	0.16%				
<i>Supplemental</i>								
USACE Erosion Survey	0.02		0.02	0.31%				
DWR UCIP Field Study					0.08	0.02		
<i>Unit Totals:</i>	0.28	0.00	0.28	4.36%	0.08	0.02	0.00	0.00

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					0.07			
Erosion / Bank Caving		0.02	0.08	1.30%				
Cracking	0.01	0.03	0.13	2.12%				
<i>Supplemental</i>								
USACE Erosion Survey	0.05		0.05	0.81%				
DWR UCIP Field Study					0.04	0.01		
<i>Unit Totals:</i>	0.06	0.05	0.26	4.23% *	0.11	0.01	0.00	0.00

**Flood Control Project Maintenance
Levee Inspections
LMA District Cover Sheet
Fall 2013 Levee Inspection Results**

Knights Landing Ridge Drainage District

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

** 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. This rating is not intended to be an indication of risk.

Comments

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2013 Levee Inspection Results

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles
Unit No. 01 Knights Landing Ridge Cut	Right	6.43

	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	-		09/24/2013 - 09/24/2013	
DWR Inspector	John Williamson		John Williamson	
Accompanied By	Chad Navarrot RD 108		Chad Navarrot RD 108	

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 2013

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.43	09/24/2013 09/24/2013	John Williamson

LMR No.	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
1			Earthen Levee	Operations & Maintenance Manuals	WS	A Ma		°	°	3
								DWR ID: DWR_NA0008_01_s_2013_3		
2			Earthen Levee	Emergency Supplies & Equipment	WS	A Ma		°	°	8
								DWR ID: DWR_NA0008_01_s_2013_8		
3			Earthen Levee	Flood Preparedness & Training	WS	A Ma		°	°	9
								DWR ID: DWR_NA0008_01_s_2013_9		
4	0.25	6.41	Earthen Levee	Vegetation	LS	A Ma	V1 : Control annual grass and weeds on the levee slopes and easements.	38.722220 ° -121.666360 °	38.792405 ° -121.726518 °	17 Y
								DWR ID: DWR_NA0008_01_f_2013_17		
5	0.25	6.41	Earthen Levee	Vegetation	WS	A Ma	V1 : Control annual grass and weeds on the levee slopes and easements.	38.722220 ° -121.666360 °	38.792412 ° -121.726533 °	18 Y
								DWR ID: DWR_NA0008_01_f_2013_18		
6	0.25	0.25	Supplemental	DWR UCIP Field Study	WS	U En	Inspector Comments: FS_ID:11063 EP_NO: 9302 Repair Type: Urgent Crossing Status: Found UCIP Comments: Pipe completely rusted through on LS slope of levee at toe/headwall of concrete distribution box. Pipe needs replacement or proper abandonment. Pipe not visible at outlet. FIELD_STRUCT_DESC: 36-inch pipe through the levee, 24.0 feet below the crown. Slide gate on the waterward end. 12'X6' Concrete box on the landward end (Permit No. 9302-Elliott). Originally included in O+M manual (1953). FS Date: 4/5/2013	38.722222 ° 38.722222 °	-121.666357 ° -121.666357 °	4 Y
								DWR ID: DWR_NA0008_01_f_2013_4		
7	0.25	0.25	Supplemental	DWR UCIP Field Study	WS	U En	Inspector Comments: FS_ID:13203 EP_NO: 9302 Repair Type: Urgent Crossing Status: Found UCIP Comments: Pipe completely rusted through on LS slope of levee at toe/headwall of concrete distribution box. Pipe needs replacement or proper abandonment. Pipe not visible at outlet. FIELD_STRUCT_DESC: 36-inch pipe through the levee, 24.0 feet below the crown. Slide gate on the waterward end. 12'X6' Concrete box on the landward end (Permit No. 9302-Elliott). Originally included in O+M manual (1953). FS Date: 4/5/2013	38.722222 ° 38.722222 °	-121.666357 ° -121.666357 °	5
								DWR ID: DWR_NA0008_01_f_2013_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 2013

