Capital Improvement Schedule

The MWMO Capital Improvement Schedule estimates the total project costs for MWMO Capital projects over the next six years. Projects found in Table 19 and described below will not be contracted for without the completion of a feasibility study. All projects will require a maintenance plan, inspection schedule and a maintenance budget. In addition, post construction performance testing of stormwater management practices installed may also be required.

The MWMO is currently assessing priority areas within the Watershed for future capital projects and will be adding additional projects to this capital schedule as studies are completed. The MWMO will continue to review the Capital Improvement Program minimally every 2 years for potential amendments. A table of future project areas where feasibility studies and an amendment will be required for adding specific projects to the MWMO Plan can be found in Appendix P.

The MWMO recommends that its staff and its member's' staff work with one another on shared reviews of capital projects and planning efforts. Sharing staff expertise between the organizations will strengthen the connectivity and synergy between MWMO and members' capital projects and planning activities.

~~**MWMO's New Facility: Water quality, water conservation, and habitat improvements**~~

~~Preliminary designs have been completed for water quality improvements in on-site and off-site stormwater reaching the MWMO's new facility. Stormwater management practices at the MWMO's new facility will provide demonstration and training opportunities for the public that focus on stormwater and natural resource management issues. Infiltration, filtration and reuse demonstration projects will create environments for the MWMO's onsite communication, outreach and research activities. Construction will be completed in 2 phases to coordinate work with the construction schedule of Lowry Avenue Bridge and shared parking at the site. Restoration of the riverbanks on site will follow the MWMO's guidance on bioengineering to reduce erosion and improve habitat within the Critical Area of the Mississippi river.~~

The Seward Common's: Water quality improvements

Seward Commons is a 4-acre, highly contaminated industrial site that Seward Redesign has acquired. Seward Commons is located between 22nd and 24th Streets and Snelling Avenue and the Hiawatha Light Rail line in Minneapolis. The site is currently a highly impervious area and will be redeveloped with considerably more green space than under current conditions (though still significantly impervious). The green space will be located and designed to manage stormwater, with a goal of retaining a significant portion of stormwater on-site.

The MWMO will work with the City of Minneapolis, Seward Redesign and the Neighborhoods to plan, design and install stormwater infrastructure (filtration and reuse systems) that achieve the MWMO's Standards in the Seward Commons project.

~~**St Anthony Village Regional Treatment System: Water quality improvements**~~

~~This project is focused on improving the quality of runoff conveyed from the City of St. Anthony Village to the City of Minneapolis, and ultimately, the Mississippi River. Currently, stormwater runoff generated in the Wilson Street region of St. Anthony Village receives little or no stormwater treatment prior to being discharged into the City of Minneapolis. It is the goal of the City of St. Anthony Village and the MWMO to implement filtration or particle settling treatment methods that will improve the quality of water that is conveyed from St. Anthony Village to the Mississippi River.~~

~~**Northeast Green Campus: Water quality and water conservation and flood reduction improvements**~~
~~This project adds underground storage of stormwater for reuse -- to irrigate adjacent athletic fields and park grounds. The project also mitigates localized flooding and provides greater water quality treatment via filtration and infiltration. This project is a partnership between the MWMO, Minneapolis Public Works, Minneapolis Park and Recreation Board and Minneapolis Public Schools. The site's land area is made up of Edison High School, Jackson Square Park, and a Public Work's flood basin.~~

Northeast Green Campus: Parking lot improvements
Minneapolis Public Schools (MPS), in partnership with MWMO, has installed significant stormwater improvements at Edison High School. The next phase of construction is to construct a parking lot, east of the athletic field, which will drain into the site's stormwater reuse system. Under this phase, MWMO will look for opportunities to bring innovative stormwater management and water quality improvements when the parking lot is installed. Opportunities for innovation may include the installation of an automated system for managing the reuse tank to function as a rate control BMP.

~~**Central Mississippi Riverfront Shoreline Restoration: Water quality and habitat improvements**~~
~~These restoration projects are within the Critical Area along the Mississippi river on the Minneapolis Park and Recreation Board's land (Father Hennepin Bluffs, Nicollet Island, and riverfront trails). Water quality and habitat improvements will result from filtration; bioengineering and erosion control practices installed during shoreline restoration; development of water-trail access points, and accessibility improvements in this area.~~

Prospect North Partnership Water quality Improvement Projects
Prospect North Partnership activities are located within the Bridal Veil Creek sub-watershed. The MWMO completed a stormwater retrofit study in Bridal Veil Creek that identified 77 retrofit opportunities to improve water quality, reduce runoff volumes, and manage rates of discharge. Using this study and others being completed by the partnership on District Systems, the MWMO will implement stormwater projects that contribute to a greater synergistic benefit when combined with other public realm land uses and infrastructure.

