

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	BCEB-G1
Problem Description	Overbank Flooding
Strategy	Replace Sauk Trail culvert, construct 130 ac-ft detention facility and a levee along Governor's Highway
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Demolition: Brick, concrete, or stone construction	ft2	8275	\$4	\$35,334	\$0	\$0	Remove existing culvert at Sauk and Bike Trail
Pipe under pavement (city): 72 to 84 inches / box culvert (28 to 38 ft2)	lf	114	\$425	\$48,452	\$45,060	\$0	Install new culvert at Bike Trail
Pipe under pavement (city): 36 inches or less	lf	4	\$304	\$1,217	\$1,132	\$0	Install new culvert at Maple Ave.
Inlet structures (Headwall): 42 to 66 inches	each	16	\$4,758	\$75,882	\$70,569	\$0	Install new culverts at Sauk Trail, Bike Trail, and Maple Ave. and Storage spillway/Outlet
Inlet structures (Headwall): 36 inches or less	each	1	\$2,600	\$2,600	\$2,418	\$0	Install new culverts at Sauk Trail, Bike Trail, and Maple Ave. and Storage spillway/Outlet
Outlet structures (Headwall): 42 to 66 inches	each	16	\$4,758	\$75,882	\$70,569	\$0	Install new culverts at Sauk Trail, Bike Trail, and Maple Ave. and Storage spillway/Outlet
Outlet structures (Headwall): 36 inches or less	each	1	\$2,600	\$2,600	\$2,418	\$0	Install new culverts at Sauk Trail, Bike Trail, and Maple Ave. and Storage spillway/Outlet
Outlet structures (Headwall): 42 to 66 inches	each	4	\$4,758	\$19,982	\$18,582	\$0	Install new culverts at Sauk Trail, Bike Trail, and Maple Ave. and Storage spillway/Outlet
Inlet structures (Headwall): 42 to 66 inches	each	4	\$4,758	\$19,982	\$18,582	\$0	Install new culverts at Sauk Trail, Bike Trail, and Maple Ave. and Storage spillway/Outlet
Pipe in earth (city): 36 inches or less	lf	75	\$217	\$16,259	\$15,120	\$0	Storage spillway/Outlet Structure
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	120	\$5	\$600	\$558	\$144	Install new culverts at Sauk Trail, Bike Trail, and Maple Ave. and Storage spillway/Outlet
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	250	\$148	\$37,118	\$34,519	\$0	Install new culverts at Sauk Trail, Bike Trail, and Maple Ave. and Storage spillway/Outlet
Channel treatment: Excavation	yd3	222415	\$11	\$2,375,392	\$0	\$0	Remove existing culverts at Sauk and Bike Trail and Maple Ave. Channel Improvements/Earthen Embankments, and Levee Excavations

Alternative Name	BCEB-G1
Problem Description	Overbank Flooding
Strategy	Replace Sauk Trail culvert, construct 130 ac-ft detention facility and a levee along Governor's Highway
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Compaction	yd3	215075	\$7	\$1,608,761	\$0	\$0	Remove existing and install new culverts at Sauk and Bike Trail and Maple Ave. Channel Improvements/Earthen Embankments, and Levee Excavations
Channel treatment: Soil stabilization and vegetative cover	yd2	21080	\$14	\$292,590	\$272,105	\$70,062	Install new culverts at Sauk Trail, Bike Trail, and Maple Ave.
Pipe under pavement (city): Box culvert (51 to 60 ft2)	lf	1130	\$661	\$746,964	\$694,665	\$0	Install new culvert at Bike Trail
Concrete: Cast in place	yd3	130	\$250	\$32,500	\$0	\$0	Storage spillway/Outlet Structure
Pump Station: 10ac-ft per day interior drainage	each	2	\$800,000	\$1,688,000	\$1,569,814	\$0	Storage Spillway/Outlet Structure
Pump Station: 10ac-ft per day interior drainage	each	5	\$800,000	\$3,760,000	\$3,496,742	\$0	Levee Construction
Demolition: Metal construction	ft2	488	\$2	\$1,044	\$0	\$0	Remove existing culvert at Maple Ave.
Channel treatment: Reinforced one sided concrete wall	yd3	250	\$587	\$146,838	\$136,557	\$35,161	Levee Construction
Land Acquisition: Permanent Easement *	dollar	123240	\$1	\$123,240	\$0	\$0	Land Acquisition
Land Acquisition: Temporary Easement *	dollar	37305	\$1	\$37,305	\$0	\$0	Land Acquisition
Buyout: Property *	dollar	178779	\$1	\$178,779	\$0	\$0	Land Acquisition
Embankment construction, grading and restoration: Material hauled from offsite	yd3	183150	\$11	\$1,956,042	\$0	\$0	Remove existing culverts at Sauk and Bike Trail and Maple Ave. Channel Improvements/Earthen Embankments, and Levee Excavations

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$12,944,039	\$6,449,412	\$105,367
Utility Relocation			4 %	\$517,762		
Mobilization \ General Conditions			5 %	\$647,202		
Subtotal with Percent Allowances				\$14,109,000		
Contingency			30%	\$4,232,701		
Profit			5%	\$917,085		
Probable Construction Cost Estimate				\$19,258,78		
Design Engineering, Geotechnical, and Construction Management			10%	\$1,925,879		
Property Acquisition Cost:				\$339,324		
Total Conceptual Cost Estimate				\$28,078,770		
Additional Comments						

**Metropolitan Water Reclamation District of Greater Chicago
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Alternative Name	BTCR-G1
Problem Description	Overbank Flooding
Strategy	Replace 206th St. culvert and construct new 65 ac-ft detention facility
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	105720	\$11	\$1,129,090	\$0	\$0	Remove existing culvert, storage excavation
Channel treatment: Compaction	yd3	105680	\$7	\$790,486	\$0	\$0	Storage construction, Remove existing and install new culvert
Embankment construction, grading and restoration: Material hauled from offsite	yd3	98080	\$11	\$1,047,494	\$0	\$0	Remove existing and install new culvert, Storage excavation
Demolition: Brick, concrete, or stone construction	ft2	684	\$4	\$2,921	\$0	\$0	Remove existing culvert
Pipe under pavement (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	171	\$609	\$104,088	\$96,800	\$0	Install new culvert
Inlet structures (Headwall): 42 to 66 inches	each	5	\$4,758	\$21,409	\$19,910	\$0	Install new culvert
Inlet structures (Headwall): 36 inches or less	each	1	\$2,600	\$2,600	\$2,418	\$0	Storage Spillway/Outlet Structure
Outlet structures (Headwall): 42 to 66 inches	each	5	\$4,758	\$21,409	\$19,910	\$0	Install new culvert
Outlet structures (Headwall): 36 inches or less	each	1	\$2,600	\$2,600	\$2,418	\$0	Storage Spillway/Outlet Structure
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	40	\$5	\$200	\$186	\$48	Install new culvert
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	30	\$148	\$4,454	\$4,142	\$0	Install new culvert
Concrete: Cast in place	yd3	250	\$250	\$62,500	\$0	\$0	Storage Spillway/Outlet Structure
Pipe in earth (city): 36 inches or less	lf	125	\$217	\$27,098	\$25,200	\$0	Storage Spillway/Outlet Structure
Floodproofing: Residence	each	4	\$21,358	\$85,432	\$79,451	\$32,943	Floodproofing
Land Acquisition: Temporary Easement *	dollar	15000	\$1	\$15,000	\$0	\$0	Land Acquisition
Land Acquisition: Purchase of Property *	dollar	200000	\$1	\$200,000	\$0	\$0	Land Acquisition
Channel treatment: Soil stabilization and vegetative cover	yd2	160	\$14	\$2,221	\$2,065	\$532	Install new culvert
Channel treatment: Soil stabilization and vegetative cover	yd2	10500	\$14	\$145,740	\$135,536	\$34,898	Storage excavation
Pump Station: 10ac-ft per day interior drainage	each	1	\$800,000	\$848,000	\$788,627	\$0	Storage Spillway/Outlet Structure

Alternative Name	BTCR-G1
Problem Description	Overbank Flooding
Strategy	Replace 206th St. culvert and construct new 65 ac-ft detention facility
District Minimum	Met
Criteria for Funding:	
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)							
Subtotal (direct costs)				\$4,297,741	\$1,176,663	\$68,421	
Utility Relocation			4 %	\$171,910			
Mobilization \ General Conditions			5%	\$214,887			
Subtotal with Percent Allowances				\$4,684,538			
Contingency			30%	\$1,405,361			
Profit			5%	\$304,495			
Probable Construction Cost Estimate				\$6,394,395			
Design Engineering, Geotechnical, and Construction Management			10%	\$639,439			
Property Acquisition Cost:				\$215,000			
Total Conceptual Cost Estimate				\$8,493,919			
Additional Comments							

**Metropolitan Water Reclamation District of Greater Chicago
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Alternative Name	BTCR-G2
Problem Description	Overbank Flooding
Strategy	Construct a 700 LF levee along Greenwood Drive
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Embankment construction, grading and restoration: Additional fill	yd3	6575	\$14	\$91,261	\$0	\$0	Construct embankment
Channel treatment: Compaction	yd3	910	\$7	\$6,807	\$0	\$0	Construct embankment
Channel treatment: Soil stabilization and vegetative cover	yd2	2725	\$14	\$37,823	\$35,175	\$9,057	Construct embankment
Pump Station: 10ac-ft per day interior drainage	each	4	\$800,000	\$3,520,000	\$3,273,546	\$0	Construct embankment
Floodproofing: Residence	each	4	\$21,358	\$85,432	\$79,451	\$32,943	Floodproofing
Land Acquisition: Permanent Easement *	dollar	2365	\$1	\$2,365	\$0	\$0	Land Acquisition
Land Acquisition: Temporary Easement *	dollar	635	\$1	\$635	\$0	\$0	Land Acquisition

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$3,741,323	\$3,388,171	\$42,000	
Utility Relocation			4 %	\$149,653			
Mobilization \ General Conditions			5 %	\$187,066			
Subtotal with Percent Allowances				\$4,078,042			
Contingency			30%	\$1,223,413			
Profit			5%	\$265,073			
Probable Construction Cost Estimate				\$5,566,527			
Design Engineering, Geotechnical, and Construction Management			10%	\$556,653			
Property Acquisition Cost:				\$3,000			
Total Conceptual Cost Estimate (2008 Dollars)				\$9,556,351			

**Metropolitan Water Reclamation District of Greater Chicago
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Alternative Name	BTCR-G3
Problem Description	Overbank Flooding
Strategy	Channel improvements near Laurel Avenue and construct a floodwall on west bank from Cambridge Avenue
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	29375	\$11	\$313,725	\$0	\$0	Levee excavation and channel improvements
Channel treatment: Compaction	yd3	29375	\$7	\$219,725	\$0	\$0	Levee excavation and construction, channel improvements
Channel treatment: Soil stabilization and vegetative cover	yd2	6165	\$14	\$85,570	\$79,579	\$20,490	Levee construction, channel improvements
Channel treatment: Reinforced one sided concrete wall	yd3	1470	\$587	\$863,405	\$802,953	\$206,744	Levee construction
Embankment construction, grading and restoration: Material hauled from offsite	yd3	23225	\$11	\$248,043	\$0	\$0	Levee excavation and channel improvements
Pump Station: 10ac-ft per day interior drainage	each	13	\$800,000	\$10,080,000	\$9,374,246	\$0	Levee construction
Land Acquisition: Permanent Easement *	dollar	45300	\$1	\$45,300	\$0	\$0	Land acquisition
Land Acquisition: Temporary Easement *	dollar	17455	\$1	\$17,455	\$0	\$0	Land acquisition

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$11,810,468	\$10,256,77	\$227,234
Utility Relocation	4 %			\$472,419		
Mobilization \ General Conditions	5%			\$590,523		
Subtotal with Percent Allowances				\$12,873,41		
Contingency	30%			\$3,862,023		
Profit	5%			\$836,772		
Probable Construction Cost Estimate				\$17,572,20		
Design Engineering, Geotechnical, and Construction Management	10%			\$1,757,220		
Property Acquisition Cost:				\$62,755		
Total Conceptual Cost Estimate (2008 Dollars)				\$29,876,191		

**Metropolitan Water Reclamation District of Greater Chicago
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Alternative Name	BLCR-G1
Problem Description	Overbank Flooding
Strategy	Construct a levee along Belaire Creek from Albany to Afton Avenue, a new 125 ac-ft storage area, and
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	201667	\$11	\$2,153,804	\$0	\$0	Removal of excavated materials for detention pond
Channel treatment: Material to be hauled offsite	yd3	201667	\$12	\$2,369,587	\$0	\$0	Removal of excavated materials for detention pond
Channel treatment: Additional fill	yd3	16556	\$14	\$229,797	\$0	\$0	Material needed for clay liner
Embankment construction, grading and restoration: Additional fill	yd3	4237	\$14	\$58,810	\$0	\$0	Fill Required to build earthen levee
Embankment construction, grading and restoration: Compaction of fill	yd3	4237	\$5	\$22,626	\$0	\$0	Compaction of soil of new levee
Concrete: Cast in place	yd3	47	\$250	\$11,750	\$0	\$0	Concrete Spillway
Pipe in earth (city): 72 to 84 inches / box culvert (28 to 38 ft2)	lf	1400	\$303	\$424,592	\$394,864	\$0	Installation of (2) new diversion culverts to the new pond
Channel treatment: Vegetative cover only	yd2	4889	\$9	\$41,752	\$38,829	\$9,998	Vegetative cover of excavated areas
Pump Station: 10ac-ft per day interior drainage	each	2	\$800,000	\$1,624,000	\$1,510,295	\$0	Assume a cost of \$13,000 per ac-ft of storage volume
Channel treatment: Vegetative cover only	yd2	16326	\$9	\$139,424	\$129,662	\$33,385	Vegetative cover of excavated basin areas
Pump Station: 10ac-ft per day interior drainage	each	0	\$800,000	\$48,000	\$44,639	\$0	
Land Acquisition: Purchase of Property *	dollar	20303	\$1	\$20,303	\$0	\$0	Purchase of two plots of land

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$7,124,141	\$2,118,289	\$43,383
Utility Relocation			4 %	\$284,966		
Mobilization \ General Conditions			5%	\$356,207		
Subtotal with Percent Allowances				\$7,765,314		
Contingency			30%	\$2,329,594		
Profit			5%	\$504,745		
Probable Construction Cost Estimate				\$10,599,65		
Design Engineering, Geotechnical, and Construction Management			10%	\$1,059,965		
Property Acquisition Cost:				\$20,303		
Total Conceptual Cost Estimate (2008 Dollars)				\$13,841,595		

