

MEMORANDUM

To: MCWD Board of Managers

From: Craig Dawson, Director of Research and Monitoring

Date: July 16, 2015

Re: 2016 Work Plans – Research and Monitoring Division

Purpose:

This memorandum provides a summary of all work plans under the Research and Monitoring Division including a brief description of program activities, a list of notable changes (>\$10,000) from the previous year's budget, and a summary of the overall budget and levy impact as compared to the previous year. Work plans summarized in this memo include the following:

Water QualityE-GradeFund 5001Fund 5002 (new)

• Lake Nokomis Project Fund 5003 (moved from capital projects)

Joint Watershed Research Grant Program
 Aquatic Invasive Species (AIS)
 Research and Monitoring General Operations
 Fund 5005
 Fund 5006 (new)

Summary:

The 2015 work plans and budgets for the Water Quality and Aquatic Invasive Species (AIS) programs were prepared separately prior to the formation of the Research and Monitoring Department later in the year. The 2016 work plans and budgets have been developed to reflect these programs integrated in one department, with the most noticeable change being the creation of a fund for shared general operation expenses of the Water Quality and AIS programs (and subsequent reductions in their respective program funds). Research and Monitoring has also identified \$196,200 in expenses to be reassigned to District General Operations for personnel, information technology, and vehicle expenses and the like in 2016.

The Water Quality programs will continue in the array of projects that are being performed. Efforts will be increased in the development of the E-Grade program. During the development of E-Grade thus far, additional monitoring and data gathering beyond what the District has historically performed has been identified. This additional field work would be performed for the Phase 2 areas (northern upper watershed) of E-Grade in 2016.

The AIS program remains "adaptive management in progress", although most activities and baseline data-gathering would be continued into 2016. AIS staff will continue the higher-level monitoring needed for the post-rapid response to the zebra mussel infestation at Christmas Lake detected in August 2014. A significant change in AIS program direction is to implement the two-year grant (\$325,000+) from the Initiative Foundation (using funds from Lessard-Sams Outdoor Heritage Council appropriations) to establish a staffed, voluntary watercraft inspection/decontamination facility; a self-inspection certification program; a home-lake program; and an evaluation of these initiatives. Unused funds that the District has

made available for various grants will be redirected toward the same activities in the Initiative Foundation grant, and will count toward the required 50 percent local match. Research funds in the 2015 workplan would be repurposed in 2016 with the Minnesota AIS Research Center to test and evaluate products and the ways they can be used to control zebra mussel populations.

Notable Changes (>\$10,000) for 2016:

*Note. All changes listed below are specific line items within program or project areas that are proposed to change in 2016 by more than \$10,000. Line item changes within program areas greater than \$10,000 do not necessarily mean a change to the bottom line budget for that program. These changes may reflect a shift in emphasis or priority within a specific program without change to the program's total budget. Other line item specific changes below \$10,000 are not listed. The total proposed budget change in each program area (including those less than \$10,000) are depicted in the summary spreadsheet on the final page of this memorandum.

W	ater Quality	
•	Subwatershed monitoring Increase in consultant services for additional monitoring and data collection for E-Grade in Phase 2 area (north upper watershed)	+ \$65,000
E-(Grade	
•	E-Grade development	+ \$31,000
	Increase in consultant services as planned for 2016 in approved scope of work	
•	E-Grade development, contingency for expenses	+ \$10,000
	\$50,000 included in approved cost for program development;	
	\$20,000 will be used in 2015; \$30,000 for availability in 2016	
ΑI	S	
•	Watercraft Inspections	+ \$15,000
	Cost-share grants and roaming inspectors (7% increase)	4,
•	Clean Boats Program	- \$55,000
	Reduce number of planned fixed-site inspection/decontamination	
	facilities from two through District grants/contracts to one for the	
	Initiative Foundation grant	* * * * * *
•	AIS Self-Inspection Certification and Home Lake Programs for watercraft	+ \$15,000
	To implement with Initiative Foundation grant program; self-inspection certification in 2015 work plan for \$5,000	
	Lake Minnetonka Zebra Mussel Study	+ \$30,000
	Study conducted in 2011-2014, with follow-up monitoring and	, \$50,000
	evaluation planned every two years thereafter (beginning in 2016)	
•	AIS Management and Innovation Cost-share Program	- \$20,000
	No requests for funding have been received; County funding is	
	now available for interested parties	
•	Communications/Education Department Activities	- \$20,000
	Reduction from \$50,000 to \$30,000	# 10.000
•	AIS Research	- \$10,000
	Repurpose \$50,000 for additional economic study in 2015 for	

study for zebra mussel controls with U of MN for \$40,000 in 2016

R & M General Operations

• Legal expenses - \$15,000

Relocated Funds

• Personnel - \$165,821

Budgeted wages for personnel will be relocated to the General Operations Fund (1002) to consolidate the District's personnel budget in one location. This is a simple relocation of a budgeted line item and represents zero overall impact to the District's budget.

Note that the AIS District Representative position (20 months, without benefits) would be transitioned to a regular full-time staff position.

Vehicles and Maintenance

- \$23,000

Vehicle expenses will be relocated to the General Operations Fund (1002) for District fleet vehicles. <u>This is a simple relocation of a budgeted line item and represents zero overall impact to the District's budget.</u>

• IT Services - \$13,700

\$13,700 will be relocated to the IT Fund (1003) for collective development of GIS mapping and database needs. This is a simple relocation of a budgeted line item and represents zero overall impact to the District's budget.

Financial Implications:

The table below is an executive summary of the proposed 2016 budget and levy as compared to 2015:

Program	201	5 Budget	201	5 Levy	2016 Budget	2016 Levy
Water Quality	\$	638,193*	\$	396,447	\$ 219,495	\$ 219,495
E-Grade		**		**	\$ 312,000	\$ 312,000
Lake Nokomis Project	\$	12,700	\$	9,000	\$ 10,300	\$ 10,300
JWRG	\$	100,000	\$	0	\$ 100,000	\$ 0
AIS	\$	831,900	\$	305,517	\$ 634,000	\$ 351,320
R & M General Operations		***		***	\$ 96,900	\$ 96,900
Total	\$	1,582,793	\$	710,964	\$1,372,695	\$ 990,015

^{* =} Revised 2015 budget expenses

The total combined budget for these programs and projects for 2016 is \$210,098 lower than the 2015 budget. However, \$196,200 in expenses is being relocated to District General Operations for personnel, information technology, and vehicle expenses and the like in 2016. Consequently, the net change from the 2015 to 2016 budgeted expenses for the Research and Monitoring Department becomes a decrease of about \$7,500.

