

**ATTACHMENT K**  
**Cost Estimate - Summary**

Reclamation District 1001  
 Rio Oso Feasibility Study  
 Summary of 100-YR Remedial Alternative Costs



Alternative	Estimated Cost					Planning, Engineering, & Design (8%)	Construction Management (6%)	Total
	Land and Damages	Environmental Mitigation	Relocations	Levees	Sub-Total			
<b>Bear River Reach C - STA 0+00 - 85+00 (8,500 ft)</b>								
(Waterside) Rock Slope Protection & (Landside) 60' wide Combination Berm	\$2,744,300	\$2,807,300	\$273,000	\$39,830,700	\$45,655,300	\$2,809,600	\$2,107,200	\$50,572,100
(Waterside) Rock Slope Protection & 60' deep Cutoff Wal	\$1,221,400	\$2,584,100	\$232,100	\$36,682,800	\$40,720,400	\$2,505,900	\$1,879,500	\$45,105,800
<b>Bear River Reach B - STA 85+00 - 130+72 (BR) &amp; STA 0+00 - 4+64 (YS) (5,036 ft)</b>								
150' wide Combination Berm	\$2,565,600	\$1,038,600	\$178,500	\$14,658,000	\$18,440,700	\$1,134,900	\$851,200	\$20,426,800
40' deep Cutoff Wall	\$1,153,100	\$493,400	\$137,500	\$6,910,100	\$8,694,100	\$535,100	\$401,300	\$9,630,500
<b>Yankee Slough Reach A.1 - STA 4+64 - 38+30 (3,366 ft)</b>								
15' wide Drained Stability Berm	\$393,900	\$283,300	\$542,400	\$3,503,600	\$4,723,200	\$290,700	\$218,000	\$5,231,900
16' deep Cutoff Wall	\$335,400	\$286,200	\$542,400	\$3,545,700	\$4,709,700	\$289,900	\$217,400	\$5,217,000
<b>Yankee Slough Reach A.2 - STA 38+30 - 231+17 (19,287 ft)</b>								
15' wide Drained Stability Berm	\$4,254,300	\$1,762,400	\$6,299,200	\$18,876,900	\$31,192,800	\$1,919,600	\$1,439,700	\$34,552,100
16' deep Cutoff Wall	\$2,614,300	\$1,212,800	\$2,122,300	\$15,202,800	\$21,152,200	\$1,301,700	\$976,300	\$23,430,200
<b>Total of Preferred Alternatives</b>								<b>\$83,383,500</b>

  Recommended Alternative

**NICOLAUS SMALL COMMUNITIES FLOOD RISK REDUCTION PROGRAM  
FLOOD RISK REDUCTION FEASIBILITY STUDY  
PROJECT UNIT COSTS (PRELIMINARY)**

**RIO OSO SMALL COMMUNITIES FLOOD RISK REDUCTION PROGRAM  
FLOOD RISK REDUCTION FEASIBILITY STUDY  
PROJECT UNIT COSTS (PRELIMINARY)**

Item #	Description	Unit	Unit Price	Comments
<b>General</b>				
	Alternatives (100-YR or 200-YR)		100-YEAR (20' CROWN)	
	Escalation @ 3.3% for 3-years	%	9.9%	
	Land Acquisition Contingency	%	30%	
	Environmental Mitigation Contingency	%	30%	
	Relocations Contingency	%	30%	
	Roads Contingency	%	30%	
	Levee Contingency	%	30%	
	Planning, Engineering, & Design Contingency	%	8%	
	Construction Management Contingency	%	6%	
	Mobilization and Demobilization	LS	5%	
	Traffic Control (Rural)	LS	1%	
	Traffic Control (Urban)	LS	3%	
	Storm Water Pollution Control	LS	3%	
	Wheatland Outfall Contingency	%	50%	
<b>1 Lands</b>				
1.1	Land Acquisition (Flood Control Feature)	AC	\$45,000.00	From OPC
	Land Acquisition (O&M Easement)	AC	\$45,000.00	Added by CH
	Borrow Site Royalties	AC	\$20,000.00	
	Residential Building	EA	\$400,000.00	From Sutter County Assessor/Zillow Estimates
<b>2 Mitigation - Environmental</b>				
2.1	Environmental Mitigation	LS		7%
<b>3 Relocations</b>				
3.1	Utility Pole Relocation	EA	\$30,000.00	FRWL Project C/B/D, 2014, From Pete B
3.2	Private Irrigation Allowance	LF	\$20.00	
3.3	Canal Relocation	LF	\$110.00	from M&H, NLIIP
3.4	Irrigation Pump Relocation	EA	\$20,000.00	From SCWA Rio Vista (8246.007)
3.5	Utility Pole w/ meter Relocation	EA	\$17,500.00	From SCWA Rio Vista (8246.007)
3.6	Remove & Replace Fiber Optic Cable	LF	\$300.00	Based on Caltrans Contract Cost Data
3.7	Remove & Replace RD 1001 Main Pump Station (650 CFS Capacity)	EA	\$60,000,000.00	Pricing of pumps and structures. Comparison with similar, but smaller, projects
3.8	PG&E Substation Relocation	EA	\$2,000,000.00	Based on Caltrans Contract Cost Data
3.9	Remove & Replace Distribution Tower	EA	\$3,000,000.00	
<b>4 Roads</b>				
4.1	Road Relocation	LF	\$0.00	
4.2	Remove Ex. Agg. Surfacing	LF	\$10.00	FRWL Project 1 B/D, 2014
4.3	Remove Existing Roadway	SY	\$6.00	Removal of AC and AB
4.4	Class 2 Aggregate Base	TON	\$35.00	FRWL Project 1 B/D, 2014
4.5	Asphalt Concrete (3.5")	TON	\$120.00	FRWL Project 1 B/D, 2014
4.6	Class 2 Aggregate Surfacing	TON	\$35.00	FRWL Project 1 B/D, 2014
<b>5 Levees</b>				
5.1	Project Fencing	LF	\$3.50	FRWL Project C/B/D, 2014
5.2	Clearing and Grubbing	AC	\$3,000.00	FRWL Project C/B/D, 2014
5.3	Levee Stripping	AC	\$4,000.00	FRWL Project C/B/D, 2014
5.4	Levee Degrading/ Excavation	CY	\$5.00	FRWL Project C/B/D, 2014
5.5	Levee Fill (Embankment)	CY	\$4.00	FRWL Project C/B/D, 2014
5.6	Levee Fill (Clay Cap)	CY	\$4.50	FRWL Project C/B/D, 2014
5.7	Levee Erosion Control Seeding	AC	\$3,500.00	FRWL Project C/B/D, 2014
5.8	Cutoff Wall - Soil Bentonite	SF	\$6.50	Wall depth < 75-ft, FRWL Project C/B/D, 2014
5.9	Drain Rock	TON	\$45.00	HDR input
5.10	Sand Filter Layer	TON	\$45.00	HDR input
5.11	Filter Fabric	SY	\$5.00	FRWL Project C/B/D, 2014
5.12	Rock Slope Protection	TON	\$80.00	MHC Cost Estimate
5.13	Borrow Site Clearing and Grubbing	AC	\$3,000.00	FRWL Project C/B/D, 2014
5.14	Borrow Site Stripping	AC	\$3,500.00	FRWL Project C/B/D, 2014
5.15	Borrow Site Excavation and Hauling	CY	\$15.00	FRWL Project C/B/D, 2014
5.16	Borrow Site Erosion Control Seeding	AC	\$3,500.00	FRWL Project C/B/D, 2014
5.17	Haul and Dispose of Unsuitable Material	CY	\$10.00	FRWL Project C/B/D, 2014
5.18	Haul and Dispose of Unsuitable Debris	CY	\$7.50	FRWL Project C/B/D, 2014

