

**Flood Control Project Maintenance
Levee Inspections**

Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2023

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/06/2023 10/06/2023	Zach Jojola

LM Start		Rating **	A	Issue No.	3
LM End		Issue Type +	Ma	Location *	N/A
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Operations & Maintenance Manuals			°	°
				°	°
DWR ID	DWR_NA0008_01_s_2017_3				
Comment Code					
OM : O&M Manuals					
Inspector Comment					
District has levee O&M manuals.					

No Photos

LM Start		Rating **	A	Issue No.	8
LM End		Issue Type +	Ma	Location *	N/A
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Emergency Supplies & Equipment			°	°
				°	°
DWR ID	DWR_NA0008_01_s_2013_8				
Comment Code					
ES : Emergency Supplies & Equipment					
Inspector Comment					
District maintains a stockpile of flood fight response material.					

No Photos

LM Start		Rating **	A	Issue No.	9
LM End		Issue Type +	Ma	Location *	N/A
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Flood Preparedness & Training			°	°
				°	°
DWR ID	DWR_NA0008_01_s_2020_9				
Comment Code					
FP : Flood Preparedness & Training					
Inspector Comment					
District has written response plan and regular flood fight training.					

No Photos

* Location LS : Land Side N/A : Not Applicable 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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Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/06/2023 10/06/2023	Zach Jojola

LM Start	0.25	Rating **	M	Issue No.	32	
LM End	0.25	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			38.722222°	38.722222°	
				-121.666357°	-121.666357°	
DWR ID	19360					
Comment Code						
Inspector Comment						
DS_ID:19360 FS_ID:55381 EP_NO: 9302 Repair Type: Non-Urgent EVAL Issue: 11, Maintenance Compliance Issue Crossing Status: Found UCIP Comments: 10/8/2019 Record updated from No Action Needed to Non-Urgent. Concrete distribution box on LS toe has been removed. Slide gate with its metal stand debris should be removed from the channel. Pipe has been grouted in 2015 under Permit 18987. (O.Yakimov - DWR UCIP) 12/07/2018 Need updated photos to show proper pipe abandonment. Update Part VI, 1. Pipe Section to remove part c and e. If crossing was abandoned properly crossing will need to be removed from the LMA responsibility list. (O. Magana - DWR UCIP)05/16/2016 Pipe has been grouted in place under permit 18987, 2015. (T. Hatch - DWR UCIP)04/05/2013 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. (W. Wylie - DWR UCIP) FIELD_STRUCT_DESC: *ABANDONED* 36-inch corrugated metal drainage pipe through the levee, 27 feet below the crown. Slide gate on the waterside (WS) end. 12-foot by 6-foot concrete box on the landside (LS) end. (36-inch pipe [HLM 1.62] authorized under Automatic Board Order (ABO) issued as Permit No. 9302, 1974 - Barbara Lowe Elliott; 36-inch pipe abandoned by removing ends and pumping pipe full of concrete under Permit No. 18987, 2016 - Knaggs Ranch, LLC, care of John Brennan). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 0+30). USACE As-Built Drawing No. 50-04-2185, October 1943, Sheet 1, upstream of STA 185+00, listed as 30-inch pipe]. FS Date: 10/8/2019 2:41:37 PM						

Photo 1 of 3 : UCIP_FA_2023_55381_81599.jpg



View of WS looking from crown

* Location LS : Land Side N/A : Not Applicable 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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Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/06/2023 10/06/2023	Zach Jojola

LM Start	0.25	Rating **	M	Issue No.	32 (cont)
LM End	0.25	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.722222°	38.722222°
				-121.666357°	-121.666357°
DWR ID	19360				

Photo 2 of 3 : UCIP_FA_2023_55381_81600.jpg



Concrete distribution box on LS toe

LM Start	0.25	Rating **	M	Issue No.	32 (cont)
LM End	0.25	Issue Type +	Ma	Location *	

Photo 3 of 3 : UCIP_FA_2023_55381_81601.jpg



Slide gate on metal stand on WS toe needs removal

LM Start	1.66	Rating **	A/W	Issue No.	17
LM End	1.66	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.736300°	38.736300°
				-121.684600°	-121.684600°
DWR ID	DWR_NA0008_01_f_2023_17				
Comment Code					
E1 : Note and monitor erosion site.					
Inspector Comment					
Erosion within waterside berm. Recommend monitoring.					