^{** =} Included in 2015 Water Quality budget and levy

^{*** =} Included in 2015 Water Quality and AIS budgets and levies

On the revenue side, there will be less in carry-over funds to apply to the 2016 budget compared to the 2015 budget. The tax levy needed to fund the 2016 work plan would be \$279,051 higher than 2015. When adding the expenses relocated to District General Operations, the Research and Monitoring Department's responsibility for a tax levy increase would be about \$462,590.



MINNEHAHA CREEK WATERSHED DISTRICT 2016 RECOMMENDED WORK PLAN

PREPARED BY: Yvette Christianson, Kelly Dooley & Kailey Kreatz **DATE:** July 16, 2015

Program	Research and Monitoring: Water Quality Program (5001)					
Summary	The Water Quality Program monitors the water resources throughout the watershed, identifies stressors and key resource areas that will assist the Planning Department in project development and provide the Communication Department with information to relay to the public.					
Location	District-wide					
Description	Two Track Approach: Geographic Focus					
	Anchor Site Monitoring (\$49,545): Long-term water quality data collected on anchor monitoring sites on lakes (32 lake sites) and streams (approx. 38 stream sites).					
	Subwatershed Monitoring (\$13,690): Additional monitoring in lakes, wetlands, and streams, includes water quality, biological and habitat assessment for E-Grade in the Phase II areas (Painter Creek, Long Lake Creek, Langdon Lake, and Dutch Lake Subwatersheds). See contracted services for additional subwatershed monitoring costs.					
	Two Track Approach: Responsiveness and Flexibility					
Volunteer Monitoring Program (\$2,060): Recruit, train and manage no current volunteers interested in monthly lake and/or precipitation monitor throughout the watershed.						
	Investigational Monitoring (\$5,000): Responsiveness and flexibility to accommodate other programs (i.e., Planning – pre-and post-project monitoring and Permitting - illicit discharge) and the public water quality concerns.					
	Contingency Monitoring (\$15,000): Responsiveness to high flow year, unexpected equipment failure/replacement, and unplanned monitoring costs.					
	Contracted Services					
	Subwatershed Monitoring (\$88,500): Staff time is allocated to other monitoring responsibilities; therefore, contracted services has been selected to collect fish index of biological integrity data, wetland plant identification, and sediment geochemistry data for the E-Grade Program.					
	Misc. Contracted Services (\$15,000): Additional services as needed.					
	USGS Gauge Management (\$15,700): Partnership with USGS to collect, manage, and publish data at two locations: Lake Minnetonka at the Grays Bay Dam and at Minnehaha Creek near Hiawatha Avenue.					

Annual Maintenance and Support Fee for Water Resources Data

Management/Analysis Tool (\$0): Funds will be reassigned to the Information Technology Department's Work Plan. The funds cover the annual maintenance and support fee for the Water Resources Data Management/Analysis software (WISKI) to be purchased for the Research and Monitoring Department in the Fall 2015. The WISKI software allows staff to store, verify, edit and analyze different types of data, such as, water flow, water level, precipitation, nutrient and biological data. The analysis capabilities of the tool allows staff to conduct statistical analysis and trend analysis of data in-house.

Other Services

Engineering/Consulting (\$15,000): Services needed to provide additional monitoring and/or equipment installation.

2016 Budget Summary:

Activity/Expense		Budget
Anchor Monitoring		\$49,545
Subwatershed Monitoring		\$13,690
Volunteer Monitoring Program		\$2,060
Investigational Monitoring		\$5,000
Contingency Monitoring		\$15,000
Contracted Services: Subwatershed Monitoring		\$88,500
Misc. Contracted Services		\$15,000
Contracted Services: USGS Gauge Management		\$15,700
Annual Maintenance and Support Fee For Water		\$0
Resources Data Management/Analysis Tool		
Engineering/Consultant		\$15,000
	Total	\$219,495

Goals/ Outcomes

To assist the Planning Department with project development:

- Collect and analyze water and biological data to assess watershed function and condition (i.e., E-Grade Report)
- Identify long term trends and stressors
- Determine if waterbodies are meeting the nutrient goals and/or standards

To assist the Communication Department with public education and awareness:

 Analyze and grade the ecosystem features and function in each subwatershed, then package the information into an E-Grade report

Provide data and/or technical expertise to:

- Local, County and/or State government agencies
- Universities
- Lake and stream associations
- Citizens

Schedule

2016:

January - March: Complete the 2015 annual monitoring and technical reports, prepare for field work, and continue to work on any additional project management.

March - October: Monitoring streams and lakes, conducting macroinvertebrate and wetland surveys, fish index of biological integrity, sediment geochemistry analysis, and continue to work on any additional project management.

November - December: Data entry for annual monitoring and technical reports, monitoring streams for chloride, submittal of data to state agencies, and continue to work on any additional project management.

Budget/Levy History

Year	Budget	Tax Revenue	Grants & Other Rev.	Expenditures	Transfer in/out	Carryover	Assigned Funds
2014	\$328,358	\$315,961	\$0	(\$294,037)	\$0	\$225,440	
2015	\$547,753	\$396,447	\$0	(\$638,193)	\$16,306	\$0	
2016	\$219,495	\$219,495	\$0	(\$219,495)	\$0	\$0	

