

**Table G-2  
Capital Improvement Program  
(Combined Watersheds)**

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
<b>MANAGEMENT PLANS</b>										
Water Quality Plan	\$12,500									
Shingle Creek Corridor Plan		\$40,000								
Lake Management Plans			\$20,000		\$15,000					
Phase II Stream Assessment				\$20,000						
Wetland Management Plan						\$20,000				
Evaluate Creek 100 Year Elev							\$20,000			
3 <sup>rd</sup> Generation Plan										\$125,000
<b>CAPITAL PROJECTS</b>										
Shingle Creek Restoration, BBldv to Candlewood			\$75,000							
New Hope-Wincrest Pond					\$290,000					
Maple Grove Pond P51					\$1,459,000					
Crystal Lake Water Quality						\$400,000				
Maple Grove Pond P57						\$648,000				
Twin Lake Wetland 639W Impr						\$120,000	\$570,000			
Crystal Twin Oak Pond						\$310,000				
New Hope 45 <sup>th</sup> Ave Pond							\$550,000			
Shingle Creek Restoration, CR 10 to I 694								\$430,000		
<a href="#">Shingle Creek Restoration, Regent to Noble</a>								<a href="#">\$750,000</a>		
Maple Grove Pond P33							\$574,000			
Maple Grove Pond P55								\$855,000		
<i>Subtotal, Commission Contribution</i>			\$75,000		\$322,500	\$369,500	\$423,500	<a href="#">\$321,250</a> <a href="#">\$508,750</a>		
<i>Subtotal, City Contribution</i>			\$675,000		\$1,426,500	\$1,108,500	\$1,270,500	<a href="#">\$963,750</a> <a href="#">\$1,526,250</a>		
<i>Total Capital Projects</i>			\$750,000		\$1,749,000	\$1,478,000	\$1,694,000	<a href="#">\$1,285,000</a> <a href="#">2,035,000</a>		

*Note: Subtotals assume Funding Option 1. See project descriptions below for funding source detail.*

## CIP Projects and Funding

Projects proposed for the Interim CIP are described below. It is the current intent of the Commissions to finance these projects using Funding Option 1, the revised Cost Share Policy. However, in the event cities are unable to agree on how to share the City Apportionment, or for some other reason the Commission determines that it is infeasible to go forward using Option 1, then the Commission, as authorized in the Joint Powers Agreement, may go forward using Option 2 or Option 3 as described below.

### Option 1 - Cost Share Policy

For capital projects that have been identified in a Commission-adopted or approved TMDL or management plan:

1. The Commission's share should be 25 percent of the cost of the project, to a maximum share of \$250,000.
2. The Commission's share should be funded through the ad valorem tax method – spread across all taxpayers within the watershed.
3. The Commission should use a maximum annual levy of \$500,000 as a working guideline.
4. The cities' share should be 75 percent of the cost of the project. This would be apportioned to the cities as follows, or in some other manner acceptable to them:
  - a. The area directly benefiting from the project should be apportioned 25 percent of the cost of the project. This would be apportioned to cities based on, for example, proportion of lake or stream frontage.
  - b. Fifty percent of the cost of the project should be apportioned based on contributing/benefiting area. The basis of this apportionment would likely be unique to each project.
5. The cities can each decide the funding mechanism that is best suited to them for payment of their share, for example through special assessments, storm drainage utility, general tax levy, or watershed management tax district.

### Option 2 - 100 Percent Ad Valorem Tax Levy

Under the authority provided by Minn Stat 103B.251 Section VIII, Subd. 5, the Commissions have the authority to certify for payment by the county all or part of the cost of an approved capital improvement. The JPA provides that if cities are unable to come to a cost sharing agreement, then the Commission may order the project by funding 100 percent of the project cost from the Hennepin County ad valorem tax levy.