**Metropolitan Water Reclamation District of Greater Chicago
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Alternative Name	CHEB-G1
Problem Description	Overbank Flooding
Strategy	Replace Governors Highway and 175th St. crossings, channel improvements from Ravisole Country Club to
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	16467	\$11	\$175,868	\$0	\$0	Channel widening from RS 1960 - RS 1309
Channel treatment: Vegetative cover only	yd2	17333	\$9	\$148,024	\$137,660	\$35,445	Vegetative cover of excavated areas
Channel treatment: Material to be hauled offsite	yd3	16467	\$12	\$193,487	\$0	\$0	Hauling of excess soil from excavation activities
Embankment construction, grading and restoration: Compaction of fill	yd3	16847	\$5	\$89,963	\$0	\$0	Compaction of soil of newly graded channel and engineered fill above new culverts
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	198	\$148	\$29,397	\$27,339	\$0	New roadway of span section above CU-18 and CU-19
Pipe under pavement (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	600	\$609	\$365,220	\$339,649	\$0	Installation of (6) box culverts replacing CU-18
Pipe under pavement (city): Box culvert (51 to 60 ft2)	lf	660	\$661	\$436,280	\$405,734	\$0	Installation of (6) box culverts replacing CU-19

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)		\$1,438,238	\$910,381	\$35,445
Utility Relocation	4 %	\$57,530		
Mobilization \ General Conditions	5%	\$71,912		
Subtotal with Percent Allowances		\$1,567,680		
Contingency	30%	\$470,304		
Profit	5%	\$101,899		
Probable Construction Cost Estimate		\$2,139,883		
Design Engineering, Geotechnical, and Construction Management	10%	\$213,988		
Property Acquisition Cost:		\$0		
Total Conceptual Cost Estimate (2008 Dollars)		\$3,299,698		

**Metropolitan Water Reclamation District of Greater Chicago
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Alternative Name	CHEB-G3
Problem Description	Overbank Flooding
Strategy	Replace Governors Highway, Braemer Road, and channel improvements
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	5945	\$11	\$63,493	\$0	\$0	Channel widening from RS 10333.71 - RS 11272.35
Channel treatment: Vegetative cover only	yd2	5736	\$9	\$48,985	\$45,556	\$11,730	Vegetative cover of excavated areas
Channel treatment: Material to be hauled offsite	yd3	5945	\$12	\$69,854	\$0	\$0	Hauling of excess soil from excavation activities
Embankment construction, grading and restoration: Compaction of fill	yd3	594	\$5	\$3,172	\$0	\$0	Compaction of soil of newly graded channel
Embankment construction, grading and restoration: Compaction of fill	yd3	700	\$5	\$3,738	\$0	\$0	Compaction of engineered fill above new culverts
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	132	\$148	\$19,598	\$18,226	\$0	New roadway of span section above CU-27
Pipe under pavement (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	390	\$609	\$237,393	\$220,772	\$0	Installation of (6) box culverts replacing CU-27
Embankment construction, grading and restoration: Compaction of fill	yd3	500	\$5	\$2,670	\$0	\$0	Compaction of engineered fill above new culverts
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	83	\$148	\$12,323	\$11,460	\$0	New roadway of span section above CU-28
Land Acquisition: Permanent Easement *	dollar	830000	\$1	\$830,000	\$0	\$0	Permanent easements for 9 homes along channel imprs.
Land Acquisition: Purchase of Property *	dollar	108000	\$1	\$108,000	\$0	\$0	Home acquisition just U/S of CU-28
Pipe under pavement (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	180	\$609	\$109,566	\$101,895	\$0	Installation of (4) box culverts replacing CU-28

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$570,792	\$397,908	\$11,730	
Utility Relocation			4 %	\$22,832			
Mobilization \ General Conditions			5%	\$28,540			
Subtotal with Percent Allowances				\$622,163			
Contingency			30%	\$186,649			
Profit			5%	\$40,441			
Probable Construction Cost Estimate				\$849,253			
Design Engineering, Geotechnical, and Construction Management			10%	\$84,925			
Property Acquisition Cost:				\$938,000			
Total Conceptual Cost Estimate (2008 Dollars)				\$2,281,816			

**Metropolitan Water Reclamation District of Greater Chicago
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Alternative Name	CUDD-G1A
Problem Description	Overbank Flooding
Strategy	Expansion and improvements to Calumet Union Reservoir, and upsizing the Robey St. diversion conduit
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	443699	\$11	\$4,738,705	\$0	\$0	Excavation for path of new 12 x 7 box culvert
Channel treatment: Compaction	yd3	443115	\$7	\$3,314,500	\$0	\$0	Compaction of soil on new culvert
Channel treatment: Material to be hauled offsite	yd3	584	\$12	\$6,862	\$0	\$0	Material displaced by new culvert
Channel treatment: Vegetative cover only	yd2	66555	\$9	\$568,380	\$528,584	\$136,100	Vegetation on top of culvert
Pipe in earth (city): Box culvert (51 to 60 ft2)	lf	57377	\$472	\$27,082,518	\$25,186,32	\$0	New Diversion Culverts (2)
Inlet structures (Headwall): 42 to 66 inches	each	2	\$4,758	\$9,515	\$8,849	\$0	Two inlet structures for the diversion tunnels
Outlet structures (Headwall): 42 to 66 inches	each	2	\$4,758	\$9,515	\$8,849	\$0	Two outlet structures for the diversion tunnels

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)		\$35,729,995	\$25,732,60	\$136,100
Utility Relocation	4 %	\$1,429,200		
Mobilization \ General Conditions	5%	\$1,786,500		
Subtotal with Percent Allowances		\$38,945,69		
Contingency	30%	\$11,683,708		
Profit	5%	\$2,531,470		
Probable Construction Cost Estimate		\$53,160,87		
Design Engineering, Geotechnical, and Construction Management	10%	\$5,316,087		
Property Acquisition Cost:			\$0	
Total Conceptual Cost Estimate (2008 Dollars)		\$84,345,669		

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Alternative Name	CUDD-G1B
Problem Description	Overbank Flooding
Strategy	Expansion and improvements to Calumet Union Reservoir, and upsizing the Robey St. diversion conduit
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Soil stabilization and vegetative cover	yd2	33003	\$14	\$458,082	\$426,009	\$109,689	Stabilization of side slopes and vegetation
Embankment construction, grading and restoration: Compaction of fill	yd3	13090	\$5	\$69,901	\$0	\$0	Compact clay liner of detention basin (assume 1 thick liner)
Embankment construction, grading and restoration: Additional fill	yd3	13090	\$14	\$181,689	\$0	\$0	Material needed to construct clay liner
Concrete: Cast in place	yd3	114	\$250	\$28,500	\$0	\$0	Assumed cost for concrete spillway
Channel treatment: Excavation	yd3	621333	\$11	\$6,635,836	\$0	\$0	Soil Excavation for new offline detention facility
Channel treatment: Material to be hauled offsite	yd3	618394	\$12	\$7,266,130	\$0	\$0	Haul Away excess soil and existing concrete & pavement
Pipe in earth (city): 36 inches or less	lf	800	\$217	\$173,424	\$161,282	\$0	To drain south pond back to the north

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)		\$14,813,561	\$587,291	\$109,689
Utility Relocation	4 %	\$592,542		
Mobilization \ General Conditions	5%	\$740,678		
Subtotal with Percent Allowances		\$16,146,78		
Contingency	30%	\$4,844,035		
Profit	5%	\$1,049,541		
Probable Construction Cost Estimate		\$22,040,35		
Design Engineering, Geotechnical, and Construction Management	10%	\$2,204,036		
Property Acquisition Cost:			\$0	
Total Conceptual Cost Estimate (2006 Dollars)		\$24,941,373		

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Alternative Name	CUDD-G1C
Problem Description	Overbank Flooding
Strategy	Expansion and improvements to Calumet Union Reservoir, and upsizing the Robey St. diversion conduit
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	744639	\$11	\$7,952,745	\$0	\$0	Soil Excavation for new offline detention facility
Channel treatment: Soil stabilization and vegetative cover	yd2	33003	\$14	\$458,082	\$426,009	\$109,689	Stabilization of side slopes and vegetation
Channel treatment: Material to be hauled offsite	yd3	741700	\$12	\$8,714,975	\$0	\$0	Haul Away excess soil and existing concrete & pavement
Embankment construction, grading and restoration: Additional fill	yd3	13090	\$14	\$181,689	\$0	\$0	Material needed to construct clay liner
Embankment construction, grading and restoration: Compaction of fill	yd3	21872	\$5	\$116,796	\$0	\$0	Compact clay liner of detention basin (assume 1 thick liner)
Concrete: Cast in place	yd3	47	\$250	\$11,750	\$0	\$0	Assumed cost for concrete spillway
Pump Station: 10ac-ft per day interior drainage	each	4	\$800,000	\$3,056,000	\$2,842,033	\$0	Pump Station to dewater back into channel
Pipe in earth (city): 36 inches or less	lf	230	\$217	\$49,859	\$46,368	\$0	Culvert to convey dewatering flow back to channel

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)		\$20,541,896	\$3,314,411	\$109,689
Utility Relocation	4 %	\$821,676		
Mobilization \ General Conditions	5%	\$1,027,095		
Subtotal with Percent Allowances		\$22,390,66		
Contingency	30%	\$6,717,200		
Profit	5%	\$1,455,393		
Probable Construction Cost Estimate		\$30,563,26		
Design Engineering, Geotechnical, and Construction Management	10%	\$3,056,326		
Property Acquisition Cost:			\$0	
Total Conceptual Cost Estimate (2008 Dollars)		\$37,043,686		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	CUDD-G1D
Problem Description	Overbank Flooding
Strategy	Expansion and improvements to Calumet Union Reservoir, and upsizing the Robey St. diversion conduit
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Pipe under pavement (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	300	\$609	\$182,610	\$169,825	\$0	Two box culverts each with a length of 150
Land Acquisition: Permanent Easement *	dollar	50000	\$1	\$50,000	\$0	\$0	PIN14=28252020150000
Pipe in earth (city): 36 inches or less	lf	800	\$217	\$173,424	\$161,282	\$0	
Pipe in earth (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	1200	\$435	\$521,568	\$485,050	\$0	Culvert to Drain pond back to North reservoir
Outlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$14,273	\$13,273	\$0	Outlet structure
Inlet structures (Headwall): 42 to 66 inches	each	2	\$4,758	\$9,515	\$8,849	\$0	Inlet structure
Concrete: Cast in place	yd3	47	\$250	\$11,750	\$0	\$0	Assumed cost for concrete spillway
Channel treatment: Excavation	yd3	243283	\$11	\$2,598,262	\$0	\$0	Soil Excavation for new offline detention facility
Embankment construction, grading and restoration: Compaction of fill	yd3	9989	\$5	\$53,341	\$0	\$0	Compact clay liner of detention basin (assume 1 think liner)
Channel treatment: Soil stabilization and vegetative cover	yd2	65617	\$14	\$910,764	\$846,997	\$218,085	Stabilization of side slopes and vegetation
Channel treatment: Material to be hauled offsite	yd3	243283	\$12	\$2,858,575	\$0	\$0	Haul Away excess soil and existing concrete & pavement
Pump Station: 10ac-ft per day interior drainage	each	2	\$800,000	\$1,960,000	\$1,822,770	\$0	Assume a cost of \$13,000 per ac-ft of storage volume

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)		\$9,294,082	\$3,508,045	\$218,085
Utility Relocation	4 %	\$371,763		
Mobilization \ General Conditions	5%	\$464,704		
Subtotal with Percent Allowances		\$10,130,55		
Contingency	30%	\$3,039,165		
Profit	5%	\$658,486		
Probable Construction Cost Estimate		\$13,828,20		
Design Engineering, Geotechnical, and Construction Management	10%	\$1,382,820		
Property Acquisition Cost:		\$50,000		
Total Conceptual Cost Estimate (2008 Dollars)		\$18,987,151		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	CUDD-G2
Problem Description	Overbank Flooding
Strategy	Construct a 450 ac-ft detention facility and a new diversion conduit from Tri-State Tollway
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Concrete: Cast in place	yd3	47	\$250	\$11,750	\$0	\$0	Concrete Spillway
Pipe in earth (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	3000	\$435	\$1,303,920	\$1,212,626	\$0	Installation of (2) new diversion culverts to the new pond
Channel treatment: Additional fill	yd3	24612	\$14	\$341,615	\$0	\$0	Material needed for clay liner
Pump Station: 10ac-ft per day interior drainage	each	7	\$800,000	\$5,848,000	\$5,438,550	\$0	Assume a cost of \$13,000 per ac-ft of storage volume
Channel treatment: Material to be hauled offsite	yd3	853776	\$12	\$10,031,868	\$0	\$0	Removal of excavated materials for detention pond
Channel treatment: Excavation	yd3	853776	\$11	\$9,118,328	\$0	\$0	Excavation for new detention pond
Channel treatment: Vegetative cover only	yd2	4889	\$9	\$41,752	\$38,829	\$9,998	Vegetative cover of excavated basin areas
Concrete: Cast in place	yd3	30	\$250	\$7,500	\$0	\$0	Concrete Weir

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$26,704,732	\$6,690,005	\$9,998
Utility Relocation	4 %		\$1,068,189			
Mobilization \ General Conditions	5%		\$1,335,237			
Subtotal with Percent Allowances				\$29,108,15		
Contingency	30%		\$8,732,447			
Profit	5%		\$1,892,030			
Probable Construction Cost Estimate				\$39,732,63		
Design Engineering, Geotechnical, and Construction Management	10%		\$3,973,264			
Property Acquisition Cost:					\$0	
Total Conceptual Cost Estimate (2008 Dollars)				\$50,405,902		

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Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	CUDD-G3
Problem Description	Overbank Flooding/Streambank Erosion
Strategy	Construct a floodwall from Hamlin to Central Park Avenue and streambank stabilization from Sunset to Central
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Inlet structures (Headwall): 42 to 66 inches	each	1	\$4,758	\$4,758	\$4,424	\$0	Improve inlet to junction box
Channel treatment: Soil stabilization and vegetative cover	yd2	10189	\$14	\$141,423	\$131,522	\$33,864	Calculation of soil erosion prevention
Pipe under pavement (city): 72 to 84 inches / box culvert (28 to 38 ft2)	lf	25	\$425	\$10,626	\$9,882	\$0	Install new culvert at CU-54
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	25	\$148	\$3,712	\$3,452	\$0	Replace Roadway Pavement
Pipe under pavement (city): 72 to 84 inches / box culvert (28 to 38 ft2)	lf	30	\$425	\$12,751	\$11,858	\$0	Install new culvert at CU-55
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	25	\$148	\$3,712	\$3,452	\$0	Replace Roadway Pavement
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	25	\$148	\$3,712	\$3,452	\$0	Replace Roadway Pavement
Pipe under pavement (city): 72 to 84 inches / box culvert (28 to 38 ft2)	lf	20	\$425	\$8,500	\$7,905	\$0	Install new culvert at CU-56
Channel treatment: Reinforced one sided concrete wall	yd3	1185	\$587	\$696,010	\$647,278	\$166,661	Levee floodwall on both sides of channel
Pump Station: 10ac-ft per day interior drainage	each	0	\$800,000	\$128,000	\$119,038	\$0	Interior drainage behind levees
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	135	\$148	\$20,043	\$18,640	\$0	Replace Junction Box