One of the partnerships first projects is the reconstruction of South East 4th St (Green 4th). Green 4th Street allows for the creation of larger outdoor gathering areas and stacked function bioretention basins within the street right-of-way. Walkways weave through deep and shallow rain gardens creating a wide variety of spaces for gathering. The bioretention basins not only treat stormwater, but also define and enhance the outdoor gathering spaces by providing greenery and shade. Seat walls connected to the deep bioretention basins provide an element of pedestrian safety while also creating flexible spaces for resting. Beyond using stormwater as a resource to irrigate the landscaping and trees bioretention basins provide numerous environmental benefits such as: habitat creation, urban heat island mitigation, and air quality improvements.

Another initiative in this area is the introduction of Restorative Development and Watershed Management. The MWMO is interested in leading cost benefit analysis, research, design and implementation efforts that bring Restorative Watershed Management from concept to a reality within the watershed. An outcome the MWMO seeks from this project is to bring water resource planning in at the front end of other Restorative planning efforts. To meet this end studies completed will be designed to scale up the watershed analysis to supplement potential future studies and planning conducted at district, city, county, regional, and state wide levels.

~~**Eco-Village: Water quality improvements**~~

~~The Eco-Village is a four block housing redevelopment project in the Hawthorne Neighborhood of North Minneapolis. The area is bounded by Lowry Avenue, Lyndale Avenue, and 30th Avenue N and 4th Street N. The Hawthorne Eco-Village is using best practices in community-based development, neighborhood revitalization, and sustainable green development to create a model for more healthy, stable, and livable communities.~~

~~The MWMO is partnering with the City of Minneapolis; The Home Depot Foundation; The Project for Pride in Living and the Hawthorne Community to integrate innovative stormwater management into the Hawthorn Eco-Village Redevelopment Project.~~

~~The MWMO and the Project for Pride in Living have developed a stormwater master plan for the Eco-Village Project. Based on this Plan the MWMO and Project for Pride in Living will work with willing landowners in the project area to implement a variety infiltration, filtration, bioretention, storage and reuse stormwater management practices shown in the stormwater master plan.~~

~~**Jackson Pond Reconstruction: Water quality improvements and flood protection**~~

~~The city of Columbia Heights in partnership with the MWMO will be reconstructing an existing Wet pond into a Dry pond (infiltration) to gain additional water quality and flood protection benefits. The pond is located along Quincy St. NE which is located between 43rd Ave. NE and 44th Ave. NE .~~

~~**LaBelle Park Shoreline Restoration: Water quality and habitat improvements**~~

~~The city of Columbia Heights in partnership with the MWMO and Anoka County Conservation District will be removing a shoreline boardwalk adjacent to Labelle Pond and installing a vegetated buffer (filtration) along the pond's perimeter. Water quality and habitat improvements will result from the bioengineering and erosion control practices installed during shoreline restoration. The pond is located between 42nd and 40th Ave. NE, a block east of Central Ave. NE.~~

Sculpture Garden Renovation: Water quality and water conservation improvements

The Minneapolis Park and Recreation Board's sculpture garden renovation will focus on innovative stormwater parking lot and the roadway installations that utilize infiltration, filtration, storage and reuse practices. Improving water quality and reducing the volume of stormwater discharging to the Mississippi River.

Scherer Park: Water quality, water conservation and habitat improvements

Scherer Park is a proposed RiverFIRST project within the Critical Area along the east bank of the Mississippi river. This Minneapolis Park and Recreation Board project would include shoreline restoration, and the development of wetlands ~~and,~~ biohavens and a riverine island. The project would result in improved water quality and habitat due to a mix of bioretention, bioengineering, infiltration, filtration, storage and reuse stormwater management techniques.