### Option 3 – 100 percent Apportionment to Cities

Projects may also be 100 percent funded by cities. The JPA provides two alternates: projects may be funded through a negotiated cost share between cities having land in the affected subwatershed. Or, projects may be funded by apportioning the cost of the project across all the cities in the watershed using the same 50% land area / 50% tax capacity formula as the general assessments to cities. The latter may be amended by the Commission if it is clear that one or more of the cities receive a special benefit from the project.

## 2007 Projects

### *New Hope Wincrest Pond*

This project includes expansion of an existing pond located between Winnetka Avenue and Sumter Avenue, north of the Wincrest Apartments into a two-cell pond system. The purpose of the project is to increase both the water quality treatment volume and flood storage volume of the existing pond. Stormwater treatment efficiency will be increased, and periodic overtopping that now causes erosion will be eliminated. The area treated by this pond drains to Upper Twin Lake. The TMDL for that lake requires phosphorus load to be reduced through retrofitting the subwatershed with additional treatment.

Funding Options New Hope Wincrest Pond	Ad Valorem Tax Levy (Commission Share)	City Apportionment (Cities' Share)	Total Estimated Project Cost
1 - Revised Cost Share Policy	\$72,500	\$217,500	\$290,000
2 - Ad Valorem Tax Levy	\$290,000	\$0	\$290,000
3 - City Apportionment	\$0	\$290,000	\$290,000

### *Maple Grove Pond P51*

Maple Grove plans to construct a series of regional ponds to provide pollutant load reduction, volume and peak rate attenuation, and infiltration to meet Commission standards. This pond would serve 312 acres of new development in the Arbor Lakes area of Maple Grove. The proposed project would upsize the pond to provide treatment beyond the minimum required by Commission standards and would provide an estimated additional 94 pounds of annual phosphorus load reduction as well as reduction of other pollutants. The project cost here is the additional cost to upsize the pond to achieve greater pollutant removal.

Funding Options Maple Grove Pond P51	Ad Valorem Tax Levy (Commission Share)	City Apportionment (Cities' Share)	Total Estimated Project Cost
1 - Revised Cost Share Policy	\$250,000	\$1,209,000	\$1,459,000
2 - Ad Valorem Tax Levy	\$1,459,000	\$0	\$1,459,000
3 - City Apportionment	\$0	\$1,459,000	\$1,459,000

## 2008 Projects

### *Robbinsdale Crystal Lake Water Quality Improvements*

The project involves the construction of infrastructure that would enable the withdrawal of hypolimnetic water from the lake, and its pumping to an upstream point for flow back through a series of vegetated ponds prior to re-entry into the lake. The purpose is to reduce high internal phosphorus loading of the lake by withdrawal of phosphorus-rich hypolimnetic water, resulting in the prevention of excessive algal blooms and improvement in water quality. This project is in the Initial TMDL Management Recommendations for Crystal Lake.

Funding Options Crystal Lake Water Quality Improvements	Ad Valorem Tax Levy (Commission Share)	City Apportionment (Cities' Share)	Total Estimated Project Cost
1 - Revised Cost Share Policy	\$100,000	\$300,000	\$400,000
2 - Ad Valorem Tax Levy	\$400,000	\$0	\$400,000
3 - City Apportionment	\$0	\$400,000	\$400,000

*Maple Grove Pond P57*

Maple Grove plans to construct a series of regional ponds to provide pollutant load reduction, volume and peak rate attenuation, and infiltration to meet Commission standards. This pond would serve 93 acres of new development in the Arbor Lakes area of Maple Grove. The proposed project would upsize the pond to provide treatment beyond the minimum required by Commission standards and would provide an estimated additional 14 pounds of annual phosphorus load reduction as well as reduction of other pollutants. The project cost here is the additional cost to upsize the pond to achieve greater pollutant removal.

