Minnehaha Creek Watershed District

2015 Work Plan Summary

Date: June 5, 2014

Department/Activity: Aquatic Invasive Species (AIS)

The 2015 workplan for AIS continues many of the activities underway in 2014, and several are proposed to be expanded as the MCWD builds on the foundations for AIS prevention and management in the AIS program amendment approved in mid-2013. The recommended workplan proposed activities that would be funded entirely by the District; it does not include activities that the District may be able to perform if it is successful in securing grants. An alternative to the work plan is also presented; it is a more robust prevention program based on the discussion and direction of the Operations and Programs Committee meeting of March 6, 2014. This alternative merits separate discussion, as it would have significant effects on the funding and staff capacity to deliver these services.

Highlights of Notable Changes for 2015:

- Proof-of-inspection for watercraft expansion +$ 15,000
- Clean boats program +$ 50,000
  One inspection/decontamination station under consideration in 2014; funding for two additional would be available in 2015
- Clean access pilot +$ 5,000
  Mechanisms to keep vegetation away from public launches
- Early detection/baseline monitoring +$ 40,000
  Expansion of survey and monitoring toward goal of having an inventory for all lakes and streams in MCWD
- Rapid response and containment funding +$ 30,000
  $15,000 toward building a fund for rapid response;
  $15,000 for containment efforts in 2015 as they may occur
- Flowering rush removal +$ 5,000
- Communications activities +$ 10,000
- Legislative and regulatory initiatives +$ 15,000
  Intended to expand authority of MCWD and other watershed districts in prevention of introduction/spread of AIS

Financial Implications

	2014	2015
AIS Fund budget proposed for the recommended work plan:	$ 635,140	$ 757,200
AIS Fund tax levy	$ 431,977	$ 388,316

No revisions for expenditures have been made to the approved 2014 budget/workplan. Reduced expenditures during the year could be used to reduce the proposed tax levy.

Alternative for Addition to AIS 2015 Work Plan

An expanded AIS prevention program is discussed in an attachment to the recommended work plan. Essentially, this program would provide AIS watercraft inspection services at all public launches within the District, and would also provide for three inspection/decontamination stations. It also addresses launches from commercial marinas and private homeowner associations. The program would be voluntary, but it could become mandatory with local ordinances that require watercraft to be inspected before being put in at local launches.

The voluntary inspection approach is estimated to cost $1,130,400. While it is the more expensive approach, it is one that could be implemented more quickly.

A mandatory inspection approach is estimated to range in cost from $668,500 to $978,700. This approach also assumes that localities will adopt ordinances and use their law enforcement resources toward compliance, and this would likely take at least a few years to establish such a system.

The District is currently budgeting $315,000 for activities that would be included in these programs.

Partner agencies are currently budgeting $310,000 (net of District cost-share) for activities that would be included in these programs.

If partners continued their funding levels, the additional cost to the District would range between $45,000 (at the low end of the "mandatory" approach) and $505,000 (for the "voluntary" system).