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.43	09/24/2013 09/24/2013	John Williamson

LMIR No.	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	

8	0.88	0.88	Supplemental	DWR UCIP Field Study	WS	M En	Inspector Comments: FS_ID:11064 EP_NO: 9302 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Pipe exposed on WS slope in trench may need to be backfilled to prevent erosion under pipe. FIELD_STRUCT_DESC: 20-inch steel irrigation pipe through the levee, 8.8 feet below the crown. Pump on steel pile structure at WS toe. Siphon breaker in 12-inch steel riser on LS slope. Possible butterfly valve at LS toe. (Permit No. 9302-Elliott 1974), Originally included in O+M manual (1953). FS Date: 4/5/2013	38.727869 ° 38.727869 °	-121.674875 ° -121.674875 °	6 Y
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DWR ID: DWR_NA0008_01_f_2013_6

9	1.16	1.16	Supplemental	DWR UCIP Field Study	WS	M En	Inspector Comments: FS_ID:11065 EP_NO: 9305 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Slope on WS shoulder appears to be eroding at pipes exit from levee. 36-inch conc riser on LS is filled with mud. FIELD_STRUCT_DESC: 10-inch pipe through the levee, 5.8-feet below the crown. Pump at the waterward toe. 36-inch Concrete standpipe at the landward toe (Permit No. 9305-Bacchini). 5-inch steel-pipe sleeved through 10-inch pipe. Annular space Grouted. (Permit No. 6076-Bacchini). Originally included in O+M manual (1953). FS Date: 4/5/2013	38.730275 ° 38.730275 °	-121.678975 ° -121.678975 °	10 Y
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DWR ID: DWR_NA0008_01_f_2013_10

10	1.61	1.61	Supplemental	DWR UCIP Field Study	WS	M En	Inspector Comments: FS_ID:11066 EP_NO: 9302 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Space between 16-inch and 24-inch pipe should be grouted. There is no pump on stand at WS toe. FIELD_STRUCT_DESC: 24-inch steel pipe through the levee, 5.9-feet below the crown. 16-inch steel pipe sleeved through this pipe. No visible control valves. Pump on pile structure in stream. Siphon breaker on the landward slope. Discharges into concrete irrigation ditch off the landward toe (Permit No. 9302-Elliott). Originally included in O+M manual (1953). FS Date: 4/5/2013	38.735399 ° 38.735399 °	-121.684058 ° -121.684058 °	11 Y
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DWR ID: DWR_NA0008_01_f_2013_11

* 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 2013

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.43	09/24/2013 09/24/2013	John Williamson

LMR No.	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
11	1.61	1.61	Supplemental	DWR UCIP Field Study	WS	M En	Inspector Comments: FS_ID:13204 EP_NO: 9302 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Space between 16-inch and 24-inch pipe should be grouted. There is no pump on stand at WS toe. FIELD_STRUCT_DESC: 24-inch steel pipe through the levee, 5.9-feet below the crown. 16-inch steel pipe sleeved through this pipe. No visible control valves. Pump on pile structure in stream. Siphon breaker on the landward slope. Discharges into concrete irrigation ditch off the landward toe (Permit No. 9302-Elliott). Originally included in O+M manual (1953). FS Date: 4/5/2013	38.735399 ° 38.735399 °	-121.684058 ° -121.684058 °	12
DWR ID: DWR_NA0008_01_f_2013_12										
12	2.61	2.61	Supplemental	DWR UCIP Field Study	WS	M En	Inspector Comments: FS_ID:11067 EP_NO: 9307 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Siphon breaker on LS burried or broken off and missing. FIELD_STRUCT_DESC: 1 of 2: 14-inch pipe through the levee, 5.4-feet below crown. Pump house on pile structure at the landward toe Siphon breaker on the landward slope. Service pole and anchor at landward toe (Permit No. 9307- Lowe). Originally included in O+M manual (1953). FS Date: 4/5/2013	38.747110 ° 38.747110 °	-121.694415 ° -121.694415 °	13 Y
DWR ID: DWR_NA0008_01_f_2013_13										
13	2.61	2.61	Supplemental	DWR UCIP Field Study	WS	M En	Inspector Comments: FS_ID:11068 EP_NO: 9307 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Walkway to actuate slide gate is missing. No method of actuating slide gate. FIELD_STRUCT_DESC: 2 of 2: 4-foot x 4-foot concrete box culvert through the levee, 23 feet below the crown. Walkway to slide gate on the waterside end, concrete headwalls on both ends. Service pole and anchor at landward toe. Concrete headwalls on both ends (Permit No. 9307- Lowe). FS Date: 4/5/2013	38.747204 ° 38.747204 °	-121.694440 ° -121.694440 °	14
DWR ID: DWR_NA0008_01_f_2013_14										