RIO OSO SMALL COMMUNITIES FLOOD RISK REDUCTION PROGRAM  
 FLOOD RISK REDUCTION FEASIBILITY STUDY  
 OPINION OF PROBABLE PROJECT COSTS - 100-YEAR (12' CROWN & 20' CROWN)  
 STABILITY/SEEPAGE BERM (150-FOOT WIDE)  
 BEAR RIVER REACH B - STA 85+00 TO STA 130+72 (BR) & STA 0+00 TO 4+64 (YS)



Item No.	Item	Quantity	Unit	Unit Price	Cost	Contingency (%)	Contingency (\$)	Cost w/Contingency
<b>1</b>	<b>Lands</b>							
1.1	Land Acquisition (Flood Control Feature)	20.7	AC	\$45,000	\$931,500	30%	\$279,450	\$1,210,950
1.2	Land Acquisition (O&M Easement)	1.2	AC	\$45,000	\$54,000	30%	\$16,200	\$70,200
1.3	Borrow Site Royalties	29.4	AC	\$20,000	\$588,000	30%	\$176,400	\$764,400
1.4	Residential Building	1.0	EA	\$400,000	\$400,000	30%	\$120,000	\$520,000
	<b>Subtotal - Land and Damages</b>				<b>\$1,973,500</b>		<b>\$592,100</b>	<b>\$2,565,600</b>
<b>2</b>	<b>Mitigation - Environmental</b>							
2.1	Environmental Mitigation	1	LS	7%	\$798,889	30%	\$239,667	\$1,038,556
	<b>Subtotal - Mitigation</b>				<b>\$798,900</b>		<b>\$239,700</b>	<b>\$1,038,600</b>
<b>3</b>	<b>Relocations</b>							
3.1	Mobilization and Demobilization	1	LS	5%	\$6,536.00	30%	\$1,961	\$8,497
3.2	Utility Pole Relocation	1	EA	\$30,000	\$30,000	30%	\$9,000	\$39,000
3.3	Private Irrigation Allowance	5,036	LF	\$20	\$100,720	30%	\$30,216	\$130,936
	<b>Subtotal - Relocations</b>				<b>\$137,300</b>		<b>\$41,200</b>	<b>\$178,500</b>
<b>4</b>	<b>Levees</b>							
4.1	Mobilization and Demobilization	1	LS	5%	\$536,920	30%	\$161,076	\$697,996
4.2	Traffic Control (Rural)	1	LS	1%	\$106,321	30%	\$31,896	\$138,217
4.3	Storm Water Pollution Control	1	LS	3%	\$309,672	30%	\$92,902	\$402,574
4.4	Project Fencing	10,072	LF	\$4	\$35,252	30%	\$10,576	\$45,828
4.5	Clearing and Grubbing	40	AC	\$3,000	\$120,000	30%	\$36,000	\$156,000
4.6	Remove Ex. Agg. Surfacing	5,036	LF	\$10	\$50,360	30%	\$15,108	\$65,468
4.7	Levee Stripping	30	AC	\$4,000	\$120,000	30%	\$36,000	\$156,000
4.8	Levee Degrading/ Excavation	1,213	CY	\$5	\$6,065	30%	\$1,820	\$7,885
4.9	Levee Fill (Embankment)	197,337	CY	\$4	\$789,348	30%	\$236,804	\$1,026,152
4.10	Cutoff Wall - Soil Bentonite	0	SF	\$7	\$0	30%	\$0	\$0
4.11	Drain Rock	74,407	TON	\$45	\$3,348,315	30%	\$1,004,495	\$4,352,810
4.12	Sand Filter Layer	38,148	TON	\$45	\$1,716,660	30%	\$514,998	\$2,231,658
4.13	Rock Slope Protection	0	TON	\$80	\$0	30%	\$0	\$0
4.14	Class 2 Aggregate Surfacing	3,777	TON	\$35	\$132,195	30%	\$39,659	\$171,854
4.15	Levee Erosion Control Seeding	40	AC	\$3,500	\$140,000	30%	\$42,000	\$182,000
4.16	Haul and Dispose of Unsuitable Material	1,213	CY	\$10	\$12,130	30%	\$3,639	\$15,769
4.17	Borrow Site Clearing and Grubbing	30	AC	\$3,000	\$90,000	30%	\$27,000	\$117,000
4.18	Borrow Site Stripping	30	AC	\$3,500	\$105,000	30%	\$31,500	\$136,500
4.19	Borrow Site Excavation and Hauling	236,805	CY	\$15	\$3,552,075	30%	\$1,065,623	\$4,617,698
4.20	Borrow Site Erosion Control Seeding	30	AC	\$3,500	\$105,000	30%	\$31,500	\$136,500
	<b>Subtotal - Levees</b>				<b>\$11,275,400</b>		<b>\$3,382,600</b>	<b>\$14,658,000</b>
	<b>ESTIMATED REACH SUB-TOTAL (100-YEAR (12' CROWN &amp; 20' CROWN))</b>				<b>\$14,185,100</b>		<b>\$4,255,600</b>	<b>\$18,440,700</b>
<b>5</b>	<b>Planning, Engineering and Design</b>							
5.1	Planning, Engineering and Design (8%)				\$1,134,808	0%	\$0	\$1,134,900
<b>6</b>	<b>Construction Management</b>							
6.1	Construction Management (6%)				\$851,106	0%	\$0	\$851,200
	<b>ESTIMATED REACH TOTAL (100-YEAR (12' CROWN &amp; 20' CROWN))</b>				<b>\$16,171,014</b>		<b>\$4,255,600</b>	<b>\$20,426,800</b>
	<b>ESTIMATED REACH TOTAL (w/Escalation @ 3.3% for 3-years)</b>				<b>\$17,771,944.39</b>		<b>\$4,676,904.40</b>	<b>\$22,449,100</b>

