

MEMORANDUM

- **To:** MCWD Board of Managers
- From: Tiffany Schaufler
- **CC:** James Wisker
- **Date:** November 16, 2015
- **Re:** November 19, 2015 Board of Managers Meeting: Operations & Maintenance Manual and Capital Reinvestment Plan Update

Purpose:

At the November 19, 2015 Board of Managers meeting, staff will provide an update on the progress made to date on the Operations & Maintenance (O&M) Manual and the Capital Reinvestment Plan.

Background:

In June 2015, the District contracted with Wenck Associates to update the District's O&M Manual and develop a Capital Reinvestment Plan. The current O&M Plan was developed by Wenck in 2000. The 2000 O&M Manual outlined the operations and maintenance requirements and responsibilities for the 32 capital projects the District had implemented at that time. Since the 2000 O&M Manual was developed, the District has implemented or plans to implement an additional 77 projects/infrastructure and has acquired over 25 properties through fee-title and easement. A list of all the capital projects and District infrastructure built to date and to be built over the next three years can be viewed in Attachment A.

Wenck's first task was to develop a series of standard O&M activities driven by project type. In total, Wenck has identified 32 basic O&M activities (Attachment B) that encompass all expected operation and maintenance needs for projects/infrastructure built to date. Wenck then determined the direct costs for each of the 32 O&M activities. Each project then had a cost estimate developed to determine the annual costs for each O&M activity associated with each project (see the Gray's Bay Dam example in Attachment C). This information was then used to compile a capital reinvestment plan and schedule which lists all of the District's projects/infrastructure built to date and to be built over the next three years (Attachment D). Long term, this capital reinvestment plan will dictate all the O&M activities and schedule their recurrence over a period

of 10 years. Using the capital reinvestment plan spreadsheet (Attachment D), annual costs can be tallied for the next 10 years to assist with long term budgeting.

Moving forward, when a new capital project is designed, the capital reinvestment plan will evaluate the maintenance requirements and their financial implications for the District's Project Maintenance & Land Management Program budget. Therefore, as each new capital project is being considered by the Board of Managers the Board will have a complete understanding of the initial project costs as well as the long-term maintenance costs necessary to protect the District's investment.

Next Steps:

Staff will facilitate a discussion with the Board of Managers at the November 19, 2015 Board Meeting on how the District can utilize the capital reinvestment plan to cyclically plan, budget and reinvest in the District's projects and infrastructure.

If there are questions in advance of the meeting, please contact Tiffany Schaufler at 952-641-4513 or tschaufler@minnehahacreek.org.

Attachments:

- Attachment A: Project List
- Attachment B: O&M Activity List
- Attachment C: Annual Cost Estimate Example Gray's Bay Dam
- Attachment D: Capital Reinvestment Plan Schedule & Estimated Annual Cost for the Period of 2016-2025

	ATTACHMENT A	
	Project Name	Status
	325 Blake Rd Infiltration	2018
	60th and 1st Storm Water Pond	Existing
3	Arden Park Stream Restoration	2017
4	Big Island Shoreline Restoration Phase 1	Existing
	Browndale Dam Scour Control	Existing
6	Canoe Landings	Existing
	Cedar Lake Whole Lake Alum Treatment	Existing
8	Cedar Meadows Wetland and Storm Water Pond	Existing
9	Centerview Park Shoreline Restoration	Existing
10	Chelsea Woods Channel Restoration	Existing
11	Co Rd 101 Grays Bay Causeway Vegetated Shoreline	2017
	Cottageville Park Phase 1	2015
	Cottageville Park Phase 2	2017
	Cottageville Park Phase 3	2018
	Judicial Ditch No. 2 (rural)	Existing
	County Ditch No. 10 (rural)	Existing
	County Ditch No. 14 (developed)	Existing
	County Ditch No. 15 (mixed)	Existing
	County Ditch No. 17 (urban)	Existing
	County Ditch No. 27 (mixed)	Existing
	County Ditch No. 29 (urban)	Existing
	County Ditch No. 32 (urban)	Existing
	County Road 26 Painter Creek Remeander	Existing
	County Road 6 Storm Water Pond and Weir	Existing
	Deer Hill Road Storm Water Pond and Weir	Existing
	DL-3 Sand/Iron Filter	Existing
	Excelsior Commons Point Shoreline Restoration	Existing
	Excelsior Ponds Alum Treatment	Existing
	Gideon Glen	Existing
-	Gleason Lake Curly Leaf Pond Weed Whole Lake Treatment	Existing
	Gleason Lake Outlet	Existing
	Gleason Lake Project Storm Sewer/Fish Barrier	Existing
	Gleason Lake Storm Water Pond 1	Existing
	Gleason Lake Storm Water Pond 2	Existing
	Gleason Lake Storm Water Pond 3	Existing
	Glenbrook Storm Water Pond	Existing
	Gray's Bay Outlet Control Structure	Existing
	Halsteds Bay Alum Injection	2018
	Halsteds Bay Internal Load Management	2018
	Hiawatha Golf Course	2016
	Independence Wetland Restoration	Existing
	Johnson/Rolling Hills Wetland Restoration	Existing
	Knollwood Mall	2016
	Lake Calhoun Whole Lake Alum Treatment	Existing
	Lake Katrina Outlet	Existing
	Lake Nokomis Outlet Weir	Existing
	Lake Nokomis-Amelia Storm Water Pond	Existing
	Lake Nokomis-Gateway Storm Water Pond	Existing
	Lake Nokomis-Knoll Storm Water Pond	Existing
	Lake Street Drainage Diversion	2017
	Lakeside Storm Water Pond	Existing
	Langdon Lake Whole Lake Alum Treatment	Existing