* 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 2013

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.43	09/24/2013 09/24/2013	John Williamson

LMIR No.	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
14	2.61	2.61	Supplemental	DWR UCIP Field Study	LS	M En	Inspector Comments: FS_ID:13205 EP_NO: 9307 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Walkway to actuator slide gate is missing. No method of actuating slide gate. FIELD_STRUCT_DESC: 2 of 2: 4-foot x 4-foot concrete box culvert through the levee, 23 feet below the crown. Walkway to slide gate on the waterside end, concrete headwalls on both ends. Service pole and anchor at landward toe. Concrete headwalls on both ends (Permit No. 9307- Lowe). FS Date: 4/5/2013	38.747204 °	-121.694440 °	15
								DWR ID: DWR_NA0008_01_f_2013_15		
15	2.61	2.61	Earthen Levee	Cracking	WS	M Ma	CR1 : Monitor and have inspected by geotechnical engineer. Inspector Comments: Cracks along crown and down waterside slope.	38.747218 °	38.747218 °	19
								-121.694450 ° -121.694450 °		Y
								DWR ID: DWR_NA0008_01_f_2013_19		
16	3.36	3.36	Supplemental	USACE Erosion Survey	WS	M Ma	Inspector Comments: 2011 - Toe scour and bank slumping. 2012: Site is part of the extended inventory, last inspected 2011. [2012 Site ID: KLR_3-5_R]	38.759332 °	38.758432 °	1
								-121.696063 ° -121.695158 °		
								DWR ID:		
17	3.54	3.54	Earthen Levee	Erosion / Bank Caving	WS	M Ma	E1 : Note and monitor erosion site.	38.759910 °	38.759910 °	20
								-121.696920 ° -121.696920 °		Y
								DWR ID: DWR_NA0008_01_f_2013_20		
18	3.88	3.88	Supplemental	USACE Erosion Survey	WS	M Ma	Inspector Comments: 2011 - Toe erosion and erosion pockets from tree popouts. More tree popouts are expected due to the eroding toe. 2012: Site is part of the extended inventory, last inspected 2011. [2012 Site ID: KLR_3-9_R]	38.764905 °	38.764037 °	2
								-121.702074 ° -121.701434 °		
								DWR ID:		
19	4.95	4.95	Supplemental	DWR UCIP Field Study	WS	M En	Inspector Comments: FS_ID:11264 EP_NO: 4443 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Pipe does not have adequate cover at crown. FIELD_STRUCT_DESC: 16-inch drainage pipe through the levee 0.5-feet below the crown. Pad constructed over pipe for vehicular crossing. Pump on metal structure on the landward side, flap gate on the waterside end, Siphon breaker on the pipe on the waterside. Slide gate located on LS toe. (Permit No. 4443-RD 730). Design drawings available in permit. FS Date: 4/5/2013	38.777566 °	-121.707591 °	16
								38.777566 ° -121.707591 °		Y
								DWR ID: DWR_NA0008_01_f_2013_16		
20	6.17	6.41	Earthen Levee	Encroachments	LS	M Ma	EQ : Equipment	38.790007 °	38.792433 °	7
								-121.723308 ° -121.726463 °		Y
								DWR ID: DWR_NA0008_01_s_2012_7		

