

**Flood Control Project Maintenance
Levee Inspections**

**Fall 2015 Levee Maintenance Deficiency Summary Report
Overall LMA & Unit Ratings, including USACE Erosion Survey**

Sacramento River Basin

MA0016 Sutter Maintenance Yard Maintenance Area 0016	Overall LMA Rating	Total LMA Miles						
	A	4.06						
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					0.05			
Encroachments					0.26	0.05		
<i>Supplemental</i>								
DWR UCIP Field Study					0.03			
<i>LMA Totals:</i>	0.00	0.00	0.00	0.00%	0.34	0.05	0.00	0.00

**Flood Control Project Maintenance
Levee Inspections**
LMA District Cover Sheet
Fall 2015 Levee Inspection Results

Sutter Maintenance Yard Maintenance Area 0016

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

** Non-receipt of Summer or Winter Inspection Reports may effect overall annual rating.

* **SPRING INSPECTIONS:** Overall maintenance ratings are not determined for the spring inspection results. Individual maintenance deficiencies are rated using the same criteria in the spring and in the fall.

FALL INSPECTIONS: The overall maintenance rating shown above is based on operation and maintenance deficiencies identified within the attached unit inspection reports. This rating is not intended to be an indication of risk.

Comments

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2015 Levee Inspection Results

Sutter Maintenance Yard Maintenance Area 0016

Waterway		Bank	Unit Miles	
Unit No. 01 Feather River		Right	4.06	
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			A	
Date of Inspection	05/05/2015 - 05/05/2015		11/16/2015 - 11/16/2015	
DWR Inspector	Michael Pitta		Bob Duffey	
Accompanied By	Sean Freitag		Sean Freitag	

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 2015

Sutter Maintenance Yard Maintenance Area 0016

Waterway		Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River		Right	4.06	11/16/2015 11/16/2015	Bob Duffey

LM Start		Rating **	A	Issue No.	3
LM End		Issue Type +	Ma	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Operations & Maintenance Manuals			°	°
DWR ID	DWR_MA0016_01_s_2013_3				
Action/Comments					
Inspector Comments: The O&M manuals are located at the Sutter Maintenance Yard.					

No Photos

LM Start		Rating **	A	Issue No.	4
LM End		Issue Type +	Ma	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Flood Preparedness & Training			°	°
DWR ID	DWR_MA0016_01_s_2013_4				
Action/Comments					
Inspector Comments: Sutter maintenance yard employees attend the annual Flood Fight class put on by DWR inspector Bob Duffy.					

No Photos

LM Start		Rating **	A	Issue No.	5
LM End		Issue Type +	Ma	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Emergency Supplies & Equipment			°	°
DWR ID	DWR_MA0016_01_s_2013_5				
Action/Comments					
Inspector Comments: Emergency supplies and equipment are stored at the Sutter Maintenance Yard.					

No Photos

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

Levee Inspection Report By Mile - Fall 2015

Sutter Maintenance Yard Maintenance Area 0016

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	4.06	11/16/2015 11/16/2015	Bob Duffey

LM Start	0.06	Rating **	M	Issue No.	2
LM End	0.10	Issue Type +	En	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Vegetation		39.256618 °	39.257228 °	
			-121.636442 °	-121.636462 °	
DWR ID	DWR_MA0016_01_s_2012_2				
Action/Comments					
Landscaping					

Photo 1 of 1 : FA_2015_MA0016_302_2_20151109_00001.jpg



This photo shows the landscaping on the landside slope and toe.

LM Start	0.11	Rating **	M	Issue No.	26
LM End	0.11	Issue Type +	En	Location *	LS
Category	Supplemental		GPS Latitude/Longitude		
			Start	End	
Item	DWR UCIP Field Study		39.257308 °	39.257308 °	
			-121.636582 °	-121.636582 °	
DWR ID					
Action/Comments					
Inspector Comments: FS_ID:45934 DS_ID:17180 EP_NO: 4556 FS_HLM: 0.11 Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: 6/8/2015 Unable to locate.2/11/2015: Revised Location and added arial photo showing U-shaped concrete headwall on LS toe. Pipe should be completely removed from levee. Unable to locate any evidence of crossing 12/11/12.11/6/2013 Unable to locate.5/19/2014 SBFCFA project had levee access blocked. Could not get to pipe.12/29/2014 Access bocked due to SBFCFA project. FIELD_STRUCT_DESC: *ABANDONED* 36 inch CMP drainpipe through the levee 22-feet below the crown. Concrete U-shaped headwall on LS toe. Originally included in O+M manual at 473+30. Pipe was abandoned in place and a concrete plug was installed in WS slope after pipe failed in 1964 under permit No. 4556. FS Date: 06/16/2015					

Photo 1 of 1 : UCIP_FA_2015_6028.jpg



Arial photo showing location of Concrete headwall on LS toe.