Recommended 2016 Budget and Levy

Budget: \$219,495 Levy: \$219,495

Detailed Budge		
Activity Code	Activity Name	Amount
4010	Wages	
4011	Wages-Overtime	
4018	Salary – Insurance Reimbursement	
4020	Payroll Tax Expense	
4035	Unemployment Reimbursement	
4040	PERA Expense	
4050	Benefits	
4060	Staff Mileage/Expenses	
4065	Staff Training	
4066	Staff Tuition Benefit	
4110	Manager Per Diems	
4120	Manager Expenses	
4125	Manager Computer/Software	
4130	Manager Dues/Subscriptions/Internet	
4210	Office Supplies	
4215	Meeting Expense	
4220	Furniture & Fixtures	
4222	Vehicle Expense	
4230	Printing/Publishing/Postage	
4240	Telecommunications -Cell/internet	
4245	Special Events	
4247	High Water Restoration	
4248	FEMA Expense	
4250	Dues & Subscriptions	
4265	Rentals-Building & Equipment	
4280	Insurance	
4292	Bank/Agency Fees	
4295	Other/Miscellaneous	
4320	Contract Services	\$119,200
4330	Accounting & Auditing	
4340	Engineering/Consulting	\$ 15,000
4350	Legal Expense	
4390	CAC Expense	
4520	Monitoring/Lab Analysis/Inventories	\$ 85,295
4530	Permit Acquisition	
4540	Property/Easement Acquisition	
4550	Construction	
4565	Property Management - CBRE	
4566	Tenant Relocation - CBRE	
4570	Equipment/Supplies	
4575	Repairs/Maintenance	
4594	Debt Service-Principal	
4595	Debt Service-Interest	
4600	Grants/Awards/Loans - Given by MCWD	
4651	Issuance Cost	
4962	Office Bldg. Maintenance	
4963	Office Building Utilities	
	TOTAL	\$219,495

MINNEHAHA CREEK WATERSHED DISTRICT 2016 RECOMMENDED WORK PLAN

PREPARED BY: Yvette Christianson & Kelly Dooley **DATE:** July 16, 2015

Program	Research and Monitoring: Ecosystem Evaluation (E-Grade) Pr	rogram (5002)				
Summary	The Ecosystem Evaluation (E-Grade) Program is being developed as a scientifically defensible, ecosystem evaluation tool to assess ecological functions and services on a graded scale throughout the watershed.					
Location	District-wide					
Description Contracted Services (\$207,000): The third year of the Ecosystem Evalual Program focusing on next set of features: Terrestrial, Groundwater, and Heart Indentify key features of health and ecosystem services Identify appropriate metrics and indices Update datasets and fill data gaps Follow up meetings with Partners and Consultant Develop Grade Break Point Test scoring system Contingency Services (\$30,000): Costs related to unforeseen E-Grade Practivities and expenses. Legal Expense (\$5,000): Costs for continuing services with Smith Partner processing and finalizing of the E-Grade Program. Printing/Publishing/Postage (\$5,000): Communication services to promprepare the public and municipalities for the introduction and rollout of the subwatershed report card. Water Quality Technician (\$65,000): Third year of a contracted position in the management of existing monitoring duties. Allows department man						
	2016 Budget Summary:					
	Activity/Expense	Budget				
	Contracted Services	\$237,000				
	Legal Expense	\$5,000				
	Printing/Publishing/Postage	\$5,000				
	Water Quality Technician Salary/Benefits	\$65,000				
	Total	\$312,000				
Goals/ Outcomes	 Develop a water quality index Evaluations of the ecological features and their performance of flood control, biodiversity habitat diversity, recreation, drinking water supply, 					

and nutrient cycling within the lower Minnehaha Creek, Schutz Creek, and Six Mile Marsh subwatersheds.

- Create a comprehensive report that grades the health of the subwatersheds' ecosystem.
- Focus management strategies in the areas identified as high-need for improvement or protection.
- Build understanding of the various factors that impact the health of the water bodies and other ecological features.

Schedule

2016:

Winter - Spring: Identify ecosystem services and key health indicators for terrestrial, groundwater, and hydrology; Review literature studies to develop break points, statistics, reference sites, and other pertinent data for terrestrial, groundwater, and hydrology; Test scoring system in streams and wetlands;

Spring - Summer: Investigate appropriate metrics and available data for metric assessment for terrestrial, groundwater, and hydrology; Follow up meeting with partners and consultants for terrestrial, groundwater, and hydrology; Present preliminary scores and stressors to TAC; Final meeting with partners and Board to present final analysis and report for deep and shallow lakes; Finalize grading process and publish technical paper for streams and wetlands;

Summer - Fall: Update datasets and fill data gaps;

Fall - Winter: Final meeting with partners and Board to present final analysis and report for streams and wetlands; Develop grade break point and test scoring system for terrestrial, groundwater, and hydrology; Follow up meeting with partners and consultants.

Budget/Levy History

Year	Budget	Tax Revenue	Grants & Other Rev.	Expenditures	Transfer in/out	Carryover	Assigned Funds
2014							
2015							
2016	\$312,000	\$312,000	\$0	(\$312,000)	\$0	\$0	

Recommended 2016 Budget and Levy

Budget: \$ 312,000 Levy: \$ 312,000

Activity Code	Activity Name	Amount
4010	Wages	\$55,000
4011	Wages-Overtime	
4018	Salary – Insurance Reimbursement	
4020	Payroll Tax Expense	
4035	Unemployment Reimbursement	
4040	PERA Expense	
4050	Benefits	\$10,000
4060	Staff Mileage/Expenses	
4065	Staff Training	
4066	Staff Tuition Benefit	
4110	Manager Per Diems	
4120	Manager Expenses	
4125	Manager Computer/Software	
4130	Manager Dues/Subscriptions/Internet	
4210	Office Supplies	
4215	Meeting Expense	
4220	Furniture & Fixtures	
4222	Vehicle Expense	
4230	Printing/Publishing/Postage	\$5,000
4240	Telecommunications -Cell/internet	7.73
4245	Special Events	
4247	High Water Restoration	
4248	FEMA Expense	
4250	Dues & Subscriptions	
4265	Rentals-Building & Equipment	
4280	Insurance	
4292	Bank/Agency Fees	
4295	Other/Miscellaneous	
4320	Contract Services	\$237,000
4330	Accounting & Auditing	<i>\$251</i> ,000
4340	Engineering/Consulting	
4350	Legal Expense	\$5,000
4390	CAC Expense	ψ2,000
4520	Monitoring/Lab Analysis/Inventories	
4530	Permit Acquisition	
4540	Property/Easement Acquisition	
4550	Construction	
4565	Property Management - CBRE	
4566	Tenant Relocation - CBRE	
4570	Equipment/Supplies	
4575	Repairs/Maintenance	
4594	Debt Service-Principal	
4595	Debt Service-Interest	
4600	Grants/Awards/Loans - Given by MCWD	
4651	Issuance Cost	
4962	Office Bldg. Maintenance	
4963	Office Building Utilities	
7703	TOTAL	L \$312,000