	ATTACHMENT A	
	Project Name	Status
53	Long Lake Creek Channel Restoration	2017
	Long Lake Lagoon Restoration	2015
	Long Lake Park Primary Storm Water Pond	Existing
	Long Lake Park Secondary Storm Water Pond	Existing
	Long Lake Park Shoreline Restoration	Existing
	Long Lake Whole Lake Alum Treatment	Existing
	MCWD Office Storm Water Pond	Existing
	Meadowbrook Golf Course	2016
	Meadowbrook to Cedar Trail Connection	2018
	Methodist Hospital Creek Remeander	Existing
	Minnehaha Creek Channel Improvements Grays Bay to Burwell House	
	Minnehaha Creek Channel Improvements Meadowbrook Golf Course	Existing
	Minnehaha Creek Channel Improvements W44th St to Hwy 100	Existing
	Minnehaha Creek Greenway Trails	2017
	Minnehaha Creek Headwaters Shoreline Restoration	Existing
	Minnehaha Creek Reach 14 Stream Bank Restoration	Existing
	Minnehaha Creek Reach 20 Remeander	Existing
	Minnehaha Creek Reach 8 Streambank Improvements	Existing
	Minnehaha Gorge Restoration-Phase 1	Existing
	Minnehaha Gorge Restoration-Phase 2	Existing
	Minnehaha Gorge Phase 3	Existing 2016
	Minnehaha Gorge Flood Repairs	
	Mooney Lake Emergency Pumping Infrastructure	Existing
	Mound Downtown Redevelopment	Existing
	Old Orchard Park Shoreline Restoration	Existing
	Painter Creek Channel Cleanout Co Rd 6 Orono	Existing
	Painter Creek Channel Restoration	2017
	Painter Creek Wetland Restoration (Potato)	2017
	Painter Creek Wetland Restoration (SOBI)	2018
	Painter Drive Fish Barrier	Existing
	Painter Marsh Channel Cleanout	Existing
	Painter Marsh Sedimentation Pond and Outlet	Existing
	Painter Marsh Weir (Pond 937)	Existing
	Pamela Park Storm Water Ponds	Existing
	Parley Lake Internal Load Management	2017
	Powell Road Storm Water Diversion	2015
	Powell-Meadowbrook Storm Water	2016
	Reach 20 Boardwalk	Existing
	Reach 20 Bridges	Existing
	Reach 20 Channel	Existing
	Reach 20 Platform	Existing
	Reach 20 Storm Sewer	Existing
	Reach 20 Trail	Existing
	Reach 20 Wet Detention Pond	Existing
	Reach 20 Wetlands and Buffers	Existing
	Saunders Rain Gardens	Existing
	Six Mile Marsh Infiltration SMC-55	2017
	Six Mile Marsh Prairie Restoration	Existing
	South Katrina Storm Water Pond and Weir	Existing
102	Spring Peeper Meadow	Existing
	Steiger Wetland Inflow Wet Detention Pond	Existing
	Steiger Wetland Restoration	Existing

	ATTACHMENT A										
	Project Name	Status									
105	SW Calhoun Storm Water Ponds	Existing									
106	Swan Lake Storm Water Pond	Existing									
107	Taft-Legion Lake Project	2014-2015									
108	Tanager Bridge Shorerline Restoration	Existing									
109	Twin Lakes Park Storm Water Pond	Existing									

Attachment B - Basic O&M Activities by Project Type

	O&M Attributes	<u>Type</u>	O&M Attributes
1 Alum In	jection] 17	Porous Pavers
Pumps,	Piping and Controls		annual inspection
Building	s and Grounds		pressure washing
	, Landscaping, Erosion		replacement of sand filler
	Startup/Shutdown	18	Pump/Lift Station
	ons/Operations		annual inspection
	al Monitoring/Delivery		confined space entry
	e Minor Maintenance		pull/store pumps
	ent Replacement		power
	tabilization		install/test pumps
Inspection		19	Rain Garden
U U	on maintenance/replacement		annual inspection
minor re	pairs		annual vegetation maintenance/replanting
3 Bridge			replacement of filter media and vegetation
	nspection	20	Small Site Riprap
structura	al rating		annual inspection
4 Buffer			rock placement or repositioning (5-year cycle)
	nspection		additional riprap (5-year cycle)
-	ion Maintenance/Replacement		replacement of filter media and vegetation (5-year cyc
Minor Re		21	Iron-Sand Filter
	I Relocation		annual inspection
	nspection		confined space entry
	ion Maintenance/Replacement		replacement of filter media and vegetation
Minor Re		22	Sedimentation Basin
	/Judicial Ditch		annual inspection
	ditch inspection		periodic sediment testing and removal
	of drainage obstructions	23	Shoreline Stabilization
erosion			annual inspection
	ion Maintenance/Replacement		vegetation maintenance/replacement (5-year cycle)
7 Elevate			minor repairs (5-year cycle)
	visual inspection of load stress, deformation, damage	24	Storm Sewer
	ion of stain and sealers as needed		annual inspection of inlets/outlets
repair da	amaged split or cracked members and decking]	confined space entry

