

## 6.0 Implementation Program

Based on the information developed in Chapters 3 through 5, the City has developed a Local Surface Water Management Plan that reflects the needs and concerns of the City Council, City Staff, citizens, and the funding capabilities of the City. A prioritized listing of the studies, programs and capital improvements that have been identified as necessary to respond to the water resource needs within the City is outlined in the following tables. The City anticipates implementing portions of the regulatory programs or improvements identified within this plan by the year 2027.

Table 6-1 contains Surface Water Capital Improvement Projects (CIP), Table 6-2 contains Surface Water Management Operation and Maintenance Programs (SMP), and Table 6-3 contains Surface Water Management Studies (SMS). Table 6-4 summarizes the information from all of these tables. The costs associated with these items reflect year 2018 costs and do not take into account inflation. These tables are for planning and budgeting purposes and are considered rough estimates. It is anticipated that these cost estimates will be reviewed annually and updated as needed. Some of the programs are currently in-place; these have been noted on the plan.

Appendix A includes a partial list of projects and analyses completed by the City.

**TABLE 6-1  
SURFACE WATER CAPITAL IMPROVEMENT PROJECTS**

No.	Priority	Project Description	Cost Estimate	Funding Sources	2018	2019	2020	2021	2022	2023-2027	Comments
<b>A. Established Projects</b>											
CIP-1	High	Normandale Lake Water Quality Improvement	\$115,000	Storm Utility/ Watershed District		\$23,000	\$23,000	\$23,000	\$23,000	\$23,000	The Normandale Lake project will be undertaken by NMCWD, with support from and in collaboration with the city.
CIP-2	High	Penn-American Linear Stormwater Storage Project	\$10,000,000	Storm water utility	\$10,000,000						
CIP-3	High	Storm sewer asset renewal and replacement	\$18,210,000	Storm water utility	\$1,550,000	\$1,640,000	\$1,700,000	\$1,740,000	\$1,790,000	\$9,790,000	Maintenance and improvements to existing storm sewer system on street construction projects
CIP-4	High	Stormwater Maintenance Funding	\$7,005,000	Storm water utility	\$850,000	\$600,000	\$625,000	\$645,000	\$660,000	\$3,625,000	
<b>Subtotal:</b>			<b>\$35,330,000</b>		<b>\$12,400,000</b>	<b>\$2,263,000</b>	<b>\$2,348,000</b>	<b>\$2,408,000</b>	<b>\$2,473,000</b>	<b>\$13,438,000</b>	

Notes:

- 1.Costs are presented in 2018 dollars and are intended for planning purposes only.
- 2.These are prefeasibility-level cost estimates based on estimates from similar projects and scopes of work. Costs will change with design, alignments, quantities and unit prices.
- 3.Costs rounded to the nearest \$1000

**TABLE 6-1  
SURFACE WATER CAPITAL IMPROVEMENT PROJECTS**

No.	Priority	Project Description	Cost Estimate	Funding Sources	2018	2019	2020	2021	2022	2023-2027	Comments
<b>B. Projects sites outlined in 1997 Wetland Protection and Management Plan</b>											
CIP-5	Low	<u>Riley-Purgatory-Bluff Creek Drainage Area.</u> Install trap manhole at Marce Woods Pond N (62-03)	\$10,000	Storm water utility						\$10,000	
CIP-6	Low	<u>SW Marsh Lake Drainage Area.</u> Construct trap manhole at Tarnhill Park Pond (36-08)	\$10,000	Storm water utility						\$10,000	
CIP-7	Low	<u>Upper Nine Mile Creek Drainage Area.</u> Install 2 trap manholes at Sandro Pond (63-08)	\$20,000	Storm water utility						\$20,000	
CIP-8	Low	<u>Riley-Purgatory-Bluff Creek Drainage Area.</u> Install trap manhole at Lindstrom Pond (69-08)	\$10,000	Storm water utility						\$10,000	
CIP-9	Low	<u>Upper Nine Mile Creek Drainage Area.</u> Install 2 trap manholes at Normandale Lake (56-05)	\$20,000	Storm water utility				\$20,000			
<b>Subtotal:</b>			<b>\$70,000</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$20,000</b>	<b>\$0</b>	<b>\$50,000</b>	

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- 3.Costs rounded to the nearest \$1000