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)		\$1,033,246	\$960,903	\$200,525
Utility Relocation	4 %	\$41,330		
Mobilization \ General Conditions	5%	\$51,662		
Subtotal with Percent Allowances		\$1,126,238		
Contingency	30%	\$337,871		
Profit	5%	\$73,205		
Probable Construction Cost Estimate		\$1,537,315		
Design Engineering, Geotechnical, and Construction Management	10%	\$153,731		
Property Acquisition Cost:			\$0	
Total Conceptual Cost Estimate (2008 Dollars)		\$2,852,474		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	CUSW-G1
Problem Description	Overbank Flooding
Strategy	Replace California Ave. culvert
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation)	lf	80	\$148	\$11,878	\$11,046	\$0	Replace Roadway Pavement, extra for additional lanes
Pipe in earth (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	390	\$435	\$169,510	\$157,641	\$0	Install new culvert to increase conveyance
Embankment construction, grading and restoration: Material hauled from offsite	yd3	1556	\$11	\$16,618	\$0	\$0	All excavated soils to be hauled away
Channel treatment: Vegetative cover only	yd2	667	\$9	\$5,696	\$5,297	\$1,364	Vegetation cover for excavated areas
Channel treatment: Excavation	yd3	1556	\$11	\$16,618	\$0	\$0	Removal of ex. pavement & soil for new culverts at CU-18

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$220,320	\$173,985	\$1,364
Utility Relocation			4 %	\$8,813		
Mobilization \ General Conditions			5%	\$11,016		
Subtotal with Percent Allowances				\$240,148		
Contingency			30%	\$72,044		
Profit			5%	\$15,610		
Probable Construction Cost Estimate				\$327,802		
Design Engineering, Geotechnical, and Construction Management			10%	\$32,780		
Property Acquisition Cost:				\$0		
Total Conceptual Cost Estimate (2008 Dollars)				\$535,931		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	CUSW-G2
Problem Description	Overbank Flooding
Strategy	Construct an 860 LF diversion conduit parallel to Kedzie Ave.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	4148	\$11	\$44,301	\$0	\$0	Removal of ex. pavement & soil for new culverts at CU-18
Channel treatment: Vegetative cover only	yd2	2500	\$9	\$21,350	\$19,855	\$5,112	Vegetation cover for excavated areas
Embankment construction, grading and restoration: Material hauled from offsite	yd3	2548	\$11	\$27,213	\$0	\$0	All excavated soils to be hauled away
Pipe under pavement (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	70	\$609	\$42,609	\$39,626	\$0	Install third culvert to increase conveyance
Pipe in earth (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	790	\$435	\$343,366	\$319,325	\$0	Install third culvert to increase conveyance
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	100	\$148	\$14,847	\$13,807	\$0	Replace Roadway Pavement, extra for additional lanes

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$493,685	\$392,613	\$5,112	
Utility Relocation			4 %	\$19,747			
Mobilization \ General Conditions			5%	\$24,684			
Subtotal with Percent Allowances				\$538,117			
Contingency			30%	\$161,435			
Profit			5%	\$34,978			
Probable Construction Cost Estimate				\$734,529			
Design Engineering, Geotechnical, and Construction Management			10%	\$73,453			
Property Acquisition Cost:				\$0			
Total Conceptual Cost Estimate (2008 Dollars)				\$1,205,707			

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	CUTS-G1
Problem Description	Overbank Flooding
Strategy	Construct a 945 LF levee along Baker Avenue
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	280	\$11	\$2,990	\$0	\$0	Soil Excavation for new levee foundation
Channel treatment: Excavation	yd3	96	\$11	\$1,025	\$0	\$0	Soil excavation for new storm sewer
Channel treatment: Excavation	yd3	1111	\$11	\$11,865	\$0	\$0	Removal of ex. pavement & soil for new culverts at CU-18
Channel treatment: Compaction	yd3	6324	\$7	\$47,304	\$0	\$0	Compact levee and surrounding areas
Channel treatment: Soil stabilization and vegetative cover	yd2	44060	\$14	\$611,553	\$568,735	\$146,438	Stabilization of side slopes and vegetation
Channel treatment: Soil stabilization and vegetative cover	yd2	200	\$14	\$2,776	\$2,582	\$665	Stabilization of side slopes and vegetation around sewer
Channel treatment: Vegetative cover only	yd2	17750	\$9	\$151,585	\$140,972	\$36,297	Vegetation cover for excavated areas
Embankment construction, grading and restoration: Additional fill	yd3	5594	\$14	\$77,645	\$0	\$0	Fill soil if any required
Embankment construction, grading and restoration: Material hauled from offsite	yd3	1111	\$11	\$11,865	\$0	\$0	All excavated soils to be hauled away
Pipe in earth (city): 36 inches or less	lf	168	\$217	\$36,419	\$33,869	\$0	Stormsewer to drain surface runoff
Pipe in earth (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	180	\$435	\$78,235	\$72,758	\$0	Install new culvert to increase conveyance
Outlet structures (Headwall): 36 inches or less	each	3	\$2,600	\$7,801	\$7,255	\$0	Outlet structure
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	100	\$148	\$14,847	\$13,807	\$0	Replace Roadway Pavement, extra for additional lanes
Pump Station: 10ac-ft per day interior drainage	each	0	\$800,000	\$64,000	\$59,519	\$0	

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$1,119,911	\$899,496	\$183,400
Utility Relocation			4 %	\$44,796		
Mobilization \ General Conditions			5%	\$55,996		
Subtotal with Percent Allowances				\$1,220,703		
Contingency			30%	\$366,211		
Profit			5%	\$79,346		
Probable Construction Cost Estimate				\$1,666,259		
Design Engineering, Geotechnical, and Construction Management			10%	\$166,626		
Property Acquisition Cost:				\$0		
Total Conceptual Cost Estimate (2008 Dollars)				\$2,915,782		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	PKCR-G1
Problem Description	Overbank Flooding
Strategy	Construct a 200 ac-ft detention facility, implement channel and conveyance improvements from Kedzie
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	2963	\$11	\$31,645	\$0	\$0	Channel Modifications excavation
Channel treatment: Vegetative cover only	yd2	3333	\$9	\$28,464	\$26,471	\$6,816	Vegetative cover of excavated areas
Embankment construction, grading and restoration: Compaction of fill	yd3	2444	\$5	\$13,051	\$0	\$0	Compaction of soil of new levee
Channel treatment: Vegetative cover only	yd2	41564	\$9	\$354,957	\$330,104	\$84,995	Vegetative cover of excavated basin areas
Channel treatment: Additional fill	yd3	18411	\$14	\$255,545	\$0	\$0	Material needed for clay liner
Concrete: Cast in place	yd3	47	\$250	\$11,750	\$0	\$0	Concrete Spillway
Concrete: Cast in place	yd3	111	\$250	\$27,750	\$0	\$0	Construction of new diversion structure to pond
Concrete: Cast in place	yd3	30	\$250	\$7,500	\$0	\$0	Concrete Weir
Pump Station: 10ac-ft per day interior drainage	each	3	\$800,000	\$2,600,000	\$2,417,960	\$0	Assume a cost of \$13,000 per ac-ft of storage volume
Pump Station: 10ac-ft per day interior drainage	each	0	\$800,000	\$64,000	\$59,519	\$0	
Channel treatment: Material to be hauled offsite	yd3	322667	\$12	\$3,791,337	\$0	\$0	Removal of excavated materials for detention pond
Channel treatment: Excavation	yd3	322667	\$11	\$3,446,084	\$0	\$0	Excavation for new detention pond

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)		\$10,632,082	\$2,834,054	\$91,811
Utility Relocation	4 %	\$425,283		
Mobilization \ General Conditions	5%	\$531,604		
Subtotal with Percent Allowances		\$11,588,96		
Contingency	30%	\$3,476,691		
Profit	5%	\$753,283		
Probable Construction Cost Estimate		\$15,818,94		
Design Engineering, Geotechnical, and Construction Management	10%	\$1,581,894		
Property Acquisition Cost:			\$0	
Total Conceptual Cost Estimate (2008 Dollars)		\$20,326,702		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	DRCR-G1
Problem Description	Overbank Flooding
Strategy	Increase channel capacity north of US 30 HWY and excavate existing reservoir to provide additional 24 ac-ft
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	130000	\$11	\$1,388,400	\$0	\$0	Reservoir Excavation and on site material placement and add approx 24 ac-ft of storage to compensate for CI N. of US 30
Channel treatment: Compaction	yd3	130000	\$7	\$972,400	\$0	\$0	Reservoir Excavation and on site material placement and add approx 24 ac-ft of storage to compensate for CI N. of US 30
Channel treatment: Vegetative cover only	yd2	75000	\$9	\$640,500	\$595,655	\$153,369	Vegetation for 6500 ft appx 100 ft wide.
Channel treatment: Material to be hauled offsite	yd3	130000	\$12	\$1,527,500	\$0	\$0	Add approx 24 ac-ft of storage to compensate for CI N. of US 30
Concrete: Cast in place	yd3	30	\$250	\$7,500	\$0	\$0	Increase existing 50 ft. weir elevation from 632.5 to 637.5. Qty doubled for possible spillway modification.
Concrete: Cast in place	yd3	300	\$250	\$75,000	\$0	\$0	Floodwall for low lying properties South of US 30.
Pipe in earth (city): 36 inches or less	lf	50	\$217	\$10,839	\$10,080	\$0	New Culvert to drain reservoir at lower elevation.
Outlet structures (Headwall): 36 inches or less	each	1	\$2,600	\$2,600	\$2,418	\$0	New Outlet at lower elevation from pond

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)		\$4,624,739	\$608,154	\$153,369
Utility Relocation	4 %	\$184,990		
Mobilization \ General Conditions	5%	\$231,237		
Subtotal with Percent Allowances		\$5,040,966		
Contingency	30%	\$1,512,290		
Profit	5%	\$327,663		
Probable Construction Cost Estimate		\$6,880,918		
Design Engineering, Geotechnical, and Construction Management	10%	\$688,092		
Property Acquisition Cost:		\$0		
Total Conceptual Cost Estimate (2008 Dollars)		\$8,330,533		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	DRCR-G2
Problem Description	Overbank Flooding
Strategy	Channel improvements for 1,800 LF upstream of Sauk Trail Road.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Outlet structures (Headwall): 36 inches or less	each	1	\$2,600	\$2,600	\$2,418	\$0	Inlet to Storage
Inlet structures (Headwall): 36 inches or less	each	1	\$2,600	\$2,600	\$2,418	\$0	Outlet from Storage
Channel treatment: Excavation	yd3	170000	\$11	\$1,815,600	\$0	\$0	Reservoir Excavation and on site material placement.
Channel treatment: Compaction	yd3	170000	\$7	\$1,271,600	\$0	\$0	Reservoir Compaction and on site material placement.
Channel treatment: Material to be hauled offsite	yd3	170000	\$12	\$1,997,500	\$0	\$0	Removal of material
Channel treatment: Soil stabilization and vegetative cover	yd2	150000	\$14	\$2,082,000	\$1,936,228	\$498,540	Area of Excavation
Land Acquisition: Purchase of Property *	dollar	135000	\$1	\$135,000	\$0	\$0	Buyout Agricultural, cost per acre based on average farmland of vicinity

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)		\$7,171,901	\$1,941,065	\$498,540
Utility Relocation	4 %	\$286,876		
Mobilization \ General Conditions	5%	\$358,595		
Subtotal with Percent Allowances		\$7,817,372		
Contingency	30%	\$2,345,212		
Profit	5%	\$508,129		
Probable Construction Cost Estimate		\$10,670,71		
Design Engineering, Geotechnical, and Construction Management	10%	\$1,067,071		
Property Acquisition Cost:		\$135,000		
Total Conceptual Cost Estimate (2008 Dollars)		\$14,312,388		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	LCRW-G1
Problem Description	Overbank flooding
Strategy	Construct a 600 LF floodwall near Sibley Blvd.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	4860	\$11	\$51,905	\$0	\$0	Soil Excavation for new levee foundation.
Channel treatment: Soil stabilization and vegetative cover	yd2	667	\$14	\$9,258	\$8,610	\$2,217	Stabilization of side slopes and vegetation
Channel treatment: Material to be hauled offsite	yd3	54	\$12	\$635	\$0	\$0	Haul Away excess soil from foundation excavation
Channel treatment: Reinforced one sided concrete wall	yd3	710	\$587	\$417,019	\$387,821	\$99,856	Levee
Pipe in earth (county): 36 inches or less	lf	20	\$217	\$4,336	\$4,032	\$0	Stormsewer to drain surface runoff (5x4)
Outlet structures (Headwall): 36 inches or less	each	4	\$2,600	\$10,401	\$9,673	\$0	Inlet/Outlet structure
Pump Station: 10ac-ft per day interior drainage	each	1	\$800,000	\$800,000	\$743,988	\$0	Assume Pump Station Required at all Levees
Land Acquisition: Permanent Easement *	dollar	39143	\$1	\$39,143	\$0	\$0	

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$1,293,553	\$1,154,123	\$102,073
Utility Relocation			4 %	\$51,742		
Mobilization \ General Conditions			5%	\$64,678		
Subtotal with Percent Allowances				\$1,409,972		
Contingency			30%	\$422,992		
Profit			5%	\$91,648		
Probable Construction Cost Estimate				\$1,924,612		
Design Engineering, Geotechnical, and Construction Management			10%	\$192,461		
Property Acquisition Cost:				\$39,143		
Total Conceptual Cost Estimate (2008 Dollars)				\$3,412,413		

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Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	LCRW-G2
Problem Description	Overbank flooding
Strategy	Construct a 1,900 LF levee/floodwall near 158th Place and 159th St.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	18844	\$11	\$201,254	\$0	\$0	Soil Excavation for new levee foundation, earthen levee.
Channel treatment: Soil stabilization and vegetative cover	yd2	9385	\$14	\$130,264	\$121,143	\$31,192	Stabilization of side slopes and vegetation and covering
Channel treatment: Material to be hauled offsite	yd3	671	\$12	\$7,884	\$0	\$0	Haul Away excess soil from foundation excavation
Channel treatment: Reinforced one sided concrete wall	yd3	1342	\$587	\$788,224	\$733,036	\$188,742	Levee
Pipe in earth (county): 36 inches or less	lf	188	\$217	\$40,755	\$37,901	\$0	Stormsewer to drain surface runoff (5x4)
Outlet structures (Headwall): 36 inches or less	each	8	\$2,600	\$20,803	\$19,346	\$0	Inlet/Outlet structure
Channel treatment: Compaction	yd3	12805	\$7	\$95,781	\$0	\$0	Compact Levee
Pump Station: 10ac-ft per day interior drainage	each	1	\$800,000	\$800,000	\$743,988	\$0	Assume Pump Station Required at all Levees
Land Acquisition: Permanent Easement *	dollar	464561	\$1	\$464,561	\$0	\$0	