Attachment B - Basic O&M Activities by Project Type Attributes Type

O&M Attributes		Тур
Fence		
annual inspection for damage, repair as needed		
Fish Screen/Barrier		
annual inspection/debris removal		
confined space entry if subsurface		
rough fish removal		
Grade Control		
annual visual inspection for damage/erosion		
repair as needed		
Hydraulic Structure (confined)		
annual confined space entry inspections		
removal of debris, sediment, foreign objects		
document wear, damage, cracking etc		
Hydraulic Structure (not confined)		
inspection, removal of debris, sediment and foreign objects		
document wear, damage, cracking etc		
Infiltration Basin (confined)		
annual inspection for sediment accumulation/clogging		
confined space entry if subsurface		
Infiltration Basin (not confined)		
Lake Restoration (whole lake alum treatment)		
-		
•		
• • •		
recommendations report		
Porous Pavement		
Porous Pavement		
annual inspection		
	Fence annual inspection for damage, repair as needed Fish Screen/Barrier annual inspection/debris removal confined space entry if subsurface rough fish removal Grade Control annual visual inspection for damage/erosion repair as needed Hydraulic Structure (confined) annual confined space entry inspections removal of debris, sediment, foreign objects document wear, damage, cracking etc Hydraulic Structure (not confined) inspection, removal of debris, sediment and foreign objects document wear, damage, cracking etc Infiltration Basin (confined) annual inspection for sediment accumulation/clogging confined space entry if subsurface periodically remove sediment accumulation/clogging confined space entry if subsurface periodically remove sediment accumulation/clogging confined space entry if subsurface periodically remove sediment accumulation/clogging confined space entry if subsurface periodically remove sediment accumulations document damage, erosion etc Lake Restoration (whole lake alum treatment) review annually with WQ staff to assess performance<	Fence annual inspection for damage, repair as needed Fish Screen/Barrier annual inspection/debris removal confined space entry if subsurface rough fish removal Grade Control annual visual inspection for damage/erosion repair as needed Hydraulic Structure (confined) annual visual inspection for damage, cracking etc Hydraulic Structure (confined) annual visual inspection objects document wear, damage, cracking etc Hydraulic Structure (not confined) inspection, removal of debris, sediment and foreign objects document wear, damage, cracking etc Infiltration Basin (confined) annual inspection for sediment accumulation/clogging confined space entry inspections annual inspection for sediment accumulations document damage, erosion etc Infiltration Basin (not confined) annual inspection for sediment accumulations document damage, erosion etc Lake Restoration (whole lake alum treatment) review annually with WQ staff to assess performance Dedicated Monitoring Station inspect entry spring for erosion, damage, vandalism affect