Minnehaha Creek Watershed District

2015 RECOMMENDED PROJECT/PROGRAM WORK PLAN (DRAFT)

PREPARED BY: Craig Dawson and Eric Fieldseth **DATE:** April 25, 2014

Project	Aquatic Invasive Species Program
Description	The AIS Program began as a separate function of the District in 2012. The purpose of the program is to prevent, contain, and control the harmful ecological, human, and economic effects of AIS through broadly diverse methods.
Location	Watershed wide
Program Elements	**Prevention Activities** AIS Cost Share and Roaming Inspector Program — **Fund 2206 – AIS** 2013 Revised: $ 177,600 2013 Actual: $ 167,926 2014 Approved: $ 200,000 2015 Proposed: $ 215,000 In 2012, the MCWD provided funding for watercraft inspection activities with Carver County (Lake Minnewashta), the Lake Minnetonka Conservation District (Lake Minnetonka), the City of Shorewood (Christmas Lake), and the Minneapolis Park and Recreation Board (Lakes Calhoun, Harriet, and Nokomis). In 2013, the MCWD established a 50% reimbursement rate for watercraft inspections. Grants totaling $134,600 were authorized; based on actual experience, $126,630 in grants were paid. Inspections also included the addition of "roaming inspectors", and the MCWD contracted with Carver County for rotating coverage at four lakes, and the Three Rivers Park District at three lakes. These services cost $38,655. Inspections will continue to focus on watercraft exiting a lake, with a proof-of-inspection program begun in 2013 to expedite the inspection process for boaters at the next lake they enter. This pilot program is meeting with initial success, and has the attention of the DNR as a concept for wider application. $15,000 is included to expand the proof-of-inspection program for 2015. For 2015, the program is expected to continue in much the same manner. We will seek opportunities to expand the roaming inspector program with Carver County and TRPD. Proposed funding does not anticipate expansion of current service levels, nor provides a contingency to replace services if one of the grantees (e.g., the LMCD) discontinues its program.

Clean Boats Program **Fund 2206 -- AIS**

2013 Approved	$ 50,000
2013 Actual:	$ 0
2014 Approved:	$ 50,000
2015 Proposed:	$100,000

This program is 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 and known locations for persons needing their watercraft properly cleaned. No organizations expressed interest in participating in this activity in 2013. 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.

In 2014, the District has had discussions with Three Rivers Park District and an adjoining watershed district to locate sites to place cleaning/decontamination services. Setting up a station with TRPD is a reasonable possibility, and a jointly-funded facility with Riley-Purgatory-Bluff Creek Watershed District in 2015 is possible. Proposed funding in 2015 would provide for an additional station.

Self-Inspection Certification Program **Fund 2206 - AIS**

2013 Revised:	$ 2,000
2013 Actual:	$ 0
2014 Approved:	$ 5,000
2015 Proposed:	$ 5,000

MCWD will arrange for training for watercraft operators that will result in a certification that they know and will inspect and clean their boats properly prior to launching them.

The DNR will not allow self-inspection certification to by-pass the queue for inspections at public accesses, and notes that with the AIS training/decal requirement in place in 2015, it would be duplicative. The District's self-inspection certification program would be provided as additional training to interested watercraft operators. The AIS Management Plan encourages cities that permit watercraft to be stored at fire lane accesses to require self-inspection training.

Clean Access Pilot (NEW) **Fund 2206 – AIS**

2015 Proposed:	$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.

This proposed pilot would incorporate a series of mechanisms to reduce aquatic vegetation build-up at select public launches on Lake Minnetonka. This could include barriers on each side of the launch to prevent lateral movement of plants, use of water circulators near the ramp to create a constant flow of water which would push the vegetation away from the ramp, and management of rooted vegetation near the ramp by physical, mechanical or chemical control.

Water Access Improvement Grants **Fund 2206 – AIS**

2013 Approved:	$ 20,000
2013 Actual:	$ 0
2014 Approved:	$ 50,000
2015 Proposed:	$ 75,000

Cost-share grants will be made available to agencies controlling public accesses 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/Lake Minnetonka is an example of these improvements. While there is increased awareness of this facility and its success, there have not been others who have made such improvements. In 2013, staff worked with a communications firm to develop social marketing strategies and messages, and one of the key audiences that would benefit from positive messaging was boaters at public accesses. Staff is developing a template for facility improvements.

The proposed level of funding for 2014 is anticipated for improvements to two or three accesses. Carver County has expressed interest in incorporating these features in its 2014 improvements at Lake Minnewashta Regional Park. The proposed level of funding for 2015 anticipates improvements at two to three public accesses.

Volunteer Monitoring/Detection Program **Fund 2206 - AIS**

2013 Revised:	$ 1,000
2013 Actual:	$ 0
2014 Approved:	$ 5,000
2015 Proposed:	$ 3,000

This program would provide training for interested residents to correctly identify AIS and report new infestations to the District.

Early Detection Monitoring for Zebra Mussels **Fund 2206 - AIS**

2013 Revised:	$ 2,000
2013 Actual:	$ 2,279
2014 Approved:	included in new activity (next, below)

Activities include additional samplers, shoreline searches, and/or diving/snorkeling in 21 major lakes in the District depending on the characteristics of each lake selected. This was moved into the Early Detection/Baseline Monitoring Program.