Photo 1 of 1 : FA_2023_NA0008_256_17_20231010_00041.jpg



View of erosion on waterside berm. Fall 2023.

* Location LS : Land Side N/A : Not Applicable 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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Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/06/2023 10/06/2023	Zach Jojola

LM Start	2.58	Rating **	M	Issue No.	36	
LM End	2.58	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			38.747110°	38.747110°	
				-121.694415°	-121.694415°	
DWR ID	19364					
Comment Code						
Inspector Comment						
DS_ID:19364 FS_ID:55698 EP_NO: 9307 Repair Type: Non-Urgent EVAL Issue: 11, Maintenance Compliance Issue Crossing Status: Found UCIP Comments: 0/08/2019 Record remains Non-Urgent, due to maintenance issue. Siphon breaker not found on LS slope: can be burried or broken off. Pipe outlet not found on WS. CVFPB is working with current owner to approve the removal and replacement of existing 14-inch pipe under draft Permit 9307-1. Work under permit 9307-1 not started. (O.Yakimov - DWR UCIP) 04/05/2013 Siphon breaker on LS burried or broken off and missing. (W.Wylie - DWR UCIP) FIELD_STRUCT_DESC: 14-inch steel drainage pipe through the levee, 5.4 feet below the crown. Pump house on a pile structure at the landside (LS) toe. Siphon breaker on the LS slope. Service pole and anchor at the LS toe. (14-inch pipe [HLM 2.62] authorized under Automatic Board Order (ABO) issued as Permit No. 9307, 1974 - Azalene E. Lowe; a 12-foot section of an existing 14-inch pipe on LS scheduled to be replaced and name change under DRAFT Permit No. 9307-1, 2016 - Ann Grube). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 123+25)]. FS Date: 10/8/2019 8:30:25 AM						

LM Start	2.58	Rating **	M	Issue No.	36 (cont)
LM End	2.58	Issue Type +	Ma	Location *	

Photo 1 of 3 : UCIP_FA_2023_55698_82444.jpg



View of LS looking from levee crown

Photo 2 of 3 : UCIP_FA_2023_55698_82445.jpg



Pumping platform on pile structure

* Location LS: Land Side N/A: Not Applicable 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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Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/06/2023 10/06/2023	Zach Jojola

LM Start	2.58	Rating **	M	Issue No.	36 (cont)
LM End	2.58	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.747110°	38.747110°
				-121.694415°	-121.694415°
DWR ID	19364				

Photo 3 of 3 : UCIP_FA_2023_55698_82446.jpg



Not found siphon breaker on LS slope

LM Start	2.58	Rating **	U	Issue No.	37
LM End	2.58	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.747204°	38.747204°
				-121.694440°	-121.694440°
DWR ID	19391				

Photo 1 of 3 : UCIP_FA_2023_77842_82487.jpg



View of LS looking from levee crown

Comment Code

Inspector Comment

DS_ID:19391
 FS_ID:77842
 EP_NO: 9307
 Repair Type: Urgent
 EVAL Issue: 1, Pipe Integrity
 Crossing Status: Found
 UCIP Comments: 12/14/2022 Record updated from Non-Urgent to Urgent. DMP internal video inspection has found pipe integrity issues. LOF of crossing is between 5 and 6. Crossing will be monitored until funding becomes available to address the issues. (O.Yakimov - DWR UCIP)
 10/8/2019 Record remains Non-Urgent. slide gate actuator is not accessible without use of equipment. Need to have CVFPB review ABO and determine current owner. (O.Yakimov - DWR UCIP) 04/05/2013 Walkway to actuator slide gate is missing. No method of actuating slide gate. (W.Wylie - DWR UCIP)
 FIELD_STRUCT_DESC: 48-inch by 48-inch reinforced concrete box drainage culvert through the levee, 23 feet below the crown. Walkway to slide gate on the waterside (WS) end. Concrete headwalls on both ends. Service pole and anchor at the landside (LS) toe. Concrete headwalls on both ends. (four foot by four foot culvert [HLM 2.62] authorized under Automatic Board Order (ABO) issued as Permit No. 9307, 1974 - Azalene E. Lowe). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 123+55.5)].
 FS Date: 10/8/2019 8:46:51 AM