pe	O&M Attributes
25	Trails
	annual inspection
	periodic replacement of lost aggregate
	periodic resurfacing
	periodic restriping
26	Sub-Drains
	annual inspections for blockage
	periodic jetting
27	Terrestial Vegetation Management
	annual inspections
	herbicide treatment, reseeding, replanting (5-year cycle)
28	Water Access
	annual inspections
~~~	annual removal/installation of structures
29	Water Level Control Structure
	annual inspection
	confined space entry
20	annual removal of debris, sediment, blockages Wet Detention Pond
30	annual inspection
	semi-annual sediment surveys/sampling/testing
	periodic sediment removal and disposal
	vegetation maintenance/replacement
31	Wetland Restoration
0.	annual inspection
	annual vegetation monitoring, mapping and report
	annual herbicide treatment, reseeding, replanting
32	New Whole Lake Alum Treatment
	annual WQ monitoring and report
	periodic redosing

						Inplated						
O&M												
Activity	O&M Attrik		2016	2017	2018	2019		2021	2022	2023	2024	202
2	Bank Stabilization	inspections	\$0	\$375	\$0	\$375		\$375	\$0	\$375	\$0	\$37
		veg. maint.	\$0	\$0	\$4,000	\$0	\$0	\$4,000	\$0	\$4,000	\$0	\$5,13
3	Bridge	inspections	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
		structural rating	\$0	\$0	\$0	\$0	\$740	\$0	\$0	\$0	\$0	\$740
		wood treatment	\$0	\$0	\$0	\$0		\$0	\$0	\$0	\$0	\$3,00
		minor repairs	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,00
7	Elevated Trail	others resp	\$0	\$0	\$0	\$0		\$0	\$0	\$0	\$0	\$
8	Fence	minor repairs	\$0	\$0	\$500	\$0	\$0	\$0	\$0	\$500	\$0	\$
10	Grade Control	inspections	\$0	\$0	\$500	\$0		\$0	\$0	\$500	\$0	\$
11A	Hydraulic Structure	inspections	\$0	\$700	\$0	\$700	\$0	\$700	\$0	\$700	\$0	\$70
		seals,gaskets, mech	\$0	\$10,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
		Entry	\$0	\$2,000	\$0	\$2,000	\$0	\$2,000	\$0	\$2,000	\$0	\$2,00
		Debris removal	\$0	\$300	\$0	\$300	\$0	\$300	\$0	\$300	\$0	\$30
		remove logs*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
		install logs*	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$
20	Small Site Riprap	rock positioning	\$0	\$0	\$0	\$0	\$5,000	\$0	\$0	\$0	\$0	\$5,00
		add rock	\$0	\$0	\$0	\$0	\$1,250		\$0	\$0	\$0	\$1,25
29	WL Control Structure	staining/painting	\$0	\$0	\$0	\$0	\$3,000	\$0	\$0	\$0	\$0	\$
		Annual Total:	\$0	\$13,375	\$5,000	\$3,375	\$9,990	\$7,375	\$0	\$8,375	\$0	\$23,49
*	City of Minnetonka historica	lly performs at no char	ge.					- 1				

## ATTACHMENT C: Example Use of O&M Cost Estimate Templates - Grays Bay Outlet Control Structure

ATTACHMENT D: MCWD Capital Reinvestment Plan: Schedule and Estimated Annual Cost for Period 2016 - 2025

					MENT D: MCWD Capita	I Reinv		Schedu		ed Annu		2016 - 2							r
Project ID Description	General O&M Activities	2016 Specific Activities	Costs	2017 Specific Activities	2018 Costs Specific Activities	Costs	2019 Specific Activities	Costs	2020 Specific Activities	Costs	2021 Specific Activities	Costs	2022 Specific Activities	2023 Costs Specific Activities	Costs	2024 Specific Activities	2025 Costs Specific Activities	Costs	Annualized Costs
1 325 Blake Rd Infiltration	2,4,11B,12B,14,20,21,22,24,25,26,27		\$0	opoonio notivitico	\$0 11B,14	\$5,083	11B,14		11B,14	\$5,083		\$9,708		\$21,243 11B,14	\$9,708		\$84,333 2,4,11B,14,27	\$9,958	\$15,482
2 60th and 1st Storm Water Pond 3 Arden Park Stream Restoration	4,8,11A,18,24,27,30 2,4,5,19,20,25,27,29		\$0		\$0 29	\$275	2,29	\$275	30 2,19,29	\$6,500	2,19,29	\$1 150	2,4,19,20,25,27,29	\$6,120 19,25,29	\$1.025	19,25,29	30 \$1,025 19,25,29	\$136,500 \$1,025	\$14,300 \$1,225
4 Big Island Shoreline Restoration Phase 1	2,4,5,19,20,25,27,29 2,20,23,27	2,20,23,27	\$9,263		\$0	\$0	2,29	\$0		\$0	2,20,23,27	\$9,338		\$0	\$0		\$0	\$0	\$1,225
5 Browndale Dam Scour Control 6 Canoe Landings	11,20 2,4,20,27,28	11	\$125	11	\$125 11	\$125	11	\$125	11,20	\$1,035	11	\$125	11	\$125 11	\$125 \$0	11	\$125 11,20 \$0	\$1.035	\$307