MINNEHAHA CREEK WATERSHED DISTRICT 2016 RECOMMENDED WORK PLAN

PREPARED BY: Kelly Dooley **DATE:** July 16, 2015

Project	Lake Nokomis – Biomanipulation of the Fish Community (50	003)			
Summary	Third year of post-biomanipulation project monitoring in Lake Nokomis				
Location	Lake Nokomis				
Description	Background: In 2010, the Minnehaha Creek Watershed District (MCWD) a Science with cooperation from the Minnesota Department of (MnDNR) and Minneapolis Park and Recreation Board (MPF four-year biomanipulation study to improve the water quality order for the lake to meet the eutrophication standards. During those 4 years, the study observed improvements in the the aquatic plant community and in the water quality of the lathird year after the biomanipulation was completed. The plan summer of monitoring to assess the sustainability of the improvate Nokomis. Carp in Lake Nokomis is still a concern. If carp continue to reecologically sustainable levels, the carp can reverse the improvate Nokomis. MPRB applied for Environment and Natural grant (ENRTF) in 2015 to conduct applied research on carp in Subwatershed in 2017. In the meantime, Blue Water Science movement into/out of Lake Nokomis and Justine Koch, University donating time to conduct electrofishing survey in Lake Nokom be a second snapshot within two years of the carp population Engineering/Consulting (\$10,300): Costs to conduct post-praquatic plant survey, fish survey), summary report and prepar manuscript to a scientific journal. *Note: No funds were budgeted and spent on manuscript pub Water Science, at no charge, will inspect the inlet/outlet of La of carp activity; and MPRB monitoring staff will conduct the monitoring in Lake Nokomis 2016 Budget Summary:	Natural Resources RB) embarked on a in Lake Nokomis in e fish community, in the 2016 will be the is to conduct a third oved conditions in emain above ovements made in Resources Trust Fund in the Lake Nokomis is assessing carpersity of Minnesota, is mis. The survey will in Lake Nokomis. Toject monitoring (i.e., re and submit lication in 2015; Blue ake Nokomis for signs			
	Activity/Expense	Budget			
	Engineering/Consulting	\$10,300			
	Total	\$10,300			

Goals/	The biomanipulation project was developed to reduce internal loading activities in					
Outcomes	Lake Nokomis, and to develop and sustain healthy fish and vegetation					
	communities. See the excerpts of sections in the Minnehaha Creek Subwatershed					
	Plan of the Comprehensive Water Resources Management Plan below:					
	1) Section 3.1 - Problems and Issues - Water Quality: The District was preparing					
	the TMDL study to address reducing phosphorus into and/or in Lake Nokomis					
	2) Section 4.2: Goal 2: Ecological Integrity – Goal 2.2: Maintain conditions suitable for healthy and varied sport fish communities within the primary lakes of the subwatershed					
	3) Section 4.3: Goal 3: Water Quality – Goals 3.1 and 3.2: Partner with the Minneapolis Park Board and City of Minneapolis to investigate and implement potential internal load reductions identified in the Lake Nokomis TMDLs, and manage aquatic vegetation in accordance with a vegetation management plan that takes into account water clarity goals					
Schedule	2016 January - June: Preparing for monitoring activities					
	July: Conduct aquatic plant survey, fish survey and inspect inlet and outlet for carp movement					
	August - December: Prepare summary report and manuscript for publication					

Budget/Levy History

Year	Budget	Tax Revenue	Grants & Other Rev.	Expenditures	Transfer in/out	Carryover	Assigned Funds
2014	\$3,700	\$0	\$0	(\$7,400)	\$3,700	\$0	
2015	\$12,700	\$9,000	\$0	(\$9,000)	\$0	\$0	
2016	\$10,300	\$10,300	\$0	(\$10,300)	\$0	\$0	

Recommended 2016 Budget and Levy
Budget: \$10,300
Levy: \$10,300

Activity Code	Activity Name	Amount
4010	Wages	
4011	Wages-Overtime	
4018	Salary – Insurance Reimbursement	
4020	Payroll Tax Expense	
4035	Unemployment Reimbursement	
4040	PERA Expense	
4050	Benefits	
4060	Staff Mileage/Expenses	
4065	Staff Training	
4066	Staff Tuition Benefit	
4110	Manager Per Diems	
4120	Manager Expenses	
4125	Manager Computer/Software	
4130	Manager Dues/Subscriptions/Internet	
4210	Office Supplies	
4215	Meeting Expense	
4220	Furniture & Fixtures	
4222	Vehicle Expense	
4230	Printing/Publishing/Postage	
4240	Telecommunications -Cell/internet	
4245	Special Events	
4247	High Water Restoration	
4248	FEMA Expense	
4250	Dues & Subscriptions	
4265	Rentals-Building & Equipment	
4280	Insurance	
4292	Bank/Agency Fees	
4295	Other/Miscellaneous	
4320	Contract Services	
4330	Accounting & Auditing	
4340	Engineering/Consulting	\$10,300
4350	Legal Expense	
4390	CAC Expense	
4520	Monitoring/Lab Analysis/Inventories	
4530	Permit Acquisition	
4540	Property/Easement Acquisition	
4550	Construction	
4565	Property Management - CBRE	
4566	Tenant Relocation - CBRE	
4570	Equipment/Supplies	
4575	Repairs/Maintenance	
4594	Debt Service-Principal	
4595	Debt Service-Interest	
4600	Grants/Awards/Loans - Given by MCWD	
4651	Issuance Cost	
4962	Office Bldg. Maintenance	
4963	Office Building Utilities	
	TOTAL	\$10,300