**TABLE 6-1  
SURFACE WATER CAPITAL IMPROVEMENT PROJECTS**

No.	Priority	Project Description	Cost Estimate	Funding Sources	2018	2019	2020	2021	2022	2023-2027	Comments
<b>C. New projects identified in Local Surface Water Management Plan</b>											
CIP-10	Med	Stormwater treatment to outfall south of boat landing prior to discharge into Normandale Lake	\$200,000	Storm water utility			\$200,000				Actual costs of implementation will depend on designed basin size.
CIP-11	Med	Expand existing forebay to provide treatment for pipe outfall from Old Cedar Ave.	\$50,000	Storm water utility						\$50,000	Actual costs of implementation will depend on designed basin size.
CIP-12	Med	Maintenance of sediment forebays at Rich Rd	\$20,000	Storm water utility			\$20,000				Actual costs of implementation will depend on amount of deposited sediment.
CIP-13	Med	Skriebakken Drainage Area. Construct 3 forebays at Skriebakken Pond	\$98,000	Storm water utility				\$98,000			Actual costs of implementation will depend on designed basin sizes.
CIP-14	High	Construction of a salt washout facility	\$750,000	Storm water utility						\$750,000	
CIP-15	High	Construct flood mitigation infrastructure based on results of flood prioritization metric and hydrologic and hydraulic modeling	\$4,000,000	Storm water utility			\$500,000	\$500,000	\$500,000	\$2,500,000	Actual costs and years of implementation will depend on number of sites, opportunities available for reconstruction, and modeling recommendations/design.
CIP-16	High	Oxboro Lake Maintenance	\$4,500,000	Storm water utility				\$4,500,000			Actual costs of implementation will depend on amount of deposited sediment.

**TABLE 6-1**  
**SURFACE WATER CAPITAL IMPROVEMENT PROJECTS**

No.	Priority	Project Description	Cost Estimate	Funding Sources	2018	2019	2020	2021	2022	2023-2027	Comments
<b>C. New projects identified in Local Surface Water Management Plan</b>											
CIP-17	Med	Stabilization projects along the Minnesota River Bluff Zone.	\$500,000	Storm water utility	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000	Actual costs and years of implementation will depend on extent of slope failures and results of vulnerability analysis.
CIP-18	High	Coordinate with NMCWD to stabilize the channel between Marsh Lake and 102nd Street.	\$300,000	Storm water utility						\$300,000	
CIP-19	Med	Maintenance of sediment forebays at Bloomington Ferry and W. 96th	\$20,000	Storm water utility			\$20,000				
CIP-20	Med	<u>Queen Circle and 110th Street</u> Use recommendations from hydrologic and hydraulic modeling to construct infrastructure to reduce flooding	\$150,000	Storm water utility		\$150,000					Actual costs of implementation will depend on modeling results.
<b>Subtotal:</b>			<b>\$10,588,000</b>		<b>\$50,000</b>	<b>\$200,000</b>	<b>\$790,000</b>	<b>\$5,148,000</b>	<b>\$550,000</b>	<b>\$3,850,000</b>	

Notes:

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- 2.These are prefeasibility-level cost estimates based on estimates from similar projects and scopes of work. Costs will change with design, alignments, quantities and unit prices.
- 3.Costs rounded to the nearest \$1000