7 Cedar Lake Whole Lake Alum Treatment	13	13	\$1,000		\$0	\$0		\$0		\$0 \$0		\$1,000		\$338,000	\$0		\$0	\$0	\$34,000
8 Cedar Meadows Wetland and Storm Water Pond 9 Centerview Park Shoreline Restoration	4,9,11B,24-25,27,29-31 20.23,27	4,11B,27,30 20.23.27	\$17,725 \$5,238	30	\$130,000 9,11B \$0 23	\$2,875 \$188	11B		9,11B,30 23	\$8,375 \$188	4,11B,27,29 20,27	\$14,225 \$5.050		\$125 9,11B, 30 \$188	\$5,625	9,11B, 30	\$130,125 11B \$188 20,27	\$125 \$5.050	\$30,933 \$1,609
10 Chelsea Woods Channel Restoration	2,5,10,20,27	20,23,27	\$4,375		\$0 2	\$375		\$0	2		2,10,20	\$9,100	2	\$375 2	\$375	2	\$375 2,5	\$18,255	\$3,361
11 Co Rd 101 Grays Bay Causeway Vegetated Shoreline 12 Cottageville Park Phase 1	4,7,8,20,23,24,25,27 2,4,11B-12A,21,24,27	11B,12A,21,25	\$0 \$500	11B,12A,21,25	\$0 \$3,250 2,11B,12A,21,25	\$0 \$975	11B,12A,21,25	\$0	2,11B,12A,21,25	\$0 \$2,525	2,4,11B,12A,21,25,27	\$0 \$27.045	4,20,23 2,11B,12A,21,25	\$32,600 \$875 11B,12A,21,25	\$0 \$99 954	2,11B,12A,21,25	\$0 25 \$875 11B,12A,21,25	\$2,500 \$2,150	\$3,510 \$14,330
13 Cottageville Park Phase 2	2,4,17,19,20,25,27	110, 120,21,20	\$0	110,120,21,20	\$0 2,17,19	\$1,025		\$650	2,17,19	\$1,025	17,19	\$650	2,4,17,19,20,27	\$36,900 17,19	\$650	2,17,19	\$1,025 17,19	\$650	\$4,258
14 Cottageville Park Phase 3 15 Judicial Ditch No. 2 (rural)	2,4,17,19,20,25,27,28	6	\$0 \$0	6	\$0 \$4,000 6	\$0 \$4,000	2,17	\$625 \$4,000	17,19	\$650 \$4,000	2,17,19	\$1,025 \$11,800		\$650 2,4,17,19,20,27 \$4,000 6	\$27,400 \$4,000		\$650 2,17,19 \$4,000 6	\$1,025 \$4,000	\$3,203 \$4,380
16 County Ditch No. 10 (rural)	6	6	\$0	6	\$4,000 6	\$4,000	6	\$4,000	6	\$4,000	6	\$11,800	6	\$4,000 6	\$4,000	6	\$4,000 6	\$4,000	\$4,380
17 County Ditch No. 14 (developed) 18 County Ditch No. 15 (mixed)	6	6	\$0 \$0	6	\$4,000 6 \$4,000 6	\$4,000 \$4,000	6	\$4,000 \$4,000		\$4,000 \$4,000		\$11,800 \$11,800		\$4,000 6 \$4,000 6	\$4,000 \$4,000		\$4,000 6 \$4,000 6	\$4,000 \$4,000	\$4,380 \$4,380
19 County Ditch No. 17 (urban)	6	6	\$0	6	\$4,000 6	\$4,000	6	\$4,000	6	\$4,000	6	\$11,800	6	\$4,000 6	\$4,000	6	\$4,000 6	\$4,000	\$4,380
20 County Ditch No. 27 (mixed) 21 County Ditch No. 29 (urban)	6	6	\$0 \$0	6	\$4,000 6 \$0 6	\$4,000 \$0	6	\$4,000 \$0	6	\$4,000 \$0	6	\$11,800 \$0	6	\$4,000 6 \$0 6	\$4,000 \$0	6	\$4,000 6 \$0 6	\$4,000 \$0	\$4,380 \$0
22 County Ditch No. 32 (urban)	6	6	\$0	6	\$0 6	\$0	6	\$0	6	\$0	6	\$0	6	\$0 6	\$0	6	\$0 6	\$0	\$0
23 County Road 26 Painter Creek Remeander 24 County Road 6 Storm Water Pond and Weir	4,5,11B,27,29,31 4, 8-9,11B,20,27,29-30	11B,31 11B,27		4,5,11B,27,29 4,8,9,11B,20,27	\$35,105 11B,27,31 \$20,275 11B,27		11B,27,31 11B,27,30		11B,27,31 11B,27,30	\$1,825 \$136,125	11B,27,31 11B,27		4,11B,27,31 4,8,9,11B,20,27	\$13,425 11B,27,31 \$20,275 27,30	\$1,825 \$6,149	11B,27,31 27	\$1,825 11B,27,31 \$500 11B,27,30	\$1,825 \$5,625	\$6,263 \$19,710
25 Deer Hill Road Storm Water Pond and Weir	4, 8-9,11B,20,27,29-30	11B,27	\$625	4,8,9,11B,20,27	\$20,275 11B,27	\$625	11B,27,30	\$6,274	11B,27,30	\$136,125	11B,27	\$625	4,8,9,11B,20,27	\$20,275 27,30	\$6,149		\$500 11B,27,30	\$5,625	\$19,710
26 DL-3 Sand/Iron Filter 27 Excelsior Commons Point Shoreline Restoration	4,14,21,24,26-27 16,20,23,25,27	14,21,26 16,23		14,21,26,27 16,20,23	\$5,583 4,14,21,26,27 \$10,200 16,23	\$19,308 \$438	14,21,26,27 16		14,21,26,27 16,23	\$92,458 \$438	14,21,26,27 16		14,21,26,27 16,20,23	\$10,608 4,14,21,26,27 \$10,200 16		14,21,26,27 16,23	\$7,708 14,21,26,27 \$438 16	\$5,583 \$250	\$17,893 \$2,315
28 Excelsior Ponds Alum Treatment	13		\$0		\$0	\$0		\$0		\$0		\$0		\$0	\$0		\$0	\$0	\$0
29 Gideon Glen 30 Gleason Lake Curly Leaf Pond Weed Whole Lake Treatment	4,25,27,31 13	31	\$0 \$0	31	\$0 31 \$0	\$0 \$0	31	\$0 \$0	4,27,31	\$0 \$0	31	\$0 \$0	31	\$0 31 \$0	\$0 \$0	31	\$0 4,27,31 \$0	\$0 \$0	\$0 \$0