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

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Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/06/2023 10/06/2023	Zach Jojola

LM Start	2.58	Rating **	U	Issue No.	37 (cont)
LM End	2.58	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.747204°	38.747204°
				-121.694440°	-121.694440°
DWR ID	19391				

Photo 2 of 3 : UCIP_FA_2023_77842_82488.jpg



View of WS looking from levee crown

LM Start	2.58	Rating **	U	Issue No.	37 (cont)
LM End	2.58	Issue Type +	Ma	Location *	

Photo 3 of 3 : UCIP_FA_2023_77842_82486.jpg



Inlet of 48 x 48 inch concrete culvert. View from LS

LM Start	2.66	Rating **	M	Issue No.	18
LM End	2.66	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Cracking			38.748258°	38.748258°
				-121.694821°	-121.694821°
DWR ID	DWR_NA0008_01_s_2023_18				
Comment Code					
CR1 : Monitor and have inspected by geotechnical engineer.					
Inspector Comment					
Appears to be a 50' linear crack at waterside toe. Monitor and have inspected by a geotech.					

Photo 1 of 1 : FA_2023_NA0008_256_18_20230907_00002.jpg



View of crack on waterside slope near the toe. Spring 2023.

* Location LS : Land Side N/A : Not Applicable 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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Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/06/2023 10/06/2023	Zach Jojola

LM Start	2.67	Rating **	M	Issue No.	38	
LM End	2.67	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			38.748391°	38.748391°	
				-121.694814°	-121.694814°	
DWR ID	19365					
Comment Code						
Inspector Comment						
DS_ID:19365 FS_ID:55711 EP_NO: 9301 Repair Type: Non-Urgent EVAL Issue: Crossing Status: Found UCIP Comments: 10/8/2019 Record updated from No Action Needed to Non-Urgent. Need to have CVFPB review ABO and determine current owner. (O.Yakimov - DWR UCIP) FIELD_STRUCT_DESC: 1 of 2: 18-inch steel drainage pipe through the levee, 6.4 feet below the crown. Siphon breaker on the waterside (WS) slope. Pump house mounted on concrete box in irrigation ditch at the landside (LS) toe. (one 18-inch and one 24-inch pipes [HLM 2.7] authorized under Automatic Board Order (ABO) issued as Permit No. 9301, 1974 - Reclamation District No. 730). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 128+00)]. FS Date: 10/8/2019 12:58:01 PM						

LM Start	2.67	Rating **	M	Issue No.	38 (cont)
LM End	2.67	Issue Type +	Ma	Location *	

Photo 1 of 3 : UCIP_FA_2023_55711_82498.jpg



View of LS looking from levee crown

Photo 2 of 3 : UCIP_FA_2023_55711_82499.jpg



View of pipe on WS slope

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

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Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/06/2023 10/06/2023	Zach Jojola

LM Start	2.67	Rating **	M	Issue No.	38 (cont)
LM End	2.67	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.748391°	38.748391°
				-121.694814°	-121.694814°
DWR ID	19365				

Photo 3 of 3 : UCIP_FA_2023_55711_82500.jpg



Concrete sump at pumping house

LM Start	2.67	Rating **	M	Issue No.	39
LM End	2.67	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.748404°	38.748404°
				-121.694818°	-121.694818°
DWR ID	19392				

Comment Code

Inspector Comment

DS_ID:19392
 FS_ID:55712
 EP_NO: 9301
 Repair Type: Non-Urgent
 EVAL Issue:
 Crossing Status: Found
 UCIP Comments: 10/8/2019 Record updated from No Action Needed to Non-Urgent. Need to have CVFPB review ABO and determine current owner. (O.Yakimov - DWR UCIP)
 FIELD_STRUCT_DESC: 2 of 2: 24-inch steel drainage pipe through the levee, 7.3 feet below the crown. Pump house mounted on concrete box in irrigation ditch at the landside (LS) toe. Siphon breaker in riser on the waterside (WS) slope. (one 24-inch and one 18-inch pipes [HLM 2.7] authorized under Automatic Board Order (ABO) issued as Permit No. 9301, 1974 - Reclamation District No. 730). [Additional Reference(s): DWR Levee Log, 1990. USACE Sacramento O&M Manual 127, June 1953, (Station 128+00)].
 FS Date: 10/8/2019 1:07:27 PM