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)		\$2,084,964	\$1,655,414	\$219,934
Utility Relocation	4 %	\$83,399		
Mobilization \ General Conditions	5%	\$104,248		
Subtotal with Percent Allowances		\$2,272,611		
Contingency	30%	\$681,783		
Profit	5%	\$147,720		
Probable Construction Cost Estimate		\$3,102,114		
Design Engineering, Geotechnical, and Construction Management	10%	\$3410,413		
Property Acquisition Cost:		\$464,561		
Total Conceptual Cost Estimate (2006 Dollars)		\$5,752,235		

**Metropolitan Water Reclamation District of Greater Chicago
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Alternative Name	LCRW-G3
Problem Description	Overbank flooding
Strategy	Construct an 850 LF floodwall near 158th St. and Chicago Ave.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	4374	\$11	\$46,714	\$0	\$0	Soil Excavation for new levee foundation.
Channel treatment: Soil stabilization and vegetative cover	yd2	944	\$14	\$13,103	\$12,185	\$3,137	Stabilization of side slopes and vegetation
Channel treatment: Material to be hauled offsite	yd3	486	\$12	\$5,711	\$0	\$0	Haul Away excess soil from foundation excavation
Channel treatment: Reinforced one sided concrete wall	yd3	972	\$587	\$570,904	\$530,932	\$136,705	Levee
Pipe in earth (county): 36 inches or less	lf	20	\$217	\$4,336	\$4,032	\$0	Stormsewer to drain surface runoff (5x4)
Outlet structures (Headwall): 36 inches or less	each	2	\$2,600	\$5,201	\$4,837	\$0	Inlet/Outlet structure
Pump Station: 10ac-ft per day interior drainage	each	1	\$800,000	\$800,000	\$743,988	\$0	Assume Pump Station Required at all Levees
Land Acquisition: Permanent Easement *	dollar	529965	\$1	\$529,965	\$0	\$0	

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$1,445,968	\$1,295,974	\$139,842
Utility Relocation			4 %	\$57,839		
Mobilization \ General Conditions			5%	\$72,298		
Subtotal with Percent Allowances				\$1,576,105		
Contingency			30%	\$472,832		
Profit			5%	\$102,447		
Probable Construction Cost Estimate				\$2,151,384		
Design Engineering, Geotechnical, and Construction Management			10%	\$215,138		
Property Acquisition Cost:				\$529,965		
Total Conceptual Cost Estimate (2008 Dollars)				\$4,332,303		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
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Alternative Name	LCRW-G4
Problem Description	Overbank flooding
Strategy	Construct an 825 LF floodwall near Parkside Ave. and School St.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	5526	\$11	\$59,018	\$0	\$0	Soil Excavation for new levee foundation and earthen levee
Channel treatment: Soil stabilization and vegetative cover	yd2	2848	\$14	\$39,530	\$36,763	\$9,466	Stabilization of side slopes and vegetation and covering
Channel treatment: Material to be hauled offsite	yd3	296	\$12	\$3,478	\$0	\$0	Haul Away excess soil from foundation excavation
Channel treatment: Reinforced one sided concrete wall	yd3	592	\$587	\$347,711	\$323,366	\$83,260	Levee
Channel treatment: Compaction	yd3	2862	\$7	\$21,408	\$0	\$0	Compact Levee
Pipe in earth (county): 36 inches or less	lf	20	\$217	\$4,336	\$4,032	\$0	Stormsewer to drain surface runoff (5x4)
Outlet structures (Headwall): 36 inches or less	each	4	\$2,600	\$10,401	\$9,673	\$0	Inlet/Outlet structure
Pump Station: 10ac-ft per day interior drainage	each	1	\$800,000	\$800,000	\$743,988	\$0	Assume Pump Station Required at all Levees
Land Acquisition: Purchase of Property *	dollar	111666	\$1	\$111,666	\$0	\$0	

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$1,285,882	\$1,117,822	\$92,726
Utility Relocation			4 %	\$51,435		
Mobilization \ General Conditions			5%	\$64,294		
Subtotal with Percent Allowances				\$1,401,611		
Contingency			30%	\$420,483		
Profit			5%	\$91,105		
Probable Construction Cost Estimate				\$1,913,199		
Design Engineering, Geotechnical, and Construction Management			10%	\$191,320		
Property Acquisition Cost:				\$111,666		
Total Conceptual Cost Estimate (2008 Dollars)				\$3,426,733		

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Alternative Name	LCRW-G5
Problem Description	Overbank Flooding
Strategy	Construct a 930 LF floodwall near 158th St. and Church Dr.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Land Acquisition: Permanent Easement *	dollar	375100	\$1	\$375,100	\$0	\$0	Land Acquisition
Channel treatment: Excavation	yd3	7450	\$11	\$79,566	\$0	\$0	Soil Excavation for new levee foundation
Channel treatment: Soil stabilization and vegetative cover	yd2	5891	\$14	\$81,767	\$76,042	\$19,579	Stabilization of side slopes and vegetation and Covering
Channel treatment: Material to be hauled offsite	yd3	84	\$12	\$987	\$0	\$0	Haul Away excess soil from foundation excavation
Channel treatment: Reinforced one sided concrete wall	yd3	169	\$587	\$99,262	\$92,312	\$23,769	Levee
Pipe in earth (county): 36 inches or less	lf	4	\$217	\$867	\$806	\$0	Stormsewer to drain surface runoff (5x4)
Outlet structures (Headwall): 36 inches or less	each	4	\$2,600	\$10,401	\$9,673	\$0	Inlet/Outlet structure
Channel treatment: Compaction	yd3	6691	\$7	\$50,049	\$0	\$0	Compact Levee

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$322,899	\$178,834	\$43,348	
Utility Relocation			4 %	\$12,916			
Mobilization \ General Conditions			5%	\$16,145			
Subtotal with Percent Allowances				\$351,960			
Contingency			30%	\$105,588			
Profit			5%	\$22,877			
Probable Construction Cost Estimate				\$480,426			
Design Engineering, Geotechnical, and Construction Management			10%	\$48,043			
Property Acquisition Cost:				\$375,100			
Total Conceptual Cost Estimate (2008 Dollars)				\$1,125,750			

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Little Calumet River Watershed Detailed Watershed Plan
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Alternative Name	LCRW-G6
Problem Description	Overbank Flooding
Strategy	Construct a 1,285 LF floodwall near Blouin Drive
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Land Acquisition: Permanent Easement *	dollar	1260000	\$1	\$1,260,000	\$0	\$0	Land Acquisition
Channel treatment: Excavation	yd3	2263	\$11	\$24,169	\$0	\$0	Soil Excavation for new levee foundation.
Channel treatment: Excavation	yd3	1642	\$11	\$17,537	\$0	\$0	Earthen Levee
Channel treatment: Soil stabilization and vegetative cover	yd2	900	\$14	\$12,492	\$11,617	\$2,991	Stabilization of side slopes and vegetation
Channel treatment: Soil stabilization and vegetative cover	yd2	2810	\$14	\$39,003	\$36,272	\$9,339	Covering
Channel treatment: Material to be hauled offsite	yd3	251	\$12	\$2,949	\$0	\$0	Haul Away excess soil from foundation excavation
Channel treatment: Reinforced one sided concrete wall	yd3	503	\$587	\$295,437	\$274,752	\$70,743	Levee
Channel treatment: Compaction	yd3	1642	\$7	\$12,282	\$0	\$0	Compact Levee
Pipe in earth (county): 36 inches or less	lf	86	\$217	\$18,643	\$17,338	\$0	Stormsewer to drain surface runoff (5x4)
Outlet structures (Headwall): 36 inches or less	each	4	\$2,600	\$10,401	\$9,673	\$0	Inlet/Outlet structure

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$432,913	\$349,652	\$83,073
Utility Relocation			4 %	\$17,317		
Mobilization \ General Conditions			5%	\$21,646		
Subtotal with Percent Allowances				\$471,875		
Contingency			30%	\$141,563		
Profit			5%	\$30,672		
Probable Construction Cost Estimate				\$644,110		
Design Engineering, Geotechnical, and Construction Management			10%	\$64,411		
Property Acquisition Cost:				\$1,260,000		
Total Conceptual Cost Estimate (2008 Dollars)				\$2,401,246		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
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Alternative Name	LCRW-G7
Problem Description	Overbank Flooding
Strategy	Construct a 785 LF floodwall near 158th St.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Outlet structures (Headwall): 36 inches or less	each	4	\$2,600	\$10,401	\$9,673	\$0	Inlet/Outlet structure
Pipe in earth (county): 36 inches or less	lf	112	\$217	\$24,279	\$22,579	\$0	Stormsewer to drain surface runoff (5x4)
Land Acquisition: Permanent Easement *	dollar	495000	\$1	\$495,000	\$0	\$0	Land Acquisition
Channel treatment: Excavation	yd3	5541	\$11	\$59,178	\$0	\$0	Earthen Levee
Channel treatment: Compaction	yd3	5541	\$7	\$41,447	\$0	\$0	Compact Levee
Channel treatment: Soil stabilization and vegetative cover	yd2	6100	\$14	\$84,668	\$78,740	\$20,274	Covering
Pump Station: 10ac-ft per day interior drainage	each	1	\$800,000	\$800,000	\$743,988	\$0	Assume Pump Station Required at all Levees

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$1,019,973	\$854,980	\$20,274	
Utility Relocation			4 %	\$40,799			
Mobilization \ General Conditions			5%	\$50,999			
Subtotal with Percent Allowances				\$1,111,771			
Contingency			30%	\$333,531			
Profit			5%	\$72,265			
Probable Construction Cost Estimate				\$1,517,567			
Design Engineering, Geotechnical, and Construction Management			10%	\$151,757			
Property Acquisition Cost:				\$495,000			
Total Conceptual Cost Estimate (2008 Dollars)				\$3,039,578			

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Alternative Name	LCRW-G8
Problem Description	Overbank Flooding
Strategy	Modify existing berm to act as a levee parallel to 158th St. near Greenwood Dr. and Madison Ave.
District Minimum	Met
Criteria for Funding:	
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Soil stabilization and vegetative cover	yd2	4573	\$14	\$63,473	\$59,029	\$15,199	Covering
Channel treatment: Compaction	yd3	2249	\$7	\$16,823	\$0	\$0	Compact Levee
Channel treatment: Excavation	yd3	2249	\$11	\$24,019	\$0	\$0	Earthen Levee
Pipe in earth (county): 36 inches or less	lf	86	\$217	\$18,643	\$17,338	\$0	Stormsewer to drain surface runoff (5x4)
Outlet structures (Headwall): 36 inches or less	each	4	\$2,600	\$10,401	\$9,673	\$0	Inlet/Outlet structure
Pump Station: 10ac-ft per day interior drainage	each	1	\$800,000	\$800,000	\$743,988	\$0	Pumping, 25 cfs

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$933,360	\$830,028	\$15,199
Utility Relocation	4 %			\$37,334		
Mobilization \ General Conditions	5%			\$46,668		
Subtotal with Percent Allowances				\$1,017,362		
Contingency	30%			\$305,209		
Profit	5%			\$66,129		
Probable Construction Cost Estimate				\$1,388,699		
Design Engineering, Geotechnical, and Construction Management	10%			\$138,870		
Property Acquisition Cost:				\$0		
Total Conceptual Cost Estimate (2008 Dollars)				\$2,372,796		

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Alternative Name	MTCR-G1
Problem Description	Overbank flooding
Strategy	Construct a 700 LF levee along Overhill Ave. and Oleander Ave.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Embankment construction, grading and restoration: Additional fill	yd3	16910	\$14	\$234,711	\$0	\$0	Construct Embankment
Channel treatment: Compaction	yd3	2775	\$7	\$20,757	\$0	\$0	Construct Embankment
Channel treatment: Soil stabilization and vegetative cover	yd2	10253	\$14	\$142,312	\$132,348	\$34,077	Construct Embankment
Channel treatment: Excavation	yd3	955	\$11	\$10,199	\$0	\$0	New Culvert in Subdivision
Embankment construction, grading and restoration: Material hauled from offsite	yd3	680	\$11	\$7,262	\$0	\$0	New Culvert in Subdivision
Channel treatment: Compaction	yd3	680	\$7	\$5,086	\$0	\$0	New Culvert in Subdivision
Pipe under pavement (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	460	\$609	\$280,002	\$260,398	\$0	New Culvert in Subdivision
Outlet structures (Headwall): 42 to 66 inches	each	2	\$4,758	\$8,564	\$7,964	\$0	New Culvert in Subdivision
Embankment construction, grading and restoration: Additional fill	yd3	0	\$14	\$0	\$0	\$0	New Culvert in Subdivision
Channel treatment: Compaction	yd3	275	\$7	\$2,057	\$0	\$0	New Culvert in Subdivision
Channel treatment: Soil stabilization and vegetative cover	yd2	30	\$14	\$416	\$387	\$100	New Culvert in Subdivision
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	20	\$5	\$100	\$93	\$24	New Culvert in Subdivision
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	268	\$148	\$39,790	\$37,004	\$0	New Culvert in Subdivision
Land Acquisition: Temporary Easement *	dollar	7750	\$1	\$7,750	\$0	\$0	Land Acquisition

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$751,257	\$438,193	\$34,201
Utility Relocation			4 %	\$30,050		
Mobilization \ General Conditions			5%	\$37,563		
Subtotal with Percent Allowances				\$818,870		
Contingency			30%	\$245,661		
Profit			5%	\$53,227		
Probable Construction Cost Estimate				\$1,117,757		
Design Engineering, Geotechnical, and Construction Management			10%	\$111,776		
Property Acquisition Cost:				\$7,750		
Total Conceptual Cost Estimate (2008 Dollars)				\$1,709,677		

**Metropolitan Water Reclamation District of Greater Chicago
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Alternative Name	MTCR-G2
Problem Description	Streambank erosion
Strategy	Streambank stabilization at Oakpark Ave. and 172nd St. and Hickory St. and 66th Court
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Reinforced trapezoidal concrete channel	yd3	1000	\$587	\$587,350	\$546,227	\$0	
Channel treatment: Excavation	yd3	1500	\$11	\$16,020	\$0	\$0	
Channel treatment: Soil stabilization and vegetative cover	yd2	260	\$14	\$3,609	\$3,356	\$864	
Channel treatment: Compaction	yd3	500	\$7	\$3,740	\$0	\$0	
Channel treatment: Material to be hauled offsite	yd3	1000	\$12	\$11,750	\$0	\$0	