MINNEHAHA CREEK WATERSHED DISTRICT 2016 RECOMMENDED WORK PLAN

DATE: July 16, 2015

PREPARED BY: Yvette Christianson

Project	Joint Watershed Research Grant Program (5004)					
Summary	The goal of the Joint Watershed Research Grant Program is to provide watershed managers and municipalities with needed research, information, and products based on a <i>sound scientific foundation</i> _and a <i>favorable economic assessment</i> that could be employed within the Twin Cities geographic area.					
Location	District-wide					
Description	Background: Partnership with Mississippi Watershed Management Organization in funding grants to support research which assesses existing BMPs and standards, provides new tools, advances understanding of water and natural resources, and determines the potential of existing and new management practices. Partnership began in 2008 with each organization contributing \$100,000/year. Four projects were awarded in 2008 and three projects were awarded in 2010, though one of the three was never implemented. 2016 Budget Summary:					
	Activity/Expense	Budget				
	Grants/Awards/Loans	\$100,000				
	Total \$100,000					
		\$100,000				
Goals/Outcomes	 Improved methods and tools based on sound reinformation to protect and improve the water quality rivers. To advance our understanding of water related bio physical systems and their functions and interaction environment. 	esearch and scientific of streams, lakes and logical, chemical, and				

Budget/Levy History

Year	Budget	Tax Revenue	Grants & Other Rev.	Expenditures	Transfer in/out	Carryover	Assigned Funds
2014	\$0	\$0	\$0	\$0	(\$14,125)	\$141,413	
2015	\$100,000	\$0	\$0	(\$25,107)	(\$16,306)	\$100,000	
2016	\$100,000	\$0	\$0				

Recommended 2016 Budget and Levy

Budget: \$100,000 Levy: \$0

Activity Code	Activity Name	Amount
4010	Wages	
4011	Wages-Overtime	
4018	Salary – Insurance Reimbursement	
4020	Payroll Tax Expense	
4035	Unemployment Reimbursement	
4040	PERA Expense	
4050	Benefits	
4060	Staff Mileage/Expenses	
4065	Staff Training	
4066	Staff Tuition Benefit	
4110	Manager Per Diems	
4120	Manager Expenses	
4125	Manager Computer/Software	
4130	Manager Dues/Subscriptions/Internet	
4210	Office Supplies	
4215	Meeting Expense	
4220	Furniture & Fixtures	
4222	Vehicle Expense	
4230	Printing/Publishing/Postage	
4240	Telecommunications -Cell/internet	
4245	Special Events	
4247	High Water Restoration	
4248	FEMA Expense	
4250	Dues & Subscriptions	
4265	Rentals-Building & Equipment	
4280	Insurance	
4292	Bank/Agency Fees	
4295	Other/Miscellaneous	
4320	Contract Services	
4330	Accounting & Auditing	
4340	Engineering/Consulting	
4350	Legal Expense	
4390	CAC Expense	
4520	Monitoring/Lab Analysis/Inventories	
4530	Permit Acquisition	
4540	Property/Easement Acquisition	
4550	Construction	
4565	Property Management - CBRE	
4566	Tenant Relocation - CBRE	
4570	Equipment/Supplies	
4575	Repairs/Maintenance	
4594	Debt Service-Principal	
4595	Debt Service-Interest	
4600	Grants/Awards/Loans - Given by MCWD	\$100,000
4962	Office Bldg. Maintenance	
4963	Office Building Utilities	
	TOTAL	\$100,000

MINNEHAHA CREEK WATERSHED DISTRICT 2016 RECOMMENDED WORK PLAN

PREPARED BY: Eric Fieldseth **DATE:** July 16, 2015

Ъ	A
<u>Program</u>	Aquatic Invasive Species (5005)
Summary	The purpose of the Aquatic Invasive Species (AIS) Program is to prevent, contain, and control the harmful ecological, human, and economic effects of AIS through broadly diverse methods.
Location	District-wide
Description	Many of the activities described in the 2016 work plan are being counted towards local match funding for a grant that has been authorized by the Initiative Foundation, which has received a Lessard-Sams Outdoor Heritage Council appropriation for innovative AIS management projects. Regardless of whether the District enters into this grant, the activities in the work plan would be undertaken. If the grant is executed, the District can leverage the Foundation funds to perform greater levels of service. A budget summary of the grant is included at the end of this work plan.
	Prevention Activities
	AIS Watercraft Inspection Cost Share and Roaming Inspector Program (\$230,000) These funds would continue our cost-share and roaming inspector program, which offers 50% reimbursement for watercraft inspections done by our partner agencies in the District, as well as fund 100% of a roaming inspector program which provides coverage on waterbodies that otherwise would not receive coverage. Our 2015 budget for this activity was \$215,000, and we foresee spending closer to \$222,500 to cover an expanded pilot program at Christmas Lake that involves more extensive decontamination protocols. An additional \$15,000 would be budgeted in 2016 to further cover this expanded program at Christmas Lake. We would also continue discussions with Long Lake on getting an inspection program started there, as they currently have a limited presence of DNR inspectors. - Additional grant funding from the Initiative Foundation for more roaming inspector coverage is proposed, which will allow an evaluation of a more comprehensive approach at public boat launches, as well as provide further evaluation of our self-inspection and home lake pilot programs. Clean Boats Program (\$0) This program was designed for the District to provide grants for boat cleaning stations (more officially called "decontamination stations") to public and private entities, in order to have more known locations for persons needing their watercraft properly cleaned. There has been little interest expressed in participating in this
	activity in the last couple years; however, Carver County recently installed a station at Lake Waconia through funding from the Initiative Foundation, and Three Rivers Park District installed one at Lake Independence through AIS grant funding from Hennepin County. Both stations are outside the District, but are relatively

close for some users in the District to access. The City of Shorewood is also piloting a more extensive protocol for decontamination at the Christmas Lake boat launch, and it is using a decontamination unit purchased by the Christmas Lake Homeowners Association a few years ago. Private entities have expressed concern about liability they may face for the introduction of AIS if they are held responsible for any insufficiency in the cleaning/decontamination process.

- Through the Initiative Foundation AIS Grant, the MCWD will establish an off-site inspection/decontamination station, adding another place users could go to get their boats cleaned. This off-station site is shown separately in this work plan.

Off-Site Inspection/Decontamination Station & Education Programing (\$45,000)

This includes the purchase of a decontamination unit and educational programming at an off-site station, and would be part of the Initiative Foundation grant. The station would be voluntary for users, and be an added convenience and a known place boaters could go to get decontaminated. We are hopeful to partner with Hennepin County on this site, as it is working to establish a more permanent decontamination station around Lake Minnetonka. Partnering with the County on this would leverage more local funds to qualify for more Initiative Foundation Grant funds. We also envision this site to be used as an AIS educational site, with interactive displays and new ways to reach our key audiences. The exact approach is yet to be determined, but this site could be a place to not only educate boaters, but school type groups and community members who could use it as a hands-on site to learn about AIS and the importance of preventing its spread.

