

**Flood Control Project Maintenance
Levee Inspections**

Fall 2009 Levee Maintenance Deficiency Summary Report

Overall LMA & Unit Ratings, including DWR Erosion Survey

San Joaquin River Basin

RD0524	Overall LMA Rating	Total LMA Miles				
Reclamation District No. 0524 Middle Roberts Island	U	6.26				
Rated Item	M Miles	U Miles	M + 4U Miles	Threshold %	Encroachments	
					PO Miles	CO Miles
Vegetation	0.12	0.08	0.44	7.03%		
Trim / Thin Trees	0.55	0.09	0.91	14.54%		
Encroachments	0.45	0.01	0.49	7.83%	0.08	0.23
Animal Control	0.39		0.39	6.23%		
Slope Stability	0.16		0.16	2.56%		
Erosion / Bank Caving	0.28	0.01	0.32	5.11%		
Crown Surface / Depressions / Rutting	0.03	0.04	0.19	3.04%		
Erosion Areas	0.01		0.01	0.16%		
DWR Erosion Survey		0.24	0.96	15.34%		
<i>LMA Totals:</i>	1.99	0.47	3.87	61.82%	0.08	0.23

**Flood Control Project Maintenance
Levee Inspections**
LMA District Cover Sheet
Fall 2009 Levee Inspection Results

Reclamation District No. 0524 Middle Roberts Island

	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.

Comments

**Flood Control Project Maintenance
Levee Inspections**

Unit Cover Sheet

Fall 2009 Levee Inspection Results

Reclamation District No. 0524 Middle Roberts Island

Waterway			Bank	Unit Miles
Unit No. 01 San Joaquin River			Left	6.26
	Spring (March - May)	Summer (June - August)	(September - November) Fall	Winter (December - February)
Unit Maintenance Rating (Fall Only)			U	
Date of Inspection	3/30/2009		11/4/2009	
DWR Inspector	Richard Willoughby		Richard Willoughby	
Accompanied By			Mario Jaques RD 524	

Check one:

- ☐ During the current winter (or summer) inspection period, my staff or I have inspected the levee and associated flood project components identified in the attached Levee Inspection Report by Mile. We have found no changes in flood project conditions other than the results of our normal maintenance and the corrections we have made to maintenance deficiencies identified in the enclosed report.
- ☐ During the current winter (or summer) inspection period, my staff or I have inspected the levee and associated flood project components identified in the attached Levee Inspection Report by Mile. In addition to the results of our normal maintenance and the corrections we have made to maintenance deficiencies identified in the report, we have found the following changes in flood project conditions.

(In the comment section below or on additional sheet(s), identify change of condition by: Start to End Levee Mile or GPS coordinates, location (Land Side, Water Side, or Crown), Item identification, and description of the current condition).

Comments

One of the boxes above is to be checked by the Local Maintaining Agency (LMA). If the second box is checked, additional information must also be submitted. This Unit Cover Sheet should be signed and dated by the LMA Representative and returned to DWR with any additional sheets by September 30 (Summer Inspection) or March 31 (Winter Inspection). Please retain a copy for your records. Please mail all of this information to :

DWR Summer/Winter Inspection Reports
3310 El Camino Avenue, Room LL-30
Sacramento, CA 95821-9000