Early Detection / Baseline Monitoring
For All MCWD Lakes and Streams

Fund 2206 – AIS
2014 Approved: $ 60,000
2015 Proposed: $ 100,000

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 in-field 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 begins in the 2014 workplan, and this first year will be spent organizing the program and gaining experience. One FTE seasonal technician position is assisting with collection of data from other organizations and performing two-season (spring and fall) plant inventories with AIS staff on 12 lakes. The early detection for zebra mussel program begun in 2013 will continue. The seasonal position and associated equipment/supply costs are estimated at $40,000. A consultant will be used to perform the two-season plant survey protocol on another 8 lakes at an estimated $20,000. In total, 20 lakes would be surveyed in 2014, and work begun to collect and systematize related existing data from other organizations.

The proposal for 2015 adds $40,000, which would be used for an additional seasonal technician and/or consultant services to increase the number of lakes that would be surveyed.

Develop a Rapid Response Plan

Fund 2206 – AIS
2014 Approved: $ 3,000

Developing an early-detection and rapid-response plan provides a coordinated system to monitor, report, and effectively respond to newly-discovered and localized invasive species. Success will depend on the ability to share resources across jurisdictional boundaries, establish strategic partnership, the ability of funds and technical resources, and the integration of response plans. In the AIS Management Plan, the District will prepare a rapid assessment and response plan that identifies appropriate actions to contain and/or remove newly-detected or -expanding invasive species.

Other agencies with which the District has been working have encouraged the MCWD to convene the preparation of a common plan for coordination among jurisdictions within the MCWD. Plan preparation will be done by staff of the

District and others, and it is expected to be a significant investment of time. The expenditure shown for 2014 would cover the cost of materials and supplies during the preparation process.

Rapid Response and Containment Funding (NEW) **Fund 2206 – AIS**
2015 Proposed: $ 30,000

Funding for the AIS Program does not include any amount for measures to respond quickly to the presence of newly-detected AIS. It is proposed that funds be identified and set aside to be available for these activities, and that the account be added to incrementally over several years. Also, as the baseline inventory progresses, there may be instances of an AIS being found in low enough, or a containable, population size where containment efforts could be undertaken. The District will only engage in management activities if ecological benefit is apparent.

$15,000 is included for rapid response funding, and $15,000 for containment efforts.

Management Activities

Carp Removal Program

Fund 2205 – Carp Program
2013 Revised: $ 2,000
2013 Actual: $ 1,263
2013 Fund closed @ year-end, Balance transferred

Fund 2206 – AIS
2014 Approved: $ 0
2014 Re-estimated: $ 1,000
2015 Proposed: $ 1,000

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. Expenses in 2013 were a response to residents of the Pierson/Marsh/Wasserman lakes system to install fish barriers to restrict the movement of carp and to make it easier for them to remove the carp, and to assist the City of Long Lake in a winter harvest of carp from Long Lake.

Funding levels shown for 2014 and 2015 would have monies available for these incidental activities should they occur.

AIS Management and Innovation Cost-Share Program

Fund 2206 - AIS
2014 Approved: $ 30,000
2015 Proposed: $ 20,000

Grants would be made available on a cost-share basis to applicants who request assistance with ongoing or innovative management (e.g., boat design) for AIS, with a proposed maximum of $10,000 per grant. Grants would be approved only for those projects that are consistent with the goals in the District's Comprehensive Water Resources Management Plan.

Research Activities

Zebra Mussel Monitoring

Fund 2206 – AIS

2013 Revised:	$ 35,000
2013 Actual:	$ 17,000
2014 Authorized:	$ 25,750
2015 Proposed:	$ 0

In 2011, the MCWD began a three-year program to monitor the presence and spread of zebra mussels within the District. In March 2014, the Board authorized funding for a fourth year of the study, as the first year was largely one of gaining experience in monitoring and data collections had inconsistencies. An outcome of the project will be two research papers that will be peer-reviewed for publication. The 2014 funding amount includes these papers, although final invoicing may occur in 2015.