RIO OSO SMALL COMMUNITIES FLOOD RISK REDUCTION PROGRAM  
 FLOOD RISK REDUCTION FEASIBILITY STUDY  
 OPINION OF PROBABLE PROJECT COSTS - 100-YEAR (12' CROWN & 20' CROWN)  
 CUTOFF WALL (40-FOOT DEEP)  
 BEAR RIVER REACH B - STA 85+00 TO STA 130+72 (BR) & STA 0+00 TO 4+64 (YS)



Item No.	Item	Quantity	Unit	Unit Price	Cost	Contingency (%)	Contingency (\$)	Cost w/Contingency
<b>1</b>	<b>Lands</b>							
1.1	Land Acquisition (Flood Control Feature)	3.4	AC	\$45,000	\$153,000	30%	\$45,900	\$198,900
1.2	Land Acquisition (O&M Easement)	1.2	AC	\$45,000	\$54,000	30%	\$16,200	\$70,200
1.3	Borrow Site Royalties	14.0	AC	\$20,000	\$280,000	30%	\$84,000	\$364,000
1.4	Residential Building	1.0	EA	\$400,000	\$400,000	30%	\$120,000	\$520,000
	<b>Subtotal - Land and Damages</b>				<b>\$887,000</b>		<b>\$266,100</b>	<b>\$1,153,100</b>
<b>2</b>	<b>Mitigation - Environmental</b>							
2.1	Environmental Mitigation	1	LS	7%	\$379,491	30%	\$113,847	\$493,338
	<b>Subtotal - Mitigation</b>				<b>\$379,500</b>		<b>\$113,900</b>	<b>\$493,400</b>
<b>3</b>	<b>Relocations</b>							
3.1	Mobilization and Demobilization	1	LS	5%	\$5,036.00	30%	\$1,511	\$6,547
3.2	Utility Pole Relocation	0	EA	\$30,000	\$0	30%	\$0	\$0
3.3	Private Irrigation Allowance	5,036	LF	\$20	\$100,720	30%	\$30,216	\$130,936
	<b>Subtotal - Relocations</b>				<b>\$105,800</b>		<b>\$31,800</b>	<b>\$137,500</b>
<b>4</b>	<b>Levees</b>							
4.1	Mobilization and Demobilization	1	LS	5%	\$253,117	30%	\$75,935	\$329,052
4.2	Traffic Control (Rural)	1	LS	1%	\$50,122	30%	\$15,037	\$65,159
4.3	Storm Water Pollution Control	1	LS	3%	\$145,987	30%	\$43,796	\$189,783
4.4	Project Fencing	10,072	LF	\$4	\$35,252	30%	\$10,576	\$45,828
4.5	Clearing and Grubbing	22	AC	\$3,000	\$66,000	30%	\$19,800	\$85,800
4.6	Remove Ex. Agg. Surfacing	5,036	LF	\$10	\$50,360	30%	\$15,108	\$65,468
4.7	Levee Stripping	7	AC	\$4,000	\$28,000	30%	\$8,400	\$36,400
4.8	Levee Degrading/ Excavation	64,070	CY	\$5	\$320,350	30%	\$96,105	\$416,455
4.9	Levee Fill (Embankment)	93,446	CY	\$4	\$373,784	30%	\$112,135	\$485,919
4.10	Cutoff Wall - Soil Bentonite	201,440	SF	\$7	\$1,309,360	30%	\$392,808	\$1,702,168
4.11	Drain Rock	0	TON	\$45	\$0	30%	\$0	\$0
4.12	Sand Filter Layer	0	TON	\$45	\$0	30%	\$0	\$0
4.13	Rock Slope Protection	0	TON	\$80	\$0	30%	\$0	\$0
4.14	Class 2 Aggregate Surfacing	3,777	TON	\$35	\$132,195	30%	\$39,659	\$171,854
4.15	Levee Erosion Control Seeding	22	AC	\$3,500	\$77,000	30%	\$23,100	\$100,100
4.16	Haul and Dispose of Unsuitable Material	65,189	CY	\$10	\$651,890	30%	\$195,567	\$847,457
4.17	Borrow Site Clearing and Grubbing	14	AC	\$3,000	\$42,000	30%	\$12,600	\$54,600
4.18	Borrow Site Stripping	14	AC	\$3,500	\$49,000	30%	\$14,700	\$63,700
4.19	Borrow Site Excavation and Hauling	112,136	CY	\$15	\$1,682,040	30%	\$504,612	\$2,186,652
4.20	Borrow Site Erosion Control Seeding	14	AC	\$3,500	\$49,000	30%	\$14,700	\$63,700
	<b>Subtotal - Levees</b>				<b>\$5,315,500</b>		<b>\$1,594,700</b>	<b>\$6,910,100</b>
	<b>ESTIMATED REACH SUB-TOTAL (100-YEAR (12' CROWN &amp; 20' CROWN))</b>				<b>\$6,687,800</b>		<b>\$2,006,500</b>	<b>\$8,694,100</b>
<b>5</b>	<b>Planning, Engineering and Design</b>							
5.1	Planning, Engineering and Design (8%)				\$535,024	0%	\$0	\$535,100
<b>6</b>	<b>Construction Management</b>							
6.1	Construction Management (6%)				\$401,268	0%	\$0	\$401,300
	<b>ESTIMATED REACH TOTAL (100-YEAR (12' CROWN &amp; 20' CROWN))</b>				<b>\$7,624,092</b>		<b>\$2,006,500</b>	<b>\$9,630,500</b>
	<b>ESTIMATED REACH TOTAL (w/Escalation @ 3.3% for 3-years)</b>				<b>\$8,378,877.11</b>		<b>\$2,205,143.50</b>	<b>\$10,584,000</b>

RIO OSO SMALL COMMUNITIES FLOOD RISK REDUCTION PROGRAM  
 FLOOD RISK REDUCTION FEASIBILITY STUDY  
 OPINION OF PROBABLE PROJECT COSTS - 100-YEAR (12' CROWN)  
 DRAINED STABILITY BERM (15-FOOT WIDE)  
 YANKEE SLOUGH REACH A.1 - STA 4+64 TO STA 38+30