X

Signature of LMA Representative

Date

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway							Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River							Left	6.26	11/04/2009 11/04/2009	Richard Willoughby
LMR No.	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No.
	Start	End						Start	End	Photo
1	0.22	0.22	Earthen Levee	Crown Surface / Depressions / Rutting	CR	M	Regrade the crown roadway for proper drainage.	37.938890 ° -121.343657 °	37.938890 ° -121.343657 °	3
2	0.36	0.36	Earthen Levee	Encroachments	LS	M	Garbage	37.938338 ° -121.341290 °	37.938338 ° -121.341290 °	15 Y
3	0.38	0.39	Earthen Levee	Erosion / Bank Caving	WS	M	Note and monitor erosion site.	37.938527 ° -121.340887 °	37.938553 ° -121.340778 °	4 Y
4	0.39	0.43	Earthen Levee	Animal Control	WS	M	No rodents visible, but rodent burrows visible; need to backfill and compact or grout borrows.	37.938555 ° -121.340870 °	37.938642 ° -121.339990 °	5
5	0.48	0.49	Earthen Levee	Erosion / Bank Caving	WS	U	Schedule repair of erosion site prior to the next inspection.	37.938693 ° -121.339063 °	37.938693 ° -121.338993 °	6 Y
6	0.51	0.52	Earthen Levee	Erosion / Bank Caving	WS	M	Note and monitor erosion site.	37.938682 ° -121.338518 °	37.938657 ° -121.338425 °	7 Y
7	0.53	0.60	Supplemental	DWR Erosion Survey	WS	U	Inspector Comments: 2009: site extends from RM 41.11 to 41.18; originally PL84 submittals in 2006; see previous comments for site conditions [2009 SiteID:RD0524U1RM41.15]	37.938895 ° -121.337602 °	37.938895 ° -121.337602 °	1
8	0.53	0.54	Earthen Levee	Erosion / Bank Caving	WS	M	Note and monitor erosion site.	37.938623 ° -121.338182 °	37.938617 ° -121.338045 °	8
9	0.58	0.59	Earthen Levee	Erosion / Bank Caving	WS	M	Note and monitor erosion site.	37.938512 ° -121.337335 °	37.938495 ° -121.337212 °	9
10	0.63	0.63	Earthen Levee	Slope Stability	WS	M	Repair the levee slope damaged by foot traffic and prevent access where possible.	37.938247 ° -121.336503 °	37.938247 ° -121.336503 °	10
11	0.63	0.64	Earthen Levee	Vegetation	WS	U	Remove the wild growth other than native grasses from the levee slopes.	37.938247 ° -121.336503 °	37.938197 ° -121.336405 °	11 Y
12	0.64	0.64	Earthen Levee	Crown Surface / Depressions / Rutting	CR	M	Regrade the crown roadway for proper drainage.	37.938198 ° -121.336407 °	37.938198 ° -121.336407 °	12 Y
13	0.65	0.66	Earthen Levee	Slope Stability	WS	M	Repair slope instability.	37.938105 ° -121.336288 °	37.938023 ° -121.336173 °	13 Y
14	0.68	0.68	Earthen Levee	Vegetation	WS	U	Remove the wild growth other than native grasses from the levee slopes.	37.937808 ° -121.335913 °	37.937808 ° -121.335913 °	14 Y
15	0.79	0.79	Supplemental	DWR Erosion Survey	WS	C	Inspector Comments: 2009: DWR planned 2009 repair per CLRO CES Evaluation Report; previously rated "M" [2009 SiteID:RD0524U1RM41.4]	37.936540 ° -121.334810 °	37.936540 ° -121.334810 °	91

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable
PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected
C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway							Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River							Left	6.26	11/04/2009 11/04/2009	Richard Willoughby
LMR No.	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No.
	Start	End						Start	End	Photo
16	0.79	0.79	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.936444 ° -121.334797 °	37.936444 ° -121.334797 °	76
17	0.81	0.81	Earthen Levee	Erosion / Bank Caving	WS	M	Note and monitor erosion site.	37.936217 ° -121.334698 °	37.936217 ° -121.334698 °	16
18	0.94	1.02	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.935259 ° -121.332864 °	37.935049 ° -121.331334 °	77
19	1.01	1.03	Earthen Levee	Erosion / Bank Caving	WS	M	Note and monitor erosion site.	37.935098 ° -121.331645 °	37.935018 ° -121.331248 °	17 Y
20	1.09	1.09	Earthen Levee	Slope Stability	LS	M	Repair slope instability.	37.934645 ° -121.330310 °	37.934645 ° -121.330310 °	18 Y
21	1.14	1.17	Earthen Levee	Trim / Thin Trees	WS	M	Trim trees over roadway to at least 12 feet above ground level.	37.934118 ° -121.329657 °	37.933775 ° -121.329305 °	19
22	1.16	1.24	Supplemental	DWR Erosion Survey	WS	U	Inspector Comments: 2009: Previously part of PL84 submittal in 2006; see previous comments for site conditions [2009 SiteID:RD0524U1RM41.79]	37.933470 ° -121.329110 °	37.933470 ° -121.329110 °	90
23	1.17	1.25	Earthen Levee	Vegetation	LS	M	Remove the wild growth other than native grasses from the levee slopes.	37.933775 ° -121.329250 °	37.932784 ° -121.328765 °	915
24	1.25	1.25	Earthen Levee	Encroachments	LS	M	Garbage	37.932665 ° -121.328808 °	37.932665 ° -121.328808 °	20 Y
25	1.32	1.33	Earthen Levee	Erosion / Bank Caving	WS	M	Schedule repair of erosion site prior to the next inspection.	37.931858 ° -121.328308 °	37.931692 ° -121.328282 °	21 Y
26	1.41	1.42	Earthen Levee	Erosion / Bank Caving	WS	M	Note and monitor erosion site.	37.930575 ° -121.328098 °	37.930420 ° -121.328245 °	22
27	1.51	1.51	Earthen Levee	Trim / Thin Trees	LS	M	Trim and thin trees to allow visibility of the ground and room to flood fight.	37.929118 ° -121.328368 °	37.929118 ° -121.328368 °	916 Y
28	1.56	1.74	Earthen Levee	Encroachments	LS	CO	Landscaping	37.928352 ° -121.328307 °	37.926497 ° -121.326248 °	23 Y
29	1.58	1.64	Supplemental	DWR Erosion Survey	WS	U	Inspector Comments: 2009: Previously a PL84 submittal in 2006; upstream of Highway 4 bridge; several trees (12" BH) with partial roots exposed; bridge possibly creating a constriction on the flow, thereby scouring the bank upstream [2009 SiteID:RD0524U1RM42.2]	37.927770 ° -121.327870 °	37.927770 ° -121.327870 °	2
30	1.62	1.66	Earthen Levee	Crown Surface / Depressions / Rutting	CR	U	Regrade the crown roadway for proper drainage.	37.927658 ° -121.327865 °	37.927255 ° -121.327164 °	24

