

**Flood Control Project Maintenance
Levee Inspections**

Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2020

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	03/27/2020 03/27/2020	Makar Sokol

LM Start		Rating **	A	Issue No.	14
LM End		Issue Type +	Ma	Location *	
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Operations & Maintenance Manuals			°	°
				°	°
DWR ID	DWR_RD1660_01_s_2013_14				
Comment Code					
Inspector Comment					
The LMA has the O&M manuals.					

No Photos

LM Start		Rating **	A	Issue No.	15
LM End		Issue Type +	Ma	Location *	
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Emergency Supplies & Equipment			°	°
				°	°
DWR ID	DWR_RD1660_01_s_2013_15				
Comment Code					
Inspector Comment					
The LMA has adequate emergency supplies and equipment.					

No Photos

LM Start		Rating **	A	Issue No.	16
LM End		Issue Type +	Ma	Location *	
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Flood Preparedness & Training			°	°
				°	°
DWR ID	DWR_RD1660_01_s_2013_16				
Comment Code					
Inspector Comment					
The LMA has completed flood fight training in 2018.					

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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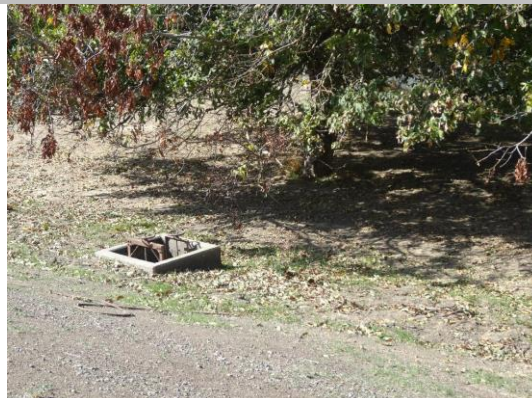
Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	03/27/2020 03/27/2020	Makar Sokol

LM Start	0.14	Rating **	M	Issue No.	27	
LM End	0.14	Issue Type +	Ma	Location *		
Category	Supplemental			GPS Latitude/Longitude		
				Start	End	
Item	DWR UCIP LMA Responsibility			39.061322 °	39.061322 °	
				-121.837993 °	-121.837993 °	
DWR ID	22489					
Comment Code						
Inspector Comment						
DS_ID:22489						
FS_ID:46670						
EP_NO: N/A						
Repair Type: Non-Urgent						
Crossing Status: Found						
UCIP Comments: - needs proper abandonment.- opening of landside pipe almost burried.						
FIELD_STRUCT_DESC: *ABANDONED* 24-inch corrugated metal gravity drainage pipe through the levee, 16.4 feet below the crown. Two corrugated metal cutoff walls. Slide gate in a concrete well at the waterside (WS) toe. (IV A-Winship). USACE bench mark on the top of the headwall at the landside (LS) toe. [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 133, August 1955, (Station 2+07.8)].						
FS Date: 10/10/2013						

LM Start	0.14	Rating **	M	Issue No.	27 (cont)
LM End	0.14	Issue Type +	Ma	Location *	

Photo 1 of 3 : UCIP_SP_2020_46670_38107.jpg



WS view: concrete box on levee slope. No pipe found on berm and river bank.

Photo 2 of 3 : UCIP_SP_2020_46670_38106.jpg



WS view: two slide gates in concrete box on levee slope.

* 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 Sacramento River	Left	2.94	03/27/2020 03/27/2020	Makar Sokol

LM Start	0.14	Rating **	M	Issue No.	27 (cont)
LM End	0.14	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			39.061322 °	39.061322 °
				-121.837993 °	-121.837993 °
DWR ID	22489				

Photo 3 of 3 : UCIP_SP_2020_46670_38105.jpg



WS view: closer view of two slide gates in concrete box on levee slope.

LM Start	0.64	Rating **	C	Issue No.	10
LM End	0.64	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.054214 °	39.054214 °
				-121.839382 °	-121.839382 °
DWR ID	DWR_RD1660_01_f_2019_10				
Comment Code					
V1 : Control annual grass and weeds on the levee slopes and easements.					
Inspector Comment					

No Photos

LM Start	1.22	Rating **	U	Issue No.	13
LM End	1.22	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.045932 °	39.045932 °
				-121.838241 °	-121.838241 °
DWR ID	DWR_RD1660_01_f_2019_13				
Comment Code					
TR : Tree or limb					
Inspector Comment					
The large fallen tree should be removed from the waterside slope.					