~~**26th Avenue N.: Water quality improvements**~~

~~This is a joint Minneapolis Park and Recreation Board and Minneapolis Public Works project. The project area runs from Lyndale Ave. N. east to the Mississippi river. The need is for greening of and creating a complete street on 26th Avenue N, linking North Minneapolis residents to the river. MWMO would assist with stormwater management features that utilize infiltration, filtration, reuse, bioretention or bioengineering.~~

Old Bassett Creek Tunnel: Water quality and water conservation improvements

This is a joint Minneapolis Public Works and MWMO project. The project involves structural repairs and modifications to the Old Bassett Creek Tunnel, including the addition of access shafts to increase opportunities for removal of deposited sediments, and possibly the addition of a weir ~~as well as renovation of the tunnel~~ to provide stormwater ~~filtration~~treatment, storage and reuse functions. ~~The project will prevent structural failure of the tunnel and prevent the discharge of sediments that have accumulated within it.~~ The renovations will improve water quality and may reduce the volume of stormwater discharging to the Mississippi River. It is expected that renovations will happen in phases, as opportunities for tunnel modification become available. The project will meet the requirements set forth in the 2000 joint and cooperative agreement (or subsequent revisions) between Bassett Creek Watershed Management Commission, MWMO, and the City of Minneapolis (see Appendix K).

Restoration of Eroded Riverbanks Sites: Water quality and habitat improvements

This is a MWMO project to reduce near bank erosion. The MWMO has identified eleven riverbank restoration sites that contribute sediment to the MWMO's reach of the Mississippi River. Bioengineering techniques will be used restore these and other eroded areas, improving water quality and habitat along the Mississippi river. Who will carry out the improvements is dependent on findings of a final feasibility study / or studies on restoration needs along the Mississippi river. The MWMO will work with our member organizations to identify eroded sites where we have a shared interest in restoration along the river. Single projects that require multi-year funding would need to be amended into the CIP schedule as stand alone projects. The $1,000,000.00 is for implementation of projects that eliminate near bank erosion and improve habitat in the Critical Area corridor in accordance with the MWMO's Bioengineering Installation Manual.

City of Fridley: Street Retrofit Project – Stormwater Quality Improvement

The City of Fridley in partnership with the MWMO will be reducing total suspended solids, reducing total phosphorus and promoting infiltration, in conjunction with a series of road reconstruction projects ~~east of Main Street and south of I-694 in Fridley~~. Projects may utilize the public right-of-way bordering adjacent residential homes. Boulevard rain gardens and tree trenches are examples of stormwater management features to be considered for the reconstruction project. In addition, the City will look for opportunities to utilize area parks and other green spaces to install infiltration practices and address localized flooding issues. The reconstruction projects cover two general areas bound by: 1) Main Street/University Avenue and 45th Ave NE/I-694; and 2) 7th St NE/MWMO boundary and I-694/59th Ave NE. ~~An underground stormwater chamber will also be installed if Clean Water funds become available.~~

~~**LaBelle Park: Water Quality Improvements and flood protection**~~

~~The City of Columbia Heights in partnership with the MWMO will install surface water treatment for two parking lots. This project will retro fit the parking lots with bio-infiltration basins and pre-settlement structures that treat runoff from the lots prior to their discharge into Labelle Pond. The project will result in flood mitigation and water quality benefits for the city. The project is located between 42nd and 40th Ave. NE, a block east of Central Ave. NE.~~

~~**Harbor Freight Holding Pond: Water quality improvements**~~

~~The City of Hilltop in partnership with the MWMO will be modifying the existing Wet pond to gain water quality benefits and lower its long-term maintenance costs. Modifications considered will utilize infiltration, filtration, reuse, bioretention or bioengineering practices to meet the project's objectives. The project is located on the SW corner of 45th Ave. NE and Monroe St. NE.~~

~~**Mississippi River Gorge WPA Infrastructure and Shoreline Restoration**~~

~~The Minneapolis Park and Recreation Board (MPRB) has allocated $1.26 million over the next 5 years to improve the condition and durability of the WPA infrastructure throughout the Mississippi River Gorge. This historic infrastructure is critical to the ongoing stability of the steep shoreline and accessibility to the river throughout the Gorge. As the MPRB replaces or rehabilitates the brick and mortar of this infrastructure, there will be opportunities to implement bioengineering, infiltration, and filtration best practices for, stormwater volume reduction, water quality and habitat improvements, and flood mitigation. The MPRB seeks matching funds from the MWMO to assist with these types of improvements.~~

Gauvitte Park Area: Water quality improvements and flood protection

The City of Columbia Heights in partnership with the MWMO will be implementing flood control and water quality improvements in the Gauvitte Park Area. The project implemented may utilize infiltration, filtration, reuse, bioretention or bioengineering practices to reduce the amount of total phosphorus and total suspended solids reaching the Mississippi River. The project is located between 42nd Ave. and 44th Ave. NE, west of University Ave.