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable
PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected
C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway							Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River							Left	6.26	11/04/2009 11/04/2009	Richard Willoughby
LMR No.	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No.
	Start	End						Start	End	Photo
31	1.62	1.63	Earthen Levee	Vegetation	WS	U	Remove the wild growth other than native grasses from the levee slopes.	37.927635 ° -121.327812 °	37.927540 ° -121.327648 °	25
32	1.63	1.66	Earthen Levee	Erosion / Bank Caving	WS	M	Note and monitor erosion site.	37.927507 ° -121.327593 °	37.927295 ° -121.327298 °	26
33	1.71	1.77	Earthen Levee	Slope Stability	WS	M	Repair slope instability.	37.926728 ° -121.326597 °	37.926142 ° -121.325972 °	27
34	1.75	1.76	Earthen Levee	Encroachments	LS	U	Garbage	37.926387 ° -121.326148 °	37.926240 ° -121.326063 °	28 Y
35	1.92	1.96	Earthen Levee	Encroachments	LS	PO	Landscaping	37.924364 ° -121.324473 °	37.923790 ° -121.324266 °	78
36	1.96	1.98	Earthen Levee	Trim / Thin Trees	LS	M	Trim and thin trees to allow visibility of the ground and room to flood fight.	37.923685 ° -121.324235 °	37.923493 ° -121.324167 °	29
37	2.17	2.18	Earthen Levee	Erosion / Bank Caving	WS	M	Note and monitor erosion site.	37.921383 ° -121.322043 °	37.921300 ° -121.321902 °	30
38	2.22	2.28	Earthen Levee	Erosion / Bank Caving	WS	M	Note and monitor erosion site.	37.920992 ° -121.321373 °	37.920505 ° -121.320485 °	31
39	2.29	2.31	Earthen Levee	Vegetation	LS	U	Elderberries are blocking visibility and flood fight capability.	37.920372 ° -121.320230 °	37.920273 ° -121.320022 °	32
40	2.32	2.35	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.920075 ° -121.319778 °	37.919702 ° -121.319700 °	33
41	2.34	2.35	Earthen Levee	Erosion / Bank Caving	WS	M	Note and monitor erosion site.	37.919885 ° -121.319713 °	37.919703 ° -121.319702 °	34
42	2.46	2.50	Earthen Levee	Erosion / Bank Caving	WS	M	Note and monitor erosion site.	37.918628 ° -121.320817 °	37.918438 ° -121.321452 °	36
43	2.47	2.48	Earthen Levee	Vegetation	LS	M	Elderberries are blocking visibility and flood fight capability.	37.918575 ° -121.320980 °	37.918515 ° -121.321110 °	35
44	2.48	2.52	Earthen Levee	Encroachments	WS	M	Garbage	37.918504 ° -121.321085 °	37.918300 ° -121.321790 °	81
45	2.48	2.48	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.918480 ° -121.321114 °	37.918480 ° -121.321114 °	80
46	2.52	2.52	Earthen Levee	Vegetation	LS	U	Elderberries are blocking visibility and flood fight capability.	37.918345 ° -121.321765 °	37.918302 ° -121.321923 °	37
47	2.53	2.53	Earthen Levee	Vegetation	WS	M	Elderberries are blocking visibility and flood fight capability.	37.918287 ° -121.321980 °	37.918287 ° -121.321980 °	38
48	2.54	2.54	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.918242 ° -121.322125 °	37.918187 ° -121.322247 °	39

