

**Flood Control Project Maintenance
Levee Inspections**

Fall 2019 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including USACE Erosion Survey

Sacramento River Basin

ST0005		Overall LMA Rating	Total LMA Miles						
Sutter Maintenance Yard Hamilton Bend		U	3.39						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence		
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles	
<i>Earthen Levee</i>									
Vegetation	0.02	1.59	6.38	187.95%					
Trim / Thin Trees		2.32	9.28	273.38%					
<i>Supplemental</i>									
DRAFT DWR UCIP Field Study					0.02				
<i>LMA Totals:</i>	0.02	3.91	15.66	461.33%	0.02	0.00	0.00	0.00	

Unit No. 01 Feather River Hamilton Bend RB		Overall Unit Rating	Total Unit Miles						
ST0005		U	3.39						
Rated Item	Maintenance Deficiency				Enforcement		Design & System Obsolescence		
	M Miles	U Miles	M + 4U Miles	Threshold %	M Miles	U Miles	M Miles	U Miles	
<i>Earthen Levee</i>									
Vegetation	0.02	1.59	6.38	187.95%					
Trim / Thin Trees		2.32	9.28	273.38%					
<i>Supplemental</i>									
DRAFT DWR UCIP Field Study					0.02				
<i>Unit Totals:</i>	0.02	3.91	15.66	461.33%	0.02	0.00	0.00	0.00	

**Flood Control Project Maintenance
Levee Inspections
LMA District Cover Sheet
Fall 2019 Levee Inspection Results**

Sutter Maintenance Yard Hamilton Bend

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

** 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 2019 Levee Inspection Results

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles
Unit No. 01 Feather River Hamilton Bend	Right	3.39

	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			U	
Date of Inspection	4/4/2019 - 4/4/2019		11/4/2019 - 11/4/2019	
DWR Inspector	Sterling York		Sterling York	
Accompanied By	Shawn Freitag Sutter Maintenance Yard		Shawn Freitag Sutter Maintenance Yard Bob Duffey Sutter Maintenance Yard	

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 2019

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	11/04/2019 11/04/2019	Sterling York

LM Start		Rating **	A	Issue No.	7
LM End		Issue Type +	Ma	Location *	
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Operations & Maintenance Manuals		o	o	o
			o	o	o
DWR ID	DWR_ST0005_01_s_2013_7				
Comment Code					
Inspector Comment					
O&M manual is located at the Sutter Maintenance Yard.					

No Photos

LM Start		Rating **	A	Issue No.	8
LM End		Issue Type +	Ma	Location *	
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Emergency Supplies & Equipment		o	o	o
			o	o	o
DWR ID	DWR_ST0005_01_s_2013_8				
Comment Code					
Inspector Comment					
Emergency supplies and equipment are stored at the Sutter Maintenance Yard.					

No Photos

LM Start		Rating **	A	Issue No.	9
LM End		Issue Type +	Ma	Location *	
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Flood Preparedness & Training		o	o	o
			o	o	o
DWR ID	DWR_ST0005_01_s_2013_9				
Comment Code					
Inspector Comment					
Sutter Maintenance Yard employees attend the annual Flood Fight class put on by DWR inspectors.					

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**

Levee Inspection Report By Mile - Fall 2019

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	11/04/2019 11/04/2019	Sterling York

LM Start	0.01	Rating **	A	Issue No.	3
LM End	1.22	Issue Type +	Ma	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Vegetation		39.439751°	39.456833°	
			-121.641555°	-121.639321°	
DWR ID	DWR_ST0005_01_f_2019_3				
Comment Code					
V1 : Control annual grass and weeds on the levee slopes and easements.					
Inspector Comment					
The annual vegetation is well maintained through this section, Fall 2019.					

Photo 1 of 1 : FA_2019_ST0005_289_3_20191112_00014.jpg



View looking upstream landside at the well maintained annual vegetation, Fall 2019.