Photo 1 of 1 : SP_2020_RD1660_8_13_20200226_00007.jpg



View of the large fallen tree on the waterside slope. Fall 2019.

*** Location**

LS : Land Side N/A : Not Applicable
WS : Water Side
CR : Crown

**** Rating**

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

+ Issue Type

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

**Flood Control Project Maintenance
Levee Inspections**

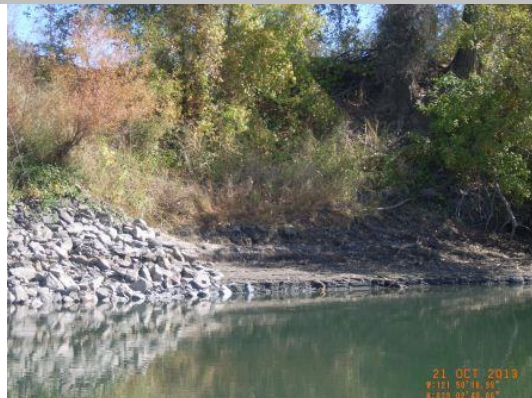
Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2020

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Sacramento River	Left	2.94	03/27/2020 03/27/2020	Makar Sokol

LM Start	1.33	Rating **	A/W	Issue No.	8
LM End	1.36	Issue Type +	Ma	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	2017 USACE Erosion Survey			39.044361 °	39.043916 °
				-121.837654 °	-121.837305 °
DWR ID	DWR_RD1660_01_f_2018_8				
Comment Code					
Inspector Comment					
2017 Site ID: SAC 120.6 L					
Status: Eroding					
2017 Field Notes: No observed change.					
Site History: 2009 - Erosion on levee toe where an old cobble site is failing. 2011 - Some new minor erosion. 2012 - Site extended downstream, bank is being impacted from the weight of the trees.					
2013 - Minor new erosion at the toe. 2015 - Minor new erosion at toe.					

Photo 1 of 1 : SP_2020_RD1660_8_8_20200226_00003.jpg



USACE 2013 Photo #1

LM Start	2.37	Rating **	M	Issue No.	2
LM End	2.37	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			39.034107 °	39.034107 °
				-121.825152 °	-121.825152 °
DWR ID	DWR_RD1660_01_s_2012_2				
Comment Code					
S1 : Repair slope instability.					
Inspector Comment					

Photo 1 of 1 : SP_2020_RD1660_8_2_20200226_00001.jpg



View of the toe cut by the farmer on the landside.

* 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 Sacramento River	Left	2.94	03/27/2020 03/27/2020	Makar Sokol

LM Start	2.39	Rating **	M	Issue No.	4
LM End	2.39	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			39.033858 °	39.033858 °
				-121.824985 °	-121.824985 °
DWR ID	DWR_RD1660_01_f_2018_4				
Comment Code					
S1 : Repair slope instability.					
Inspector Comment					

No Photos

LM Start	2.48	Rating **	M	Issue No.	17
LM End	2.48	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.032688 °	39.032688 °
				-121.824242 °	-121.824242 °
DWR ID	DWR_RD1660_01_s_2020_17				
Comment Code					
TR : Tree or limb					
Inspector Comment					
The fallen tree should be removed from the waterside slope.					

Photo 1 of 1 : SP_2020_RD1660_8_17_20200421_00019.jpg



View of the fallen tree at the waterside toe. Spring 2020.

LM Start	2.63	Rating **	M	Issue No.	5
LM End	2.66	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			39.030891 °	39.030436 °
				-121.822956 °	-121.822617 °
DWR ID	DWR_RD1660_01_s_2012_5				
Comment Code					
S1 : Repair slope instability.					
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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Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	03/25/2020 03/25/2020	Makar Sokol

LM Start	0.00	Rating **	M	Issue No.	6
LM End	0.00	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Slope Stability			39.032910 °	39.032910 °
				-121.743665 °	-121.743665 °
DWR ID	DWR_RD1660_02_f_2016_6				
Comment Code					
S1 : Repair slope instability.					
Inspector Comment					

Photo 1 of 1 : SP_2020_RD1660_9_6_20200326_00015.jpg



View of the slope instability along the landside slope. Spring 2020.