- The Initiative Foundation Grant funding would include funds to staff the station with inspectors and cover operating costs. The District must make the capital investment, as the Initiative Foundation funds cannot cover capital costs.

Water Access AIS Improvements (\$75,000)

This program has been available to agencies controlling public accesses in the District in order to facilitate proper cleaning and inspection of watercraft by operators entering and exiting water bodies. Hennepin County's public access on North Arm/Minnetonka is an example of these improvements. It uses social marketing principles in the messaging, and provides prompts for users to perform certain AIS related activities. There has been some interest by partner agencies, but nothing has been implemented up to this point.

- These funds will be incorporated into the local match for the Initiative Foundation Grant, and provides enough funding to implement the signage at all public accesses in the District.

Self-Inspection Certification Pilot Program (\$10,000)

This pilot program will be part of the Initiative Foundation AIS Grant, and be part of the local match required for the grant. \$5,000 was budgeted in 2015, but no program was able to get started. As part of a larger AIS prevention initiative, this program will have more momentum behind it to gain DNR approval. There has already been interest in this program by a number of partner agencies. It focuses on recognizing a group of users (typically frequent users) who will demonstrate the steps they take to reduce the spread of AIS and take personal responsibility. In turn, the goal would be to allow these users to bypass the inspection process, and

be examples for others to follow. By recognizing these individuals, we are hopeful to gain behavior change in others to follow suit.

Home Lake Pilot Program (\$10,000)

This pilot is also part of the Initiative Foundation AIS Grant Project, and contributes to the local match needed for the grant. Participants in this pilot will be users who trailer their boats to one lake only in a given season, providing no risk for spreading AIS. The idea for this pilot is to allow these users to bypass the inspection process, and allow prevention efforts to be focused on those users who visit multiple lakes in a season.

Clean Access Pilot (\$5,000)

Experience on Lake Minnetonka has shown that one of the biggest risks of watercraft transporting zebra mussels is when the zebra mussels are attached to aquatic vegetation that attaches to boats and trailers at the boat landing. Vegetation in Lake Minnetonka becomes uprooted frequently either by boats or by natural processes, and often drifts into shorelines and docks such as those at public boat accesses, providing an easy way for vegetation to attach to boats and trailers. Similarly, watercraft inspection data from 2014 from District lakes showed that 93% of the potential AIS found on exiting watercraft was aquatic vegetation that was deemed removable by hand. The goal of this pilot is to manage the vegetation at a sub-set of launches in the District to reduce the amount of vegetation and potential AIS leaving the lake on exiting watercraft. The vegetation could be managed through a number of mechanisms, including the use of lateral barriers; physical, mechanical or chemical control; and creating water flow to move vegetation away from the launch. Launches participating in this pilot will be chosen by analyzing past watercraft inspection data which shows potential AIS found during inspections of watercraft leaving the lakes.

This pilot will be part of the Initiative Foundation grant and contribute towards our local match for the pilot.

- The Initiative Foundation Grant would include additional funding for this activity.

Communications/Education Department Activities (\$30,000)

Communications are necessarily broad and flexible as needs and opportunities arise. Activities from past consultant work helped identify social marketing strategies and messages for AIS prevention. Social marketing strategies revolve around making desired behavior changes of certain users. Work will be done to implement more of those activities which target specific AIS vectors and pathways through strategic messaging.

Communication and Outreach will be included as part of the Initiative Foundation Grant to create awareness on the AIS prevention activities in the program, especially with the off-site station and self-inspection/home lake programs. Evaluation of the activities in the Initiative Foundation Grant will also be completed through this activity, and could involve data analysis, public surveys and other public engagement to get feedback and evaluate behavior changes.

- A portion of these funds would be part of the local match requirement for the Initiative Foundation Grant.

Volunteer Monitoring Program (\$3,000)

This program was started in 2015 with good interest from the public, especially in regards to zebra mussel monitoring. We will continue to grow our volunteer network, and continue introducing them to ways to monitor for a variety of AIS. A guide book for volunteer AIS early detectors was created in 2015, and these funds in 2016 allow for additional copies to be printed if needed.

Early Detection/Baseline Monitoring (\$60,000)

The AIS Management Plan identifies the need for a survey and inventory of all waterbodies within the District, and acknowledges that this effort will likely span several years. It is critical to understand where AIS are present, as well as features at and in waterbodies throughout the watershed indicating the likelihood that AIS may be introduced. Actions within the strategy to inventory and document the presence of AIS are:

- a) Develop survey methodology and standards
- b) Inventory existing information from appropriate sources and conduct infield surveys as necessary
- c) Organize data to document and map distribution of AIS
- d) Identify at-risk and priority waters to survey and monitor
- e) Determine preferred schedule to re-survey waterbodies, streams, and wetlands.

This effort began in 2014, and the goal is to have at least one assessment done on each waterbody in the District by 2020. The two main activities included in this monitoring are aquatic plant point-intercept surveys, which assess the aquatic plant community in a waterbody, and our AIS Early Detection Surveys, which assesses aquatic plants and animals such as spiny water flea, zebra mussels and other invasive snails. Consultants are used to get additional monitoring completed in addition to what staff completes. A portion of these funds may be used for two seasonal (6-month) staff to perform or assist in the monitoring.

Rapid Response and Containment Funding (\$35,000)

In 2015, \$30,000 was budgeted for Rapid Response and Containment Funding. Nearly all of these funds were needed for Christmas Lake in 2015, so the funds need to be replenished. Based on experience on Christmas Lake, \$35,000 seems to be the appropriate amount to have identified for future rapid response needs. The majority of these funds are needed for barriers (which the DNR now has on hand), control products, application costs, consultant costs (typically to assist with surveying), and lab analysis of water samples for product concentration monitoring.

Management and Research Activities

Carp Removal Program (\$1000)

This program is for the removal of carp as an invasive/nuisance species by DNR-licensed commercial fish harvesters, as well as the use of barriers to restrict the movement of carp. No activities are currently planned for 2016, but opportunities may arise while the work continues in Six-Mile Creek with the Carp Assessment.