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$622,469	\$549,583	\$864	
Utility Relocation			4 %	\$24,899			
Mobilization \ General Conditions			5%	\$31,123			
Subtotal with Percent Allowances				\$678,491			
Contingency			30%	\$203,547			
Profit			5%	\$44,102			
Probable Construction Cost Estimate				\$926,140			
Design Engineering, Geotechnical, and Construction Management			10%	\$92,614			
Property Acquisition Cost:				\$0			
Total Conceptual Cost Estimate (2008 Dollars)				\$1,569,201			

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Alternative Name	MTCR-G3
Problem Description	Overbank flooding
Strategy	Replace 160th and 159th St. culverts and channel improvements between 160th and Oak Ave.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	1610	\$11	\$17,195	\$0	\$0	Remove Existing Culvert @ 160th
Demolition: Brick, concrete, or stone construction	ft2	6900	\$4	\$29,463	\$0	\$0	Remove Existing Culvert @ 160th
Embankment construction, grading and restoration: Material hauled from offsite	yd3	1810	\$11	\$19,331	\$0	\$0	Remove Existing Culvert @ 160th
Channel treatment: Compaction	yd3	600	\$7	\$4,488	\$0	\$0	Remove Existing Culvert @ 160th
Pipe under pavement (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	1150	\$609	\$700,005	\$650,994	\$0	Install New Culvert @ 160th
Inlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$15,700	\$14,601	\$0	Install New Culvert @ 160th
Outlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$15,700	\$14,601	\$0	Install New Culvert @ 160th
Channel treatment: Compaction	yd3	1005	\$7	\$7,517	\$0	\$0	Install New Culvert @ 160th
Channel treatment: Soil stabilization and vegetative cover	yd2	100	\$14	\$1,388	\$1,291	\$332	Install New Culvert @ 160th
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	40	\$5	\$200	\$186	\$48	Install New Culvert @ 160th
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation)	lf	155	\$148	\$23,013	\$21,402	\$0	Install New Culvert @ 160th
Channel treatment: Excavation	yd3	1575	\$11	\$16,821	\$0	\$0	Remove Existing Culvert @ 159th/Cicero
Demolition: Brick, concrete, or stone construction	ft2	3370	\$4	\$14,390	\$0	\$0	Remove Existing Culvert @ 159th/Cicero
Embankment construction, grading and restoration: Material hauled from offsite	yd3	1315	\$11	\$14,044	\$0	\$0	Remove Existing Culvert @ 159th/Cicero
Channel treatment: Compaction	yd3	700	\$7	\$5,236	\$0	\$0	Remove Existing Culvert @ 159th/Cicero
Pipe under pavement (city): Box culvert (51 to 60 ft2)	lf	590	\$661	\$390,008	\$362,701	\$0	Install New Culvert @ 159th/Cicero
Inlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$11,894	\$11,061	\$0	Install New Culvert @ 159th/Cicero
Outlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$11,894	\$11,061	\$0	Install New Culvert @ 159th/Cicero
Channel treatment: Compaction	yd3	875	\$7	\$6,545	\$0	\$0	Install New Culvert @ 159th/Cicero
Channel treatment: Soil stabilization and vegetative cover	yd2	75	\$14	\$1,041	\$968	\$249	Install New Culvert @ 159th/Cicero
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	40	\$5	\$200	\$186	\$48	Install New Culvert @ 159th/Cicero
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation)	lf	230	\$148	\$34,148	\$31,757	\$0	Install New Culvert @ 159th/Cicero
Channel treatment: Excavation	yd3	1025	\$11	\$10,947	\$0	\$0	Channel Improvements
Channel treatment: Soil stabilization and vegetative cover	yd2	1295	\$14	\$17,975	\$16,716	\$4,304	Channel Improvements

Alternative Name	MTCR-G3
Problem Description	Overbank flooding
Strategy	Replace 160th and 159th St. culverts and channel improvements between 160th and Oak Ave.
District Minimum	Met
Criteria for Funding:	
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Compaction	yd3	330	\$7	\$2,468	\$0	\$0	Channel Improvements
Embankment construction, grading and restoration: Material hauled from offsite	yd3	695	\$11	\$7,423	\$0	\$0	Channel Improvements
Channel treatment: Compaction	yd3	695	\$7	\$5,199	\$0	\$0	Channel Improvements
Land Acquisition: Permanent Easement *	dollar	32335	\$1	\$32,335	\$0	\$0	Land Acquisition
Land Acquisition: Temporary Easement *	dollar	14560	\$1	\$14,560	\$0	\$0	Land Acquisition

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$1,384,231	\$1,137,524	\$4,981	
Utility Relocation			4 %	\$55,369			
Mobilization \ General Conditions			5%	\$69,212			
Subtotal with Percent Allowances				\$1,508,812			
Contingency			30%	\$452,644			
Profit			5%	\$98,073			
Probable Construction Cost Estimate				\$2,059,528			
Design Engineering, Geotechnical, and Construction Management			10%	\$205,953			
Property Acquisition Cost:				\$46,895			
Total Conceptual Cost Estimate				\$3,454,881			
Additional Comments							

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Alternative Name	MTCR-G4
Problem Description	Overbank flooding
Strategy	Replace 155th and Kilpatrick Ave. culverts and construct a 700 LF floodwall along north bank downstream of
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	155	\$11	\$1,655	\$0	\$0	Levee Excavation at Metra RR
Embankment construction, grading and restoration: Material hauled from offsite	yd3	105	\$11	\$1,121	\$0	\$0	Levee Excavation at Metra RR
Channel treatment: Compaction	yd3	105	\$7	\$785	\$0	\$0	Levee Excavation at Metra RR
Channel treatment: Compaction	yd3	50	\$7	\$374	\$0	\$0	Levee Construction at Metra RR
Channel treatment: Reinforced one sided concrete wall	yd3	315	\$587	\$185,015	\$172,061	\$44,302	Levee Construction at Metra RR
Channel treatment: Soil stabilization and vegetative cover	yd2	1170	\$14	\$16,240	\$15,103	\$3,889	Levee Construction at Metra RR
Pump Station: 10ac-ft per day interior drainage	each	9	\$800,000	\$7,360,000	\$6,844,687	\$0	Levee Construction at Metra RR
Channel treatment: Excavation	yd3	1860	\$11	\$19,865	\$0	\$0	Remove Existing Culvert at 155th/Kilpatrick
Demolition: Brick, concrete, or stone construction	ft2	1731	\$4	\$7,391	\$0	\$0	Remove Existing Culvert at 155th/Kilpatrick
Embankment construction, grading and restoration: Material hauled from offsite	yd3	1600	\$11	\$17,088	\$0	\$0	Remove Existing Culvert at 155th/Kilpatrick
Channel treatment: Compaction	yd3	1245	\$7	\$9,313	\$0	\$0	Remove Existing Culvert at 155th/Kilpatrick
Pipe under pavement (city): Box culvert (51 to 60 ft2)	lf	720	\$661	\$475,942	\$442,618	\$0	Install New Culvert at 155th/Kilpatrick
Inlet structures (Headwall): 42 to 66 inches	each	7	\$4,758	\$30,924	\$28,759	\$0	Install New Culvert at 155th/Kilpatrick
Outlet structures (Headwall): 42 to 66 inches	each	7	\$4,758	\$30,924	\$28,759	\$0	Install New Culvert at 155th/Kilpatrick
Channel treatment: Compaction	yd3	615	\$7	\$4,600	\$0	\$0	Install New Culvert at 155th/Kilpatrick
Channel treatment: Soil stabilization and vegetative cover	yd2	180	\$14	\$2,498	\$2,323	\$598	Install New Culvert at 155th/Kilpatrick
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	40	\$5	\$200	\$186	\$48	Install New Culvert at 155th/Kilpatrick
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	105	\$148	\$15,589	\$14,498	\$0	Install New Culvert at 155th/Kilpatrick
Channel treatment: Excavation	yd3	155	\$11	\$1,655	\$0	\$0	Levee Excavation at Kilpatrick
Embankment construction, grading and restoration: Material hauled from offsite	yd3	105	\$11	\$1,121	\$0	\$0	Levee Excavation at Kilpatrick
Channel treatment: Compaction	yd3	105	\$7	\$785	\$0	\$0	Levee Excavation at Kilpatrick
Channel treatment: Compaction	yd3	50	\$7	\$374	\$0	\$0	Levee Construction at Kilpatrick
Channel treatment: Reinforced one sided concrete wall	yd3	394	\$587	\$231,416	\$215,213	\$55,413	Levee Construction at Kilpatrick

Alternative Name	MTCR-G4
Problem Description	Overbank flooding
Strategy	Replace 155th and Kilpatrick Ave. culverts and construct a 700 LF floodwall along north bank downstream of
District Minimum	Met
Criteria for Funding:	
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Soil stabilization and vegetative cover	yd2	1170	\$14	\$16,240	\$15,103	\$3,889	Levee Construction at Kilpatrick
Pump Station: 10ac-ft per day interior drainage	each	3	\$800,000	\$2,320,000	\$2,157,564	\$0	Levee Construction at Kilpatrick

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$10,751,117	\$9,936,875	\$108,139	
Utility Relocation			4 %	\$430,045			
Mobilization \ General Conditions			5%	\$537,556			
Subtotal with Percent Allowances				\$11,718,71			
Contingency			30%	\$3,515,615			
Profit			5%	\$761,717			
Probable Construction Cost Estimate				\$15,996,04			
Design Engineering, Geotechnical, and Construction Management			10%	\$1,599,605			
Property Acquisition Cost:					\$0		
Total Conceptual Cost Estimate (2008 Dollars)				\$27,640,667			

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	MTCR-G5
Problem Description	Overbank flooding
Strategy	Construct a 25 ac-ft detention at Kilbourn and Waverly, channel improvements from 151st St. to Pulaski Rd.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	13665	\$11	\$145,942	\$0	\$0	Channel Improvements/ Earthen Embankments
Channel treatment: Soil stabilization and vegetative cover	yd2	13660	\$14	\$189,601	\$176,326	\$45,400	Channel Improvements/ Earthen Embankments
Channel treatment: Compaction	yd3	5205	\$7	\$38,933	\$0	\$0	Channel Improvements/ Earthen Embankments
Channel treatment: Compaction	yd3	6040	\$7	\$45,179	\$0	\$0	Channel Improvements/ Earthen Embankments
Channel treatment: Soil stabilization and vegetative cover	yd2	18115	\$14	\$251,436	\$233,832	\$60,207	Channel Improvements/ Earthen Embankments
Pump Station: 10ac-ft per day interior drainage	each	9	\$800,000	\$6,800,000	\$6,323,896	\$0	Channel Improvements/ Earthen Embankments
Channel treatment: Excavation	yd3	40335	\$11	\$430,778	\$0	\$0	Storage Excavation
Embankment construction, grading and restoration: Material hauled from offsite	yd3	27730	\$11	\$296,156	\$0	\$0	Storage Excavation
Channel treatment: Compaction	yd3	27730	\$7	\$207,420	\$0	\$0	Storage Excavation
Channel treatment: Compaction	yd3	1450	\$7	\$10,846	\$0	\$0	Storage Construction
Channel treatment: Soil stabilization and vegetative cover	yd2	3600	\$14	\$49,968	\$46,469	\$11,965	Storage Construction
Concrete: Cast in place	yd3	125	\$250	\$31,250	\$0	\$0	Storage Spillway/Outlet Structure
Pipe in earth (city): 36 inches or less	lf	44	\$217	\$9,538	\$8,870	\$0	Storage Spillway/Outlet Structure
Inlet structures (Headwall): 36 inches or less	each	2	\$2,600	\$5,201	\$4,837	\$0	Storage Spillway/Outlet Structure
Outlet structures (Headwall): 36 inches or less	each	2	\$2,600	\$5,201	\$4,837	\$0	Storage Spillway/Outlet Structure
Land Acquisition: Purchase of Property *	dollar	77469	\$1	\$77,469	\$0	\$0	Land Acquisition
Land Acquisition: Permanent Easement *	dollar	34725	\$1	\$34,725	\$0	\$0	Land Acquisition
Land Acquisition: Temporary Easement *	dollar	33350	\$1	\$33,350	\$0	\$0	Land Acquisition

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$8,517,450	\$6,799,067	\$117,572
Utility Relocation			4 %	\$340,698		
Mobilization \ General Conditions			5 %	\$425,873		
Subtotal with Percent Allowances				\$9,284,021		
Contingency			30%	\$2,785,206		
Profit			5%	\$603,461		
Probable Construction Cost Estimate				\$12,672,68		
Design Engineering, Geotechnical, and Construction Management			10%	\$1,267,269		
Property Acquisition Cost:				\$145,544		
Total Conceptual Cost Estimate (2008 Dollars)				\$21,002,140		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	MTCR-G6
Problem Description	Overbank flooding
Strategy	Channel improvements between 137th and 139th St.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	8665	\$11	\$92,542	\$0	\$0	Channel Improvements
Channel treatment: Soil stabilization and vegetative cover	yd2	2431	\$14	\$33,742	\$31,380	\$8,080	Channel Improvements
Channel treatment: Compaction	yd3	1455	\$7	\$10,883	\$0	\$0	Channel Improvements
Embankment construction, grading and restoration: Material hauled from offsite	yd3	7210	\$11	\$77,003	\$0	\$0	Channel Improvements
Channel treatment: Compaction	yd3	7210	\$7	\$53,931	\$0	\$0	Channel Improvements
Land Acquisition: Permanent Easement *	dollar	225	\$1	\$225	\$0	\$0	Land Acquisition
Land Acquisition: Temporary Easement *	dollar	210	\$1	\$210	\$0	\$0	Land Acquisition

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$268,101	\$31,380	\$8,080	
Utility Relocation			4 %	\$10,724			
Mobilization \ General Conditions			5%	\$13,405			
Subtotal with Percent Allowances				\$292,231			
Contingency			30%	\$87,669			
Profit			5%	\$18,995			
Probable Construction Cost Estimate				\$398,895			
Design Engineering, Geotechnical, and Construction Management			10%	\$39,889			
Property Acquisition Cost:				\$435			
Total Conceptual Cost Estimate (2008 Dollars)				\$478,679			