**TABLE 6-2**  
**SURFACE WATER OPERATIONS AND MAINTENANCE PROGRAMS**

No.	Priority	Project Description	Cost Estimate	Funding Sources	2018	2019	2020	2021	2022	2023-2027	Comments
<b>A. In-Place Programs</b>											
SMP-1	High	Storm sewer mainline inspections	\$250,000	Storm water utility	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000	Complete approx. 8 miles of mainline pipe annually
SMP-2	High	Annual storm sewer inspections	\$350,000	Storm water utility	\$35,000	\$35,000	\$35,000	\$35,000	\$35,000	\$175,000	Perform approx. 300 CB inspections and approx. 200 MH inspections annually
SMP-3	High	Sweep all street twice annually; identify high priority areas	\$7,250,000	Storm water utility	\$725,000	\$725,000	\$725,000	\$725,000	\$725,000	\$3,625,000	
SMP-4	High	Work cooperatively with the activities of the watershed agencies	\$200,000	Storm water utility	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$100,000	
SMP-5	High	Provide review of all plans for new development	\$150,000	Storm water utility	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$75,000	
SMP-6	High	Review certificates of survey	\$40,000	Storm water utility	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$20,000	
SMP-7	High	Permit and inspect private storm sewer connections	\$10,000	Public Works	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000	
SMP-8	High	Perform LGU responsibilities	\$80,000	Storm water utility	\$8,000	\$8,000	\$8,000	\$8,000	\$8,000	\$40,000	
SMP-9	Med	Biennial Home Improvement Fair	\$30,000	Storm water utility	\$5,000		\$5,000		\$5,000	\$15,000	
SMP-10	High	Nine Mile Creek maintenance	\$500,000	Storm water utility	\$50,000	\$50,000	\$50,000	\$50,000	\$50,000	\$250,000	
SMP-11	High	Erosion control inspections	\$150,000	Storm water utility	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000	\$75,000	Part of City's SWPPP for MS4 Permit (MCM#4)
SMP-12	High	Water quality monitoring	\$100,000	Storm water utility	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000	
SMP-13	Med	Update GIS data to show infrastructure improvements	\$95,000	Storm water utility	\$5,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000	

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**SURFACE WATER OPERATIONS AND MAINTENANCE PROGRAMS**

No.	Priority	Project Description	Cost Estimate	Funding Sources	2018	2019	2020	2021	2022	2023-2027	Comments
<b>A. In-Place Programs</b>											
SMP-14	High	Implement drainage and erosion control ordinance	\$91,000	Storm water utility	\$1,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000	Part of City's SWPPP for MS4 Permit (MCM#4)
SMP-15	Med	Implement community education plan	\$105,000	Storm water utility	\$15,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000	
SMP-16	Med	Adopt-a-Park, Adopt-a-Street	\$170,000	Park maintenance	\$17,000	\$17,000	\$17,000	\$17,000	\$17,000	\$85,000	
SMP-17	Med	Wetland health evaluation program	\$95,000	Storm water utility	\$5,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000	
SMP-18	Med	Invasive species vegetation control program	\$165,000	Park maintenance	\$75,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000	
SMP-19	Med	Adopt-a-Storm Drain	\$130,000	Storm water utility	\$25,000	\$20,000	\$15,000	\$10,000	\$10,000	\$50,000	
SMP-20	High	Maintenance of Lower Penn Lake Sediment Basins (may be used to demonstrate compliance with South Metro Mississippi Turbidity TMDL)	\$20,000	Storm water utility/ Engineering					\$20,000		

**TABLE 6-2  
SURFACE WATER OPERATIONS AND MAINTENANCE PROGRAMS**

No.	Priority	Project Description	Cost Estimate	Funding Sources	2018	2019	2020	2021	2022	2023-2027	Comments
<b>A. In-Place Programs</b>											
SMP-21	High	Implement Twin Cities Metropolitan Area Chloride Management Plan by complying with following requirements: 1. Pilot-Scale Chloride Loading Study—Determine the sources and potential improvement measures for chloride load reductions from representative sources in a smaller portion of the Nine Mile Creek watershed and implement measures, monitor progress and apply what was learned to implementation practices in other parts of the watershed. 2. Education and Training—Partner on public education and training/information exchange for MS4 staff and private/commercial salt applicators	\$900,000	Storm water utility		\$100,000	\$100,000	\$100,000	\$100,000	\$500,000	Actual costs and years of implementation will depend on results of pilot study and recommended implementation items.
SMP-22	High	Use P8 models to demonstrate compliance with South Metro Mississippi Turbidity TMDL (see also SMP-21, SMS-16, and SMS-19)	\$120,000	Storm water utility/ Engineering		\$30,000	\$30,000	\$30,000	\$30,000		
SMP-23	High	On-going Bush Lake Shoreline restoration	\$50,000	Storm water utility/ Watershed District	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000	