AIS Management and Innovations Cost-Share Program (\$0)

With AIS grant funding available from Hennepin County, as well as the Initiative Foundation AIS Grants, this program is no longer needed.

Lake Minnetonka Zebra Mussel Study (\$30,000)

This study was conducted from 2011 – 2014, with only the population assessment portion done in 2015. The plan is to collect the whole suite of parameters for the study every other year. This was last completed in 2014, so it would be due in 2016. The whole suite of parameters include: Periphyton, Phytoplankton, Zooplankton and Veliger Density. From this work, we continue to have one of the largest data sets to track zebra mussels and their impacts in a waterbody.

Flowering Rush Management Program (\$40,000)

The MCWD conducted a pilot project in 2011 for the manual extraction (aka hand-pulling) of flowering rush. Follow-up evaluation in 2012 indicated it was highly effective in areas with soft soil substrate, and had little change in cobble/gravel/rock substrate.

Starting in 2013, activity continued for removal of flowering rush from selected sites as part of a long-term demonstration that this AIS could be effectively removed through manual extraction. The levels of activity for 2016 would continue the gradual ramp-up of the program begun in 2013. The AIS Management Plan identifies flowering rush as an AIS that can be controlled and likely reduced within the District.

Zebra Mussel Control Study with U of M (\$40,000)

This study would partner with the Minnesota AIS Research Center and likely another University or individual with expertise in toxicology, to further evaluate control products for zebra mussels, looking at both field and lab trials. This research would start to identify concentration and exposure relationships for the different products, which is what is needed to better our strategies for zebra mussel control and rapid response.

Six-Mile Creek Carp Assessment (\$0)

This activity is included in the Six-Mile Creek Subwatershed Diagnostic Study, a comprehensive water quality project undertaken within the Planning Department. The District has entered into an agreement with the University of Minnesota Aquatic Invasive Species Research Center to conduct an applied science carp management study from 2014 through 2016, as the presence and activity of carp are major contributors to degraded water quality throughout the system.

* The MCWD's AIS Department is managing this aspect of the Diagnostic Study for the Planning and Permitting Department.

AIS Economic Study (\$0)

If warranted, the second phase of this study, budgeted at \$50,000, was not pursued.

Legislative and Regulatory Initiatives (\$15,000)

The Board has expressed a desire to expand the authority of the MCWD and other watershed districts in a variety of prevention initiatives (e.g., watercraft inspections), and thus make implementation of strategies in the AIS management plan more effective. The proposed funding would provide for legal and legislative services in initiatives at the legislative and agency levels. In 2015, these funds were used on legislation for the AIS trailer decal statute. Funding in 2016 would be the same as 2015.

Media Relations (\$5,000)

Funding levels for 2016 are estimates for the effort that the Communications Department may perform or arrange related to AIS, including expenses that may be incurred for communications consulting services.

2016 Budget Summary:

Activity/Expense		Budget
AIS Watercraft Inspection Cost Share and Ros	aming	\$230,000
Inspector Program		
Off-Site Inspection/Decontamination Station & Edu	cation	\$45,000
Programming		
Water Access AIS Improvements		\$75,000
Self-Inspection Certification Pilot Program		\$10,000
Home Lake Pilot Program		\$10,000
Clean Access Pilot Program		\$5,000
Communications/Education Department Activities		\$30,000
Volunteer Monitoring Program	\$3,000	
Early Detection/Baseline Monitoring	\$60,000	
Rapid Response and Containment Funding	\$35,000	
Carp Removal Program	\$1,000	
Lake Minnetonka Zebra Mussel Study		\$30,000
Flowering Rush Management Program		\$40,000
Zebra Mussel Control Study		\$40,000
Six-Mile Creek Carp Assessment	\$0	
Legislative and Regulatory Initiatives		\$15,000
Media Relations		\$5,000
	Total	\$634,000

The AIS program has developed a comprehensive management plan that has been added to the District's Comprehensive Water Management Plan adopted in 2007. It provides the basis to continue AIS efforts in coming years through public education and outreach, regulation, capital projects, and research. Research and cost-sharing activities are prevention, control, and management activities to limit the spread of AIS throughout the District.

Schedule

On-going

Budget/Levy History

Year	Budget	Tax Revenue	Grants & Other Rev.	Expenditures	Transfer in/out	Carryover	Assigned Funds
2014	\$635,140	\$414,955	\$6,247	\$440,335	\$0	\$349,751	
2015	\$831,900	\$305,517	\$0	\$515,400	\$142,812	\$282,680	
2016	\$634,000	\$351,320	\$0	\$634,000	\$0		

Recommended 2016 Budget and Levy

Budget: \$634,000 Levy: \$351,320

Initiative Foundation Grant Budget Summary: (2-Year Grant 2016 & 2017)

These grant activities would occur in 2016 and 2017. The funds cannot cover capital costs or costs associated with program evaluation.

ussociated with program	2016	2016	2016	2017	2017	2017
Activity/Expense	Local	Local In-	Initiative	Local	Local In-	Initiative
	Match	Kind	Foundation	Match	Kind	Foundation
	Funding		Funding	(MCWD)		Funding
	(MCWD)					
Off-Site Inspection	\$45,000	Staff	\$128,500		Staff time	\$128,500
Station (includes		time (~	(inspector		(~\$36,000)	(inspector
Signage/Educational		\$36,000)	staffing &			staffing &
Programming,			operating			operating
Decontamination			costs)			costs)
Equipment, Inspector						
Staffing and Operating						
Costs)						
Water Access AIS	\$75,000					
Improvements						
(Signage)						
Roaming Inspectors	\$55,000		\$45,000	\$55,000		\$45,000
Communication &	\$10,000			\$10,000		
Outreach						
Program Evaluation		Staff			Staff	
		Time			Time	
		(~\$4,500)			(~\$4,500)	
Program Evaluation	\$3,000			\$3,000		
Consultant/Supplies						
Clean Access Pilot	\$5,000		\$15,000			\$20,000
Home Lake & Self-	\$20,000			\$20,000		
Inspection Pilot						
Totals	\$213,000	\$40,500	\$188,500	\$88,000	\$40,500	\$193,500

Total Local Match: \$382,000

Total Initiative Foundation Grant Award: \$382,000

The District would have \$213,000 of direct costs in 2016, and \$88,000 in 2017. All of these funds and activities would be done regardless of the Initiative Foundation grant going through.