* 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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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2015

Sutter Maintenance Yard Maintenance Area 0016

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	4.06	11/16/2015 11/16/2015	Bob Duffey

LM Start	0.18	Rating **	M	Issue No.	15
LM End	0.18	Issue Type +	En	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Encroachments		39.258437 °	39.258437 °	
			-121.636613 °	-121.636613 °	
DWR ID	DWR_MA0016_01_s_2012_15				
Action/Comments					
Building					

Photo 1 of 1 : FA_2015_MA0016_302_15_20151109_00005.jpg



Levee mile 0.18. This photo shows the building on the landside shoulder and toe.

LM Start	0.44	Rating **	U	Issue No.	7
LM End	0.49	Issue Type +	En	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Encroachments		39.262213 °	39.262825 °	
			-121.636545 °	-121.636430 °	
DWR ID	DWR_MA0016_01_s_2012_7				
Action/Comments					
Building					

Photo 1 of 1 : FA_2015_MA0016_302_7_20151109_00002.jpg



Levee mile 0.49. This photo shows the building and landscaping on the landside slope and toe.

LM Start	1.63	Rating **	C	Issue No.	18
LM End	1.63	Issue Type +	En	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Encroachments		39.278943 °	39.278943 °	
			-121.633291 °	-121.633291 °	
DWR ID	DWR_MA0016_01_s_2015_18				
Action/Comments					
Prunings					

No Photos

* 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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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2015

Sutter Maintenance Yard Maintenance Area 0016

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	4.06	11/16/2015 11/16/2015	Bob Duffey

LM Start	1.69	Rating **	M	Issue No.	27
LM End	1.69	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			39.279812 °	39.279812 °
				-121.632987 °	-121.632987 °
DWR ID					

Photo 1 of 2 : UCIP_FA_2015_5416.jpg



Action/Comments

Inspector Comments: FS_ID:45938
 DS_ID:17129
 EP_NO: N/A
 FS_HLM: 1.696
 Repair Type: Non-Urgent
 Crossing Status: Found
 UCIP Comments: 6/8/2015 SBFCA project recommended replacing this pipe but after completion of the project in this area i was unable locate any signs of this crossing.Pipe is partially buried at LS toe and shows heavy corrosion. Unable to locate headwalls on either side of levee. Pipe should be cleared of soil and inspected (suspect heavy corrosion throughout pipe).5/14/2013 SBFCA project recommends replacing in accordance with title 23.5/14/2013 Same as last inspection.11/6/2013 Same as last inspection.5/19/2014 SBFCA project had levee access blocked. Could not get to pipe.12/29/2014 Access bocked due to SBFCA project.
 FIELD_STRUCT_DESC: 12-inch CM Storm drain pipe through the levee 14.5 feet below the crown. Slide gate on the waterward end. (O&M entry-As builds available 50-4-2193A).
 FS Date: 06/16/2015

Pipe at LS inlet showing heavy silt and corrosion of pipe.

* 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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Levee Inspection Report By Mile - Fall 2015

Sutter Maintenance Yard Maintenance Area 0016

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	4.06	11/16/2015 11/16/2015	Bob Duffey

LM Start	1.69	Rating **	M	Issue No.	27 (cont)
LM End	1.69	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			39.279812 °	39.279812 °
				-121.632987 °	-121.632987 °
DWR ID					
Action/Comments					
Inspector Comments: FS_ID:45938 DS_ID:17129 EP_NO: N/A FS_HLM: 1.696 Repair Type: Non-Urgent Crossing Status: Found UCIP Comments: 6/8/2015 SBFCA project recommended replacing this pipe but after completion of the project in this area i was unable locate any signs of this crossing. Pipe is partially buried at LS toe and shows heavy corrosion. Unable to locate headwalls on either side of levee. Pipe should be cleared of soil and inspected (suspect heavy corrosion throughout pipe). 5/14/2013 SBFCA project recommends replacing in accordance with title 23.5/14/2013 Same as last inspection. 11/6/2013 Same as last inspection. 5/19/2014 SBFCA project had levee access blocked. Could not get to pipe. 12/29/2014 Access bocked due to SBFCA project. FIELD_STRUCT_DESC: 12-inch CM Storm drain pipe through the levee 14.5 feet below the crown. Slide gate on the waterward end. (O&M entry-As built available 50-4-2193A). FS Date: 06/16/2015					