LM Start	0.02	Rating **	A/W	Issue No.	22
LM End	0.02	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			39.033214 °	39.033214 °
				-121.743541 °	-121.743541 °
DWR ID	22495				
Comment Code					
Inspector Comment					
DS_ID:22495 FS_ID:22663 EP_NO: 10020 Repair Type: No Action Needed Crossing Status: Found UCIP Comments: - pipe/opening not visible as it was submerged into water on both sides.- it seems that 36-inch concrete pipe through the levee. It needs confirmation from LMA/DWR Inspector.- USED bench mark on landside concrete vault. FIELD_STRUCT_DESC: [Reclamation District No. 1660 (RD1660) Drainage Pump] 48-inch by 84-inch reinforced concrete outfall structure through the levee, 34 feet below the crown. Slide gate in a 4-foot by 8-foot concrete riser on the waterside (WS) slope. (Retention of a 4-foot by 7-foot concrete culvert outfall drain through the levee, 34 feet below the crown, and a slide gate in a concrete well authorized under Automatic Board Order (ABO) issued as Permit No. 10020, 1974 - Leo Bandoni, care of John Digardi). [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 133, August 1955, (Station 1044+60), two 4-foot by 7-foot concrete tunnels referenced]. FS Date: 10/10/2013					

Photo 1 of 3 : UCIP_SP_2020_22663_38248.jpg



WS view: 4 ft. by 8 ft. concrete box with slide gate on levee slope. USED bench mark on top of the box.

* 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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Levee Inspections**

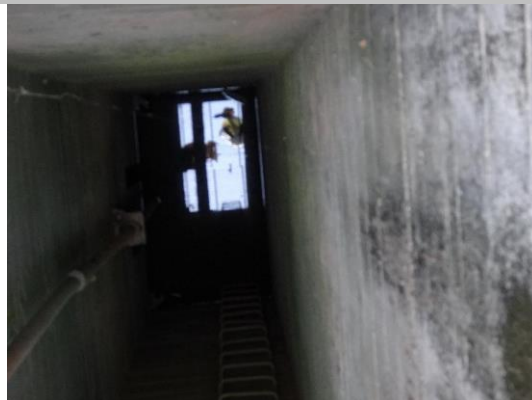
Maintenance Issue Types Only, Levee Inspection Report By Mile - Spring 2020

Reclamation District No. 1660 Tisdale

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	03/25/2020 03/25/2020	Makar Sokol

LM Start	0.02	Rating **	A/W	Issue No.	22 (cont)
LM End	0.02	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			39.033214 °	39.033214 °
				-121.743541 °	-121.743541 °
DWR ID	22495				

Photo 2 of 3 : UCIP_SP_2020_22663_38247.jpg



WS view: inside view of concrete box on levee slope. Slide gate in concrete box.

LM Start	0.02	Rating **	A/W	Issue No.	22 (cont)
LM End	0.02	Issue Type +	Ma	Location *	

Photo 3 of 3 : UCIP_SP_2020_22663_38246.jpg



WS view: closer view of U shaped concrete headwall in bypass channel. Pipe not visible.

LM Start	0.07	Rating **	M	Issue No.	4
LM End	0.07	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.033911 °	39.033911 °
				-121.743849 °	-121.743849 °
DWR ID	DWR_RD1660_02_s_2020_4				
Comment Code					
V2 : Remove the wild growth other than native grasses from the levee slopes.					
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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Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	03/25/2020 03/25/2020	Makar Sokol

LM Start	0.61	Rating **	M	Issue No.	5
LM End	0.61	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.041313 °	39.041313 °
				-121.746910 °	-121.746910 °
DWR ID	DWR_RD1660_02_s_2020_5				
Comment Code					
V2 : Remove the wild growth other than native grasses from the levee slopes.					
Inspector Comment					

Photo 1 of 1 : SP_2020_RD1660_9_5_20200326_00016.jpg



View of wild growth along the waterside slope. Spring 2020.

LM Start	1.07	Rating **	M	Issue No.	7
LM End	1.07	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.047650 °	39.047650 °
				-121.749583 °	-121.749583 °
DWR ID	DWR_RD1660_02_s_2020_7				
Comment Code					
V2 : Remove the wild growth other than native grasses from the levee slopes.					
Inspector Comment					

No Photos

LM Start	1.71	Rating **	M	Issue No.	8
LM End	2.64	Issue Type +	Ma	Location *	LS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Vegetation			39.056532 °	39.069384 °
				-121.753260 °	-121.758624 °
DWR ID	DWR_RD1660_02_s_2020_8				
Comment Code					
V1 : Control annual grass and weeds on the levee slopes and easements.					
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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Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	03/25/2020 03/25/2020	Makar Sokol