Funding Options Maple Grove Pond P57	Ad Valorem Tax Levy (Commission Share)	City Apportionment (Cities' Share)	Total Estimated Project Cost
1 - Revised Cost Share Policy	\$162,000	\$486,000	\$648,000
2 – Ad Valorem Tax Levy	\$648,000	\$0	\$648,000
3 – City Apportionment	\$0	\$648,000	\$648,000

*Twin Lake Wetland 639W Improvements*

The Twin Lake Management Plan and TMDL both identified restoration of this wetland as key to reducing subwatershed phosphorus loading to Upper Twin Lake. The wetland is located north of Upper Twin Lake in Brooklyn Center and Crystal; a majority of the wetland is located on property owned by the Metropolitan Airports Commission and is commonly referred to as the MAC Nature Preserve. Three alternatives for achieving this reduction have been identified: 1) partial diversion of flow around the wetland; 2) dechannelization and increased storage within the wetland; and 3) an alum ferric chloride treatment system. This initial project phase will be the completion of a feasibility study to determine the most appropriate and cost effective option for achieving the desired phosphorus load reduction and the preparation of plans and specifications for the recommended restoration option.

Funding Options Twin Lake Wetland 639W	Ad Valorem Tax Levy (Commission Share)	City Apportionment (Cities' Share)	Total Estimated Project Cost
1 - Revised Cost Share Policy	\$30,000	\$90,000	\$120,000
2 – Ad Valorem Tax Levy	\$120,000	\$0	\$120,000
3 – City Apportionment	\$0	\$120,000	\$120,000

*Crystal Twin Oak Pond.*

There is little stormwater treatment in the watershed draining to Upper Twin Lake. The Twin Lake Management Plan and TMDL both identified the need to retrofit the watershed with treatment BMPs when opportunities arise. Redevelopment adjacent to Twin Oak Park in Crystal provides an opportunity to construct a new regional stormwater pond to treat stormwater conveyed by the trunk storm sewer in Bass Lake Road. Low flows conveying the first flush of pollutants would be diverted into this new pond, providing a significant amount of phosphorus and sediment removal prior to discharge into Upper Twin Lake.

Funding Options Crystal Twin Oak Pond	Ad Valorem Tax Levy (Commission Share)	City Apportionment (Cities' Share)	Total Estimated Project Cost
1 - Revised Cost Share Policy	\$77,500	\$232,500	\$310,000
2 – Ad Valorem Tax Levy	\$310,000	\$0	\$310,000
3 – City Apportionment	\$0	\$310,000	\$310,000

## 2009 Projects

### *Twin Lake Wetland 639W Improvements*

This project is the construction of the most feasible and cost-effective restoration option identified in the feasibility study conducted in 2008-9.

Funding Options Twin Lake Wetland 639W	Ad Valorem Tax Levy (Commission Share)	City Apportionment (Cities' Share)	Total Estimated Project Cost
1 - Revised Cost Share Policy	\$142,500	\$427,500	\$570,000
2 – Ad Valorem Tax Levy	\$570,000	\$0	\$570,000
3 – City Apportionment	\$0	\$570,000	\$570,000

### *New Hope 45<sup>th</sup> Avenue Pond*

The project would convert an existing dry pond on 45<sup>th</sup> Avenue between Winnetka and Xylon Avenues to a wet pond to provide phosphorus removal from an 80 acre subwatershed. The purpose of the project is to reduce pollutant loading to downstream water bodies. This subwatershed drains to the Crystal Memory Lane Pond system, which ultimately discharges to Lower Twin Lake. Increasing the size of the pond will also provide additional flood storage for the subwatershed. The TMDL for the Twin Lake system requires phosphorus loads to be reduced through retrofitting the subwatershed with additional treatment.

Funding Options New Hope 45 <sup>th</sup> Ave Pond	Ad Valorem Tax Levy (Commission Share)	City Apportionment (Cities' Share)	Total Estimated Project Cost
1 - Revised Cost Share Policy	\$137,500	\$412,500	\$550,000
2 – Ad Valorem Tax Levy	\$550,000	\$0	\$550,000
3 – City Apportionment	\$0	\$550,000	\$550,000

### *Maple Grove Pond P33*

Maple Grove plans to construct a series of regional ponds to provide pollutant load reduction, volume and peak rate attenuation, and infiltration to meet Commission standards. This pond would serve 123 acres of new development in the Arbor Lakes area of Maple Grove. The proposed project would upsize the pond to provide treatment beyond the minimum required by Commission standards and would provide an estimated additional 17 pounds of annual phosphorus load reduction as well as reduction of other pollutants. The project cost here is the additional cost to upsize the pond to achieve greater pollutant removal.