Item No.	Item	Quantity	Unit	Unit Price	Cost	Contingency (%)	Contingency (\$)	Cost w/Contingency
<b>1</b>	<b>Lands</b>							
1.1	Land Acquisition (Flood Control Feature)	3.0	AC	\$45,000	\$135,000	30%	\$40,500	\$175,500
1.2	Land Acquisition (O&M Easement)	0.8	AC	\$45,000	\$36,000	30%	\$10,800	\$46,800
1.3	Borrow Site Royalties	6.6	AC	\$20,000	\$132,000	30%	\$39,600	\$171,600
	<b>Subtotal - Land and Damages</b>				<b>\$303,000</b>		<b>\$90,900</b>	<b>\$393,900</b>
<b>2</b>	<b>Mitigation - Environmental</b>							
2.1	Environmental Mitigation	1	LS	7%	\$217,861	30%	\$65,358	\$283,219
	<b>Subtotal - Mitigation</b>				<b>\$217,900</b>		<b>\$65,400</b>	<b>\$283,300</b>
<b>3</b>	<b>Relocations</b>							
3.1	Mobilization and Demobilization	1	LS	5%	\$19,866.00	30%	\$5,960	\$25,826
3.2	Utility Pole Relocation	0	EA	\$30,000	\$0	30%	\$0	\$0
3.3	Canal Relocation	3,000	LF	\$110	\$330,000	30%	\$99,000	\$429,000
3.4	Private Irrigation Allowance	3,366	LF	\$20	\$67,320	30%	\$20,196	\$87,516
	<b>Subtotal - Relocations</b>				<b>\$417,200</b>		<b>\$125,200</b>	<b>\$542,400</b>
<b>4</b>	<b>Levees</b>							
4.1	Mobilization and Demobilization	1	LS	5%	\$128,336	30%	\$38,501	\$166,837
4.2	Traffic Control (Rural)	1	LS	1%	\$25,413	30%	\$7,624	\$33,037
4.3	Storm Water Pollution Control	1	LS	3%	\$74,019	30%	\$22,206	\$96,224
4.4	Project Fencing	6,732	LF	\$4	\$23,562	30%	\$7,069	\$30,631
4.5	Clearing and Grubbing	13	AC	\$3,000	\$39,000	30%	\$11,700	\$50,700
4.6	Remove Ex. Agg. Surfacing	3,366	LF	\$10	\$33,660	30%	\$10,098	\$43,758
4.7	Levee Stripping	12	AC	\$4,000	\$48,000	30%	\$14,400	\$62,400
4.8	Levee Degrading/ Excavation	24,560	CY	\$5	\$122,800	30%	\$36,840	\$159,640
4.9	Levee Fill (Embankment)	44,008	CY	\$4	\$176,032	30%	\$52,810	\$228,842
4.10	Cutoff Wall - Soil Bentonite	0	SF	\$7	\$0	30%	\$0	\$0
4.11	Drain Rock	11,613	TON	\$45	\$522,585	30%	\$156,776	\$679,361
4.12	Sand Filter Layer	6,564	TON	\$45	\$295,380	30%	\$88,614	\$383,994
4.13	Rock Slope Protection	0	TON	\$80	\$0	30%	\$0	\$0
4.14	Class 2 Aggregate Surfacing	1,515	TON	\$35	\$53,025	30%	\$15,908	\$68,933
4.15	Levee Erosion Control Seeding	13	AC	\$3,500	\$45,500	30%	\$13,650	\$59,150
4.16	Haul and Dispose of Unsuitable Material	24,560	CY	\$10	\$245,600	30%	\$73,680	\$319,280
4.17	Borrow Site Clearing and Grubbing	7	AC	\$3,000	\$21,000	30%	\$6,300	\$27,300
4.18	Borrow Site Stripping	7	AC	\$3,500	\$24,500	30%	\$7,350	\$31,850
4.19	Borrow Site Excavation and Hauling	52,810	CY	\$15	\$792,150	30%	\$237,645	\$1,029,795
4.20	Borrow Site Erosion Control Seeding	7	AC	\$3,500	\$24,500	30%	\$7,350	\$31,850
	<b>Subtotal - Levees</b>				<b>\$2,695,100</b>		<b>\$808,600</b>	<b>\$3,503,600</b>
<b>ESTIMATED REACH SUB-TOTAL (100-YEAR (12' CROWN))</b>					<b>\$3,633,200</b>		<b>\$1,090,100</b>	<b>\$4,723,200</b>
<b>5</b>	<b>Planning, Engineering and Design</b>							
5.1	Planning, Engineering and Design (8%)				\$290,656	0%	\$0	\$290,700
<b>6</b>	<b>Construction Management</b>							
6.1	Construction Management (6%)				\$217,992	0%	\$0	\$218,000
<b>ESTIMATED REACH TOTAL (100-YEAR (12' CROWN))</b>					<b>\$4,141,848</b>		<b>\$1,090,100</b>	<b>\$5,231,900</b>
<b>ESTIMATED REACH TOTAL (w/Escalation @ 3.3% for 3-years)</b>					<b>\$4,551,890.95</b>		<b>\$1,198,019.90</b>	<b>\$5,749,900</b>

RIO OSO SMALL COMMUNITIES FLOOD RISK REDUCTION PROGRAM  
 FLOOD RISK REDUCTION FEASIBILITY STUDY  
 OPINION OF PROBABLE PROJECT COSTS - 100-YEAR (12' CROWN)  
 CUTOFF WALL (16-FOOT DEEP)  
 YANKEE SLOUGH REACH A.1 - STA 4+64 TO STA 38+30