**TABLE 6-2**  
**SURFACE WATER OPERATIONS AND MAINTENANCE PROGRAMS**

No.	Priority	Project Description	Cost Estimate	Funding Sources	2018	2019	2020	2021	2022	2023-2027	Comments
<b>A. In-Place Programs</b>											
<i>TMDL Projects</i>											
SMP-24	High	Implement recommendations from Nine Mile Creek Fecal Coliform TMDL once published	\$300,000	Storm water utility/ Engineering			\$300,000				
SMP-25	High	Implement recommendations from Hyland Lake nutrient TMDL once published	\$1,200,000	Storm water utility/ Engineering			\$150,000	\$150,000	\$150,000	\$750,000	
SMP-26	High	Implement recommendations from Penn Lake nutrient TMDL once published	\$500,000						\$200,000	\$300,000	
SMP-27	High	Demonstrate compliance with other nutrient TMDLs	\$350,000	Storm water utility/ Engineering						\$350,000	
<b>Subtotal:</b>			<b>\$13,401,000</b>		<b>\$1,061,000</b>	<b>\$1,130,000</b>	<b>\$1,580,000</b>	<b>\$1,270,000</b>	<b>\$1,495,000</b>	<b>\$6,865,000</b>	<b>\$0</b>

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- 3.Costs rounded to the nearest \$1000

**TABLE 6-2**  
**SURFACE WATER OPERATIONS AND MAINTENANCE PROGRAMS**

No.	Priority	Project Description	Cost Estimate	Funding Sources	2018	2019	2020	2021	2022	2023-2027	Comments
<b>B. Programs Identified in Wetland Management Plan</b>											
SMP-28	Med	Work with others to address WQ issues on Bush Lake, Hyland Lake, MN River	\$50,000	Storm water utility, Watershed Districts, Three Rivers Parks	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000	
SMP-29	Med	Publish water resources articles in Briefing newsletter	\$80,000	Storm water utility	\$8,000	\$8,000	\$8,000	\$8,000	\$8,000	\$40,000	
SMP-30	Med	Maintain city's water resources webpage	\$25,000	Storm water utility/ Public Works	\$2,500	\$2,500	\$2,500	\$2,500	\$2,500	\$12,500	
SMP-31	High	Field erosion control calls	\$75,000	Storm water utility	\$7,500	\$7,500	\$7,500	\$7,500	\$7,500	\$37,500	
SMP-32	High	Promote use of Hennepin County Haz. Waste disposal center	\$10,000	Public Works	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000	
SMP-33	High	Zero phosphorus fertilizer ordinance	\$5,000	Public Works/Legal	\$500	\$500	\$500	\$500	\$500	\$2,500	
SMP-34	High	Map and update city's storm sewer system including private storm systems	\$300,000	Storm water utility	\$30,000	\$30,000	\$30,000	\$30,000	\$30,000	\$150,000	
SMP-35	High	Public works operation and maintenance program/training to reduce pollutant loading	\$30,000	Storm water Utility/ Public Works	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	
SMP-36	High	Erosion control training	\$30,000	Storm water Utility/ Engineering	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	
SMP-37	High	Implement shore area regulations	\$31,000	Storm water Utility/ Engineering	\$20,000	\$1,500	\$1,500	\$1,500	\$1,500	\$5,000	

**TABLE 6-2**  
**SURFACE WATER OPERATIONS AND MAINTENANCE PROGRAMS**

No.	Priority	Project Description	Cost Estimate	Funding Sources	2018	2019	2020	2021	2022	2023-2027	Comments
<b>B. Programs Identified in Wetland Management Plan</b>											
SMP-38	Med	Implement special zoning overlay districts	\$35,000	Storm water Utility/ Engineering	\$10,000	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	
SMP-39	Med	Meetings with other water resources staff from other agencies	\$12,500	Storm water utility, Watershed Districts, Three Rivers Parks	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$5,000	
SMP-40	Med	Maintain records of inspection activities	\$100,000	Storm water Utility/ Engineering	\$10,000	\$10,000	\$10,000	\$10,000	\$10,000	\$50,000	
SMP-41	Med	Review and update the Wetland Vegetation Treatment Policy	\$60,000	Storm water Utility	\$30,000	\$30,000					Actual costs of implementation will depend on the extent of required updates.
<b>Subtotal:</b>			<b>\$843,500</b>		<b>\$136,000</b>	<b>\$112,500</b>	<b>\$82,500</b>	<b>\$82,500</b>	<b>\$82,500</b>	<b>\$347,500</b>	

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3. Costs rounded to the nearest \$1000