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable
PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected
C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway							Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River							Left	6.26	11/04/2009 11/04/2009	Richard Willoughby
LMR No	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No.
	Start	End						Start	End	Photo
49	2.55	2.59	Earthen Levee	Slope Stability	LS	M	Repair slope instability.	37.918060 ° -121.322384 °	37.917667 ° -121.322713 °	82
50	2.56	2.56	Earthen Levee	Vegetation	LS	M	Elderberries are blocking visibility and flood fight capability.	37.918047 ° -121.322415 °	37.918047 ° -121.322415 °	40
51	2.59	2.59	Earthen Levee	Encroachments	LS	M	Garbage	37.917673 ° -121.322718 °	37.917673 ° -121.322718 °	41
52	2.59	2.60	Earthen Levee	Encroachments	LS	CO	Buildings	37.917673 ° -121.322723 °	37.917555 ° -121.322778 °	42
53	2.60	2.60	Earthen Levee	Animal Control	LS	M	Repair the levee slope damaged by livestock and prevent large animal access.	37.917475 ° -121.322808 °	37.917475 ° -121.322808 °	917
54	2.66	2.66	Earthen Levee	Vegetation	LS	U	Elderberries are blocking visibility and flood fight capability.	37.916780 ° -121.322095 °	37.916780 ° -121.322095 °	43
55	2.67	2.69	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.916718 ° -121.322020 °	37.916502 ° -121.321980 °	918
56	2.67	2.67	Earthen Levee	Encroachments	WS	PO	Ramp	37.916698 ° -121.322007 °	37.916698 ° -121.322007 °	920
57	2.67	2.67	Earthen Levee	Erosion / Bank Caving	WS	M	Schedule repair of erosion site prior to the next inspection.	37.916650 ° -121.321987 °	37.916650 ° -121.321987 °	919
58	2.71	2.73	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.916180 ° -121.322165 °	37.915947 ° -121.322357 °	44
59	2.74	2.83	Earthen Levee	Trim / Thin Trees	LS	U	Trim trees to at least five feet above ground level.	37.915813 ° -121.322485 °	37.914963 ° -121.323605 °	45
60	2.78	2.79	Earthen Levee	Encroachments	LS	PO	Landscaping	37.915285 ° -121.322813 °	37.915175 ° -121.322983 °	46 Y
61	2.79	2.81	Earthen Levee	Slope Stability	LS	M	Repair the levee slope damaged by vehicle traffic and prevent access where possible.	37.915173 ° -121.322982 °	37.915098 ° -121.323183 °	47
62	2.81	2.81	Earthen Levee	Encroachments	WS	M	Prunings	37.915125 ° -121.323227 °	37.915125 ° -121.323227 °	921
63	2.82	2.82	Earthen Levee	Vegetation	LS	U	Elderberries are blocking visibility and flood fight capability.	37.915022 ° -121.323443 °	37.915022 ° -121.323443 °	48
64	2.88	2.88	Earthen Levee	Vegetation	LS	M	Elderberries are blocking visibility and flood fight capability.	37.914427 ° -121.324198 °	37.914427 ° -121.324198 °	49
65	2.93	2.95	Earthen Levee	Encroachments	LS	M	Prunings	37.913767 ° -121.324427 °	37.913503 ° -121.324488 °	50
66	2.96	2.96	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.913415 ° -121.324503 °	37.913415 ° -121.324503 °	51

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable
PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected
C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway						Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River						Left	6.26	11/04/2009 11/04/2009	Richard Willoughby