Activity Code	Activity Name	Amount
4010	Wages	
4011	Wages-Overtime	
4018	Salary – Insurance Reimbursement	
4020	Payroll Tax Expense	
4035	Unemployment Reimbursement	
4040	PERA Expense	
4050	Benefits	
4060	Staff Mileage/Expenses	
4065	Staff Training	
4066	Staff Tuition Benefit	
4110	Manager Per Diems	
4120	Manager Expenses	
4125	Manager Computer/Software	
4130	Manager Dues/Subscriptions/Internet	
4210	Office Supplies	
4215	Meeting Expense	
4220	Furniture & Fixtures	
4222	Vehicle Expense	
4230	Printing/Publishing/Postage	
4240	Telecommunications -Cell/internet	
4245	Special Events	
4247	High Water Restoration	
4248	FEMA Expense	
4250	Dues & Subscriptions	
4265	Rentals-Building & Equipment	
4280	Insurance	
4292	Bank/Agency Fees	
4295	Other/Miscellaneous	
4320	Contract Services	\$231,000
4330	Accounting & Auditing	
4340	Engineering/Consulting	
4350	Legal Expense	\$15,000
4390	CAC Expense	
4520	Monitoring/Lab Analysis/Inventories	\$28,000
4530	Permit Acquisition	
4540	Property/Easement Acquisition	
4550	Construction	
4565	Property Management - CBRE	
4566	Tenant Relocation - CBRE	
4570	Equipment/Supplies	\$185,000
4575	Repairs/Maintenance	
4594	Debt Service-Principal	
4595	Debt Service-Interest	
4600	Grants/Awards/Loans - Given by MCWD	\$175,000
4651	Issuance Cost	
4962	Office Bldg. Maintenance	
4963	Office Building Utilities	
	TOTAL	\$634,000

MINNEHAHA CREEK WATERSHED DISTRICT 2016 RECOMMENDED WORK PLAN

PREPARED BY: Yvette Christianson, Kelly Dooley, Eric Fieldseth & Kailey Kreatz

DATE: July 16, 2015

<u>Program</u>	Research and Monitoring: General Operations (5006)					
Summary	The Water Quality and AIS programs in the Research and Monitoring Department share general operation expenses.					
Location	District-wide					
Description	Equipment/Supplies/Services (\$36,700): Cover the cost of new equipment, supplies and service needed to efficiently collect water quality samples, ensure the safety of staff, calibration supplies to maintain equipment, provide telemetry services					
	Department Pull-up Banner (\$0): Collaborating with Education Department to design and print a pull-up banner to showcase the goals and activities of the Research and Monitoring Department. The Education Department will be covering the expenses for the pull-up banner.					
	Repair/Maintenance (\$8,000): Service and maintenance of	field equipment				
	Watercraft/Trailer (\$17,000): Gas and maintenance of boa	ts, kayaks, and canoes				
	Staff Training/Expenses (\$20,200): Training includes workshops and confere to assist staff with career development, networking, and maintaining/improving techniques and technical methods/skills; Expenses to reimburse staff for milea and other expenditures that are related to work					
	Legal Expense (\$15,000): Legal expenses that may be need contracts/agreements or other services	ed for review of				
	2016 Budget Summary:					
	Activity/Expense	Budget				
	Equipment/Supplies/Services	\$36,700				
	Department Pull-up Banner	\$0				
	Repair/Maintenance	\$8,000				
	Watercraft/Trailer Maintenance	\$17,000				
	Staff Training/Expenses	\$20,200				
	Legal Expense \$15,000					
	Total	\$96,900				
Goals/ Outcomes	Instead of budgeting shared expenses separately, but pooling funds	th programs are				

	The shared expenses are for new equipment and software, maintaining existing equipment and software, staff training/expenses and legal expenses
<u>Schedule</u>	Ongoing

Budget/Levy History

Year	Budget	Tax Revenue	Grants & Other Rev.	Expenditures	Transfer in/out	Carryover	Assigned Funds
2014							
2015							
2016	\$96,900	\$96,900	\$0	(\$96,900)	\$0	\$0	

Recommended 2016 Budget and Levy
Budget: \$96,900
Levy: \$96,900

Activity Code	Activity Name	Amount
4010	Wages	
4011	Wages-Overtime	
4018	Salary – Insurance Reimbursement	
4020	Payroll Tax Expense	
4035	Unemployment Reimbursement	
4040	PERA Expense	
4050	Benefits	
4060	Staff Mileage/Expenses	\$5,100
4065	Staff Training	\$12,500
4066	Staff Tuition Benefit	
4110	Manager Per Diems	
4120	Manager Expenses	
4125	Manager Computer/Software	
4130	Manager Dues/Subscriptions/Internet	
4210	Office Supplies	
4215	Meeting Expense	\$300
4220	Furniture & Fixtures	
4222	Vehicle Expense	\$7,000
4230	Printing/Publishing/Postage	\$10,000
4240	Telecommunications -Cell/internet	\$1,000
4245	Special Events	\$300
4247	High Water Restoration	
4248	FEMA Expense	
4250	Dues & Subscriptions	\$4,500
4265	Rentals-Building & Equipment	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
4280	Insurance	
4292	Bank/Agency Fees	
4295	Other/Miscellaneous	
4320	Contract Services	
4330	Accounting & Auditing	
4340	Engineering/Consulting	
4350	Legal Expense	\$15,000
4390	CAC Expense	\$10,000
4520	Monitoring/Lab Analysis/Inventories	
4530	Permit Acquisition	
4540	Property/Easement Acquisition	
4550	Construction	
4565	Property Management - CBRE	
4566	Tenant Relocation - CBRE	
4570	Equipment/Supplies	\$23,200
4575	Repairs/Maintenance	\$18,000
4594	Debt Service-Principal	720,000
4595	Debt Service-Interest	
4600	Grants/Awards/Loans - Given by MCWD	
4651	Issuance Cost	
4962	Office Bldg. Maintenance	
4963	Office Building Utilities	
1703	TOTAL	\$96,900