Item No.	Item	Quantity	Unit	Unit Price	Cost	Contingency (%)	Contingency (\$)	Cost w/Contingency
<b>1</b>	<b>Lands</b>							
1.1	Land Acquisition (Flood Control Feature)	1.6	AC	\$45,000	\$72,000	30%	\$21,600	\$93,600
1.2	Land Acquisition (O&M Easement)	0.8	AC	\$45,000	\$36,000	30%	\$10,800	\$46,800
1.3	Borrow Site Royalties	7.5	AC	\$20,000	\$150,000	30%	\$45,000	\$195,000
	<b>Subtotal - Land and Damages</b>				<b>\$258,000</b>		<b>\$77,400</b>	<b>\$335,400</b>
<b>2</b>	<b>Mitigation - Environmental</b>							
2.1	Environmental Mitigation	1	LS	7%	\$220,129	30%	\$66,039	\$286,168
	<b>Subtotal - Mitigation</b>				<b>\$220,200</b>		<b>\$66,100</b>	<b>\$286,200</b>
<b>3</b>	<b>Relocations</b>							
3.1	Mobilization and Demobilization	1	LS	5%	\$19,866.00	30%	\$5,960	\$25,826
3.2	Utility Pole Relocation	0	EA	\$30,000	\$0	30%	\$0	\$0
3.3	Canal Relocation	3,000	LF	\$110	\$330,000	30%	\$99,000	\$429,000
3.4	Private Irrigation Allowance	3,366	LF	\$20	\$67,320	30%	\$20,196	\$87,516
	<b>Subtotal - Relocations</b>				<b>\$417,200</b>		<b>\$125,200</b>	<b>\$542,400</b>
<b>4</b>	<b>Levees</b>							
4.1	Mobilization and Demobilization	1	LS	5%	\$129,878	30%	\$38,963	\$168,841
4.2	Traffic Control (Rural)	1	LS	1%	\$25,718	30%	\$7,716	\$33,434
4.3	Storm Water Pollution Control	1	LS	3%	\$74,908	30%	\$22,472	\$97,380
4.4	Project Fencing	6,732	LF	\$4	\$23,562	30%	\$7,069	\$30,631
4.5	Clearing and Grubbing	11	AC	\$3,000	\$33,000	30%	\$9,900	\$42,900
4.6	Remove Ex. Agg. Surfacing	3,366	LF	\$10	\$33,660	30%	\$10,098	\$43,758
4.7	Levee Stripping	9	AC	\$4,000	\$36,000	30%	\$10,800	\$46,800
4.8	Levee Degrading/ Excavation	49,680	CY	\$5	\$248,400	30%	\$74,520	\$322,920
4.9	Levee Fill (Embankment)	50,042	CY	\$4	\$200,168	30%	\$60,050	\$260,218
4.10	Cutoff Wall - Soil Bentonite	53,856	SF	\$7	\$350,064	30%	\$105,019	\$455,083
4.11	Drain Rock	0	TON	\$45	\$0	30%	\$0	\$0
4.12	Sand Filter Layer	0	TON	\$45	\$0	30%	\$0	\$0
4.13	Rock Slope Protection	0	TON	\$80	\$0	30%	\$0	\$0
4.14	Class 2 Aggregate Surfacing	1,515	TON	\$35	\$53,025	30%	\$15,908	\$68,933
4.15	Levee Erosion Control Seeding	11	AC	\$3,500	\$38,500	30%	\$11,550	\$50,050
4.16	Haul and Dispose of Unsuitable Material	49,979	CY	\$10	\$499,790	30%	\$149,937	\$649,727
4.17	Borrow Site Clearing and Grubbing	8	AC	\$3,000	\$24,000	30%	\$7,200	\$31,200
4.18	Borrow Site Stripping	8	AC	\$3,500	\$28,000	30%	\$8,400	\$36,400
4.19	Borrow Site Excavation and Hauling	60,051	CY	\$15	\$900,765	30%	\$270,230	\$1,170,995
4.20	Borrow Site Erosion Control Seeding	8	AC	\$3,500	\$28,000	30%	\$8,400	\$36,400
	<b>Subtotal - Levees</b>				<b>\$2,727,500</b>		<b>\$818,300</b>	<b>\$3,545,700</b>
<b>ESTIMATED REACH SUB-TOTAL (100-YEAR (12' CROWN))</b>					<b>\$3,622,900</b>		<b>\$1,087,000</b>	<b>\$4,709,700</b>
<b>5</b>	<b>Planning, Engineering and Design</b>							
5.1	Planning, Engineering and Design (8%)				\$289,832	0%	\$0	\$289,900
<b>6</b>	<b>Construction Management</b>							
6.1	Construction Management (6%)				\$217,374	0%	\$0	\$217,400
<b>ESTIMATED REACH TOTAL (100-YEAR (12' CROWN))</b>					<b>\$4,130,106</b>		<b>\$1,087,000</b>	<b>\$5,217,000</b>
<b>ESTIMATED REACH TOTAL (w/Escalation @ 3.3% for 3-years)</b>					<b>\$4,538,986.49</b>		<b>\$1,194,613.00</b>	<b>\$5,733,500</b>

RIO OSO SMALL COMMUNITIES FLOOD RISK REDUCTION PROGRAM  
 FLOOD RISK REDUCTION FEASIBILITY STUDY  
 OPINION OF PROBABLE PROJECT COSTS - 100-YEAR (12' CROWN)  
 DRAINED STABILITY BERM (15-FOOT WIDE)  
 YANKEE SLOUGH REACH A.2 - STA 38+30 TO STA 231+17



Item No.	Item	Quantity	Unit	Unit Price	Cost	Contingency (%)	Contingency (\$)	Cost w/Contingency
<b>1</b>	<b>Lands</b>							
1.1	Land Acquisition (Flood Control Feature)	16.4	AC	\$45,000	\$738,000	30%	\$221,400	\$959,400
1.2	Land Acquisition (O&M Easement)	4.5	AC	\$45,000	\$202,500	30%	\$60,750	\$263,250
1.3	Borrow Site Royalties	36.6	AC	\$20,000	\$732,000	30%	\$219,600	\$951,600
1.4	Residential Building	4.0	EA	\$400,000	\$1,600,000	30%	\$480,000	\$2,080,000
	<b>Subtotal - Land and Damages</b>				<b>\$3,272,500</b>		<b>\$981,800</b>	<b>\$4,254,300</b>
<b>2</b>	<b>Mitigation - Environmental</b>							
2.1	Environmental Mitigation	1	LS	7%	\$1,355,634	30%	\$406,690	\$1,762,324
	<b>Subtotal - Mitigation</b>				<b>\$1,355,700</b>		<b>\$406,700</b>	<b>\$1,762,400</b>
<b>3</b>	<b>Relocations</b>							
3.1	Mobilization and Demobilization	1	LS	5%	\$230,737.00	30%	\$69,221	\$299,958
3.2	Utility Pole Relocation	16	EA	\$30,000	\$480,000	30%	\$144,000	\$624,000
3.3	Canal Relocation	5,900	LF	\$110	\$649,000	30%	\$194,700	\$843,700
3.4	Irrigation Pump Relocation	5	EA	\$20,000	\$100,000	30%	\$30,000	\$130,000
3.5	Remove & Replace Distribution Tower	1	EA	\$3,000,000	\$3,000,000	30%	\$900,000	\$3,900,000
3.6	Private Irrigation Allowance	19,287	LF	\$20	\$385,740	30%	\$115,722	\$501,462
	<b>Subtotal - Relocations</b>				<b>\$4,845,500</b>		<b>\$1,453,700</b>	<b>\$6,299,200</b>
<b>4</b>	<b>Levees</b>							
4.1	Mobilization and Demobilization	1	LS	5%	\$691,459	30%	\$207,438	\$898,897
4.2	Traffic Control (Rural)	1	LS	1%	\$136,923	30%	\$41,077	\$177,999
4.3	Storm Water Pollution Control	1	LS	3%	\$398,804	30%	\$119,641	\$518,445
4.4	Project Fencing	38,574	LF	\$4	\$135,009	30%	\$40,503	\$175,512
4.5	Clearing and Grubbing	59	AC	\$3,000	\$177,000	30%	\$53,100	\$230,100
4.6	Remove Ex. Agg. Surfacing	19,287	LF	\$10	\$192,870	30%	\$57,861	\$250,731
4.7	Levee Stripping	44	AC	\$4,000	\$176,000	30%	\$52,800	\$228,800
4.8	Levee Degrading/ Excavation	109,293	CY	\$5	\$546,465	30%	\$163,940	\$710,405
4.9	Levee Fill (Embankment)	245,731	CY	\$4	\$982,924	30%	\$294,877	\$1,277,801
4.10	Cutoff Wall - Soil Bentonite	0	SF	\$7	\$0	30%	\$0	\$0
4.11	Drain Rock	66,541	TON	\$45	\$2,994,345	30%	\$898,304	\$3,892,649
4.12	Sand Filter Layer	37,610	TON	\$45	\$1,692,450	30%	\$507,735	\$2,200,185
4.13	Rock Slope Protection	0	TON	\$80	\$0	30%	\$0	\$0
4.14	Class 2 Aggregate Surfacing	8,680	TON	\$35	\$303,800	30%	\$91,140	\$394,940
4.15	Levee Erosion Control Seeding	59	AC	\$3,500	\$206,500	30%	\$61,950	\$268,450
4.16	Haul and Dispose of Unsuitable Material	109,293	CY	\$10	\$1,092,930	30%	\$327,879	\$1,420,809
4.17	Borrow Site Clearing and Grubbing	37	AC	\$3,000	\$111,000	30%	\$33,300	\$144,300
4.18	Borrow Site Stripping	37	AC	\$3,500	\$129,500	30%	\$38,850	\$168,350
4.19	Borrow Site Excavation and Hauling	294,878	CY	\$15	\$4,423,170	30%	\$1,326,951	\$5,750,121
4.20	Borrow Site Erosion Control Seeding	37	AC	\$3,500	\$129,500	30%	\$38,850	\$168,350
	<b>Subtotal - Levees</b>				<b>\$14,520,700</b>		<b>\$4,356,200</b>	<b>\$18,876,900</b>
	<b>ESTIMATED REACH SUB-TOTAL (100-YEAR (12' CROWN))</b>				<b>\$23,994,400</b>		<b>\$7,198,400</b>	<b>\$31,192,800</b>
<b>5</b>	<b>Planning, Engineering and Design</b>							
5.1	Planning, Engineering and Design (8%)				\$1,919,552	0%	\$0	\$1,919,600
<b>6</b>	<b>Construction Management</b>							
6.1	Construction Management (6%)				\$1,439,664	0%	\$0	\$1,439,700
	<b>ESTIMATED REACH TOTAL (100-YEAR (12' CROWN))</b>				<b>\$27,353,616</b>		<b>\$7,198,400</b>	<b>\$34,552,100</b>
	<b>ESTIMATED REACH TOTAL (w/Escalation @ 3.3% for 3-years)</b>				<b>\$30,061,623.98</b>		<b>\$7,911,041.60</b>	<b>\$37,972,800</b>