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	NTCR-G1
Problem Description	Overbank flooding
Strategy	Construct a 190 ac-ft detention facility at LeClaire Ave. and 153rd St. and a 6600 LF diversion conduit from
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	130	\$11	\$1,388	\$0	\$0	Remove Existing Culvert @ LeClaire
Demolition: Brick, concrete, or stone construction	ft2	590	\$4	\$2,519	\$0	\$0	Remove Existing Culvert @ LeClaire
Embankment construction, grading and restoration: Material hauled from offsite	yd3	115	\$11	\$1,228	\$0	\$0	Remove Existing Culvert @ LeClaire
Channel treatment: Compaction	yd3	15	\$7	\$112	\$0	\$0	Remove Existing Culvert @ LeClaire
Pipe under pavement (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	84	\$609	\$51,131	\$47,551	\$0	Install New Culvert @ LeClaire
Inlet structures (Headwall): 42 to 66 inches	each	4	\$4,758	\$17,127	\$15,928	\$0	Install New Culvert @ LeClaire
Outlet structures (Headwall): 42 to 66 inches	each	4	\$4,758	\$17,127	\$15,928	\$0	Install New Culvert @ LeClaire
Channel treatment: Compaction	yd3	75	\$7	\$561	\$0	\$0	Install New Culvert @ LeClaire
Channel treatment: Soil stabilization and vegetative cover	yd2	110	\$14	\$1,527	\$1,420	\$366	Install New Culvert @ LeClaire
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	40	\$5	\$200	\$186	\$48	Install New Culvert @ LeClaire
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation)	lf	25	\$148	\$3,712	\$3,452	\$0	Install New Culvert @ LeClaire
Channel treatment: Excavation	yd3	240	\$11	\$2,563	\$0	\$0	Remove Existing Culvert @ Lavergne
Demolition: Brick, concrete, or stone construction	ft2	560	\$4	\$2,391	\$0	\$0	Remove Existing Culvert @ Lavergne
Embankment construction, grading and restoration: Material hauled from offsite	yd3	85	\$11	\$908	\$0	\$0	Remove Existing Culvert @ Lavergne
Pipe under pavement (city): 72 to 84 inches / box culvert (28 to 38 ft2)	lf	40	\$425	\$17,001	\$15,810	\$0	Install New Culvert @ Lavergne
Inlet structures (Headwall): 42 to 66 inches	each	1	\$4,758	\$6,185	\$5,752	\$0	Install New Culvert @ Lavergne
Outlet structures (Headwall): 42 to 66 inches	each	1	\$4,758	\$6,185	\$5,752	\$0	Install New Culvert @ Lavergne
Channel treatment: Compaction	yd3	280	\$7	\$2,094	\$0	\$0	Install New Culvert @ Lavergne
Channel treatment: Soil stabilization and vegetative cover	yd2	100	\$14	\$1,388	\$1,291	\$332	Install New Culvert @ Lavergne
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	40	\$5	\$200	\$186	\$48	Install New Culvert @ Lavergne
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation)	lf	38	\$148	\$5,642	\$5,247	\$0	Install New Culvert @ Lavergne
Channel treatment: Excavation	yd3	338000	\$11	\$3,609,840	\$0	\$0	Storage Excavation
Channel treatment: Soil stabilization and vegetative cover	yd2	313035	\$14	\$4,344,926	\$4,040,714	\$1,040,404	Storage Construction
Channel treatment: Compaction	yd3	313035	\$7	\$2,341,502	\$0	\$0	Storage Construction
Channel treatment: Compaction	yd3	25765	\$7	\$192,722	\$0	\$0	Storage Construction

Alternative Name	NTCR-G1
Problem Description	Overbank flooding
Strategy	Construct a 190 ac-ft detention facility at Leclair Ave. and 153rd St. and a 6600 LF diversion conduit from
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Soil stabilization and vegetative cover	yd2	16000	\$14	\$222,080	\$206,531	\$53,178	Storage Construction
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	1875	\$148	\$278,381	\$258,890	\$0	Storage Construction
Concrete: Cast in place	yd3	100	\$250	\$25,000	\$0	\$0	Storage Spillway/Outlet Structure
Pipe in earth (city): 36 inches or less	lf	50	\$217	\$10,839	\$10,080	\$0	Storage Spillway/Outlet Structure
Inlet structures (Headwall): 36 inches or less	each	1	\$2,600	\$2,600	\$2,418	\$0	Storage Spillway/Outlet Structure
Outlet structures (Headwall): 36 inches or less	each	1	\$2,600	\$2,600	\$2,418	\$0	Storage Spillway/Outlet Structure
Pump Station: 10ac-ft per day interior drainage	each	3	\$800,000	\$2,728,000	\$2,536,998	\$0	Storage Spillway/Outlet Structure
Channel treatment: Excavation	yd3	270	\$11	\$2,884	\$0	\$0	Levee Excavation
Embankment construction, grading and restoration: Material hauled from offsite	yd3	180	\$11	\$1,922	\$0	\$0	Levee Excavation
Channel treatment: Compaction	yd3	180	\$7	\$1,346	\$0	\$0	Levee Excavation
Channel treatment: Compaction	yd3	90	\$7	\$673	\$0	\$0	Levee Construction
Channel treatment: Reinforced one sided concrete wall	yd3	580	\$587	\$340,663	\$316,811	\$81,573	Levee Construction
Channel treatment: Soil stabilization and vegetative cover	yd2	1800	\$14	\$24,984	\$23,235	\$5,982	Levee Construction
Pump Station: 10ac-ft per day interior drainage	each	10	\$800,000	\$8,000,000	\$7,439,878	\$0	Levee Construction
Land Acquisition: Purchase of Property *	dollar	406600	\$1	\$406,600	\$0	\$0	Land Acquisition
Land Acquisition: Temporary Easement *	dollar	2615	\$1	\$2,615	\$0	\$0	Land Acquisition
Floodproofing: Residence	each	1	\$21,358	\$21,358	\$19,863	\$8,236	Floodproofing
Demolition: Brick, concrete, or stone construction	ft2	52980	\$4	\$226,225	\$0	\$0	Land Acquisition
Embankment construction, grading and restoration: Material hauled from offsite	yd3	52980	\$11	\$565,826	\$0	\$0	Land Acquisition
Channel treatment: Excavation	yd3	18236	\$11	\$194,760	\$0	\$0	New Diversion Structure
Channel treatment: Compaction	yd3	5835	\$7	\$43,646	\$0	\$0	New Diversion Structure
Inlet structures (Headwall): 42 to 66 inches	each	1	\$4,758	\$5,233	\$4,867	\$0	New Diversion Structure
Outlet structures (Headwall): 42 to 66 inches	each	1	\$4,758	\$5,233	\$4,867	\$0	New Diversion Structure
Channel treatment: Compaction	yd3	18235	\$7	\$136,398	\$0	\$0	New Diversion Structure
Channel treatment: Soil stabilization and vegetative cover	yd2	53	\$14	\$736	\$684	\$176	New Diversion Structure
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	40	\$5	\$200	\$186	\$48	New Diversion Structure
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	2735	\$148	\$406,065	\$377,635	\$0	New Diversion Structure
Demolition: Brick, concrete, or stone construction	ft2	575	\$4	\$2,455	\$0	\$0	Remove Existing Culvert at Karlov
Embankment construction, grading and restoration: Material hauled from offsite	yd3	90	\$11	\$961	\$0	\$0	Remove Existing Culvert at Karlov
Channel treatment: Compaction	yd3	40	\$7	\$299	\$0	\$0	Remove Existing Culvert at Karlov

Alternative Name	NTCR-G1
Problem Description	Overbank flooding
Strategy	Construct a 190 ac-ft detention facility at Leclair Ave. and 153rd St. and a 6600 LF diversion conduit from
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Pipe under pavement (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	48	\$609	\$29,218	\$27,172	\$0	Install New Culvert at Karlov
Inlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$11,894	\$11,061	\$0	Install New Culvert at Karlov
Outlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$11,894	\$11,061	\$0	Install New Culvert at Karlov
Channel treatment: Compaction	yd3	40	\$7	\$299	\$0	\$0	Install New Culvert at Karlov
Channel treatment: Soil stabilization and vegetative cover	yd2	90	\$14	\$1,249	\$1,162	\$299	Install New Culvert at Karlov
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	40	\$5	\$200	\$186	\$48	Install New Culvert at Karlov
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	25	\$148	\$3,712	\$3,452	\$0	Install New Culvert at Karlov
Channel treatment: Excavation	yd3	665	\$11	\$7,102	\$0	\$0	Channel Improvements
Channel treatment: Compaction	yd3	135	\$7	\$1,010	\$0	\$0	Channel Improvements
Embankment construction, grading and restoration: Material hauled from offsite	yd3	530	\$11	\$5,660	\$0	\$0	Channel Improvements
Channel treatment: Compaction	yd3	530	\$7	\$3,964	\$0	\$0	Channel Improvements
Pipe under pavement (city): Box culvert (51 to 60 ft2)	lf	265	\$661	\$175,173	\$162,908	\$0	Channel Improvements
Inlet structures (Headwall): 42 to 66 inches	each	20	\$4,758	\$95,150	\$88,488	\$0	Other
Land Acquisition: Temporary Easement *	dollar	865	\$1	\$865	\$0	\$0	Land Acquisition
Channel treatment: Excavation	yd3	125	\$11	\$1,335	\$0	\$0	Remove Existing Culvert at Karlov
Embankment construction, grading and restoration: Material hauled from offsite	yd3	5835	\$11	\$62,318	\$0	\$0	New Diversion Structure
Pipe under pavement (city): 42 to 66 inches / box culvert (15 to 27 ft2)	lf	6565	\$292	\$1,913,960	\$1,779,954	\$0	

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)		\$26,205,687	\$17,450,02	\$1,190,738
Utility Relocation	4 %	\$1,048,227		
Mobilization \ General Conditions	5%	\$1,310,284		
Subtotal with Percent Allowances		\$28,564,19		
Contingency	30%	\$8,569,260		
Profit	5%	\$1,856,673		
Probable Construction Cost Estimate		\$38,990,13		
Design Engineering, Geotechnical, and Construction Management	10%	\$3,899,013		
Property Acquisition Cost:		\$410,080		
Total Conceptual Cost Estimate		\$61,939,983		

Additional Comments

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	LDET-G1
Problem Description	Overbank flooding
Strategy	Replace existing crossing on Katz Corner Rd.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	900	\$11	\$9,612	\$0	\$0	Soil Excavation for new culvert, 2 ft buffer along edges, cut down at 1:2 side slopes
Channel treatment: Additional fill	yd3	710	\$14	\$9,855	\$0	\$0	Replace soil on top of new culvert
Channel treatment: Compaction	yd3	710	\$7	\$5,311	\$0	\$0	Compact soil on top of new culvert
Channel treatment: Material to be hauled offsite	yd3	285	\$12	\$3,349	\$0	\$0	Haul Away excess soil and existing concrete & pavement
Channel treatment: Vegetative cover only	yd2	35	\$9	\$299	\$278	\$72	Vegetation restoration - road embankment
Concrete: Cast in place	yd3	110	\$250	\$27,500	\$0	\$0	Oversize culvert construction (2- 10 ft x 7 ft)
Outlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$14,273	\$13,273	\$0	Outlet structure - used 3 units to cover larger size
Inlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$14,273	\$13,273	\$0	Inlet structure - used 3 units to cover larger size
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	100	\$5	\$500	\$465	\$120	Clean-up around inlet & outlet
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation)	lf	150	\$148	\$22,271	\$20,711	\$0	Replace Roadway Pavement, extra for additional lanes
Floodproofing: Residence	each	1	\$21,358	\$21,358	\$19,863	\$8,236	Residential Acq - PIN 33311200260000

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$128,599	\$67,863	\$8,428
Utility Relocation			4 %	\$5,144		
Mobilization \ General Conditions			5%	\$6,430		
Subtotal with Percent Allowances				\$140,173		
Contingency			30%	\$42,052		
Profit			5%	\$9,111		
Probable Construction Cost Estimate				\$191,336		
Design Engineering, Geotechnical, and Construction Management			10%	\$19,134		
Property Acquisition Cost:				\$0		
Total Conceptual Cost Estimate (2008 Dollars)				\$286,760		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	NCLD-G1
Problem Description	Overbank flooding
Strategy	Construct 700 ac-ft detention facility and replace crossings at 198th St. and downstream private drives
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	470	\$11	\$5,020	\$0	\$0	Soil Excavation for new culvert, 2 ft buffer along edges, cut down at 1:2 side slopes
Channel treatment: Additional fill	yd3	335	\$14	\$4,650	\$0	\$0	Replace soil on top of new culvert
Channel treatment: Compaction	yd3	335	\$7	\$2,506	\$0	\$0	Compact soil on top of new culvert
Channel treatment: Material to be hauled offsite	yd3	165	\$12	\$1,939	\$0	\$0	Haul Away excess soil and existing concrete & pavement
Demolition: Brick, concrete, or stone construction	ft2	2615	\$4	\$11,166	\$0	\$0	Demolition of existing concrete culvert
Channel treatment: Vegetative cover only	yd2	24	\$9	\$205	\$191	\$49	Vegetation restoration - road embankment
Pipe under pavement (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	174	\$609	\$105,914	\$98,498	\$0	2, 6x8 box culverts, 87 length
Outlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$14,273	\$13,273	\$0	Outlet structure - used 3 units to cover larger size
Inlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$14,273	\$13,273	\$0	Inlet structure - used 3 units to cover larger size
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	100	\$5	\$500	\$465	\$120	Clean-up around inlet & outlet
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation)	lf	85	\$148	\$12,620	\$11,736	\$0	Replace Roadway Pavement, extra for additional lanes
Floodproofing: Industry	2,500 ft2	23	\$21,358	\$488,031	\$453,861	\$188,189	Commercial Floodproof - PIN 33303000140000
Floodproofing: Residence	each	1	\$21,358	\$21,358	\$19,863	\$8,236	Residential - PIN 32254050140000
Channel treatment: Excavation	yd3	1040	\$11	\$11,107	\$0	\$0	Soil Excavation for new culvert, 2 ft buffer along edges, cut down at 1:2 side slopes
Channel treatment: Additional fill	yd3	830	\$14	\$11,520	\$0	\$0	Replace soil on top of new culvert
Channel treatment: Compaction	yd3	830	\$7	\$6,208	\$0	\$0	Compact soil on top of new culvert
Channel treatment: Material to be hauled offsite	yd3	270	\$12	\$3,173	\$0	\$0	Haul Away excess soil and existing concrete & pavement
Demolition: Brick, concrete, or stone construction	ft2	4850	\$4	\$20,710	\$0	\$0	Demolition of existing concrete culvert
Channel treatment: Vegetative cover only	yd2	60	\$9	\$512	\$477	\$123	Vegetation restoration - road embankment
Concrete: Cast in place	yd3	75	\$250	\$18,750	\$0	\$0	Bridge construction - 29 span