St. Anthony Lane South Industrial Park: Flood mitigation

The City of Saint Anthony Village plans to construct a flood water storage pond on the west side of the St. Anthony Village industrial park to improve the level of flood protection to the adjacent industrial buildings. This project may include some new stormwater pipes, reconfiguration of existing stormwater pipes, and construction of a linear pond. The work may coincide with Hennepin and Ramsey counties reconstruction of County Road C.

~~**City of Columbia Heights Public Library: Stormwater Management**~~

~~The City of Columbia Heights is interested in a demonstration site for stormwater management practices, similar to that of the MWMO facility, at its new library site on Central Avenue near 40th Street. The City has already begun remediation of contaminated soils on the 1.7 acre site, and the improvements will allow it to manage the stormwater from the adjacent 2.1 acre property. If the project moves forward, it will be a fast-paced Design-Bid-Build process which is anticipated to take place in 2015-2016.~~

1NE Watershed System-Scale / Multiple-Benefit Stormwater BMPs

The MWMO is working with the City of Minneapolis and MPRB to design and implement system-scale stormwater BMPs within the 1NE Watershed. These BMPs will be informed through the use of recently completed watershed-scale hydrology/hydraulic and water quality models and focus on optimizing benefits to multiple project partners. Examples may include regional treatment practices that address stormwater management concerns amongst multiple partners and across jurisdictional lines. Projects may also include practices that meet or exceed MWMO's water quality standards while addressing members' flood concerns or other stormwater management goals. The Columbia Park Golf Course is being considered as a likely location for BMP implementation.

Water Works Park

Water Works is an 8-acre park development project by the MPRB. It lies along the west bank of the Mississippi River, just north of the Stone Arch Bridge, and was originally envisioned as part of the RiverFirst Initiative. In addition to green infrastructure practices, the MPRB will be installing a stormwater reuse system at the site. The stormwater reuse system will collect and treat roof runoff from the existing rooftops of adjacent buildings, as well as the proposed park pavilion rooftop. This water will be used for irrigation at the Water Works site, toilet flushing in the proposed pavilion and potentially for use in one of the three water features at the site.

Minneapolis: Greening within the public right-of-way

The City of Minneapolis, in partnership with the MWMO, will look for opportunities to implement greening for stormwater management within the public right-of-way. Greening projects will be designed to reduce total suspended solids, reduce total phosphorus and promote infiltration. In some cases, increased habitat potential may also be considered. Opportunities may occur as part of a street reconstruction project or as a retrofit to existing infrastructure. For opportunities in the Downtown area, the Downtown Improvement District will likely be a stakeholder in the project planning.

Huset Park Area: Water reuse and water quality improvements

The City of Columbia Heights, in partnership with the MWMO, will implement water reuse and water quality improvements in Huset Park. The project will be designed to optimize stormwater reuse to maximize the amount of water captured/reused and reduce the amount of total phosphorus and total suspended solids reaching the Mississippi River. Water quality improvements may include the additional of an iron enhanced sand filter to an existing pond in the park. The project is located south of 49th Ave, between University Ave and Central Ave NE.

Upper Harbor Terminal

The Minneapolis Upper Harbor Terminal (UHT) is a 50-acre redevelopment site located along the west bank of the Mississippi River in North Minneapolis. The MWMO will seek to implement site and district-scale stormwater opportunities at the UHT. The MWMO will work with willing landowners to evaluate the opportunity for innovative stormwater practices along the roadways; railway and utility corridors; private development sites and on MPRB lands. Stormwater designs will work to create an added-value from the significant volume of stormwater that passes though the UHT area from North Minneapolis; utilize historic sites; complement existing and future land uses; provide bank and shoreland stabilization; and provide benefits to habitat.

~~Table 19: MWMO Capital Improvement Schedule 2014 to 2019~~

~~MWMO Capital Improvement Projects~~	~~2014~~	~~2015~~	~~2016~~	~~2017~~	~~2018~~	~~2019~~	~~Total funding~~
~~MWMO: Demonstrations of Stormwater Rate Control, Water Quality, Reuse and Habitat Improvements at the MWMO's New Facility~~							~~$550,000~~
~~Mpls CPED: Seward Common's Water Quality Improvements~~							~~$100,000~~