The majority of the funds for this project are spent on the analysis of the plankton community. Zebra mussels are known to negatively impact the plankton community, which leads to shifts in the food web. Pre- and post-zebra mussel data of the plankton community will be compared to determine how zebra mussels have impacted the food web in Lake Minnetonka.

The zebra mussel monitoring program on Lake Minnetonka would not be continued in 2015. It is anticipated that monitoring would be done periodically (e.g., every few years) and at fewer sites.

Curly-leaf Pondweed Turion Control –
Evaluate Harvesting as an Alternative to Herbicide

Fund 2204 – Vegetation Mgmt Study

2013 Actual:	$ 13,555

Herbicide treatments can effectively inhibit the production of turions in stands of curly-leaf pondweed. Harvesting is viewed as an equally effective alternative to herbicides for managing curly-leaf pondweed, but this view has been based largely upon the removal of substantial amounts of biomass rather than on reducing the source of infestation (i.e., the production of turions).

This project directly measured reductions in the level of newly-produced turions through intensive harvesting in Lake Minnewashta. These data were compared to existing data on herbicide treatments.

Results -- Taken from final report, "Evaluation of Harvesting as a Strategy for Reducing Turion Deposition in Lakes Infested with Curlyleaf Pondweed," submitted to MCWD by Freshwater Scientific, LLC
"Our study clearly showed that harvesting greatly reduced the deposition of new turions by removing most of the turions produced on plants before they were deposited to the lake sediment (90 to 95% of new turions were removed). However, harvesting when curlyleaf is visible on the surface of lakes (typical timing for most harvesting projects) appeared to allow about 10% of the newly produced turions to be deposited prior to or during harvesting. This amount of

pre-senescence ("early-drop") turion deposition reduces the effectiveness of harvesting as a strategy to reduce the abundance of turions in lake sediments and helps to explain why intensive harvesting has not consistently led to reduced levels of curlyleaf growth in the past."

- Overall, this study showed harvesting curlyleaf that is at the surface of the lake does not provide the turion reduction that herbicides have been shown to do. (10% turions deposited during harvesting) compared to (<1 turion/m2 for herbicides; Johnson et al. 2012)
- The study also identified several things harvesters could do to improve harvesting as a strategy for management of curlyleaf pondweed.

Milfoil Weevil Study

Fund 2407 – Watershed Research
2013 Actual: $ 11,604

The District contracted with EnviroScience, Inc., in 2012 to conduct a project using its milfoil weevil bio-control technique in Minnesota, and selected District water bodies for the study. Unprecedented weather forced curtailment of the project in 2012, and a redo of the first year of a potential three-year study was approved for 2013. Waterbodies in the study were Christmas Lake and Veterans Cove of Lake Minnetonka. Additional quality assurance features were approved for the 2013 work with the services of Blue Water Science and the University of Minnesota.

In late June 2013, EnviroScience informed the District that conditions were again unfavorable to perform the study. Since then, EnviroScience has discontinued this part of its business.

Funds for 2013 re-purposed for the services arranged with the University of Minnesota and Blue Water Science. They performed inventories and made assessments about existing weevil populations in several MCWD waterbodies, including Grays, Smiths and Veterans Bay of Lake Minnetonka, and Auburn, Cedar, Piersons, Steiger and Christmas Lake. The University work was performed by students under the direction of Dr. Ray Newman. Blue Water Science performed a fish survey on Christmas Lake to detail the sunfish community, which is thought to be a factor in limiting weevil populations.

Results -- Assessments revealed weevils were present in many of the lakes; however, they were in numbers too low to provide much control of Eurasian watermilfoil. In Smiths and Veterans Bay on Lake Minnetonka, weevils were actually at a level high enough to provide some control (0.31 and 0.29 weevils/stem respectively), and thus may explain the low abundance of Eurasian Watermilfoil in Smiths Bay. Sunfish continue to appear to be a factor in preventing weevil populations from expanding, and future work for the University of Minnesota is geared towards manipulating those sunfish populations in lakes to increase existing weevil populations. Stocking weevils proved to be difficult, especially if consecutive years of stocking are needed, with seasonal conditions being a complicating factor. On-going research by other groups will continue to be monitored.