Photo 1 of 3 : UCIP_FA_2023_55712_82512.jpg



View of levee crown at the crossing

* Location LS : Land Side N/A : Not Applicable 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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Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/06/2023 10/06/2023	Zach Jojola

LM Start	2.67	Rating **	M	Issue No.	39 (cont)
LM End	2.67	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.748404°	38.748404°
				-121.694818°	-121.694818°
DWR ID	19392				

Photo 2 of 3 : UCIP_FA_2023_55712_82514.jpg



Pumphouse and pipe on LS toe

LM Start	2.67	Rating **	M	Issue No.	39 (cont)
LM End	2.67	Issue Type +	Ma	Location *	

Photo 3 of 3 : UCIP_FA_2023_55712_82515.jpg



View of pipe on WS slope

LM Start	3.05	Rating **	M	Issue No.	27
LM End	3.05	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Trim / Thin Trees			38.753900°	38.753900°
				-121.694500°	-121.694500°
DWR ID	DWR_NA0008_01_f_2023_27				
Comment Code					
T3 : Fallen tree with root ball.					
Inspector Comment					
Fallen tree at waterside toe with root ball.					

No Photos

* Location LS : Land Side N/A : Not Applicable 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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Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/06/2023 10/06/2023	Zach Jojola

LM Start	3.09	Rating **	M	Issue No.	28
LM End	3.09	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Animal Control			38.754500°	38.754500°
				-121.694500°	-121.694500°
DWR ID	DWR_NA0008_01_f_2023_28				
Comment Code					
A3 : No rodents visible, but rodent burrows visible; need to backfill and compact or grout burrows.					
Inspector Comment					
Rodent holes on the waterside slope.					

Photo 1 of 1 : FA_2023_NA0008_256_28_20231010_00042.jpg



View of rodent holes on the waterside slope. Fall 2023.

LM Start	3.36	Rating **	M	Issue No.	19
LM End	3.44	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2018 USACE Erosion Survey			38.758432°	38.759332°
				-121.695158°	-121.696063°
DWR ID	DWR_NA0008_01_s_2022_19				
Comment Code					
Inspector Comment					
2018 Site ID: KLR 3.5 R					
Status: Eroding					
2018 Field Notes: Last observed in 2011. Access issues prevented inspection in 2017.					
Site History: 2011 - Toe scour and bank slumping.					

Photo 1 of 1 : FA_2023_NA0008_256_19_20230907_00003.jpg



View of erosion at the waterside toe. Spring 2022.

LM Start	3.37	Rating **	M	Issue No.	23
LM End	3.37	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Trim / Thin Trees			38.758477°	38.758477°
				-121.695431°	-121.695431°
DWR ID	DWR_NA0008_01_f_2022_23				
Comment Code					
T3 : Fallen tree with root ball.					
Inspector Comment					

Photo 1 of 1 : FA_2023_NA0008_256_23_20230907_00006.jpg



View of fallen tree on the waterside slope and crown. Fall 2022.

* Location LS : Land Side N/A : Not Applicable 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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Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/06/2023 10/06/2023	Zach Jojola

LM Start	3.50	Rating **	M	Issue No.	20
LM End	3.50	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.759910°	38.759910°
				-121.696920°	-121.696920°
DWR ID	DWR_NA0008_01_f_2015_20				
Comment Code					
E2 : Schedule repair of erosion site prior to the next inspection.					
Inspector Comment					

Photo 1 of 1 : FA_2023_NA0008_256_20_20230907_00004.jpg



View of erosion on the waterside slope. Fall 2022.

LM Start	3.78	Rating **	M	Issue No.	30
LM End	3.78	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.762886°	38.762886°
				-121.700406°	-121.700406°
DWR ID	DWR_NA0008_01_s_2017_30				
Comment Code					
E2 : Schedule repair of erosion site prior to the next inspection.					
Inspector Comment					
There is a hole from a fallen tree at the waterside toe.					

Photo 1 of 1 : FA_2023_NA0008_256_30_20230907_00008.jpg



View of hole at the waterside toe. Spring 2019.