RIO OSO SMALL COMMUNITIES FLOOD RISK REDUCTION PROGRAM  
 FLOOD RISK REDUCTION FEASIBILITY STUDY  
 OPINION OF PROBABLE PROJECT COSTS - 100-YEAR (12' CROWN)  
 CUTOFF WALL (16-FOOT DEEP)  
 YANKEE SLOUGH REACH A.2 - STA 38+30 TO STA 231+17



Item No.	Item	Quantity	Unit	Unit Price	Cost	Contingency (%)	Contingency (\$)	Cost w/Contingency
<b>1</b>	<b>Lands</b>							
1.1	Land Acquisition (Flood Control Feature)	8.9	AC	\$45,000	\$400,500	30%	\$120,150	\$520,650
1.2	Land Acquisition (O&M Easement)	4.5	AC	\$45,000	\$202,500	30%	\$60,750	\$263,250
1.3	Borrow Site Royalties	30.4	AC	\$20,000	\$608,000	30%	\$182,400	\$790,400
1.4	Residential Building	2.0	EA	\$400,000	\$800,000	30%	\$240,000	\$1,040,000
	<b>Subtotal - Land and Damages</b>				<b>\$2,011,000</b>		<b>\$603,300</b>	<b>\$2,614,300</b>
<b>2</b>	<b>Mitigation - Environmental</b>							
2.1	Environmental Mitigation	1	LS	7%	\$932,890	30%	\$279,867	\$1,212,757
	<b>Subtotal - Mitigation</b>				<b>\$932,900</b>		<b>\$279,900</b>	<b>\$1,212,800</b>
<b>3</b>	<b>Relocations</b>							
3.1	Mobilization and Demobilization	1	LS	5%	\$77,737.00	30%	\$23,321	\$101,058
3.2	Utility Pole Relocation	14	EA	\$30,000	\$420,000	30%	\$126,000	\$546,000
3.3	Canal Relocation	5,900	LF	\$110	\$649,000	30%	\$194,700	\$843,700
3.4	Irrigation Pump Relocation	5	EA	\$20,000	\$100,000	30%	\$30,000	\$130,000
3.5	Remove & Replace Distribution Tower	0	EA	\$3,000,000	\$0	30%	\$0	\$0
3.6	Private Irrigation Allowance	19,287	LF	\$20	\$385,740	30%	\$115,722	\$501,462
	<b>Subtotal - Relocations</b>				<b>\$1,632,500</b>		<b>\$489,800</b>	<b>\$2,122,300</b>
<b>4</b>	<b>Levees</b>							
4.1	Mobilization and Demobilization	1	LS	5%	\$556,879	30%	\$167,064	\$723,942
4.2	Traffic Control (Rural)	1	LS	1%	\$110,273	30%	\$33,082	\$143,355
4.3	Storm Water Pollution Control	1	LS	3%	\$321,183	30%	\$96,355	\$417,539
4.4	Project Fencing	38,574	LF	\$4	\$135,009	30%	\$40,503	\$175,512
4.5	Clearing and Grubbing	44	AC	\$3,000	\$132,000	30%	\$39,600	\$171,600
4.6	Remove Ex. Agg. Surfacing	19,287	LF	\$10	\$192,870	30%	\$57,861	\$250,731
4.7	Levee Stripping	26	AC	\$4,000	\$104,000	30%	\$31,200	\$135,200
4.8	Levee Degrading/ Excavation	191,085	CY	\$5	\$955,425	30%	\$286,628	\$1,242,053
4.9	Levee Fill (Embankment)	203,871	CY	\$4	\$815,484	30%	\$244,645	\$1,060,129
4.10	Cutoff Wall - Soil Bentonite	308,592	SF	\$7	\$2,005,848	30%	\$601,754	\$2,607,602
4.11	Drain Rock	0	TON	\$45	\$0	30%	\$0	\$0
4.12	Sand Filter Layer	0	TON	\$45	\$0	30%	\$0	\$0
4.13	Rock Slope Protection	0	TON	\$80	\$0	30%	\$0	\$0
4.14	Class 2 Aggregate Surfacing	8,680	TON	\$35	\$303,800	30%	\$91,140	\$394,940
4.15	Levee Erosion Control Seeding	44	AC	\$3,500	\$154,000	30%	\$46,200	\$200,200
4.16	Haul and Dispose of Unsuitable Material	192,799	CY	\$10	\$1,927,990	30%	\$578,397	\$2,506,387
4.17	Borrow Site Clearing and Grubbing	31	AC	\$3,000	\$93,000	30%	\$27,900	\$120,900
4.18	Borrow Site Stripping	31	AC	\$3,500	\$108,500	30%	\$32,550	\$141,050
4.19	Borrow Site Excavation and Hauling	244,646	CY	\$15	\$3,669,690	30%	\$1,100,907	\$4,770,597
4.20	Borrow Site Erosion Control Seeding	31	AC	\$3,500	\$108,500	30%	\$32,550	\$141,050
	<b>Subtotal - Levees</b>				<b>\$11,694,500</b>		<b>\$3,508,400</b>	<b>\$15,202,800</b>
	<b>ESTIMATED REACH SUB-TOTAL (100-YEAR (12' CROWN))</b>				<b>\$16,270,900</b>		<b>\$4,881,400</b>	<b>\$21,152,200</b>
<b>5</b>	<b>Planning, Engineering and Design</b>							
5.1	Planning, Engineering and Design (8%)				\$1,301,672	0%	\$0	\$1,301,700
<b>6</b>	<b>Construction Management</b>							
6.1	Construction Management (6%)				\$976,254	0%	\$0	\$976,300
	<b>ESTIMATED REACH TOTAL (100-YEAR (12' CROWN))</b>				<b>\$18,548,826</b>		<b>\$4,881,400</b>	<b>\$23,430,200</b>
	<b>ESTIMATED REACH TOTAL (w/Escalation @ 3.3% for 3-years)</b>				<b>\$20,385,159.77</b>		<b>\$5,364,658.60</b>	<b>\$25,749,800</b>