Zequanox Study

Fund 3111 – Special Projects

2013 Revised:	$ 3,000
2013 Actual:	$ 1,675
2014 Approved:	$ 0
2014 Re-estimated:	$ 2,000

"Zequanox" is the trade name for a new control treatment that is to-date species-specific to zebra and quagga mussels. It uses dead bacteria (a type commonly found in soil) to be ingested by these mussels, and they then destroy the mussels' digestive systems.

The 2013 budget was revised when it was learned that the United States Geological Survey (USGS) was awarded a grant from the Legislative Citizens Commission on Minnesota Resources (LCCMR) in order to perform an open-water trial of Zequanox as part of a multi-year project to evaluate its effectiveness in the Great Lakes/Mississippi River region.

The role of the MCWD in a Zequanox study has become one of providing local and logistical assistance for the USGS. The 2014 re-estimated expenditure reflects the District's likely costs to assist in the study.

The trial is taking place in Robinsons Bay of Lake Minnetonka. It began in June 2013, and the actual application of Zequanox is scheduled for Fall 2014.

Flowering Rush Pilot Program

Fund 3111 – Special Projects

2013 Approved:	$ 35,000
2013 Actual:	$ 27,920
2014 Approved:	$ 35,000
2015 Proposed:	$ 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 2014 and 2013 would continue the gradual ramp-up of the program begun in 2013 program. The AIS Management Plan identifies flowering rush as an AIS that can be controlled and likely reduced within the District.

Suction Conveyance for AIS Plants

Fund 2206 - AIS

2014 Approved:	$ 2,000

Early in 2013 the Board directed staff to undertake efforts which would allow divers to use suction devices for conveying aquatic invasive plants that they have removed from lakebeds. Currently, the DNR does not allow Diver Assisted Suction Handling (DASH) for removing plants, because it is considered to be a

dredging activity. There are differences of opinion in interpretation of whether all of the ways to use suction handling are indeed dredging activities; it could be used, for instance, in conveying plant material that has been harvested, rather than for removing rooted plants.

Funding for 2014 is for assistance the District may need to develop information that would lead to approval of suction handling for conveyance of harvested AIS plants through changes in DNR rules or their interpretation, or through legislative amendments.

Six-Mile Creek Subwatershed Diagnostic Study
Carp Management Study — **Fund 2401 – Planning**
2014 Approved: $ 0*
2015 Proposed: $ 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 will be managing this aspect of the Diagnostic Study for the Planning Department.

Aquatic Plant Growing Temperature Study — **Fund 2204 – Veg. Mgmt.**
2014 Approved: $ 4,000

This study will be performed by Freshwater Scientific with funding from the U.S. Army Corps of Engineers and the MCWD. One or two bays in Lake Minnetonka will be included in the study. The study would assess which plants respond to specific water temperatures to start growing actively. Deep and shallow lakes would be sampled from ice-out until water temperatures increase to a level that all native plants are actively growing. Temperature data for the growth of different plants have been missing from the current MnDNR protocol for early-season curly-leaf pondweed treatments. Having these data would allow for better treatment practices to protect native aquatic plants while managing curly-leaf pondweed.

Gleason Lake Plant Study Technical Report
and Scientific Paper — **Fund 2204 – Veg. Mgmt.**
2014 Approved: $ 3,000

The District conducted a five-year study of chemical treatments for curly-leaf pondweed in Gleason Lake. Performed in conjunction with Blue Water Science, this study was completed in 2012. A technical report of the five-year study would be prepared with Blue Water Science and submitted to a peer-reviewed journal.