LM Start	0.19	Rating **	M	Issue No.	15
LM End	0.19	Issue Type +	Ma	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Vegetation		39.442435°	39.442435°	
			-121.641760°	-121.641760°	
DWR ID	DWR_ST0005_01_s_2015_15				
Comment Code					
V4 : Elderberries are blocking visibility and flood fight capability.					
Inspector Comment					

No Photos

LM Start	0.70	Rating **	M	Issue No.	16
LM End	0.70	Issue Type +	Ma	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Vegetation		39.449623°	39.449623°	
			-121.640940°	-121.640940°	
DWR ID	DWR_ST0005_01_s_2017_16				
Comment Code					
V4 : Elderberries are blocking visibility and flood fight capability.					
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**

Levee Inspection Report By Mile - Fall 2019

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	11/04/2019 11/04/2019	Sterling York

LM Start	1.48	Rating **	U	Issue No.	18
LM End	1.99	Issue Type +	Ma	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Trim / Thin Trees		39.458053°	39.461949°	
			-121.636300°	-121.629563°	
DWR ID	DWR_ST0005_01_s_2017_18				
Comment Code					
T3 : Trim and thin trees to allow visibility of the ground and room to flood fight.					
Inspector Comment					
Trim/Thin Trees from Levee Mile 1.48 to 1.99. The LMA does not maintain the levee from Levee Mile 1.38 to 3.39.					

Photo 1 of 1 : FA_2019_ST0005_289_18_20191112_00015.jpg



View looking upstream of thick trees and vegetation blocking visibility on waterside, Fall 2019.

LM Start	1.48	Rating **	U	Issue No.	11
LM End	3.25	Issue Type +	Ma	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Trim / Thin Trees		39.458055°	39.470312°	
			-121.636300°	-121.609242°	
DWR ID	DWR_ST0005_01_s_2017_11				
Comment Code					
T3 : Trim and thin trees to allow visibility of the ground and room to flood fight.					
Inspector Comment					
Trim/Thin Trees from Levee Mile 1.48 to 3.25. The LMA does not maintain the levee from Levee Mile 1.38 to 3.39.					

Photo 1 of 1 : FA_2019_ST0005_289_11_20191112_00016.jpg



View looking upstream of thick trees blocking visibility on landside, Fall 2019.

* 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**

Levee Inspection Report By Mile - Fall 2019

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	11/04/2019 11/04/2019	Sterling York

LM Start	1.50	Rating **	U	Issue No.	17
LM End	1.96	Issue Type +	Ma	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Vegetation		39.458131°	39.461634°	
			-121.635916°	-121.629926°	
DWR ID	DWR_ST0005_01_f_2017_17				
Comment Code					
V2 : Remove the wild growth other than native grasses from the levee slopes.					
Inspector Comment					
Maintain annual grasses from Levee Mile 1.50 to 1.96. The LMA does not maintain the levee from Levee Mile 1.38 to 3.39.					

Photo 1 of 1 : FA_2019_ST0005_289_17_20190904_00006.jpg



View looking upstream waterside of annual grasses that need to be maintained.

LM Start	1.50	Rating **	U	Issue No.	6
LM End	2.63	Issue Type +	Ma	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Vegetation		39.458132°	39.466025°	
			-121.635914°	-121.618972°	
DWR ID	DWR_ST0005_01_f_2016_6				
Comment Code					
V2 : Remove the wild growth other than native grasses from the levee slopes.					
Inspector Comment					
Blackberries covering slope from Levee Mile 1.50 to 2.63. The LMA does not maintain the levee from Levee Mile 1.38 to 3.39.					

Photo 1 of 1 : FA_2019_ST0005_289_6_20190904_00002.jpg



View looking upstream landside of blackberries that are covering the landside 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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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2019

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	11/04/2019 11/04/2019	Sterling York

LM Start	3.23	Rating **	U	Issue No.	4
LM End	3.27	Issue Type +	Ma	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Trim / Thin Trees			39.470063°	39.470558°
				-121.609264°	-121.609215°
DWR ID	DWR_ST0005_01_s_2013_4				
Comment Code					
T3 : Trim and thin trees to allow visibility of the ground and room to flood fight.					
Inspector Comment					
Small trees 4" in diameter at chest height should be removed before they get too big from Levee Mile 3.23 to 3.27. Levee Mile 1.38 to 3.39 has never been maintained by the LMA.					

Photo 1 of 1 : FA_2019_ST0005_289_4_20190904_00001.jpg



View looking upstream waterside of small trees 4" in diameter at chest height should be removed before they get too big.