LMR No	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No.
	Start	End						Start	End	Photo
67	2.97	2.97	Interior Drainage & Piping Systems	Erosion Areas	WS	M	Inspector Comments: Due to erosion on the bank at LM 2.98 is causing erosion around the outlet of the pipe.	37.913152 ° -121.324493 °	37.913152 ° -121.324493 °	922
68	2.98	2.98	Earthen Levee	Erosion / Bank Caving	WS	M	Schedule repair of erosion site prior to the next inspection.	37.913057 ° -121.324508 °	37.913057 ° -121.324508 °	923
69	3.04	3.04	Earthen Levee	Animal Control	LS	M	Repair the levee slope damaged by livestock and prevent large animal access.	37.912163 ° -121.324702 °	37.912163 ° -121.324702 °	924
70	3.10	3.12	Earthen Levee	Animal Control	LS	M	Exterminate rodents and backfill and compact or grout burrows.	37.911382 ° -121.324928 °	37.911088 ° -121.325113 °	925
71	3.33	3.35	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.908158 ° -121.325418 °	37.907872 ° -121.325443 °	926
72	3.37	3.40	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.907645 ° -121.325442 °	37.907157 ° -121.325408 °	52
73	3.39	3.45	Earthen Levee	Animal Control	WS	M	Exterminate rodents and backfill and compact or grout burrows.	37.907283 ° -121.325432 °	37.906503 ° -121.325002 °	53
74	3.43	3.49	Earthen Levee	Trim / Thin Trees	LS	M	Trim and thin trees to allow visibility of the ground and room to flood fight.	37.906747 ° -121.325248 °	37.906192 ° -121.324543 °	54
75	3.45	3.45	Earthen Levee	Encroachments	LS	M	Garbage	37.906503 ° -121.325002 °	37.906503 ° -121.325002 °	55
76	3.47	3.49	Earthen Levee	Encroachments	LS	M	Prunings	37.906295 ° -121.324730 °	37.906192 ° -121.324545 °	56
77	3.54	3.64	Earthen Levee	Trim / Thin Trees	LS	M	Trim and thin trees to allow visibility of the ground and room to flood fight.	37.905638 ° -121.323892 °	37.904430 ° -121.324570 °	57
78	3.68	3.68	Earthen Levee	Slope Stability	WS	M	Repair the levee slope damaged by foot traffic and prevent access where possible.	37.904113 ° -121.325080 °	37.904113 ° -121.325080 °	58
79	3.80	3.80	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.902645 ° -121.326340 °	37.902645 ° -121.326340 °	927
80	3.82	3.82	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.902417 ° -121.326482 °	37.902417 ° -121.326482 °	59
81	3.84	3.85	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.902155 ° -121.326523 °	37.902002 ° -121.326550 °	928
82	3.88	4.02	Earthen Levee	Encroachments	WS	M	Prunings	37.901582 ° -121.326547 °	37.899602 ° -121.326685 °	60 Y
83	3.89	3.89	Earthen Levee	Trim / Thin Trees	LS	C	Trim trees to at least five feet above ground level.	37.901463 ° -121.326528 °	37.901463 ° -121.326528 °	61