Public Education/Outreach and Communications Activities

Communications Department Activities — **Fund 2206 – AIS**

2013 Actual:	$ 6,640
2014 Approved:	$ 40,000
2015 Proposed:	$ 50,000

Communications are necessarily broad and flexible as needs and opportunities arise. Activities are being developed from consultant work in 2013 to assist in developing social marketing strategies and messages for AIS prevention. The social marketing strategies will be used to target specific AIS vectors and pathways through strategic messaging. The District held and AIS Symposium in March 2014, and a symposium for 2015 is not planned.

Media Relations — **Fund 2206 – AIS**

2013 Actual:	$ 5,431
2014 Approved:	$ 5,000
2015 Proposed:	$ 5,000

Funding levels for 2014 and 2015 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.

AIS Management Plan

Plan Development — **Fund 2206 – AIS**

2013 Actual:	$ 100,655

The District's AIS Management Plan was completed in 2013 when it was added as an amendment to the MCWD Comprehensive Water Resources Management Plan. This. The plan development process was coordinated by new staff and facilitated by the District's counsel. The 2013 actual expense reflects a full-year compensation for the AIS Program Director.

AIS Economic Study — **Fund 2206 – AIS**

2013 Revised:	$ 35,000
2014 Approved:	$ 50,000

This study is a supplement for the AIS Management Plan. The literature is very sparse from which to understand and to make projections about the likely negative economic impacts from the presence of AIS; the costs of doing nothing; or the cost/benefit of prevention, containment, or control measures. MCWD contracted with the University of Minnesota to perform this study in 2013 as a Phase 1 overview of the information available and relating it to the District. This study will be completed in late spring 2014, and payment for services will be made upon completion. Funding for 2014 would provide for a Phase 2 study, should more in-depth research recommended by the Phase 1 study and authorized by the Board. If authorized, payment would likely be made for this study in 2015.

	AIS Program Director **Fund 2206 – AIS** 2013 Estimate: $ 85,460 * 2014 Approved: $ 90,000 2015 Proposed: $ 93,000 *This compensation is included in the AIS Management Plan activity listed earlier in the Workplan. The proposal for 2015 would continue the Director position in the AIS Fund if it is not placed in the fund for general personal services. Legislative and Regulatory Initiatives (NEW) **Fund 2206 – AIS** 2015 Proposed: $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. Any new authority for the District would likely be possible no earlier than mid-2015.
Outcome	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

Fund 2206 -- AIS

Year	Budget	Tax Levy	Other Revenue	Expenditures	Transfers In (Out)	Carryover
2011	$ 180,000	$ 179,818		$ 145,987	$ 41,413	$ 75, 244
2012	$ 180,000	$ 177,281		$ 240,410	$250,000	$297,824
2013	$ 607,360	$ 317,299		$ 411,960		$368,884
2014	$ 635,140	$ 431,977		$ 635,140		$368,884
2015	$ 757,200	$ 388,316		$ 757,200		$ 0

Recommended 2015 Budget and Levy

Budget: $ 757,200
Levy: $ 388,316

Fund 2206 – AIS

2014 Budget $635,140
2015 Budget $757,200

2015 Budget

Planning and Policy Development		
Contracted Services-Business Plan-PRC	(Staff Director)	93,000
Survey/Data Collection		
Engineering/Consulting		
Equipment/Supplies		
Meetings/Seminars		
Maintenance Plan Dev.		
Legal	Legislative & Regulatory Initiative	15,000
Other/Miscellaneous		
	sub-total	***$108,000***
Project/Program Implementation		
Training		
Contracted Services	Baseline Lake/Plant Survey	63,000
Project Management		
Supplies/Equipment	Self-Insp. (5K), Proof-of-Insp. (15K), Vol Mntrg (3K), Baseline(5K), Clean Access Pilot (5K)	33,000
Engineering		
Supplies/Equipment (Clean Access Pilot)		5,000
Construction		
Landscaping/restoration		
Legal		15,000
Meetings/Seminars		1,000
Monitoring/Lab Analysis/Inventories	1 Dist Rep for Baseline Monitoring	32,000
Other/Miscellaneous	Carp Removal	1,000
Permit Research		
Permit Acquisition		
Operations/Maintenance	(*Rapid Response*)	30,000
Grants/Awards/Loans Given	Inspections/DeconSta/AIS Mgmt	395,000
	sub-total	***$570,000***
Communications-Education-Stakeholder Involvement		
Training		10,000
Supplies/Equipment- E-mail retention		
Meetings/Seminars		1,200
Printing		3,000
Publishing		
Postage		
Dues/Subscriptions		2,000
Other/Miscellaneous -- $50K thru MCWD Communication; $5K media relats.		55,000
Computer Services- Web		2,000
Contracted Services-Financial & Computer Charges		6,000
Engineering/Consulting		
Legal		
Construction		
Teacher Stipend		
Grants/Awards/Loans Given		
	sub-total	***$79,200***