* 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 2013

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.43	09/24/2013 09/24/2013	John Williamson

Levee Mile Report Line	4
Start Levee Mile	0.25
End Levee Mile	6.41
Location	Land Side
Category	Earthen Levee
Item	Vegetation
Landside of the levee has been burned and dragged. Fall 2013	
johngw_f_20130930_931.JPG	



Levee Mile Report Line	5
Start Levee Mile	0.25
End Levee Mile	6.41
Location	Water Side
Category	Earthen Levee
Item	Vegetation
Waterside of the levee has been burned and dragged with little vegetation. Fall 2013	
johngw_f_20130930_932.JPG	



Levee Mile Report Line	6
Start Levee Mile	0.25
End Levee Mile	0.25
Location	Water Side
Category	Supplemental
Item	DWR UCIP Field Study
Slide gate on metal stand on WS toe. Pipe opening not visible.	
UCIP_6248.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 2013

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.43	09/24/2013 09/24/2013	John Williamson

Levee Mile Report Line	8
Start Levee Mile	0.88
End Levee Mile	0.88
Location	Water Side
Category	Supplemental
Item	DWR UCIP Field Study
Pump on pile at WS toe with pipe in open trench on LS slope.	
UCIP_6253.jpg	



Levee Mile Report Line	9
Start Levee Mile	1.16
End Levee Mile	1.16
Location	Water Side
Category	Supplemental
Item	DWR UCIP Field Study
36-inch Concrete standpipe at LS toe	
UCIP_6254.jpg	



Levee Mile Report Line	10
Start Levee Mile	1.61
End Levee Mile	1.61
Location	Water Side
Category	Supplemental
Item	DWR UCIP Field Study
16-inch pipe sleeved through 24-inch pipe on WS slope.	
UCIP_6257.jpg	



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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2013

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.43	09/24/2013 09/24/2013	John Williamson

Levee Mile Report Line	12
Start Levee Mile	2.61
End Levee Mile	2.61
Location	Water Side
Category	Supplemental
Item	DWR UCIP Field Study
Pump and pipe on LS toe.	
UCIP_6258.jpg	



Levee Mile Report Line	15
Start Levee Mile	2.61
End Levee Mile	2.61
Location	Water Side
Category	Earthen Levee
Item	Cracking
Cracking along the waterside shoulder of the crown the length of 20 feet. Fall 2013	
johngw_f_20130930_933.JPG	



Levee Mile Report Line	17
Start Levee Mile	3.54
End Levee Mile	3.54
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving
Deep erosion at the bottom of the waterside slope 3-4 foot cut. Fall 2013	
johngw_f_20130930_934.JPG	



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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2013

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.43	09/24/2013 09/24/2013	John Williamson

Levee Mile Report Line	17
Start Levee Mile	3.54
End Levee Mile	3.54
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

Another view of the erosion cutting into the slope. Fall 2013

johngw_f_20130930_935.JPG



Levee Mile Report Line	19
Start Levee Mile	4.95
End Levee Mile	4.95
Location	Water Side
Category	Supplemental
Item	DWR UCIP Field Study

Pump on Steel pile structure with slide gate at LS toe.

UCIP_6268.jpg



Levee Mile Report Line	20
Start Levee Mile	6.17
End Levee Mile	6.41
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Equipment and irrigation pipe lays on the landside levee slope. Fall 2013

johngw_f_20130930_936.JPG



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**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2013 Levee Inspection Results

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles
Unit No. 02 Knights Landing Ridge Cut	Left	6.14

	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			M	
Date of Inspection	-		09/24/2013 - 09/24/2013	
DWR Inspector	John Williamson		John Williamson	
Accompanied By	Chad Navarrot RD 108		Chad Navarrot RD 108	

Summer & Winter Inspections

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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.