LM Start	3.86	Rating **	A/W	Issue No.	31
LM End	3.86	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.763751°	38.763751°
				-121.701398°	-121.701398°
DWR ID	DWR_NA0008_01_s_2018_31				
Comment Code					
E1 : Note and monitor erosion site.					
Inspector Comment					
The erosion appears to be stable. LMA continues to monitor.					

Photo 1 of 1 : FA_2023_NA0008_256_31_20230907_00009.jpg



View of the erosion at the waterside toe. Fall 2019.

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Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/06/2023 10/06/2023	Zach Jojola

LM Start	3.88	Rating **	M	Issue No.	21
LM End	3.95	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2018 USACE Erosion Survey			38.764037°	38.764905°
				-121.701434°	-121.702074°
DWR ID	DWR_NA0008_01_s_2022_21				
Comment Code					
Inspector Comment					
2018 Site ID: KLR 3.9 R					
Status: Eroding					
2018 Field Notes: Last observed in 2011. Access issues prevented inspection in 2017.					
Site History: 2011 - Toe erosion and erosion pockets from tree popouts. More tree popouts are expected due to the eroding toe.					

No Photos

LM Start	3.92	Rating **	M	Issue No.	29
LM End	3.92	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Trim / Thin Trees			38.764500°	38.764500°
				-121.702000°	-121.702000°
DWR ID	DWR_NA0008_01_f_2023_29				
Comment Code					
T3 : Fallen tree with root ball.					
Inspector Comment					
Fallen tree with root ball at the waterside toe.					

Photo 1 of 1 : FA_2023_NA0008_256_29_20231010_00043.jpg



View of fallen tree at the waterside toe. Fall 2023.

LM Start	4.96	Rating **	M	Issue No.	16
LM End	4.96	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Cracking			38.778300°	38.778300°
				-121.708400°	-121.708400°
DWR ID	DWR_NA0008_01_f_2023_16				
Comment Code					
CR1 : Monitor and have inspected by geotechnical engineer.					
Inspector Comment					
Appears to be a large 50' desiccation crack on the waterside slope.					

Photo 1 of 1 : FA_2023_NA0008_256_16_20231010_00040.jpg



View of crack on the waterside slope. Fall 2023.

* Location LS : Land Side N/A : Not Applicable 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**

Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2023

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/06/2023 10/06/2023	Zach Jojola

LM Start	5.29	Rating **	M	Issue No.	24
LM End	5.29	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Trim / Thin Trees			38.781673°	38.781673°
				-121.712776°	-121.712776°
DWR ID	DWR_NA0008_01_s_2023_24				
Comment Code					
T3 : Fallen tree with root ball.					
Inspector Comment					
Fallen tree on the waterside slope.					

No Photos

LM Start	6.01	Rating **	C	Issue No.	25
LM End	6.01	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Trim / Thin Trees			38.789086°	38.789086°
				-121.722196°	-121.722196°
DWR ID	DWR_NA0008_01_s_2023_25				
Comment Code					
T2 : Tree or limb.					
Inspector Comment					

No Photos

* Location LS : Land Side N/A : Not Applicable 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**

Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2023

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Knights Landing Ridge Cut	Right	6.36	10/06/2023 10/06/2023	Zach Jojola

LM Start	6.32	Rating **	M	Issue No.	42
LM End	6.32	Issue Type +	Ma	Location *	
Category	Supplemental		GPS Latitude/Longitude		
			Start	End	
Item	DWR UCIP LMA Responsibility		38.792227°	38.792227°	
			-121.726287°	-121.726287°	
DWR ID	19389				
Comment Code					
Inspector Comment					
DS_ID:19389 FS_ID:55746 EP_NO: N/A Repair Type: Non-Urgent EVAL Issue: Crossing Status: Not Found UCIP Comments: 10/8/2019 Record updated from No Action Needed to Non-Urgent. Crossing not found. (O.Yakimov - DWR UCIP) FIELD_STRUCT_DESC: 48-inch corrugated metal drainage pipe partially through the levee, approximately 4 feet below the crown. [Additional Reference(s): USACE Sacramento O&M Manual 127, June 1953, (Station 323+00)]. FS Date: 10/8/2019 9:41:40 AM					

No Photos

* Location LS: Land Side N/A: Not Applicable 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**

Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2023

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/06/2023 10/06/2023	Zach Jojola