TOTAL $757,200

MEMORANDUM

TO: MCWD Operations and Programs Committee
FROM: Eric Fieldseth and Craig Dawson, AIS Staff
DATE: May 1, 2014
SUBJECT: Alternative option for 2015 work plan: Expanded AIS prevention program

The following is an alternative to the AIS prevention programs included in the proposed 2015 work plan; it provides an expanded AIS prevention effort. It would replace $315,000 worth of prevention programs that are outlined in the 2015 proposed work plan, which includes the cost-share program for watercraft inspections ($215,000) and Clean Boats Program ($100,00).

Comparison of Costs for AIS prevention programs:

- Current proposed 2015 work plan: $315,000 (inspections & decontamination) – details can be found in proposed 2015 work plan.
- Alternative option for expanded prevention program: $668,492 to $1,130,368 – details can be found in this document. Factors in costs includes whether an ordinance is in place, cost of enforcement and/or inspectors and hours of service for each.

Budgeting considerations for MCWD:

- Current funding level for watercraft inspections within the MCWD is approximately $625,450 between 7 agencies. $315,000 is proposed by MCWD AIS staff for 2015. (further details can be found later in this document)
- If partners continued existing funding levels for an expanded program, an additional $43,042 to $504,918 would be needed by the MCWD above and beyond the $315,000 already proposed for 2015.
- Alternatively, a proposed expanded plan could be presented to various agencies to partner and perhaps share in a larger portion of the costs.
- Total annual operating cost for program after initial investment is: $603,492 to $913,684

Detailed on the next several pages is:

- Expanded program concept
- Voluntary – Mandatory Inspections Program Details (No ordinance in place)
- Mandatory Inspections Program Details (Enforceable ordinance in place)
- Approximate levels of funding for watercraft inspections currently on-going in MCWD
- Obstacles and limitations in the expanded program

Mandatory Boat Inspection Concept
For MCWD Waterbodies

The Minnehaha Creek Watershed District currently does not have regulatory authority to require mandatory boat inspections prior to launching; however, several cities or other local government agencies may be able to enact local ordinances. Until ordinances and enforcement are in place, a more comprehensive program would require higher watercraft inspector coverage at public accesses, staffing time at regional inspection stations, cooperation of private and commercial access operators to voluntarily comply, and cooperation of boaters to voluntarily comply.

Program Concept

- *This program would require DNR approval, as well as partnerships and cooperation with other local agencies.*

The following program would require mandatory boat inspections for anyone looking to launch a boat in the MCWD, regardless of public or private access, by ordinance or regulation.

Regional stations would be established to inspect watercraft and issue the proof-of-inspection tag that would be required to launch in any waterbody within the MCWD. The regional stations could be located at current boat launches or off-site locations, and would offer free decontamination services. They would be strategically located to provide as little inconvenience for users, preferably within 6 miles of any public access. Once watercraft is in compliance with the Clean Drain Dry standard, it would be given a proof of inspection tag, which can be used to launch at any MCWD waterbody with an access.

At the public access, if an inspector is present, they will remove the tag and let the boater launch the boat. If no inspector is present, the user must deposit the tag in the designated drop-box by placing the tag in the provided envelopes and fill out date, time, license plate number and tag ID number and place a portion of the envelope on their dash board. The user can then launch their watercraft.

Upon exiting the lake, if an inspector is present, and if boat can be in compliance of Clean Drain Dry standards, a proof-of-inspection tag will be given. If watercraft needs decontamination, the boater will be recommended to a regional station to get their watercraft in compliance and receive a proof-of-inspection tag.