RIO OSO SMALL COMMUNITIES FLOOD RISK REDUCTION PROGRAM  
 FLOOD RISK REDUCTION FEASIBILITY STUDY  
 OPINION OF PROBABLE PROJECT COSTS - 100-YEAR (20' CROWN)  
 WATERSIDE ROCK SLOPE PROTECTION & LANDSIDE SEEPAGE/STABILITY BERM (60-FOOT WIDE)  
 BEAR RIVER REACH C - STA 0+00 TO STA 85+00



Item No.	Item	Quantity	Unit	Unit Price	Cost	Contingency (%)	Contingency (\$)	Cost w/Contingency
<b>1</b>	<b>Lands</b>							
1.1	Land Acquisition (Flood Control Feature)	17.8	AC	\$45,000	\$801,000	30%	\$240,300	\$1,041,300
1.2	Land Acquisition (O&M Easement)	2.0	AC	\$45,000	\$90,000	30%	\$27,000	\$117,000
1.3	Borrow Site Royalties	41.0	AC	\$20,000	\$820,000	30%	\$246,000	\$1,066,000
1.4	Residential Building	1.0	EA	\$400,000	\$400,000	30%	\$120,000	\$520,000
	<b>Subtotal - Land and Damages</b>				<b>\$2,111,000</b>		<b>\$633,300</b>	<b>\$2,744,300</b>
<b>2</b>	<b>Mitigation - Environmental</b>							
2.1	Environmental Mitigation	1	LS	7%	\$2,159,430	30%	\$647,829	\$2,807,259
	<b>Subtotal - Mitigation</b>				<b>\$2,159,500</b>		<b>\$647,900</b>	<b>\$2,807,300</b>
<b>3</b>	<b>Relocations</b>							
3.1	Mobilization and Demobilization	1	LS	5%	\$10,000.00	30%	\$3,000	\$13,000
3.2	Utility Pole Relocation	1	EA	\$30,000	\$30,000	30%	\$9,000	\$39,000
3.3	Private Irrigation Allowance	8,500	LF	\$20	\$170,000	30%	\$51,000	\$221,000
	<b>Subtotal - Relocations</b>				<b>\$210,000</b>		<b>\$63,000</b>	<b>\$273,000</b>
<b>4</b>	<b>Levees</b>							
4.1	Mobilization and Demobilization	1	LS	5%	\$1,459,000	30%	\$437,700	\$1,896,700
4.2	Traffic Control (Rural)	1	LS	1%	\$288,911	30%	\$86,673	\$375,584
4.3	Storm Water Pollution Control	1	LS	3%	\$841,488	30%	\$252,446	\$1,093,934
4.4	Project Fencing	17,000	LF	\$4	\$59,500	30%	\$17,850	\$77,350
4.5	Clearing and Grubbing	54	AC	\$3,000	\$162,000	30%	\$48,600	\$210,600
4.6	Remove Ex. Agg. Surfacing	8,500	LF	\$10	\$85,000	30%	\$25,500	\$110,500
4.7	Levee Stripping	31	AC	\$4,000	\$124,000	30%	\$37,200	\$161,200
4.8	Levee Degrading/ Excavation	58,399	CY	\$5	\$291,995	30%	\$87,599	\$379,594
4.9	Levee Fill (Embankment)	275,149	CY	\$4	\$1,100,596	30%	\$330,179	\$1,430,775
4.10	Cutoff Wall - Soil Bentonite	0	SF	\$7	\$0	30%	\$0	\$0
4.11	Drain Rock	74,588	TON	\$45	\$3,356,460	30%	\$1,006,938	\$4,363,398
4.12	Sand Filter Layer	79,050	TON	\$45	\$3,557,250	30%	\$1,067,175	\$4,624,425
4.13	Rock Slope Protection	161,925	TON	\$80	\$12,954,000	30%	\$3,886,200	\$16,840,200
4.14	Class 2 Aggregate Surfacing	6,375	TON	\$35	\$223,125	30%	\$66,938	\$290,063
4.15	Levee Erosion Control Seeding	54	AC	\$3,500	\$189,000	30%	\$56,700	\$245,700
4.16	Haul and Dispose of Unsuitable Material	58,399	CY	\$10	\$583,990	30%	\$175,197	\$759,187
4.17	Borrow Site Clearing and Grubbing	41	AC	\$3,000	\$123,000	30%	\$36,900	\$159,900
4.18	Borrow Site Stripping	41	AC	\$3,500	\$143,500	30%	\$43,050	\$186,550
4.19	Borrow Site Excavation and Hauling	330,179	CY	\$15	\$4,952,685	30%	\$1,485,806	\$6,438,491
4.20	Borrow Site Erosion Control Seeding	41	AC	\$3,500	\$143,500	30%	\$43,050	\$186,550
	<b>Subtotal - Levees</b>				<b>\$30,639,000</b>		<b>\$9,191,700</b>	<b>\$39,830,700</b>
	<b>ESTIMATED REACH SUB-TOTAL (100-YEAR (20' CROWN))</b>				<b>\$35,119,500</b>		<b>\$10,535,900</b>	<b>\$45,655,300</b>
<b>5</b>	<b>Planning, Engineering and Design</b>							
5.1	Planning, Engineering and Design (8%)				\$2,809,560	0%	\$0	\$2,809,600
<b>6</b>	<b>Construction Management</b>							
6.1	Construction Management (6%)				\$2,107,170	0%	\$0	\$2,107,200
	<b>ESTIMATED REACH TOTAL (100-YEAR (20' CROWN))</b>				<b>\$40,036,230</b>		<b>\$10,535,900</b>	<b>\$50,572,100</b>
	<b>ESTIMATED REACH TOTAL (w/Escalation @ 3.3% for 3-years)</b>				<b>\$43,999,816.77</b>		<b>\$11,578,954.10</b>	<b>\$55,578,800</b>