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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2013

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.14	09/24/2013 09/24/2013	John Williamson

LMIR No.	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
1	1.00	1.00	Supplemental	DWR UCIP Field Study	WS	M En	Inspector Comments: FS_ID:11307 EP_NO: 9320 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Appears abandoned as pump is missing from platform. FIELD_STRUCT_DESC: 16-inch steel pipe through the levee 2.8-feet below the crown. Discharges into 36-inch concrete standpipe at levee toe. Pump on steel pile structure in stream with metal walkway. Two service poles on the waterward slope. (Permit No. 9320-Pollock) Originally included in O+M manual 1953. FS Date: 4/9/2013	38.733120 °	-121.679383 °	221 Y
DWR ID: DWR_NA0008_02_f_2013_221										
2	1.91	1.91	Supplemental	DWR UCIP Field Study	WS	U En	Inspector Comments: FS_ID:11306 EP_NO: 9320 Repair Type: Urgent Crossing Status: Found UCIP Comments: Pipe at flap gate rusted through at WS toe. Flap gate does not function properly. FIELD_STRUCT_DESC: 1 of 2: 12-inch pipe through the levee, 4-feet below the crown. Flap gate on waterward end at concrete headwall, siphon breaker in 2-inch CM pipe riser on the landward shoulder. Vertical pump unit on concrete foundation in irrigation ditch at the LS toe. (Permit No. 9320-Pollock) Originally included in O+M manual 1953. FS Date: 4/9/2013	38.743768 °	-121.689185 °	222 Y
DWR ID: DWR_NA0008_02_f_2013_222										
3	2.28	2.28	Supplemental	DWR UCIP Field Study	WS	M En	Inspector Comments: FS_ID:11304 EP_NO: 15517 Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: Pipe alignment should be marked at levee crossing. FIELD_STRUCT_DESC: 8-inch natural gas pipeline through the levee 50-feet below the crown. (Permit No. 15517, 1991). Design drawings available in permit. FS Date: 4/9/2013	38.748282 °	-121.692652 °	223 Y
DWR ID: DWR_NA0008_02_f_2013_223										
4	2.30	2.30	Supplemental	DWR UCIP Field Study	WS	M En	Inspector Comments: FS_ID:11303 EP_NO: 13164 Repair Type: Non-Urgent Crossing Status: Not Found UCIP Comments: Need to have pipe located and marked properly if still in use. FIELD_STRUCT_DESC: 4-inch steel natural gas collection pipe through the levee 3.2-feet below the crown. (Permit No. 13164, 1981). Design drawings available in permit. FS Date: 4/9/2013	38.748505 °	-121.692697 °	224 Y
DWR ID: DWR_NA0008_02_f_2013_224										

* 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 2013

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.14	09/24/2013 09/24/2013	John Williamson