**TABLE 6-3**  
**SURFACE WATER MANAGEMENT STUDIES**

No.	Priority	Project Description	Cost Estimate	Funding Sources	2018	2019	2020	2021	2022	2023-2027	Comments
<b>A. Studies needed for Pending Projects</b>											
SMS-1	High	Queen Circle and 110th Street - Investigate flood-management strategies for this area.	\$50,000	Storm water utility/ Engineering	\$50,000						Actual cost of implementation will depend on size and detail required for the model.
SMS-2	High	Show Compliance with Lower Minnesota River Dissolved Oxygen Lake TMDL by: 1) Evaluating BMP coverage and treatment effectiveness 2) Require construction stormwater sites to evaluate the soil phosphorus content and potential soil erosion and develop a BMP plan 3) Build model to demonstrate treatment effectiveness, develop construction stormwater sites ordinance, or other plan to comply with Lower Minnesota River Dissolved Oxygen Lake TMDL	\$250,000	Storm water utility/ Engineering		\$250,000					Actual costs and year of implementation will depend on size and detail required for the water quality model.
SMS-3	High	Develop more detailed hydraulic model of priority flood risk areas (SMS- 18) to evaluate causes of flooding and feasible alternatives for flood risk reduction.	\$1,000,000	Storm water utility/ Engineering	\$100,000	\$100,000	\$100,000	\$100,000	\$100,000	\$500,000	Actual costs and year of implementation will depend on size and detail required for the water quality model.
<b>Subtotal:</b>			<b>\$1,300,000</b>		<b>\$150,000</b>	<b>\$350,000</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$100,000</b>	<b>\$500,000</b>	

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**TABLE 6-3  
SURFACE WATER MANAGEMENT STUDIES**

No.	Priority	Project Description	Cost Estimate	Funding Sources	2018	2019	2020	2021	2022	2023-2027	Comments
<b>B. In-Place Studies</b>											
SMS-4	High	Review of city's formal agreements	\$10,000	Storm water utility			\$10,000				
SMS-5	High	Work with USFWS to manage floodplain water bodies including Ike's Creek	\$50,000	Storm water utility/ Engineering	\$5,000	\$5,000	\$5,000	\$5,000	\$5,000	\$25,000	
SMS-6	High	Compile, review, and update (if necessary) agreement concerning flooding and stormwater rate control between city and adjoining entities.	\$20,000	Storm water utility		\$20,000					
<b>Subtotal:</b>			<b>\$80,000</b>		<b>\$5,000</b>	<b>\$25,000</b>	<b>\$15,000</b>	<b>\$5,000</b>	<b>\$5,000</b>	<b>\$25,000</b>	

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**TABLE 6-3  
SURFACE WATER MANAGEMENT STUDIES**

No.	Priority	Project Description	Cost Estimate	Funding Sources	2018	2019	2020	2021	2022	2023-2027	Comments
<b>C. New Studies Identified In the Local Surface Water Management Plan</b>											
<b>Administrative</b>											
SMS-7	High	IDDE regulatory mechanism	\$40,000	Storm water utility/ Environmental Health		\$20,000				\$20,000	MS4 Program MCM#3
SMS-8	High	Public/distribute information regarding IDDE	\$10,000	Public Works	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000	
SMS-9	Med	Post construction stormwater management	\$10,000	Storm water utility/ Engineering	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000	
SMS-10	High	Erosion control ordinance	\$10,000	Storm water utility/ General Fund	\$1,000	\$1,000	\$1,000	\$1,000	\$1,000	\$5,000	
SMS-11	Med	Update the City's Wetland Protection and Management Plan	\$250,000	Storm water utility/ Engineering						\$250,000	
<b>Water Quality</b>											
SMS-12	High	Update P8 model for Overlook, Penn Lake, etc...	\$55,000	Storm water utility/ NMCWD			\$40,000			\$15,000	
SMS-13	High	Develop Long-term Wetland Monitoring Program with other agencies	\$75,000	Storm water utility	\$15,000	\$15,000	\$15,000	\$15,000	\$15,000		

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**SURFACE WATER MANAGEMENT STUDIES**