RIO OSO SMALL COMMUNITIES FLOOD RISK REDUCTION PROGRAM  
 FLOOD RISK REDUCTION FEASIBILITY STUDY  
 OPINION OF PROBABLE PROJECT COSTS - 100-YEAR (20' CROWN)  
 WATERSIDE ROCK SLOPE PROTECTION & CUTOFF WALL (60-FOOT DEEP)  
 BEAR RIVER REACH C - STA 0+00 TO STA 85+00



Item No.	Item	Quantity	Unit	Unit Price	Cost	Contingency (%)	Contingency (\$)	Cost w/Contingency
<b>1</b>	<b>Lands</b>							
1.1	Land Acquisition (Flood Control Feature)	6.3	AC	\$45,000	\$283,500	30%	\$85,050	\$368,550
1.2	Land Acquisition (O&M Easement)	2.0	AC	\$45,000	\$90,000	30%	\$27,000	\$117,000
1.3	Borrow Site Royalties	28.3	AC	\$20,000	\$566,000	30%	\$169,800	\$735,800
1.4	Residential Building	0.0	EA	\$400,000	\$0	30%	\$0	\$0
	<b>Subtotal - Land and Damages</b>				<b>\$939,500</b>		<b>\$281,900</b>	<b>\$1,221,400</b>
<b>2</b>	<b>Mitigation - Environmental</b>							
2.1	Environmental Mitigation	1	LS	7%	\$1,987,727	30%	\$596,318	\$2,584,045
	<b>Subtotal - Mitigation</b>				<b>\$1,987,800</b>		<b>\$596,400</b>	<b>\$2,584,100</b>
<b>3</b>	<b>Relocations</b>							
3.1	Mobilization and Demobilization	1	LS	5%	\$8,500.00	30%	\$2,550	\$11,050
3.2	Utility Pole Relocation	0	EA	\$30,000	\$0	30%	\$0	\$0
3.3	Private Irrigation Allowance	8,500	LF	\$20	\$170,000	30%	\$51,000	\$221,000
	<b>Subtotal - Relocations</b>				<b>\$178,500</b>		<b>\$53,600</b>	<b>\$232,100</b>
<b>4</b>	<b>Levees</b>							
4.1	Mobilization and Demobilization	1	LS	5%	\$1,343,692	30%	\$403,108	\$1,746,799
4.2	Traffic Control (Rural)	1	LS	1%	\$266,078	30%	\$79,823	\$345,901
4.3	Storm Water Pollution Control	1	LS	3%	\$774,983	30%	\$232,495	\$1,007,478
4.4	Project Fencing	17,000	LF	\$4	\$59,500	30%	\$17,850	\$77,350
4.5	Clearing and Grubbing	41	AC	\$3,000	\$123,000	30%	\$36,900	\$159,900
4.6	Remove Ex. Agg. Surfacing	8,500	LF	\$10	\$85,000	30%	\$25,500	\$110,500
4.7	Levee Stripping	10	AC	\$4,000	\$40,000	30%	\$12,000	\$52,000
4.8	Levee Degrading/ Excavation	172,047	CY	\$5	\$860,235	30%	\$258,071	\$1,118,306
4.9	Levee Fill (Embankment)	190,149	CY	\$4	\$760,596	30%	\$228,179	\$988,775
4.10	Cutoff Wall - Soil Bentonite	510,000	SF	\$7	\$3,315,000	30%	\$994,500	\$4,309,500
4.11	Drain Rock	0	TON	\$45	\$0	30%	\$0	\$0
4.12	Sand Filter Layer	40,163	TON	\$45	\$1,807,335	30%	\$542,201	\$2,349,536
4.13	Rock Slope Protection	161,925	TON	\$80	\$12,954,000	30%	\$3,886,200	\$16,840,200
4.14	Class 2 Aggregate Surfacing	6,375	TON	\$35	\$223,125	30%	\$66,938	\$290,063
4.15	Levee Erosion Control Seeding	41	AC	\$3,500	\$143,500	30%	\$43,050	\$186,550
4.16	Haul and Dispose of Unsuitable Material	174,880	CY	\$10	\$1,748,800	30%	\$524,640	\$2,273,440
4.17	Borrow Site Clearing and Grubbing	29	AC	\$3,000	\$87,000	30%	\$26,100	\$113,100
4.18	Borrow Site Stripping	29	AC	\$3,500	\$101,500	30%	\$30,450	\$131,950
4.19	Borrow Site Excavation and Hauling	228,179	CY	\$15	\$3,422,685	30%	\$1,026,806	\$4,449,491
4.20	Borrow Site Erosion Control Seeding	29	AC	\$3,500	\$101,500	30%	\$30,450	\$131,950
	<b>Subtotal - Levees</b>				<b>\$28,217,600</b>		<b>\$8,465,300</b>	<b>\$36,682,800</b>
	<b>ESTIMATED REACH SUB-TOTAL (100-YEAR (20' CROWN))</b>				<b>\$31,323,400</b>		<b>\$9,397,200</b>	<b>\$40,720,400</b>
<b>5</b>	<b>Planning, Engineering and Design</b>							
5.1	Planning, Engineering and Design (8%)				\$2,505,872	0%	\$0	\$2,505,900
<b>6</b>	<b>Construction Management</b>							
6.1	Construction Management (6%)				\$1,879,404	0%	\$0	\$1,879,500
	<b>ESTIMATED REACH TOTAL (100-YEAR (20' CROWN))</b>				<b>\$35,708,676</b>		<b>\$9,397,200</b>	<b>\$45,105,800</b>
	<b>ESTIMATED REACH TOTAL (w/Escalation @ 3.3% for 3-years)</b>				<b>\$39,243,834.92</b>		<b>\$10,327,522.80</b>	<b>\$49,571,300</b>