LM Start	3.25	Rating **	M	Issue No.	19
LM End	3.25	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DRAFT DWR UCIP Field Study			39.470269°	39.470269°
				-121.609229°	-121.609229°
DWR ID	17044				
Comment Code					
Inspector Comment					
DS_ID:17044 FS_ID:55888 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: 05/07/2019 Limited access--Unable to inspect crossing due to steep slopes and dense vegetation. (O. Magana - DWR UCIP)04/26/2016 Unable to access area near structure.05/14/2013 Same as last inspection.11/14/2012 Abandoned Structure: WS-remance of gates and concrete standpipe; LS-remance of concrete headwall and pump station. FIELD_STRUCT_DESC: *ABANDONED* [Western Canal Head Gate Inlet Structure] 1 of 2: 96-inch by 96-inch (8-foot by 8-foot) reinforced concrete culverts through the levee 25 feet below the crown. Three slide gates on the waterside (WS) end. Concrete stairs on the WS slope. Concrete headwall at both WS and landside (LS) toes. [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 152, March 1957 (Station 170+00)] FS Date: 5/7/2019 12:36:00 PM					

Photo 1 of 3 : UCIP_FA_2019_55888_21682.jpg



View of levee crown looking downstream.

* 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**

Levee Inspection Report By Mile - Fall 2019

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	11/04/2019 11/04/2019	Sterling York

LM Start	3.25	Rating **	M	Issue No.	19 (cont)
LM End	3.25	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DRAFT DWR UCIP Field Study			39.470269°	39.470269°
				-121.609229°	-121.609229°
DWR ID	17044				
Comment Code					
Inspector Comment					
DS_ID:17044 FS_ID:55888 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: 05/07/2019 Limited access--Unable to inspect crossing due to steep slopes and dense vegetation. (O. Magana - DWR UCIP)04/26/2016 Unable to access area near structure.05/14/2013 Same as last inspection.11/14/2012 Abandoned Structure: WS-remance of gates and concrete standpipe; LS-remance of concrete headwall and pump station. FIELD_STRUCT_DESC: *ABANDONED* [Western Canal Head Gate Inlet Structure] 1 of 2: 96-inch by 96-inch (8-foot by 8-foot) reinforced concrete culverts through the levee 25 feet below the crown. Three slide gates on the waterside (WS) end. Concrete stairs on the WS slope. Concrete headwall at both WS and landside (LS) toes. [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 152, March 1957 (Station 170+00)] FS Date: 5/7/2019 12:36:00 PM					

Photo 2 of 3 : UCIP_FA_2019_55888_21681.jpg



View of levee crown at right bend.

LM Start	3.25	Rating **	M	Issue No.	19 (cont)
LM End	3.25	Issue Type +	En	Location *	

Photo 3 of 3 : UCIP_FA_2019_55888_21680.jpg



View of levee looking upstream.

* 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**

Levee Inspection Report By Mile - Fall 2019

Sutter Maintenance Yard Hamilton Bend

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River Hamilton Bend	Right	3.39	11/04/2019 11/04/2019	Sterling York

LM Start	3.25	Rating **	M	Issue No.	20 (cont)
LM End	3.25	Issue Type +	En	Location *	
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DRAFT DWR UCIP Field Study			39.470269 °	39.470269 °
				-121.609229 °	-121.609229 °
DWR ID	17056				
Comment Code					
Inspector Comment					
DS_ID:17056 FS_ID:55889 EP_NO: N/A Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: 05/07/2019 Limited access--Unable to inspect crossing due to steep slopes and dense vegetation. (O. Magana - DWR UCIP)04/26/2016 Unable to access area near structure.05/14/2013 Same as last inspection.11/14/2012 Abandoned Structure: WS-remance of gates and concrete standpipe; LS-remance of concrete headwall and pump station. FIELD_STRUCT_DESC: *ABANDONED* [Western Canal Head Gate Inlet Structure] 2 of 2: 72-inch by 96-inch (8-foot by 8-foot) reinforced concrete culvert through the levee 25 feet below the crown. Three slide gates on the waterside (WS) end. Concrete stairs on the WS slope. Concrete headwall at both WS and landside (LS) toes. [Additional Reference(s): DWR Levee Log, 2005. USACE Sacramento O&M Manual 152, March 1957 (Station 170+00)] FS Date: 5/7/2019 12:37:00 PM					

Photo 3 of 3 : UCIP_FA_2019_55889_21695.jpg



View of levee crown looking upstream at 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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