Alternative Name	NCLD-G1
Problem Description	Overbank flooding
Strategy	Construct 700 ac-ft detention facility and replace crossings at 198th St. and downstream private drives
District Minimum	Met
Criteria for Funding:	
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Outlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$14,273	\$13,273	\$0	Outlet structure - used 3 units to cover larger size
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	100	\$5	\$500	\$465	\$120	Clean-up around inlet & outlet
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation)	lf	160	\$148	\$23,755	\$22,092	\$0	Replace Roadway Pavement, extra for additional lanes
Inlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$14,273	\$13,273	\$0	Inlet structure - used 3 units to cover larger size

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$807,233	\$660,740	\$196,837
Utility Relocation		4 %		\$32,289		
Mobilization \ General Conditions		5%		\$40,362		
Subtotal with Percent Allowances				\$879,884		
Contingency		30%		\$263,965		
Profit		5%		\$57,192		
Probable Construction Cost Estimate				\$1,201,042		
Design Engineering, Geotechnical, and Construction Management		10%		\$120,104		
Property Acquisition Cost:				\$0		
Total Conceptual Cost Estimate (2008 Dollars)				\$2,178,723		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	NCLD-G2
Problem Description	Overbank flooding
Strategy	Replace Bridge St. and Linda Lane and relocate mobile homes
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	130	\$11	\$1,388	\$0	\$0	Soil Excavation for new culvert, 2 ft buffer along edges, cut down at 1:2 side slopes
Channel treatment: Additional fill	yd3	100	\$14	\$1,388	\$0	\$0	Replace soil on top of new culvert
Channel treatment: Compaction	yd3	100	\$7	\$748	\$0	\$0	Compact soil on top of new culvert
Channel treatment: Material to be hauled offsite	yd3	50	\$12	\$588	\$0	\$0	Haul Away excess soil and existing concrete & pavement
Demolition: Brick, concrete, or stone construction	ft2	1620	\$4	\$6,917	\$0	\$0	Demolition of existing concrete culvert
Channel treatment: Vegetative cover only	yd2	20	\$9	\$171	\$159	\$41	Vegetation restoration - road embankment
Pipe under pavement (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	58	\$609	\$35,305	\$32,833	\$0	2, 7x5 box at INV 617.67, 29 length
Outlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$14,273	\$13,273	\$0	Outlet structure - used 3 units to cover larger size
Inlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$14,273	\$13,273	\$0	Inlet structure - used 3 units to cover larger size
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	100	\$5	\$500	\$465	\$120	Clean-up around inlet & outlet
Buyout: Property *	dollar	36000	\$1	\$36,000	\$0	\$0	Relocate mobile homes to other pads within park
Channel treatment: Excavation	yd3	170	\$11	\$1,816	\$0	\$0	Soil Excavation for new culvert, 2 ft buffer along edges, cut down at 1:2 side slopes
Channel treatment: Additional fill	yd3	110	\$14	\$1,527	\$0	\$0	Replace soil on top of new culvert
Channel treatment: Compaction	yd3	110	\$7	\$823	\$0	\$0	Compact soil on top of new culvert
Channel treatment: Material to be hauled offsite	yd3	70	\$12	\$823	\$0	\$0	Haul Away excess soil and existing concrete & pavement
Demolition: Brick, concrete, or stone construction	ft2	815	\$4	\$3,480	\$0	\$0	Demolition of existing concrete culvert
Channel treatment: Vegetative cover only	yd2	30	\$9	\$256	\$238	\$61	Vegetation restoration - road embankment
Concrete: Cast in place	yd3	30	\$250	\$7,500	\$0	\$0	Bridge deck construction
Outlet structures (Headwall): 42 to 66 inches	each	4	\$4,758	\$19,030	\$17,698	\$0	Outlet structure - used 4 units to cover larger size
Inlet structures (Headwall): 42 to 66 inches	each	4	\$4,758	\$19,030	\$17,698	\$0	Inlet structure - used 4 units to cover larger size
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	100	\$5	\$500	\$465	\$120	Clean-up around inlet & outlet

Alternative Name	NCLD-G2
Problem Description	Overbank flooding
Strategy	Replace Bridge St. and Linda Lane and relocate mobile homes
District Minimum	Met
Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	30	\$148	\$4,454	\$4,142	\$0	Replace Roadway Pavement, extra for additional lanes

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$134,788	\$100,244	\$342	
Utility Relocation			4 %	\$5,392			
Mobilization \ General Conditions			5%	\$6,739			
Subtotal with Percent Allowances				\$146,919			
Contingency			30%	\$44,076			
Profit			5%	\$9,550			
Probable Construction Cost Estimate				\$200,544			
Design Engineering, Geotechnical, and Construction Management			10%	\$20,054			
Property Acquisition Cost:				\$36,000			
Total Conceptual Cost Estimate (2008 Dollars)				\$357,184			

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	NCLD-G3
Problem Description	Overbank flooding
Strategy	Replace Torrence Ave. and Sauk Trail Rd.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	1074500	\$11	\$11,475,660	\$0	\$0	Excavation for detention area
Channel treatment: Material to be hauled offsite	yd3	1068700	\$12	\$12,557,225	\$0	\$0	Haul Away excess soil
Channel treatment: Soil stabilization and vegetative cover	yd2	57000	\$14	\$791,160	\$735,767	\$189,445	Vegetation restoration - berms and along creek
Channel treatment: Vegetative cover only	yd2	210000	\$9	\$1,793,400	\$1,667,835	\$429,434	Vegetation restoration - pond bottom
Embankment construction, grading and restoration: Additional fill	yd3	5800	\$14	\$80,504	\$0	\$0	Levee surface reconstruction: 6,500 linear feet
Embankment construction, grading and restoration: Compaction of fill	yd3	5800	\$5	\$30,972	\$0	\$0	Levee surface reconstruction compaction: 6,500 linear feet
Channel treatment: Excavation	yd3	3300	\$11	\$35,244	\$0	\$0	Weir excavation, 530 ft wide, 6 ft deep, assume 4:1 side slopes across levee on channel and pond sides.
Pump Station: 10ac-ft per day interior drainage	each	10	\$800,000	\$8,000,000	\$7,439,878	\$0	Pump Sta. for 700 ac-ft - assume 10x size of 10ac/day PS
Pipe in earth (city): 36 inches or less	lf	250	\$217	\$54,195	\$50,401	\$0	Pipe to outlet from pump
Outlet structures (Headwall): 36 inches or less	each	1	\$2,600	\$2,600	\$2,418	\$0	Outlet structure from pump
Inlet structures (Headwall): 36 inches or less	each	1	\$2,600	\$2,600	\$2,418	\$0	Inlet structure to pump
Land Acquisition: Purchase of Property *	dollar	137075	\$1	\$137,075	\$0	\$0	Buyout Residential, PIN 33171000090000
Land Acquisition: Purchase of Property *	dollar	217668	\$1	\$217,668	\$0	\$0	Buyout Residential, PIN 33171000070000
Land Acquisition: Purchase of Property *	dollar	240026	\$1	\$240,026	\$0	\$0	Buyout Residential, PIN 33171000080000
Land Acquisition: Purchase of Property *	dollar	172474	\$1	\$172,474	\$0	\$0	Buyout Residential, PIN 33171000060000
Land Acquisition: Purchase of Property *	dollar	354804	\$1	\$354,804	\$0	\$0	Buyout Residential, PIN 33171010020000
Demolition: Wood construction	ft2	7386	\$2	\$15,806	\$0	\$0	Demolition of existing homes; square footage for 5 homes from the CCAD
Channel treatment: Excavation	yd3	155	\$11	\$1,655	\$0	\$0	Soil Excavation for new culvert, 2 ft buffer along edges, cut down at 1:2 side slopes

Alternative Name	NCLD-G3
Problem Description	Overbank flooding
Strategy	Replace Torrence Ave. and Sauk Trail Rd.
District Minimum	Met
Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Additional fill	yd3	95	\$14	\$1,319	\$0	\$0	Replace soil on top of new culvert
Channel treatment: Compaction	yd3	95	\$7	\$711	\$0	\$0	Compact soil on top of new culvert
Channel treatment: Material to be hauled offsite	yd3	70	\$12	\$823	\$0	\$0	Haul Away excess soil and existing concrete & pavement
Demolition: Brick, concrete, or stone construction	ft2	815	\$4	\$3,480	\$0	\$0	Demolition of existing concrete culvert
Channel treatment: Vegetative cover only	yd2	33	\$9	\$282	\$262	\$67	Vegetation restoration - road embankment
Pipe under pavement (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	63	\$609	\$38,348	\$35,663	\$0	3, 7x6.5 box at INV 605.55, 21 length
Outlet structures (Headwall): 42 to 66 inches	each	4	\$4,758	\$19,030	\$17,698	\$0	Outlet structure - used 4 units to cover larger size
Inlet structures (Headwall): 42 to 66 inches	each	4	\$4,758	\$19,030	\$17,698	\$0	Inlet structure - used 4 units to cover larger size
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	100	\$5	\$500	\$465	\$120	Clean-up around inlet & outlet
Channel treatment: Excavation	yd3	695	\$11	\$7,423	\$0	\$0	Soil Excavation for new culvert, 2 ft buffer along edges, cut down at 1:2 side slopes
Channel treatment: Additional fill	yd3	621	\$14	\$8,619	\$0	\$0	Replace soil on top of new culvert
Channel treatment: Compaction	yd3	621	\$7	\$4,645	\$0	\$0	Compact soil on top of new culvert
Channel treatment: Material to be hauled offsite	yd3	127	\$12	\$1,492	\$0	\$0	Haul Away excess soil and existing concrete & pavement
Demolition: Brick, concrete, or stone construction	ft2	53	\$4	\$226	\$0	\$0	Demolition of existing concrete culvert
Channel treatment: Vegetative cover only	yd2	50	\$9	\$427	\$397	\$102	Vegetation restoration - road embankment
Pipe under pavement (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	118	\$609	\$71,827	\$66,798	\$0	2, 8x8.5 box at INV 603.5, 59 length
Outlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$14,273	\$13,273	\$0	Outlet structure - used 3 units to cover larger size
Inlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$14,273	\$13,273	\$0	Inlet structure - used 3 units to cover larger size
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	100	\$5	\$500	\$465	\$120	Clean-up around inlet & outlet
Channel treatment: Excavation	yd3	155	\$11	\$1,655	\$0	\$0	Soil Excavation for new culvert, 2 ft buffer along edges, cut down at 1:2 side slopes
Channel treatment: Additional fill	yd3	150	\$14	\$2,082	\$0	\$0	Replace soil on top of new culvert
Channel treatment: Compaction	yd3	150	\$7	\$1,122	\$0	\$0	Compact soil on top of new culvert

Alternative Name	NCLD-G3
Problem Description	Overbank flooding
Strategy	Replace Torrence Ave. and Sauk Trail Rd.
District Minimum	Met
Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Material to be hauled offsite	yd3	17	\$12	\$200	\$0	\$0	Haul Away excess soil and existing concrete & pavement
Demolition: Brick, concrete, or stone construction	ft2	975	\$4	\$4,163	\$0	\$0	Demolition of existing concrete culvert
Channel treatment: Vegetative cover only	yd2	42	\$9	\$359	\$334	\$86	Vegetation restoration - road embankment
Pipe under pavement (city): 90 to 96 inches / box culvert (39 to 50 ft2)	lf	48	\$609	\$29,218	\$27,172	\$0	2, 8x8.5 box at INV 603.5, 24 width
Outlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$14,273	\$13,273	\$0	Outlet structure - used 3 units to cover larger size
Inlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$14,273	\$13,273	\$0	Inlet structure - used 3 units to cover larger size
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	100	\$5	\$500	\$465	\$120	Clean-up around inlet & outlet
Land Acquisition: Purchase of Property *	dollar	128414	\$1	\$128,414	\$0	\$0	Buyout Agricultural, cost per acre based on average farmland of vicinity

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)		\$35,116,092	\$10,119,22	\$619,494
Utility Relocation	4 %	\$1,404,644		
Mobilization \ General Conditions	5%	\$1,755,805		
Subtotal with Percent Allowances		\$38,276,54		
Contingency	30%	\$11,482,962		
Profit	5%	\$2,487,975		
Probable Construction Cost Estimate		\$52,247,47		
Design Engineering, Geotechnical, and Construction Management	10%	\$5,224,748		
Property Acquisition Cost:		\$1,250,460		
Total Conceptual Cost Estimate (2008 Dollars)		\$69,461,403		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	NOCR-G1
Problem Description	Overbank Flooding
Strategy	Replace culvert from Wenworth Ave. and Grand Truck Railroad and construct a 12 ac-ft detention facility
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	40500	\$11	\$432,540	\$0	\$0	Excavation for detention area, including down to HWL
Channel treatment: Material to be hauled offsite	yd3	40500	\$12	\$475,875	\$0	\$0	Haul Away excess soil
Channel treatment: Vegetative cover only	yd2	13100	\$9	\$111,874	\$104,041	\$26,789	Vegetation restoration - pond
Pump Station: 10ac-ft per day interior drainage	each	1	\$800,000	\$800,000	\$743,988	\$0	Pump Station for 12 ac-ft basin
Outlet structures (Headwall): 36 inches or less	each	2	\$2,600	\$5,201	\$4,837	\$0	Outlet structure to pond and outlet from pump
Inlet structures (Headwall): 36 inches or less	each	2	\$2,600	\$5,201	\$4,837	\$0	Inlet from ditch to sewer and inlet to pump
Land Acquisition: Permanent Easement *	dollar	3	\$1	\$3	\$0	\$0	Permanent Easement (50%) - based on local per acre average value, Golf course (2.7 acre)
Pipe under pavement (city): 36 inches or less	lf	2730	\$304	\$830,876	\$772,702	\$0	Storm sewer under streets (varies 12" to 36")
Pipe in earth (city): 36 inches or less	lf	510	\$217	\$110,558	\$102,817	\$0	Storm sewer along lot lines and out from pond (varies 12" to 36")
Pipe under pavement (city): 42 to 66 inches / box culvert (15 to 27 ft2)	lf	1100	\$292	\$320,694	\$298,241	\$0	Culvert under streets (4 x 6ft)
Pipe in earth (city): 42 to 66 inches / box culvert (15 to 27 ft2)	lf	0	\$208	\$0	\$0	\$0	Culvert along lot lines (4 x 6ft)
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	400	\$5	\$2,000	\$1,860	\$479	Regrade drainage ditch in the vicinity of proposed storm sewer inlet

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)		\$3,094,818	\$2,033,321	\$27,268
Utility Relocation	4 %	\$123,793		
Mobilization \ General Conditions	5%	\$154,741		
Subtotal with Percent Allowances		\$3,373,351		
Contingency	30%	\$1,012,005		
Profit	5%	\$219,268		
Probable Construction Cost Estimate		\$4,604,624		
Design Engineering, Geotechnical, and Construction Management	10%	\$460,462		
Property Acquisition Cost:		\$3		
Total Conceptual Cost Estimate (2008 Dollars)		\$7,125,679		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	PLCR-G1
Problem Description	Overbank flooding
Strategy	Construct a levee with a compensatory storage
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Concrete: Cast in place	yd3	1688	\$250	\$422,000	\$0	\$0	Floodwall to elev 640, tied into elev 638.
Pipe under pavement (city): 36 inches or less	lf	630	\$304	\$191,741	\$178,316	\$0	2- 15 ft. long culverts, 36 inch diameter for low flow interior drainage. +600 ft "culverts" for hosp site drainage.
Channel treatment: Soil stabilization and vegetative cover	yd2	48400	\$14	\$671,792	\$624,756	\$160,862	Assumed appx 10 acres at 2 ft deep of flood fringe removed = 20 acre-ft *1.1= 22 acre-feet = 35000 cubic yards.
Channel treatment: Excavation	yd3	35000	\$11	\$373,800	\$0	\$0	Assumed excavation area about 10 acres - 48400 square yards.
Pump Station: 10ac-ft per day interior drainage	each	0	\$800,000	\$48,000	\$44,639	\$0	Total of 5 acre ft pumping per day (can be more than one pump station).