LMIR No.	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
5	2.72	2.72	Supplemental	USACE Erosion Survey	WS	M Ma	Inspector Comments: 2006 - The whole levee toe area is slowly slumping into the channel (creep) due to dewatering and poor slope soils. Occasional piping in the levee slope evident as well. Pistol-butted trees at the levee toe indicate slow retreat. 2011 - Multiple scallops throughout the site and slumping of the toe. 2012: Site is part of the extended inventory, last inspected 2011. [2012 Site ID: KLR_3-0_L]	38.757925 ° -121.693048 °	38.754899 ° -121.692653 °	2
DWR ID:										
6	3.01	3.01	Supplemental	USACE Erosion Survey	WS	M Ma	Inspector Comments: 2006 - The whole levee toe area is slowly slumping into the channel (creep) due to dewatering and poor slope soils. Occasional piping in the levee slope evident as well. Pistol-butted trees at the levee toe indicate slow retreat. 2011 - Slumping of the levee toe. 2012: Site is part of the extended inventory, last inspected 2011. [2012 Site ID: KLR_3-1_L]	38.760053 ° -121.694686 °	38.758587 ° -121.693359 °	3
DWR ID:										
7	3.05	3.05	Earthen Levee	Erosion / Bank Caving	WS	U Ma	E1 : Note and monitor erosion site.	38.759112 ° -121.693638 °	38.759112 ° -121.693638 °	230 Y
DWR ID: DWR_NA0008_02_f_2013_230										
8	3.08	3.08	Earthen Levee	Erosion / Bank Caving	WS	U Ma	E1 : Note and monitor erosion site. Inspector Comments: Erosion is undermining large oak tree and is growing.	38.759542 ° -121.694007 °	38.759542 ° -121.694007 °	229 Y
DWR ID: DWR_NA0008_02_f_2013_229										
9	3.61	3.61	Supplemental	USACE Erosion Survey	WS	M Ma	Inspector Comments: 2011 - The toe has eroded away and there are a few scallops from bank slumping. 2012: Site is part of the extended inventory, last inspected 2011. [2012 Site ID: KLR_3-7_L]	38.767336 ° -121.701023 °	38.765522 ° -121.700608 °	4
DWR ID:										
10	4.35	4.35	Supplemental	USACE Erosion Survey	WS	M Ma	Inspector Comments: 2011 - This site is the downstream section of the old KLR 5.3L site. Levee toe is slowly retreating. Cracking on top of the levee may indicate potential mass movement. 2012: Site is part of the extended inventory, last inspected 2011. [2012 Site ID: KLR_4-7_L]	38.778115 ° -121.706195 °	38.775271 ° -121.703685 °	5
DWR ID:										
11	4.78	4.78	Earthen Levee	Cracking	LS	U Ma	CR1 : Monitor and have inspected by geotechnical engineer.	38.780080 ° -121.708137 °	38.780080 ° -121.708137 °	228 Y
DWR ID: DWR_NA0008_02_f_2013_228										
12	4.86	4.88	Earthen Levee	Cracking	LS	U Ma	CR1 : Monitor and have inspected by geotechnical engineer.	38.780858 ° -121.709093 °	38.781102 ° -121.709385 °	226 Y
DWR ID: DWR_NA0008_02_f_2013_226										
13	4.86	4.86	Earthen Levee	Cracking	WS	M Ma	CR1 : Monitor and have inspected by geotechnical engineer.	38.780858 ° -121.709095 °	38.780858 ° -121.709095 °	227 Y
DWR ID: DWR_NA0008_02_f_2013_227										

* 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 2013

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.14	09/24/2013 09/24/2013	John Williamson

LMR No.	Levee Mile		Category	Item	* Location	+ Rating	Action/Comment	GPS Latitude/Longitude		Issue No. Photo
	Start	End						Start	End	
14	5.37	5.37	Supplemental	USACE Erosion Survey	WS	M Ma	Inspector Comments: 2011 - This site is the upstream section of the old KLR 5.3L site. Levee toe is slowly retreating. Cracking on top of the levee may indicate potential mass movement. 2012: Site is part of the extended inventory, last inspected 2011. [2012 Site ID: KLR_5-8_L]	38.792395 ° -121.724091 °	38.786566 ° -121.716724 °	6
DWR ID:										
15	5.64	5.64	Supplemental	DWR UCIP Field Study	WS	M En	Inspector Comments: FS_ID:11289 EP_NO: 3671 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: Electrical panal missing parts. Siphon breaker missing from pipe on LS. Pipe heavily corroded at outlet with holes present. Appears abandoned-should be abandoned properly. FIELD_STRUCT_DESC: 20-inch steel pipe through the levee, 5.5-feet below the crown. Siphon breaker in a steel pipe riser on the landward slope. Metal cutoff wall . Service pole on the waterward slope. (Permit No. 3671-Wallace Replaced 20-inch pipe at same location in 1961) FS Date: 4/9/2013	38.788662 ° 38.788662 °	-121.718997 ° -121.718997 °	225 Y
DWR ID: DWR_NA0008_02_f_2013_225										
16	6.05	6.12	Earthen Levee	Encroachments	LS	M En	CR : Crops Inspector Comments: No access; strawberries are being grown landside levee slope and crown	38.792735 ° -121.724092 °	38.792735 ° -121.724092 °	1 Y
DWR ID: DWR_NA0008_02_s_2012_1										