LM Start	0.86	Rating **	C	Issue No.	15
LM End	0.86	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Rills			38.731748°	38.731748°
				-121.677815°	-121.677815°
DWR ID	DWR_NA0008_02_s_2023_15				
Comment Code					
E5 : Schedule repair of rills prior to the next inspection.					
Inspector Comment					

No Photos

* Location LS : Land Side N/A : Not Applicable 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**

Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2023

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/06/2023 10/06/2023	Zach Jojola

LM Start	1.89	Rating **	M	Issue No.	34	
LM End	1.89	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			38.743768°	38.743768°	
				-121.689185°	-121.689185°	
DWR ID	25471					
Comment Code						
Inspector Comment						
DS_ID:25471 FS_ID:55758 EP_NO: N/A Repair Type: Non-Urgent EVAL Issue: Crossing Status: Found UCIP Comments: 10/08/2019 Record remains Non-Urgent. Encroachment permit is missing. No details provided from Levee Improvement Project. (O.Yakimov - DWR UCIP) 09/27/2017 Previous 12-inch pipe (see DSID 19371) was replaced with new 18-inch steel pipe as part of the Knights Landing 2015 Levee Repair Project. No integrity issues were recorded by DWR levee inspector Zachary Jojola. Inspector located the concrete headwall, flap gate, and manual operator for the 12-inch pipe. No as-builts have been received to confirm the details of the new pipe or the abandoned structures allowed to remain from the previous structure. UCIP staff will need to follow-up with LMA to obtain as-built records and authorizing permit. (DWR UCIP - O. Magana)09/01/2016 - pipe was replaced as part of the knights landing 2015 levee repair project. UCIP has requested the As-builts from the LMA and will update the record when those are received. (T. Hatch/UCIP) FIELD_STRUCT_DESC: Replacement of DSID 19371. 18-inch steel drainage pipe through the levee, at an unknown depth. Pump in a metal pump house on the landside (LS) toe in a drainage canal. Concrete headwall on the waterside (WS) toe. Flap gate on the WS at the headwall. Manhole labeled storm drain at the WS shoulder, ait vent on LS shoulder. (18-inch steel pipe installed as part of the Knights Landing 2015 Levee Repair Project, as a replacement of 12-inch pipe). FS Date: 10/8/2019 1:36:03 PM						

Photo 1 of 3 : UCIP_FA_2023_55758_82732.jpg



Air vent on LS shoulder

* Location LS: Land Side N/A: Not Applicable 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**

Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2023

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/06/2023 10/06/2023	Zach Jojola

LM Start	1.89	Rating **	M	Issue No.	34 (cont)
LM End	1.89	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			38.743768°	38.743768°
				-121.689185°	-121.689185°
DWR ID	25471				

Photo 2 of 3 : UCIP_FA_2023_55758_82731.jpg



Closure device in manhole at WS soulder

LM Start	1.89	Rating **	M	Issue No.	34 (cont)
LM End	1.89	Issue Type +	Ma	Location *	

Photo 3 of 3 : UCIP_FA_2023_55758_82730.jpg



LS levee slope looking towards levee

* Location LS : Land Side N/A : Not Applicable 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**

Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2023

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/06/2023 10/06/2023	Zach Jojola

LM Start	1.90	Rating **	M	Issue No.	35	
LM End	1.90	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			38.743752°	38.743752°	
				-121.689172°	-121.689172°	
DWR ID	25597					
Comment Code						
Inspector Comment						
DS_ID:25597						
FS_ID:79242						
EP_NO: N/A						
Repair Type: Non-Urgent						
EVAL Issue:						
Crossing Status: Found						
UCIP Comments: Needs field verification.						
FIELD_STRUCT_DESC: 24-inch steel drainage pipe through the levee, unknown depth below the crown. Concrete box with slide gate on WS shoulder. Concrete pad with electrical wiring at LS toe. Flap gate on the waterside (WS) end. Open on the landside (LS) end. LS toe cobble reveted. Replacement of DSID 19399. (24-inch pipe installed as part of the Knights Landing 2015 Levee Repair Project).						
FS Date: 1/1/1900						

No Photos

LM Start	2.72	Rating **	A/W	Issue No.	8
LM End	2.93	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2018 USACE Erosion Survey			38.754899°	38.757925°
				-121.692653°	-121.693048°
DWR ID	DWR_NA0008_02_s_2022_8				
Comment Code					
Inspector Comment					
2018 Site ID: KLR 3.0 L Status: Eroding 2018 Field Notes: Last observed in 2011. Access issues prevented inspection in 2017. Site History: 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. DWR Inspector Comment: District is placing riprap along the toe.					