31 Gleason Lake Outlet	10,11B,20,29	11B,29	\$500	11B,29	\$500 11B,29	\$500	11B,29		10,11B,20,29	\$4,750	11B,29	\$500	11B,29	\$500 11B,29	\$500	11B,29	\$500 10,11B,20,29	\$4,750	\$1,350
32 Gleason Lake Project Storm Sewer/Fish Barrier 33 Gleason Lake Storm Water Pond 1	9,24 5,9,11B,29-30	11B,29	\$0 \$500	11B,29	\$0 \$500 11B,29	\$0 \$500	11B,29,30	\$0 \$6,000	11B,29	\$0 \$500	11B,29	\$0 \$500	11B,29	\$0 \$500 11B,29	\$0 \$500	11B,29,30	\$0 \$30,667 5,9,11B,29	\$0 \$19,380	\$0 \$5,955
34 Gleason Lake Storm Water Pond 2 35 Gleason Lake Storm Water Pond 3	30		\$0		\$0	\$0	30	\$5,500	30	\$3,000			30	\$5,500	\$0		\$0 30	\$5,500	\$1,950 \$300
36 Glenbrook Storm Water Pond	30 4,27,30		\$0 \$0		\$0 \$0 30	\$0 \$5,500	30	\$0	30	\$3,000 \$0	30	\$0 \$5,500		\$0 \$0	\$0 \$0	30	\$0 \$5,500	\$0 \$0	\$1,650
37 Gray's Bay Outlet Control Structure 38 Halsteds Bay Alum Injection	2-3,7-11A,14,20,29 1,4,8,11B,14,27		\$0	2,11A	\$13,375 2,8,10		2,11A		3,20,29	\$9,990	2,11A	\$7,375	1 11P 14 27	\$0 2,8,10,11A \$125 222 1 4 8 11P 14 27	\$8,375 \$147,333		\$0 2,3,11A,20	\$23,495	\$7,099 \$95,873
39 Halsteds Bay Internal Load Management	32		\$0 \$0		\$0	\$0 \$0	1,11B,14,27 32	\$135,233 \$500	32	\$500		\$135,233 \$500		\$135,233 1,4,8,11B,14,27 \$500 32	\$500	32	\$135,233 1,11B,14,27 \$500 32	\$135,233 \$500	\$350
40 Hiawatha Golf Course 41 Independence Wetland Restoration	4,11B,27,30,31	31	\$0 \$1,200	11B 31	\$125 11B \$1,200 31	\$125 \$1,200	11B,30	\$3,625 \$1,200	11B,31	\$1,325 \$6,200	11B,30	\$7,450 \$1,200	11B,30,31	\$4,825 11B,31 \$1,200 31	\$1,325 \$1,200	11B,31	\$6,325 11B,30,31 \$1,200 31	\$4,825 \$6,200	\$2,995 \$2,200
42 Johnson/Rolling Hills Wetland Restoration	4,27,31	27,31	\$1,200 \$1,700	27,31	\$1,700 4,27,31	\$18,300	27,31	\$1,700	27,31	\$1,700	27,31	\$1,700	27,31	\$1,700 4,27,31	\$18,300	27,31	\$1,700 27,31	\$1,700	\$5,020
43 Knollwood Mall 44 Lake Calhoun Whole Lake Alum Treatment	2,4,7,11A,12A, 12B,17,18,20,22,24,25,27,28	13	\$0 \$1,000	2,11A,11B,12B,18,25	\$12,369 11A,11B,12B,18,25	\$16,769	2,11A,11B,12B,18,25	\$12,494	11A,11B,12B,18,25		2,4,11A,11B,12B,18,20,25,27	\$41,744 \$1,000	11A,11B,12B,18,25	\$23,469 2,11A,11B,12B,18,25 \$388,120	\$12,994	11A,11B,12B,18,25	\$20,769 2,11A,11B,12B,18,25	\$12,994 \$0	\$17,437 \$39,012
45 Lake Katrina Outlet	13 11B,25	11B	\$125	11B	\$0 \$1,325 11B	\$0 \$125	11B	\$0 \$1,325		\$2,125	11B	\$1,325	11B	\$125 11B	\$0 \$1,325		\$0 \$125 11B	\$0 \$2,125	\$1,005
46 Lake Nokomis Outlet Weir 47 Lake Nokomis-Amelia Storm Water Pond	11B,29 4.11B,24.27.30	11B,29	\$125 \$625	11B,29	\$2,525 11B,29 \$625 4.11B,27.30	\$125 \$18,125	11B,29		11B,29 11B,27,30	\$2,125	11B,29 11B.27.30	\$2,525	11B,29 11B.27	\$125 11B,29 \$5.025 4.11B.27		11B,29 11B,27,30	\$125 11B,29 \$6,525 11B,27,30	\$2,125 \$130.625	\$1,485 \$18,455
48 Lake Nokomis-Gateway Storm Water Pond	4,11B,24,27,30	1	\$625		\$625 4,11B,27,30	\$18,125	11B,27	\$625	11B,27,30	\$6,025	11B,27,30	\$4,125	11B,27	\$5,025 4,11B,27	\$12,225	11B,27,30	\$6,525 11B,27,30	\$130,625	\$18,455
49 Lake Nokomis-Knoll Storm Water Pond 50 Lake Street Drainage Diversion	4,11B,24,27,30 20,22,24	11B,27	\$625	11B,27	\$625 4,11B,27,30	\$18,125	11B,27		11B,27,30 20	\$6,025 \$4,550	11B,27,30	\$4,125	11B,27	\$5,025 4,11B,27	\$12,225	11B,27,30	\$6,525 11B,27,30	\$130,625	\$18,455 \$455
51 Lakeside Storm Water Pond	11B,23,27,30	11B	\$375	11B	\$375 11B		11B	\$375	11B		11B,30	\$5,875	11B	\$0 \$375 11B	\$375	11B	\$0 \$375 11B	\$375	\$925
52 Langdon Lake Whole Lake Alum Treatment 53 Long Lake Creek Channel Restoration	13 2,4,5,20,27		\$0		\$0 13	\$1,000 \$375	13	\$345,000	2	\$0 \$375		\$0	2,4,20,27	\$0 \$13,125	\$0 \$0	13	\$1,000 \$375	\$0	\$34,700 \$1,425
54 Long Lake Lagoon Restoration	2,5,27	2	\$375		\$0 2	\$375		\$0	2,27	\$2.875	2	\$4,375	2	\$375	\$0	2	\$375	\$0	\$875