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable
PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected
C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway							Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River							Left	6.26	11/04/2009 11/04/2009	Richard Willoughby
LMR No.	Levee Mile		Category	Item	Location	Rating	Action/Comment	GPS Latitude/Longitude		Issue No.
	Start	End						Start	End	Photo
84	3.89	4.01	Earthen Levee	Encroachments	LS	M	Equipment	37.901375 ° -121.326507 °	37.899745 ° -121.326630 °	62 Y
85	3.91	3.91	Earthen Levee	Encroachments	WS	M	Garbage	37.901170 ° -121.326482 °	37.901170 ° -121.326482 °	929 Y
86	3.93	3.93	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.900854 ° -121.326438 °	37.900854 ° -121.326438 °	83
87	4.05	4.05	Earthen Levee	Encroachments	LS	M	Garbage	37.899127 ° -121.326938 °	37.899127 ° -121.326938 °	63 Y
88	4.08	4.13	Earthen Levee	Animal Control	LS	M	No rodents visible, but rodent burrows visible; need to backfill and compact or grout borrows.	37.898832 ° -121.327092 °	37.898090 ° -121.327457 °	64
89	4.19	4.19	Earthen Levee	Encroachments	WS	C	Garbage	37.897252 ° -121.327905 °	37.897252 ° -121.327905 °	930
90	4.40	4.56	Earthen Levee	Animal Control	LS	M	No rodents visible, but rodent burrows visible; need to backfill and compact or grout borrows.	37.894587 ° -121.329253 °	37.892493 ° -121.328267 °	65
91	4.64	4.64	Earthen Levee	Encroachments	LS	M	Garbage	37.891428 ° -121.328642 °	37.891428 ° -121.328642 °	66 Y
92	4.64	4.64	Earthen Levee	Trim / Thin Trees	LS	C	Trim trees to at least five feet above ground level.	37.891365 ° -121.328680 °	37.891365 ° -121.328680 °	67
93	4.98	4.98	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.887277 ° -121.331609 °	37.887277 ° -121.331609 °	84
94	5.24	5.24	Earthen Levee	Encroachments	LS	M	Prunings	37.883657 ° -121.332132 °	37.883657 ° -121.332132 °	68
95	5.33	5.35	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.882377 ° -121.332598 °	37.882076 ° -121.332676 °	85
96	5.46	5.46	Earthen Levee	Animal Control	LS	M	Exterminate rodents and backfill and compact or grout burrows.	37.880575 ° -121.332890 °	37.880575 ° -121.332890 °	931
97	5.49	5.49	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.880055 ° -121.333048 °	37.880055 ° -121.333048 °	932
98	5.65	5.66	Supplemental	DWR Erosion Survey	WS	U	Inspector Comments: 2009: no change observed; sliding of revetment; site is same as RM 46.3, LM5.69 [2009 SiteID:RD0524U1RM46.12]	37.877880 ° -121.332550 °	37.877880 ° -121.332550 °	79
99	5.84	5.84	Earthen Levee	Encroachments	LS	C	Prunings	37.875370 ° -121.333052 °	37.875370 ° -121.333052 °	70
100	5.86	5.86	Earthen Levee	Animal Control	LS	M	No rodents visible, but rodent burrows visible; need to backfill and compact or grout borrows.	37.875073 ° -121.333168 °	37.875073 ° -121.333168 °	69

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected

C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway							Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River							Left	6.26	11/04/2009 11/04/2009	Richard Willoughby
LMR No.	Levee Mile		Category	Item	Location *	Rating **	Action/Comment	GPS Latitude/Longitude		Issue No.
	Start	End						Start	End	Photo
101	5.87	5.87	Earthen Levee	Encroachments	CR	M	Pipe	37.875002 ° -121.333222 °	37.875002 ° -121.333222 °	71 Y
102	5.87	5.87	Earthen Levee	Crown Surface / Depressions / Rutting	CR	M	Regrade the crown roadway for proper drainage.	37.874983 ° -121.333225 °	37.874983 ° -121.333225 °	72
103	5.92	5.94	Earthen Levee	Animal Control	WS	M	No rodents visible, but rodent burrows visible; need to backfill and compact or grout borrows.	37.874240 ° -121.333187 °	37.874002 ° -121.333027 °	75
104	5.92	5.92	Earthen Levee	Erosion / Bank Caving	WS	M	Note and monitor erosion site.	37.874240 ° -121.333185 °	37.874165 ° -121.333155 °	74 Y
105	5.92	5.92	Earthen Levee	Encroachments	CR	M	Pipe	37.874240 ° -121.333180 °	37.874240 ° -121.333180 °	73 Y
106	5.97	5.97	Earthen Levee	Trim / Thin Trees	LS	M	Trim trees to at least five feet above ground level.	37.873678 ° -121.332550 °	37.873678 ° -121.332550 °	86
107	5.99	6.00	Earthen Levee	Encroachments	LS	PO	Fences	37.873545 ° -121.332308 °	37.873445 ° -121.332127 °	87
108	5.99	6.00	Earthen Levee	Encroachments	LS	PO	Landscaping	37.873543 ° -121.332308 °	37.873445 ° -121.332127 °	88
109	6.01	6.05	Earthen Levee	Encroachments	LS	CO	Buildings	37.873377 ° -121.331977 °	37.873102 ° -121.331382 °	89 Y
110	6.05	6.05	Earthen Levee	Erosion / Bank Caving	WS	M	Schedule repair of erosion site prior to the next inspection.	37.873047 ° -121.331408 °	37.873047 ° -121.331408 °	933

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable
PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected
C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Left	6.26	11/04/2009 11/04/2009	Richard Willoughby