Photo 1 of 1 : FA_2023_NA0008_257_8_20230907_00002.jpg



View of repaired waterside slope. Fall 2022.

* Location LS : Land Side N/A : Not Applicable 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**

Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2023

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/06/2023 10/06/2023	Zach Jojola

LM Start	2.98	Rating **	M	Issue No.	9
LM End	3.11	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
Item				Start	End
	2018 USACE Erosion Survey	38.758587°	38.760053°		
			-121.693359°	-121.694686°	
DWR ID	DWR_NA0008_02_s_2022_9				
Comment Code					
Inspector Comment					
2018 Site ID: KLR 3.1 L					
Status: Eroding					
2018 Field Notes: Last observed in 2011. Access issues prevented inspection in 2017.					
Site History: 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.					
DWR Comment: Erosion due to opening within channel.					

Photo 1 of 1 : FA_2023_NA0008_257_9_20231010_00021.jpg



View of erosion at waterside edge. Fall 2023.

LM Start	3.31	Rating **	A/W	Issue No.	14
LM End	3.31	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Erosion / Bank Caving			38.762301°	38.762301°
				-121.697190°	-121.697190°
DWR ID	DWR_NA0008_02_f_2018_14				
Comment Code					
E1 : Note and monitor erosion site.					
Inspector Comment					
The primary channel changes course throughout the water year and erodes the slope through an opening in the center barrier. The slope appears to be stable and erosion is not within the prism. The levee is further reinforced by the newly constructed berm on the landside. Recommend monitoring.					

Photo 1 of 1 : FA_2023_NA0008_257_14_20230907_00006.jpg



View of erosion at waterside toe. Fall 2021.

* Location LS: Land Side N/A: Not Applicable 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**

Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2023

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/06/2023 10/06/2023	Zach Jojola

LM Start	3.60	Rating **	A/W	Issue No.	10
LM End	3.73	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2018 USACE Erosion Survey			38.765522°	38.767336°
				-121.700608°	-121.701023°
DWR ID	DWR_NA0008_02_s_2022_10				
Comment Code					
Inspector Comment					
2018 Site ID: KLR 3.7 L Status: Eroding 2018 Field Notes: Last observed in 2011. Access issues prevented inspection in 2017. Site History: 2011 - The toe has eroded away and there are a few scallops from bank slumping.					
DWR Comment: Erosion due to opening within channel. Not within the prism. Recommend monitoring.					

Photo 1 of 1 : FA_2023_NA0008_257_10_20230907_00004.jpg



View of erosion at the waterside edge. Fall 2022.

LM Start	4.30	Rating **	A/W	Issue No.	11
LM End	4.55	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2018 USACE Erosion Survey			38.775271°	38.778115°
				-121.703685°	-121.706195°
DWR ID	DWR_NA0008_02_s_2022_11				
Comment Code					
Inspector Comment					
2018 Site ID: KLR 4.7 L					
Status: Eroding					
2018 Field Notes: Last observed in 2011. Access issues prevented inspection in 2017.					
Site History: 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.					

Photo 1 of 1 : FA_2023_NA0008_257_11_20230907_00005.jpg



View of erosion at waterside toe. Spring 2022.

* Location LS : Land Side N/A : Not Applicable 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**

Maintenance Issue Types Only, Levee Inspection Report By Mile - Fall 2023

Knights Landing Ridge Drainage District

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Knights Landing Ridge Cut	Left	6.03	10/06/2023 10/06/2023	Zach Jojola

LM Start	5.36	Rating **	A/W	Issue No.	12
LM End	5.93	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2018 USACE Erosion Survey			38.786566°	38.792395°
				-121.716724°	-121.724091°
DWR ID	DWR_NA0008_02_s_2022_12				
Comment Code					
Inspector Comment					
2018 Site ID: KLR 5.8 L					
Status: Eroding					
2018 Field Notes: Last observed in 2017.					
Site History: 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. 2017 - Hummocky levee, with multiple slump failures and tree popouts.					

No Photos

* Location LS: Land Side N/A: Not Applicable 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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