No.	Priority	Project Description	Cost Estimate	Funding Sources	2018	2019	2020	2021	2022	2023-2027	Comments
<b>C. New Studies Identified In the Local Surface Water Management Plan</b>											
<i><b>Flooding: Hydrologic and Hydraulic Modeling</b></i>											
SMS-14	High	Annual XPSWMM Model Updates	\$250,000	Storm water utility/ Engineering	\$25,000	\$25,000	\$25,000	\$25,000	\$25,000	\$125,000	Actual costs of implementation will depend on number of updates required in the model.
SMS-15	High	Complete P8,XPSWMM for Hopkins Rd, 10th Ave, 11th Ave, and 3rd Ave	\$200,000	Storm water utility/ Engineering		\$200,000					Actual costs of implementation will depend on size and detail required for the model.
SMS-16	High	Refine P8 XP SWMM for Bush Lake watershed (may be used to demonstrate compliance with South Metro Mississippi Turbidity TMDL)	\$60,000	Storm water utility/ NMCWD		\$60,000					Actual costs of implementation will depend on size and detail required for the model.
SMS-17	Med	Model the 95th Percentile 100-year storm to provide greater resilience to flooding	\$50,000	Storm water utility/ Engineering			\$50,000				
SMS-18	High	Develop Flood Risk Reduction Project Prioritization Metrics	\$30,000	Storm water utility/ Engineering	\$30,000						
<i><b>Other Studies</b></i>											
SMS-19	Med	Complete analysis to identify slopes most vulnerable to failure/sliding	\$35,000	Storm water utility/ Engineering			\$35,000				
SMS-20	High	Develop Rapid Response Plan for Aquatic Invasive Species in Bush Lake	\$20,000	Storm water utility			\$20,000				
<b>Subtotal:</b>			<b>\$1,095,000</b>		<b>\$73,000</b>	<b>\$323,000</b>	<b>\$188,000</b>	<b>\$43,000</b>	<b>\$43,000</b>	<b>\$425,000</b>	

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- 3.Costs rounded to the nearest \$1000

**TABLE 6-4  
IMPLEMENTATION SUMMARY**

Type		Budget Subtotal	2018	2019	2020	2021	2022	2023-2027
<b>CIP</b>	A. Projects Pending	\$35,330,000	\$12,400,000	\$2,263,000	\$2,348,000	\$2,408,000	\$2,473,000	\$13,438,000
	B. Projects outlined in 1997 Wetland Protection and Management Plan	\$70,000	\$0	\$0	\$0	\$20,000	\$0	\$50,000
	C. New projects identified in the Local Surface Water Management Plan	\$10,588,000	\$50,000	\$200,000	\$790,000	\$5,148,000	\$550,000	\$3,850,000
	<b>Subtotal:</b>	<b>\$45,988,000</b>	<b>\$12,450,000</b>	<b>\$2,463,000</b>	<b>\$3,138,000</b>	<b>\$7,576,000</b>	<b>\$3,023,000</b>	<b>\$17,338,000</b>
<b>SMP</b>	A. In-Place Programs	\$13,401,000	\$1,061,000	\$1,130,000	\$1,580,000	\$1,270,000	\$1,495,000	\$6,865,000
	B. Programs Identified in 1997 Wetland Protection and Management Plan	\$843,500	\$136,000	\$112,500	\$82,500	\$82,500	\$82,500	\$347,500
	<b>Subtotal:</b>	<b>\$14,244,500</b>	<b>\$1,197,000</b>	<b>\$1,242,500</b>	<b>\$1,662,500</b>	<b>\$1,352,500</b>	<b>\$1,577,500</b>	<b>\$7,212,500</b>
<b>SMS</b>	A. Studies needed for Pending Projects	\$1,300,000	\$150,000	\$350,000	\$100,000	\$100,000	\$100,000	\$500,000
	B. In-Place Studies	\$80,000	\$5,000	\$25,000	\$15,000	\$5,000	\$5,000	\$25,000
	C. New Studies Identified in the Local Surface Water Management Plan	\$1,095,000	\$73,000	\$323,000	\$188,000	\$43,000	\$43,000	\$425,000
	<b>Subtotal:</b>	<b>\$2,475,000</b>	<b>\$228,000</b>	<b>\$698,000</b>	<b>\$303,000</b>	<b>\$148,000</b>	<b>\$148,000</b>	<b>\$950,000</b>
<b>Subtotal:</b>		<b>\$62,707,500</b>	<b>\$13,875,000</b>	<b>\$4,403,500</b>	<b>\$5,103,500</b>	<b>\$9,076,500</b>	<b>\$4,748,500</b>	<b>\$25,500,500</b>

Notes:

1. Costs are presented in 2018 dollars and are intended for planning purposes only.
2. These are prefeasibility-level cost estimates based on estimates from similar projects and scopes of work. Costs will change with design, alignments, quantities and unit prices.
3. Costs rounded to the nearest \$1000