Levee Mile Report Line	2
Start Levee Mile	0.36
End Levee Mile	0.36
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Garbage pile at landward toe at LM 0.36

richard_20091104_38.jpg



Levee Mile Report Line	3
Start Levee Mile	0.38
End Levee Mile	0.39
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

Minor erosion from LM 0.38 to 0.39

richard_20091104_32.jpg



Levee Mile Report Line	5
Start Levee Mile	0.48
End Levee Mile	0.49
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

Major erosion from LM 0.48 to 0.49

richard_20091104_33.jpg



*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected

C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Left	6.26	11/04/2009 11/04/2009	Richard Willoughby

Levee Mile Report Line	5
Start Levee Mile	0.48
End Levee Mile	0.49
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

Update of erosion site at LM 0.48 to 0.49

richard_20091110_91.jpg



Levee Mile Report Line	6
Start Levee Mile	0.51
End Levee Mile	0.52
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

Erosion from LM 0.51 to 0.52

richard_20091104_34.jpg



Levee Mile Report Line	6
Start Levee Mile	0.51
End Levee Mile	0.52
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

Update of erosion site at LM 0.51 to 0.52

richard_20091110_92.jpg



*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected

C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Left	6.26	11/04/2009 11/04/2009	Richard Willoughby

Levee Mile Report Line	11
Start Levee Mile	0.63
End Levee Mile	0.64
Location	Water Side
Category	Earthen Levee
Item	Vegetation

Looking north at bamboo on waterside slope.

richard_20091110_93.jpg



Levee Mile Report Line	12
Start Levee Mile	0.64
End Levee Mile	0.64
Location	Crown
Category	Earthen Levee
Item	Crown Surface / Depressions / Rutting

Large hole 3 x 3 on levee crown near waterside shoulder at LM 0.64

richard_20091104_35.jpg



Levee Mile Report Line	13
Start Levee Mile	0.65
End Levee Mile	0.66
Location	Water Side
Category	Earthen Levee
Item	Slope Stability

Erosion from LM 0.65 to 0.66

richard_20091104_36.jpg



*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected

C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Left	6.26	11/04/2009 11/04/2009	Richard Willoughby

Levee Mile Report Line	13
Start Levee Mile	0.65
End Levee Mile	0.66
Location	Water Side
Category	Earthen Levee
Item	Slope Stability
Update of erosion site at LM 0.65 to 0.66	
richard_20091110_94.jpg	



Levee Mile Report Line	14
Start Levee Mile	0.68
End Levee Mile	0.68
Location	Water Side
Category	Earthen Levee
Item	Vegetation
Bamboo on waterward slope at LM 0.68	
richard_20091104_37.jpg	



Levee Mile Report Line	19
Start Levee Mile	1.01
End Levee Mile	1.03
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving
Looking upstream (south) at erosion site.	
richard_20091110_95.jpg	

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected

C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Left	6.26	11/04/2009 11/04/2009	Richard Willoughby

Levee Mile Report Line	20
Start Levee Mile	1.09
End Levee Mile	1.09
Location	Land Side
Category	Earthen Levee
Item	Slope Stability

Landward slope damage at LM 1.09

richard_20091104_39.jpg



Levee Mile Report Line	20
Start Levee Mile	1.09
End Levee Mile	1.09
Location	Land Side
Category	Earthen Levee
Item	Slope Stability

Updated picture of erosion site on landside shoulder.

richard_20091110_96.jpg



Levee Mile Report Line	24
Start Levee Mile	1.25
End Levee Mile	1.25
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Concrete rubble with rebar on landward shoulder at LM 1.25

richard_20091104_40.jpg



*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected

C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Left	6.26	11/04/2009 11/04/2009	Richard Willoughby

Levee Mile Report Line	25
Start Levee Mile	1.32
End Levee Mile	1.33
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

Erosion from LM 1.32 to 1.33

richard_20091104_41.jpg



Levee Mile Report Line	25
Start Levee Mile	1.32
End Levee Mile	1.33
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

Looking at erosion from top of levee

richard_20091110_97.jpg



Levee Mile Report Line	25
Start Levee Mile	1.32
End Levee Mile	1.33
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

Looking at update of erosion site at LM 1.32 to 1.33

richard_20091110_98.jpg



*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected

C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Left	6.26	11/04/2009 11/04/2009	Richard Willoughby