55 Long Lake Park Primary Storm Water Pond 56 Long Lake Park Secondary Storm Water Pond	4,11B,24,27,30 4,11B,24,27,30	11B,27 11B,27		11B,27 11B,27	\$625 4,11B,27,30 \$625 4,11B,27,30	\$18,125 \$18,125			11B,27,30 11B,27,30		11B,27,30 11B,27,30		11B,27 11B,27	\$5,025 4,11B,27 \$5,025 4,11B,27		11B,27,30 11B,27,30	\$6,525 11B,27,30 \$6,525 11B,27,30	\$130,625 \$130,625	\$18,455 \$18,455
57 Long Lake Park Shoreline Restoration	4,8,23,25	110,27	\$0		\$0 4	\$11,600	110,21	\$023	8,25	\$16,950	110,27,00	\$0	110,27	\$0 4	\$11,600		\$0 8,25	\$16,950	\$5,710
58 Long Lake Whole Lake Alum Treatment 59 MCWD Office Storm Water Pond	13	13	\$1,000 \$0	13 31	\$337,500 \$1,200	\$0		\$0		\$0 \$0		\$0 \$0	13 31	\$1,000 \$2,500	\$0 \$0		\$0 \$0	\$0 \$0	\$33,950 \$370
60 Meadowbrook Golf Course	4,5,7,27,30,31		\$0	51	\$0	\$0	7	\$1,500	7	\$1,500	7,30	\$7,000	7	\$1,500 7	\$48,000	7	\$1,500 7	\$1,500	\$6,250
61 Meadowbrook to Cedar Trail Connection 62 Methodist Hospital Creek Remeander	3,4,7,20,25,27,31		\$0 \$0	2	\$0 \$750	\$0 \$0	2	\$0 \$750	2	\$4,000	2	\$750		\$0.2	\$750		\$0.25	\$27,760	\$0 \$3,476
63 Minnehaha Creek Channel Improvements GB to Burwell House	2,0,7		¢0	-	\$100	0	Ĩ		-	01,000	-	¢100			<i><i><i>ϕ</i></i>, <i>ϕ</i>, <i>ϕ</i>, <i>ϕ</i>, <i>ϕ</i>, <i>ϕ</i>, <i>ϕ</i>, <i>ϕ</i></i>		\$0 <u>2</u> ,0	¢21,100	\$0
64 Minnehaha Creek Channel Improvements Meadowbrook GC 65 Minnehaha Creek Channel Improvements W44th St																			\$0 \$0
66 Minnehaha Creek Greenway Trails	20,25,27		\$0		\$0 25	\$250	25	\$250		\$250	25	\$2,350	20,25,27	\$9,000 25	\$250	25	\$250 25	\$250	\$1,285
67 Minnehaha Creek Headwaters Shoreline Restoration 68 Minnehaha Creek Reach 14 Stream Bank Restoration	4,20,25,27-28 2,4,20,27		\$0 \$0	4,27	\$14,100 \$375	\$0 \$0	2	\$0 \$375	20	\$6,250 \$7,750	2	\$0 \$375	4,27	\$14,100 \$0 2	\$0 \$375		\$0 20 \$0 2,20	\$6,250 \$10,315	\$4,070 \$1,957
69 Minnehaha Creek Reach 20 Remeander	2-5,7,19-20,24-25,27-28,30-31	31	\$1,200	19,27,31	\$2,100 3,7,19,27,30,31	\$9,095	3,7,19,30,31		3,7,19,30,31		2,3,7,19,20,25,27,30,31	\$30,020	3,4,7,19,27,31	\$67,435 3,7,19,30,31	\$3,595	3,7,19,27,30,31	\$9,095 3,7,19,30,31	\$3,595	\$13,333
70 Minnehaha Creek Reach 8 Streambank Improvements 71 Minnehaha Gorge Restoration-Phase 1	2,4,20,25,27 2,4,5,11A,12A,16,17,19,20,23,24,26		\$0 \$0	2,4,17,19,23	\$0 \$9,275 2,4,5,12A,19,23,26	\$0 \$44,550	5,12A,19,23	\$0 \$42,225	19,20,23	\$0 \$5,325	19,23	\$0 \$775	4,19,23	\$0 \$2,775 2,4,19,23	\$0 \$21,650	19,23	\$0 \$12,225 19,20,23	\$0 \$5,325	\$0 \$14,413
72 Minnehaha Gorge Restoration-Phase 2	2,5,7-8,10,20,23,25			2,7,8,10,20,23,25	\$48,775 2,5,10,23	\$27,450		\$375	23	\$375	23		5,10,20,23,25	\$22,405 2,5,10,23	\$27,450		\$375 23	\$375	\$12,796
73 Minnehaha Gorge Phase 3 74 Minnehaha Gorge Flood Repairs	4,27 10,11B	10,11B	\$0 \$53,000		\$0 \$625 10,11B		10,11B		10,11B	\$0 \$3,000	10,11B		10,11B	\$0 \$3,000 10,11B		10,11B	\$0 \$3,000 10,11B	\$0 \$625	\$0 \$7,513
75 Mooney Lake Emergency Pumping Infrastructure 76 Mound Downtown Redevelopment	9,11B,18,20,24 16-17,19,24,26-27	11B	\$375 \$250		\$375 11B \$250	\$375 \$250			11B	\$375 \$250	11B	\$375 \$250		\$375 11B \$250	\$375	11B	\$375 11B \$250	\$375 \$250	\$375 \$250
77 Old Orchard Park Shoreline Restoration	16-17,19,24,26-27 20,23,27		\$250 \$0		\$∠50 \$0		20	\$1,250	23	\$250 \$6,450		\$250 \$0		\$250 \$0 \$0		20	\$1,250 23	\$250 \$6,450	\$250 \$1,540
78 Painter Creek Channel Cleanout Co Rd 6 Orono 79 Painter Creek Channel Restoration	2,4,5,20,25,31	+	\$0		\$0 \$0	\$0		\$0	}	\$0	2,31	\$0	4,5,20,25,31	\$0 \$20,450 31	\$0 \$1,200	31	\$0 \$1,200 31	\$0 \$1,200	\$0 \$3,825
80 Painter Creek Wetland Restoration (Potato)	5,20,31		\$0 \$0		\$0	\$0 \$0		\$0 \$0		\$0	5,20,31	\$8,400	31	\$1,200 20,31	\$5,750	31	\$1,200 20,31	\$6,200	\$2,275
81 Painter Creek Wetland Restoration (SOBI) 82 Painter Drive Fish Barrier	5,20,31 9-10,11B,24	9	\$0 \$1,000	9	\$0 \$1,000 9	\$0 \$1,000	9	\$0 \$1,000	9 10	\$0 \$9,000	5,20,31 9	\$8,400 \$1,000		\$1,200 20,31 \$1,000 9	\$5,750 \$1,000		\$1,200 20,31 \$1,000 9,10	\$6,200 \$15,000	\$2,275 \$3,200