~~St Anthony Village: Regional Water Quality Improvements~~							~~$1,209,000~~
~~Mpls Public Works: Northeast Green Campus Water Reuse and Water Quality Improvements~~							~~$975,000~~
~~MPRB: Central Mississippi Riverfront Shoreline Restoration. Water Quality and Habitat Improvements~~							~~$100,000~~
~~MWMO: Prospect North Partnership Water Quality Improvements~~							~~$3,500,000~~
~~MWMO: Eco-Village Project~~							~~$250,000~~
~~Columbia Heights: Jackson Pond Reconstruction, Water Quality Improvements and Flood Protection~~							~~$495,000~~
~~Columbia Heights: LaBelle Park Shoreline Restoration, Water Quality and Habitat Improvements~~							~~$115,000~~
~~MPRB: Sculpture Garden Renovation Stormwater Reuse and Water Quality Improvements~~							~~$1,500,000~~
~~MPRB: Scherer Park- Stormwater Reuse and Water Quality Improvements~~							~~$1,500,000~~
~~MPRB: 26th Avenue N. Water Quality Improvements~~							~~$50,000~~
~~Mpls Public Works: Old Bassett Creek Tunnel Water Reuse and Water Quality Improvements~~							~~$150,000~~
~~MWMO: Restoration of Eroded Riverbanks Sites. Water Quality and Habitat Improvements~~							~~$1,000,000~~
~~Fridley: Street Retrofit Projects — Stormwater Quality Improvements~~							~~$150,000~~
~~Columbia Heights: LaBelle Park Water Quality Improvements and Flood Protection~~							~~$135,000~~
~~Hilltop: Harbor Freight Holding Pond Water Quality Improvements~~							~~$150,000~~
~~MPRB: Mississippi River Gorge stormwater volume reduction; rate control, water quality and habitat improvements; and flood mitigation.~~							~~$340,000~~
~~Columbia Heights: Public Library Stormwater Management Practices/ Interpretive Area~~							~~$600,000~~
~~St. Anthony Village: St. Anthony Lane South Industrial Park~~							~~$200,000~~
~~Columbia Heights: Gauvitte Park Area Water Quality Improvements and Flood Protection~~							~~$425,000~~
~~**Grand Total**~~							~~**$13,494,000**~~

Table 1: MWMO Capital Improvement Schedule 2016 to 2021

MWMO Capital Improvement Projects	2016	2017	2018	2019	2020	2021	Total funding
Mpls CPED: Seward Common's Water Quality Improvements	X	X					$100,000
Mpls: Northeast Green Campus Parking Lot Improvements			X	X	X		$200,000
MWMO: Prospect North Partnership Water Quality Improvements	X	X	X	X			$3,500,000
MPRB: Sculpture Garden Renovation Stormwater Reuse and Water Quality Improvements	X	X					$1,500,000
MPRB: Scherer Park Stormwater Reuse and Water Quality Improvements	X	X	X	X			$1,500,000
Mpls: Old Bassett Creek Tunnel Water Quality and Water Conservation Improvements			X	X	X		$2,000,000
MWMO: Restoration of Eroded Riverbanks Sites. Water Quality and Habitat Improvements	X	X	X	X			$1,000,000
Fridley: Street Retrofit Projects — Stormwater Quality Improvements	X	X	X	X			$750,000
Columbia Heights: Gauvitte Park Area Water Quality Improvements and Flood Protection			X	X			$500,000
St. Anthony Village: St. Anthony Lane South Industrial Park			X	X	X		$250,000
MPRB/Mpls/MWMO: 1NE Watershed System-Scale / Multiple-Benefit Stormwater Projects			X	X	X		$4,000,000
MPRB: Water Works Park		X	X	X			$900,000
Mpls: Greening within the Public Right-of-Way		X	X	X			$1,000,000
Columbia Heights: Huset Park Water Reuse & Water Quality Improvements		X	X	X			$900,000
MPRB/Mpls/MWMO: Upper Harbor Terminal				X	X	X	$3,500,000
Grand Total							**$21,600,000**

Note: A feasibility study of the project and the MWMO's funding guidelines will determine what aspects of the project may be funded. MWMO Board will review and approve all final project budgets and agreements.

Funding amounts for the capital improvement projects do not include diagnostic and feasibility study costs. These costs are a part of the annual budget for the Watershed Assessments. Any significant changes (15 to 25% increase) to the estimated project costs will be reported by the MWMO in their annual report to the Board of Water and Soil Resources and included in the MWMO's annual budget meeting which is open for public comment. Projects exceeding 25% of their budgeted cost will require a minor amendment. The maximum grant amount for a CIP project not on the current CIP schedule is 25% of the MMWO's annual CIP project budget or an average annual estimated total CIP project budget over the life of the Plan.