Levee Mile Report Line	27
Start Levee Mile	1.51
End Levee Mile	1.51
Location	Land Side
Category	Earthen Levee
Item	Trim / Thin Trees

Dense vegetation on landside toe.

richard_20091110_99.jpg



Levee Mile Report Line	28
Start Levee Mile	1.56
End Levee Mile	1.74
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Overgrown landscaping on landward slope from LM 1.56 to 1.74

richard_20091104_42.jpg



Levee Mile Report Line	34
Start Levee Mile	1.75
End Levee Mile	1.76
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Garbage on landward toe from LM 1.75 to 1.76

richard_20091104_43.jpg



*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected

C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Left	6.26	11/04/2009 11/04/2009	Richard Willoughby

Levee Mile Report Line	34
Start Levee Mile	1.75
End Levee Mile	1.76
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Looking at updated trash pile on landside slope and toe.

richard_20091110_100.jpg



Levee Mile Report Line	60
Start Levee Mile	2.78
End Levee Mile	2.79
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Landscaping (Cactus) on landward slope from LM 2.78 to 2.79

richard_20091104_44.jpg



Levee Mile Report Line	82
Start Levee Mile	3.88
End Levee Mile	4.02
Location	Water Side
Category	Earthen Levee
Item	Encroachments

Looking upstream at prunings on waterside slope

richard_20091104_45.jpg



*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected

C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Left	6.26	11/04/2009 11/04/2009	Richard Willoughby

Levee Mile Report Line	84
Start Levee Mile	3.89
End Levee Mile	4.01
Location	Land Side
Category	Earthen Levee
Item	Encroachments
Looking upstream at equipment on landside shoulder	
richard_20091104_46.jpg	



Levee Mile Report Line	85
Start Levee Mile	3.91
End Levee Mile	3.91
Location	Water Side
Category	Earthen Levee
Item	Encroachments
Looking at garbage (pallets) on waterside slope.	
richard_20091104_54.jpg	



Levee Mile Report Line	87
Start Levee Mile	4.05
End Levee Mile	4.05
Location	Land Side
Category	Earthen Levee
Item	Encroachments
Garbage at landward toe at LM 4.05	
richard_20091104_47.jpg	

*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected

C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Left	6.26	11/04/2009 11/04/2009	Richard Willoughby

Levee Mile Report Line	91
Start Levee Mile	4.64
End Levee Mile	4.64
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Garbage at landward toe next to ramp at LM 4.64

richard_20091104_48.jpg



Levee Mile Report Line	101
Start Levee Mile	5.87
End Levee Mile	5.87
Location	Crown
Category	Earthen Levee
Item	Encroachments

Abandoned pipe at LM 5.87 wateside view

richard_20091104_49.jpg



Levee Mile Report Line	101
Start Levee Mile	5.87
End Levee Mile	5.87
Location	Crown
Category	Earthen Levee
Item	Encroachments

Abandoned pipe at LM 5.87 landside view

richard_20091104_50.jpg



*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected

C : Corrected

**Flood Control Project Maintenance
Levee Inspections**

Levee Inspection Report By Mile - Fall 2009

Reclamation District No. 0524 Middle Roberts Island

Waterway	Bank	Unit Miles	Inspection Start/End	Inspector
Unit No. 01 San Joaquin River	Left	6.26	11/04/2009 11/04/2009	Richard Willoughby

Levee Mile Report Line	104
Start Levee Mile	5.92
End Levee Mile	5.92
Location	Water Side
Category	Earthen Levee
Item	Erosion / Bank Caving

Erosion at waterward toe at LM 5.92

richard_20091104_52.jpg



Levee Mile Report Line	105
Start Levee Mile	5.92
End Levee Mile	5.92
Location	Crown
Category	Earthen Levee
Item	Encroachments

Abandoned pipe at LM 5.92 waterside view

richard_20091104_51.jpg



Levee Mile Report Line	109
Start Levee Mile	6.01
End Levee Mile	6.05
Location	Land Side
Category	Earthen Levee
Item	Encroachments

Looking downstream at building on landside toe.

richard_20091104_53.jpg



*** Location**

LS : Land Side
WS : Water Side
CR : Crown

**** Rating**

A : Acceptable
M : Minimally Acceptable
U : Unacceptable

PO : Partially Obstructing
CO : Completely Obstructing
N : Not Inspected

C : Corrected