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$1,707,333	\$847,711	\$160,862
Utility Relocation			4 %	\$68,293		
Mobilization \ General Conditions			5%	\$85,367		
Subtotal with Percent Allowances				\$1,860,992		
Contingency			30%	\$558,298		
Profit			5%	\$120,965		
Probable Construction Cost Estimate				\$2,540,255		
Design Engineering, Geotechnical, and Construction Management			10%	\$254,025		
Property Acquisition Cost:					\$0	
Total Conceptual Cost Estimate (2008 Dollars)				\$3,802,853		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
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Alternative Name	TCTA-G1
Problem Description	Overbank Flooding
Strategy	Replace culvert from 26th St. and Stewart Ave. to State and 22nd St.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Compaction	yd3	5932	\$7	\$44,371	\$0	\$0	Compact areas around culverts
Channel treatment: Excavation	yd3	1240425	\$11	\$13,247,739	\$0	\$0	Soil Excavation for detention and culverts
Channel treatment: Material to be hauled offsite	yd3	1183606	\$12	\$13,907,371	\$0	\$0	Haul Away excess soil and existing concrete & pavement
Channel treatment: Reinforced one sided concrete wall	yd3	95	\$587	\$55,798	\$51,892	\$13,361	Assumed cost for concrete spillway
Channel treatment: Soil stabilization and vegetative cover	yd2	158595	\$14	\$2,201,299	\$2,047,174	\$527,107	Stabilization of side slopes and vegetation
Channel treatment: Vegetative cover only	yd2	5469	\$9	\$46,705	\$43,435	\$11,184	Vegetation cover for excavated areas
Demolition: Brick, concrete, or stone construction	ft2	550	\$4	\$2,349	\$0	\$0	Demolition of existing concrete outlet structure
Embankment construction, grading and restoration: Compaction of fill	yd3	46611	\$5	\$248,903	\$0	\$0	Compact clay liner of detention basin (assume 1 thick liner)
Inlet structures (Headwall): 42 to 66 inches	each	5	\$4,758	\$23,788	\$22,122	\$0	Inlet structure
Land Acquisition: Purchase of Property *	dollar	1500000	\$1	\$1,500,000	\$0	\$0	Land Acquisition
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	130	\$5	\$650	\$604	\$156	Clean-up around inlet & outlet
Outlet structures (Headwall): 42 to 66 inches	each	5	\$4,758	\$23,788	\$22,122	\$0	Outlet structure
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation)	lf	8706	\$148	\$1,292,580	\$1,202,079	\$0	Replace Roadway Pavement, extra for additional lanes
Pipe in earth (city): 36 inches or less	lf	3840	\$217	\$832,435	\$774,152	\$0	Culvert construction between reservoir and waterway
Pipe under pavement (city): Box culvert (51 to 60 ft2)	lf	3700	\$661	\$2,445,811	\$2,274,567	\$0	Culvert construction assumed cost of 1.25X Cost 51
Pump Station: 10ac-ft per day interior drainage	each	12	\$800,000	\$9,600,000	\$8,927,853	\$0	
Land Acquisition: Purchase of Property *	dollar	30000	\$1	\$30,000	\$0	\$0	Land Acquisition

Alternative Name	TCTA-G1
Problem Description	Overbank Flooding
Strategy	Replace culvert from 26th St. and Stewart Ave. to State and 22nd St.
District Minimum	Met
Criteria for Funding:	
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)							
Subtotal (direct costs)				\$43,973,585	\$15,366,00	\$551,808	
Utility Relocation			4 %	\$1,758,943			
Mobilization \ General Conditions			5%	\$2,198,679			
Subtotal with Percent Allowances				\$47,931,20			
Contingency			30%	\$14,379,362			
Profit			5%	\$3,115,529			
Probable Construction Cost Estimate				\$65,426,09			
Design Engineering, Geotechnical, and Construction Management			10%	\$6,542,610			
Property Acquisition Cost:				\$1,530,000			
Total Conceptual Cost Estimate (2008 Dollars)				\$89,416,517			

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	TCTB-G1
Problem Description	Overbank Flooding
Strategy	Channel improvements along Thorn Creek Tributary B
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Reinforced trapezoidal concrete channel	yd3	4083	\$587	\$2,398,150	\$2,230,243	\$0	Concrete lining cost for the entire tributary
Channel treatment: Excavation	yd3	8167	\$11	\$87,224	\$0	\$0	Must excavate in order to get grading correct for lining
Channel treatment: Material to be hauled offsite	yd3	4083	\$12	\$47,975	\$0	\$0	Displaced material by concrete lining
Embankment construction, grading and restoration: Compaction of fill	yd3	4083	\$5	\$21,803	\$0	\$0	Compaction of soil of newly graded embankments (2:1) slope
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	3119	\$5	\$15,595	\$14,503	\$3,734	Compaction of soil of newly graded embankments (2:1) slope
Land Acquisition: Temporary Easement *	dollar	13000	\$1	\$13,000	\$0	\$0	Assume Property value of \$130,000. 1 Year Easement

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$2,570,747	\$2,244,746	\$3,734
Utility Relocation			4 %	\$102,830		
Mobilization \ General Conditions			5%	\$128,537		
Subtotal with Percent Allowances				\$2,802,114		
Contingency			30%	\$840,634		
Profit			5%	\$182,137		
Probable Construction Cost Estimate				\$3,824,886		
Design Engineering, Geotechnical, and Construction Management			10%	\$382,489		
Property Acquisition Cost:				\$13,000		
Total Conceptual Cost Estimate (2008 Dollars)				\$6,468,855		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	TCTD-G1
Problem Description	Overbank Flooding
Strategy	Construct 530 ac-ft detention facility and replace culverts at Lakwood Blvd., east of Gold St., and East Rocket
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Excavation	yd3	946222	\$11	\$10,105,651	\$0	\$0	Soil Excavation for new offline detention facility and remove Structure 56
Channel treatment: Soil stabilization and vegetative cover	yd2	222907	\$14	\$3,093,949	\$2,877,325	\$740,854	Stabilization of side slopes and vegetation
Channel treatment: Material to be hauled offsite	yd3	940625	\$12	\$11,052,344	\$0	\$0	Haul Away excess soil and existing concrete & pavement
Outlet structures (Headwall): 42 to 66 inches	each	3	\$4,758	\$14,273	\$13,273	\$0	Inlet/Outlet Structure
Inlet structures (Headwall): 42 to 66 inches	each	2	\$4,758	\$9,515	\$8,849	\$0	Inlet/Outlet Structure
Concrete: Cast in place	yd3	47	\$250	\$11,750	\$0	\$0	Assumed cost for concrete spillway
Land Acquisition: Permanent Easement *	dollar	25000	\$1	\$25,000	\$0	\$0	Land Acquisition
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	50	\$5	\$250	\$233	\$60	Clean-up around inlet & outlet
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	3918	\$148	\$581,705	\$540,977	\$0	Replace Roadway Pavement, extra for additional lanes
Pump Station: 10ac-ft per day interior drainage	each	10	\$800,000	\$8,000,000	\$7,439,878	\$0	

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)		\$32,869,437	\$10,880,53	\$740,914
Utility Relocation	4 %	\$1,314,777		
Mobilization \ General Conditions	5%	\$1,643,472		
Subtotal with Percent Allowances		\$35,827,68		
Contingency	30%	\$10,748,306		
Profit	5%	\$2,328,800		
Probable Construction Cost Estimate		\$48,904,79		
Design Engineering, Geotechnical, and Construction Management	10%	\$4,890,479		
Property Acquisition Cost:		\$25,000		
Total Conceptual Cost Estimate (2008 Dollars)		\$65,441,719		

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	THCR-G1
Problem Description	Overbank Flooding
Strategy	Channel capacity improvements along Thorn Creek Tributary B, levees along Thorn Creek, a diversion
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Channel treatment: Additional fill	yd3	92860	\$14	\$1,288,897	\$0	\$0	Additional fill for new storm sewer
Channel treatment: Compaction	yd3	147185	\$7	\$1,100,944	\$0	\$0	Compact soil near the levee, on top of new storm sewer, around new sidewalk, and on new culvert.
Channel treatment: Excavation	yd3	195041	\$11	\$2,083,038	\$0	\$0	Multiple projects/uses
Channel treatment: Material to be hauled offsite	yd3	84821	\$12	\$996,647	\$0	\$0	Multiple projects/uses
Channel treatment: Reinforced one sided concrete wall	yd3	3576	\$587	\$2,100,364	\$1,953,306	\$502,938	Levee assume 3 feet thick, 10 feet high
Channel treatment: Soil stabilization and vegetative cover	yd2	57458	\$14	\$797,517	\$741,679	\$190,968	Stabilization of side slopes and vegetation
Channel treatment: Vegetative cover only	yd2	16604	\$9	\$141,798	\$131,870	\$33,954	Vegetative cover of excavated areas
Concrete: Cast in place	yd3	1156	\$250	\$289,000	\$0	\$0	New Bridge for Chicago Hts Glenwood Road and assumed cost for spillway
Demolition: Brick, concrete, or stone construction	ft2	546100	\$4	\$2,331,847	\$0	\$0	RR/Path Bridge and road removal
Embankment construction, grading and restoration: Additional fill	yd3	6681	\$14	\$92,732	\$0	\$0	Additional fill required to raise road and fill to match grade of raised road
Embankment construction, grading and restoration: Compaction of fill	yd3	7283	\$5	\$38,891	\$0	\$0	Compaction of soil of newly graded channel
Embankment construction, grading and restoration: Material hauled from offsite	yd3	9806	\$11	\$104,728	\$0	\$0	Remove Bike Path/Railroad
maintenance: Large Channel Maintenance	lf	1192	\$100	\$119,200	\$110,854	\$28,543	Clear Trees etc.
maintenance: Small Channel Maintenance (Brush and debris removal)	lf	20	\$5	\$100	\$93	\$24	Clean-up around inlet & outlet
Outlet structures (Headwall): 36 inches or less	each	6	\$2,600	\$15,602	\$14,510	\$0	Inlet/Outlet structure
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	13214	\$148	\$1,961,883	\$1,824,521	\$0	Replace Roadway Pavement, extra for additional lanes
Pipe in earth (city): 72 to 84 inches / box culvert (28 to 38 ft2)	lf	86	\$303	\$26,082	\$24,256	\$0	Additional Barrel 5.5 x
Pipe in earth (city): Box culvert (51 to 60 ft2)	lf	4782	\$472	\$2,257,152	\$2,099,117	\$0	Multiple uses
Pipe in earth (county): 36 inches or less	lf	221	\$217	\$47,908	\$44,554	\$0	Stormsewer to drain surface runoff (5x4)
Pump Station: 10ac-ft per day interior drainage	each	2	\$800,000	\$1,600,000	\$1,487,976	\$0	Assume Pump Station Required at all Levees

Alternative Name	THCR-G1
Problem Description	Overbank Flooding
Strategy	Channel capacity improvements along Thorn Creek Tributary B, levees along Thorn Creek, a diversion
District Minimum	Met
Criteria for Funding:	
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)							
Subtotal (direct costs)				\$17,394,330	\$8,432,735	\$756,427	
Utility Relocation			4 %	\$695,773			
Mobilization \ General Conditions			5%	\$869,716			
Subtotal with Percent Allowances				\$18,959,81			
Contingency			30%	\$5,687,946			
Profit			5%	\$1,232,388			
Probable Construction Cost Estimate				\$25,880,15			
Design Engineering, Geotechnical, and Construction Management			10%	\$2,588,015			
Property Acquisition Cost:					\$0		
Total Conceptual Cost Estimate (2008 Dollars)				\$37,657,330			

**Metropolitan Water Reclamation District of Greater Chicago
Little Calumet River Watershed Detailed Watershed Plan
Total Conceptual Cost Report**

Alternative Name	THCR-G2
Problem Description	Overbank Flooding
Strategy	Modify the roadway profile of Sauk Trail Rd.
District Minimum Criteria for Funding:	Met
Recommended	Yes

	Unit	Quantity	Unit Cost	Base Cost	Maint. Cost	Replacement Cost	Notes/Issues
Embankment construction, grading and restoration: Additional fill	yd3	14715	\$14	\$204,244	\$0	\$0	Additional fill required to raise road
Embankment construction, grading and restoration: Compaction of fill	yd3	14688	\$5	\$78,434	\$0	\$0	Compaction of soil to fill up to new road elevation
Channel treatment: Vegetative cover only	yd2	2033	\$9	\$17,362	\$16,146	\$4,157	Road Embankment vegetation
Demolition: Brick, concrete, or stone construction	ft2	84608	\$4	\$361,276	\$0	\$0	Excavate
Channel treatment: Material to be hauled offsite	yd3	9401	\$12	\$110,462	\$0	\$0	Haul Away existing concrete & pavement
Paving: Asphalt Pavement Installation (24 ft wide, 2 ft C&G, 1 ft Excavation	lf	3305	\$148	\$490,693	\$456,337	\$0	Replace Roadway Pavement, extra for additional lanes

* Indicates item excluded from subtotal (e.g. land acquisition, buyouts)

Subtotal (direct costs)				\$1,262,471	\$472,484	\$4,157	
Utility Relocation			4 %	\$50,499			
Mobilization \ General Conditions			5%	\$63,124			
Subtotal with Percent Allowances				\$1,376,094			
Contingency			30%	\$412,828			
Profit			5%	\$89,446			
Probable Construction Cost Estimate				\$1,878,368			
Design Engineering, Geotechnical, and Construction Management			10%	\$187,837			
Property Acquisition Cost:				\$0			
Total Conceptual Cost Estimate (2008 Dollars)				\$2,542,845			