Photo 2 of 2 : UCIP_FA_2015_5417.jpg



screwgate and headwall found on LS

LM Start	1.71	Rating **	M	Issue No.	19
LM End	1.71	Issue Type +	En	Location *	WS
Category	Earthen Levee			GPS Latitude/Longitude	
				Start	End
Item	Encroachments			39.280104 °	39.280104 °
				-121.632890 °	-121.632890 °
DWR ID	DWR_MA0016_01_s_2015_19				
Action/Comments					
Equipment					

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
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Levee Inspection Report By Mile - Fall 2015

Sutter Maintenance Yard Maintenance Area 0016

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	4.06	11/16/2015 11/16/2015	Bob Duffey

LM Start	2.85	Rating **	M	Issue No.	14
LM End	3.08	Issue Type +	En	Location *	LS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Encroachments		39.293675 °	39.296748 °	
			-121.636615 °	-121.638192 °	
DWR ID	DWR_MA0016_01_s_2012_14				
Action/Comments					
Ditch					

Photo 1 of 1 : FA_2015_MA0016_302_14_20151109_00003.jpg



Agricultural ditch land side slope and toe.

LM Start	2.86	Rating **	M	Issue No.	25
LM End	2.86	Issue Type +	En	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Vegetation		39.293865 °	39.293865 °	
			-121.636690 °	-121.636690 °	
DWR ID	DWR_MA0016_01_f_2013_25				
Action/Comments					
Landscaping Inspector Comments: Remove the landscape from the waterside slope.					

Photo 1 of 1 : FA_2015_MA0016_302_25_20151118_00006.jpg



View of the landscape along the waterside slope.

LM Start	3.27	Rating **	M	Issue No.	23
LM End	3.27	Issue Type +	En	Location *	WS
Category	Earthen Levee		GPS Latitude/Longitude		
			Start	End	
Item	Encroachments		39.299516 °	39.299516 °	
			-121.638335 °	-121.638335 °	
DWR ID	DWR_MA0016_01_s_2015_23				
Action/Comments					
Prunings Inspector Comments: Remove the prunings from the landside toe.					

Photo 1 of 1 : FA_2015_MA0016_302_23_20151118_00007.jpg



View of the prunings along the landside toe.

* 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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**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2015

Sutter Maintenance Yard Maintenance Area 0016

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 Feather River	Right	4.06	11/16/2015 11/16/2015	Bob Duffey

LM Start	3.39	Rating **	M	Issue No.	28
LM End	3.39	Issue Type +	En	Location *	WS
Category	Supplemental			GPS Latitude/Longitude	
				Start	End
Item	DWR UCIP Field Study			39.301218 °	39.301218 °
				-121.638332 °	-121.638332 °
DWR ID					
Action/Comments					
Inspector Comments: FS_ID:45943 DS_ID:17183 EP_NO: N/A FS_HLM: 3.39 Repair Type: Non-Urgent Crossing Status: Indicator Found UCIP Comments: 6/8/2015 Concrete headwall is still cracked and inlet is buried. It was said to be replaced with the SBFCA project but the project skipped over in this area. Pipe buried on LS toe and should be inspected along with adjacent 24-inch once uncovered. 5/14/2013 SBFCA project recommends replacing in accordance with title 23.5/14/2013 Same as last inspection. 11/6/2013 Same as last inspection. 5/19/2014 Same as last inspection. 12/29/2014 Same as last inspection. FIELD_STRUCT_DESC: 2 of 2: 24-inch CMP drain pipe through the levee 16.6-feet below the crown. Headwalls at both ends and a Flap gate on the WS toe. FS Date: 06/16/2015					

Photo 1 of 2 : UCIP_FA_2015_5418.jpg



Headwall and flap gate on WS toe.

LM Start	3.39	Rating **	M	Issue No.	28 (cont)
LM End	3.39	Issue Type +	En	Location *	WS

Photo 2 of 2 : UCIP_FA_2015_5419.jpg



Pipe should be located on either side of the one visible in this picture.

* 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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