Funding Options Maple Grove Pond P33	Ad Valorem Tax Levy (Commission Share)	City Apportionment (Cities' Share)	Total Estimated Project Cost
1 - Revised Cost Share Policy	\$143,500	\$430,500	\$574,000
2 – Ad Valorem Tax Levy	\$574,000	\$0	\$574,000
3 – City Apportionment	\$0	\$574,000	\$574,000

**2010 Projects**

*Shingle Creek Restoration, CR 10 to I694*

The project would construct stream corridor improvements on Shingle Creek as recommended by the Shingle Creek Corridor Study and as anticipated will be recommended improvements in the Shingle Creek dissolved oxygen and impaired biotic TMDLs to be completed in ~~2007~~2009. The reach to be improved is from County Road 10 to Interstate Highway 94/694. The following improvements are proposed: streambank stabilization in eroding areas; removal of select trees to reduce canopy density; establishing or enhancing buffer vegetation; and installation of rock vanes and varied substrates.

Funding Options Shingle Creek Restoration, CR 10 to I694	Ad Valorem Tax Levy (Commission Share)	City Apportionment (Cities' Share)	Total Estimated Project Cost
1 - Revised Cost Share Policy	\$107,500	\$322,500	\$430,000
2 – Ad Valorem Tax Levy	\$430,000	\$0	\$430,000
3 – City Apportionment	\$0	\$430,000	\$430,000

*Shingle Creek Restoration, Regent to Noble Avenues*

The project would construct stream corridor improvements on Shingle Creek as recommended by the Shingle Creek Corridor Study and as anticipated will be recommended improvements in the Shingle Creek dissolved oxygen and impaired biotic TMDLs to be completed in 2009. The reach to be improved is from Regent Avenue to Noble Avenue North. The following improvements are proposed: streambank stabilization in eroding areas; removal of select trees to reduce canopy density; establishing or enhancing buffer vegetation; and installation of rock vanes and varied substrates.

<u>Funding Options</u> <u>Shingle Creek Restoration, CR 10 to</u> <u>I694</u>	<u>Ad Valorem Tax Levy</u> <u>(Commission Share)</u>	<u>City Apportionment</u> <u>(Cities' Share)</u>	<u>Total Estimated</u> <u>Project Cost</u>
<u>1 - Revised Cost Share Policy</u>	<u>\$187,500</u>	<u>\$562,500</u>	<u>\$750,000</u>
<u>2 – Ad Valorem Tax Levy</u>	<u>\$750,000</u>	<u>\$0</u>	<u>\$750,000</u>
<u>3 – City Apportionment</u>	<u>\$0</u>	<u>\$750,000</u>	<u>\$750,000</u>

*Maple Grove Pond P55*

Maple Grove plans to construct a series of regional ponds to provide pollutant load reduction, volume and peak rate attenuation, and infiltration to meet Commission standards. This pond would serve 96 acres of new development in the Arbor Lakes area of Maple Grove. The proposed project would upsize the pond to provide treatment beyond the minimum required by Commission standards and would provide an estimated additional 25 pounds of annual phosphorus load reduction as well as reduction of other pollutants. The project cost here is the additional cost to upsize the pond to achieve greater pollutant removal.

Funding Options Maple Grove Pond P55	Ad Valorem Tax Levy (Commission Share)	City Apportionment (Cities' Share)	Total Estimated Project Cost
1 - Revised Cost Share Policy	\$213,625	\$747,375	\$855,000
2 - Ad Valorem Tax Levy	\$855,000	\$0	\$855,000
3 - City Apportionment	\$0	\$855,000	\$855,000

Z:\Shingle Creek\ManagementPlan\Major Plan Amendment\_2009\Jan 2009 Proposed Amended Appendix G\_2.doc