83 Painter Marsh Channel Cleanout			\$0		\$0	\$0		\$0		\$0		\$0		\$0	\$0		\$0	\$0	\$0
84 Painter Marsh Sedimentation Pond and Outlet 85 Painter Marsh Weir (Pond 937)	9,11A,22,24,29 (removed as part of Co Rd 26 Project)	9,29	\$2,375 \$0	29	\$5,125 9,29 \$0	\$2,375 \$0	29	\$375	9,22,29	\$36,425 \$0	29	\$375 \$0	9,29	\$7,125 29 \$0	\$375 \$0	9,29	\$2,375 9,29 \$0	\$5,375 \$0	\$6,230 \$0
86 Pamela Park Storm Water Ponds	4,11B,27,30-31		\$0 \$0		\$0 \$0 30	\$0 \$5,500	30	\$43,000		50 \$0		φU \$0		\$0	\$0	30	\$5,500	\$0 \$0	\$5,400
87 Parley Lake Internal Load Management 88 Powell Road Storm Water Diversion	9,32 11A.24.29		\$0	11A	\$0 \$2.875	\$0 \$0	9 11A	\$10,000 \$2,875	32	\$5,000 \$4,000	32 11A	\$210,000 \$5,275		\$0 \$0_11A	\$0 \$2.875		\$0 9 \$0 11A	\$7,000 \$2.875	\$23,200 \$2,078
89 Powell-Meadowbrook Storm Water	24	1	\$0		\$0	\$0		\$0		\$0		\$0		\$0	\$0		\$0	\$0	\$0
90 Reach 20 Boardwalk 91 Reach 20 Bridges	7 3,20,27		\$0 \$0	7 3	\$3,125 7 \$500 3	\$9,800 \$685		\$12,925 \$500		\$13,800 \$685	7 3,20,27	\$15,325 \$8,740		\$9,800 7 \$500 3	\$12,925 \$685		\$9,800 7 \$500 3	\$18,925 \$685	\$10,643 \$1,348
92 Reach 20 Channel	2,5,20		\$0	2	\$375	\$0	2	\$375	i	\$0	2,20	\$6,625	2	\$4,000	\$0	2	\$375	\$0	\$1,175
93 Reach 20 Platform 94 Reach 20 Storm Sewer	7,27	7	\$500 \$0	7	\$750 7 \$0	\$800 \$0	7	\$750 \$0	7	\$500 \$0	7,27	\$49,500 \$0	7	\$500 7 \$0	\$750 \$0	7	\$500 7 \$0	\$6,750 \$0	\$6,130 \$0
95 Reach 20 Trail	25		\$0 \$0	25	\$250 25	\$250	25	\$250		\$250		\$2,350	25	\$250 25	\$250	25	\$250 25	\$16,000	\$2,010
96 Reach 20 Wet Detention Pond 97 Reach 20 Wetlands and Buffers	4,20,30 4,12B,19,27,31		\$0 \$0	12B,19,31	\$0 \$1,850 12B,19,31	\$0 \$1 850	12B,19,31		4,20,30 12B,19,31	\$18,350 \$1,850	30 4,12B, 19,31	\$65,000 \$12,625	12B,19,27,31	\$0 \$17,420 19,31	\$0 \$1,600	19.31	\$0 4,20 \$1,600 19,31	\$13,850 \$1,600	\$9,720 \$4,225
98 Saunders Rain Gardens	19	-	\$0 \$0	0,.0,01	\$0	\$0	0, 10,01	\$0		\$0	.,, 10,01	\$0		\$0	\$0		\$0	\$0	\$0
99 Six Mile Marsh Infiltration SMC-55 100 Six Mile Marsh Prairie Restoration	4,9,11B,12B,20,27,29 4,27		\$0 \$0		\$0 9,11B,12B,29 \$0	\$1,125 \$0			9,11B,12B,29 4,27	\$1,125 \$14,100		\$0 \$0	4,9,11B,12B,27,29	\$22,725 12B,20 \$0	\$18,320 \$0	9,11B,12B,29	\$1,125 \$0 4,27	\$0 \$14.100	\$4,442 \$2,820
101 South Katrina Storm Water Pond and Weir	9,11B,22,29		\$0	9,11B	\$500	\$0 \$0	9,11B	\$500	9,22,29	\$35,750		\$500		\$0 \$0 9,11B	\$500		\$0 9,11B	\$13,500	\$2,820
102 Spring Peeper Meadow 103 Steiger Wetland Inflow Wet Detention Pond	4,7,25,27,31 4,27,30		\$0 \$0		\$0 \$0	\$0 \$0		\$0 \$0		\$0 \$0		\$0 \$0		\$0 \$0 30	\$0 \$8 500	4,27,30	\$0 \$100,767	\$0 \$0	\$0 \$10,927
104 Steiger Wetland Restoration	4,11B,27,31	11B	\$375		\$375 11B	\$375			11B,27,31	\$7,875	11B	\$375		\$375 4,11B	\$11,975	11B	\$375 27,31	\$7,875	\$3,035
105 SW Calhoun Storm Water Ponds 106 Swan Lake Storm Water Pond	3-4,9,11A,24-25,27,30 30		\$0 \$0	3,4,9,11A	\$16,600 30 \$0 30	\$5,500 \$5,500	3,9,11A,30 30	\$143,060 \$43,333		\$6,000 \$3,000	3,9,11A	\$3,060 \$0	3,4	\$12,340 3,9,11A,30 \$0 30	\$8,560 \$5,500		\$130,000 3,9,11A,30 \$0	\$6,060 \$0	\$33,118 \$5,733
107 Taft-Legion Lake Project	4,12A,15,18,25,27,30		\$0	15	\$15,000 15	\$5,000		\$5,000	15	\$5,000		\$5,000	15	\$5,000 15	\$5,000	15	\$5,000 15	\$5,000	\$5,500
108 Tanager Bridge Shorerline Restoration 109 Twin Lakes Park Storm Water Pond	2,23,27 4,11B,25,27,30	11B	\$0 \$375	11B	\$0 2,27 \$375 11B	\$6,500 \$375	11B	\$0 \$375	4,11B,30	\$0 \$17,475	11B,30	\$0 \$65,375	11B	\$0 27 \$375 11B	\$2,500 \$375		\$0 2 \$375 4,11B,30	\$5,130 \$17,475	\$1,413 \$10,295
· · · · · · · · · · · · · · · · · · ·	Totals:	•	\$117,922		\$749,957	\$341,841		\$904,881		\$883,649		\$937,571		\$1,365,381	\$655,005		\$782,548	\$1,344,328	\$808,308