LM Start	5.58	Rating **	M	Issue No.	10
LM End	9.10	Issue Type +	Ma	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Vegetation		39.107454 °	39.137123 °	
			-121.781074 °	-121.834496 °	
DWR ID	DWR_RD1660_02_s _ 2020_10				
Comment Code					
V1 : Control annual grass and weeds on the levee slopes and easements.					
Inspector Comment					

No Photos

LM Start	6.19	Rating **	C	Issue No.	12
LM End	6.19	Issue Type +	Ma	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Encroachments		39.112670 °	39.112670 °	
			-121.790310 °	-121.790310 °	
DWR ID	DWR_RD1660_02_s _ 2019_12				
Comment Code					
TR : Tree or limb					
Inspector Comment					
The fallen trees should be removed from the waterside slope.					

No Photos

LM Start	7.38	Rating **	M	Issue No.	11
LM End	7.98	Issue Type +	Ma	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Vegetation		39.122724 °	39.127745 °	
			-121.808451 °	-121.817523 °	
DWR ID	DWR_RD1660_02_s _ 2020_11				
Comment Code					
V1 : Control annual grass and weeds on the levee slopes and easements.					
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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Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 02 Sutter Bypass	Right	9.10	03/25/2020 03/25/2020	Makar Sokol

LM Start	7.91	Rating **	M	Issue No.	13
LM End	7.91	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.127113 °	39.127113 °
				-121.816335 °	-121.816335 °
DWR ID	DWR_RD1660_02_s_2020_13				
Comment Code					
TR : Tree or limb					
Inspector Comment					
The fallen tree should be removed from the waterside slope and toe.					

No Photos

LM Start	9.07	Rating **	A/W	Issue No.	24
LM End	9.07	Issue Type +	Ma	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP LMA Responsibility			39.136861 °	39.136861 °
				-121.833974 °	-121.833974 °
DWR ID	22505				
Comment Code					
Inspector Comment					
DS_ID:22505 FS_ID:22708 EP_NO: N/A Repair Type: No Action Needed Crossing Status: Found UCIP Comments: - inlet structure 160 ft off the levee center on landside drainage ditch. FIELD_STRUCT_DESC: 48-inch steel gravity drainage pipe through the levee, 29 feet below the crown. Slide gate and concrete bulkhead on the riverbank. Staff gage on the waterside (WS) berm. (Retention of a 48-inch corrugated metal pipe (CMP) through the levee, 29 feet below the crown, a slide gate, and a concrete bulkhead authorized under Automatic Board Order (ABO) No. 10021, 1974 - Butte Slough Irrigation Company, care of Tarke Warehouse). [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 133, August 1955, (Station 433+43), 48-inch CMP referenced]. FS Date: 10/15/2013					

Photo 1 of 3 : UCIP_SP_2020_22708_38406.jpg



WS view: overview of concrete box on channel bank. It looks like a fish ladder. Pipe discharges into this box.

* 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. 02 Sutter Bypass	Right	9.10	03/25/2020 03/25/2020	Makar Sokol

LM Start	9.07	Rating **	A/W	Issue No.	24 (cont)
LM End	9.07	Issue Type +	Ma	Location *	
Category	Supplemental		GPS Latitude/Longitude		
			Start	End	
Item	DWR UCIP LMA Responsibility		39.136861 °	39.136861 °	
			-121.833974 °	-121.833974 °	
DWR ID	22505				

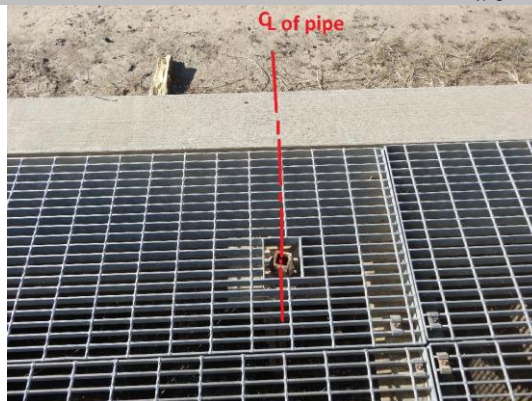
Photo 2 of 3 : UCIP_SP_2020_22708_38405.jpg



WS view: concrete box on channel bank. Pipe end with slide gate. Pipe discharges into this box.

LM Start	9.07	Rating **	A/W	Issue No.	24 (cont)
LM End	9.07	Issue Type +	Ma	Location *	

Photo 3 of 3 : UCIP_SP_2020_22708_38409.jpg



WS view: concrete box on channel bank. Pipe discharges into this box.
A slide gate inside this box.

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