* 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 2013

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.14	09/24/2013 09/24/2013	John Williamson

Levee Mile Report Line	1
Start Levee Mile	1.00
End Levee Mile	1.00
Location	Water Side
Category	Supplemental
Item	DWR UCIP Field Study
Pump platform and walkway on WS toe.	
UCIP_6279.jpg	



Levee Mile Report Line	2
Start Levee Mile	1.91
End Levee Mile	1.91
Location	Water Side
Category	Supplemental
Item	DWR UCIP Field Study
Pumphouse on concrete platform on LS toe with JP.	
UCIP_6276.jpg	



Levee Mile Report Line	4
Start Levee Mile	2.30
End Levee Mile	2.30
Location	Water Side
Category	Supplemental
Item	DWR UCIP Field Study
Sign on LS shoulder may indicate location of pipe, or it may indicate where pipe crosses approach ramp to bridge.	
UCIP_6275.jpg	



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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2013

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.14	09/24/2013 09/24/2013	John Williamson

Levee Mile Report Line	7
Start Levee Mile	3.05
End Levee Mile	3.05
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving
Erosion at the bottom of the slope. It appears that a fallen tree has caused a sink hole. Fall 2013	
johngw_f_20130930_930.JPG	



Levee Mile Report Line	8
Start Levee Mile	3.08
End Levee Mile	3.08
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving
Waterside eroision vertical cut at bottom of slope. Fall 2013	
johngw_f_20130930_928.JPG	



Levee Mile Report Line	8
Start Levee Mile	3.08
End Levee Mile	3.08
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving
Another view of the vertical cut at the bottom of the slope. Fall 2013	
johngw_f_20130930_929.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 2013

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.14	09/24/2013 09/24/2013	John Williamson

Levee Mile Report Line	12
Start Levee Mile	4.86
End Levee Mile	4.88
Location	Land Side
Category	Earthen Levee
Item	Cracking
Cracking on the landside is 3-4 inches wide and 12 inches deep. Fall 2013	
johngw_f_20130930_925.JPG	



Levee Mile Report Line	13
Start Levee Mile	4.86
End Levee Mile	4.86
Location	Water Side
Category	Earthen Levee
Item	Cracking
Cracking on levee slope 1-2 inches wide and 6 inches deep. Fall 2013	
johngw_f_20130930_926.JPG	



Levee Mile Report Line	13
Start Levee Mile	4.86
End Levee Mile	4.86
Location	Water Side
Category	Earthen Levee
Item	Cracking
Another view of the cracking on the levee slope. Fall 2013	
johngw_f_20130930_927.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 2013

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.14	09/24/2013 09/24/2013	John Williamson

Levee Mile Report Line	15
Start Levee Mile	5.64
End Levee Mile	5.64
Location	Land Side
Category	Supplemental
Item	DWR UCIP Field Study
Pump on pile structure on WS toe. UCIP_6273.jpg	



Levee Mile Report Line	16
Start Levee Mile	6.05
End Levee Mile	6.12
Location	Land Side
Category	Earthen Levee
Item	Encroachments
Strawberry patch on the levee crown has added other crops on the crown. Fall 2013 johngw_f_20130930_924.JPG	



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