- Enforcement will be necessary to properly enforce mandatory inspections.
- NO WATERCRAFT CAN LAUNCH WITHOUT A PROOF-OF-INSPECTION TAG.
- Until an ordinance or law is in place, this program requires voluntary compliance.
- Non-public accesses, such as commercial marinas, homeowner association launches, private property, etc, would need to have various registration processes for users or operators of those accesses, and would fall into the mandatory inspection program.

Without an ordinance to require mandatory inspections prior to launching, the program relies on a heavy presence of watercraft inspectors and cooperation of all access operators and boaters to voluntarily comply. Regional stations would be in place, and provide the framework for a mandatory program once proper ordinances were in place. By locating the majority of regional stations at current public boat launches, there would be a reduction in the duplication of watercraft inspectors and reduce staffing costs initially. Once an ordinance was in place, staffing at the launches could be reduced and enforcement could be increased. The regional stations could then move from current public boat launches to off-site locations. Non-public accesses operators would be encouraged to participate in a voluntary program, but without an ordinance and enforcement, desire to participate will likely be low.

Assumptions on public access use

- Typical usage dates of boaters is assumed to be May 1 – Oct. 31 (4,416 total possible hours of use during this time frame) (*there may be use before and after these dates depending upon seasonal conditions*)
    - Typical hours of use during each day: 5:00am to 9:00 pm (2,944 hours)
    - Night-time hours, assumed lower use 9:00pm to 5:00am (1,472 hours)
- Watercraft inspector cost is assumed at a rate of $17 per hour (includes some administration costs)

Scenario 1: Voluntary - Mandatory Inspection Program (No ordinance in-place)

Public Access – watercraft inspector service levels

The service level numbers are used to identify different operational hours and service times of watercraft inspectors. Service level 1 provides staffing hours for medium and high use lakes, while service level 2 is a recommended program for low use lakes. Regional station numbers provide different operating hours and dates for the regional inspection stations.

Service Level 1. Pre Memorial Day: May 1 – May 22 (22 days), 7am-6pm (242 hours)
Memorial Day – Labor Day: May 23 – Sept. 7 (108 days), 5am – 9pm (1,728 hours)
Post Labor Day: Sept. 8 – Oct. 31 (54 days), 7am-6pm (594 hours)

Service Level 2. Roaming Inspectors: 8 hour shifts (5am–1pm, 1pm-9pm), 4 inspectors per day, 32 hrs/day, 7 days/week May 1 – Oct. 31 (5,888 hours)

Regional Station 1. May 1 – Oct. 31, 5am-9pm with decontamination services, 2 inspectors, (2,944 hours)

Regional Station 2. May 1 – Oct. 31, 3am-9pm with decontamination services, 2 inspectors, (3,312 hours)

Regional Station 3. May 1 – Oct. 31, Monday – Friday 8am-5pm with decontamination services, 1 inspector (1,152 hours)

Public Access Details

Lake Minnetonka: (possible LMCD ordinance requiring proof-of-inspection prior to launching)
Non-staffed hours: Proof-of-inspection required to be placed in drop-box

Description of Program

Use-level	Access Name	Program Level	Estimated Staff Hours	Roaming Inspector Hours
High	Grays Bay	Regional Station 1	2,944 x2 staff	0
High	Maxwell Bay	Service Level 1	2,564	0
High	North Arm	Regional Station 2	3,312 x2 staff	0
High	Minnetonka Regional Park	Regional Station 1	2,944 x2 staff	0
High	Spring Park	Service Level 1	2,564	0
Medium	Wayzata Bay	Service Level 1	2,564	0
Medium	Carsons Bay	Service Level 1	2,564	0
Medium	Halsted Bay	Service Level 1	2,564	0
Medium	Cooks Bay	Service Level 1	2,564	0
Low	Phelps Bay	Service Level 2	0	Part of roaming program (share 5,888 hours)
Low	North Waseca Fire Lane	Service Level 2	0	

Total Hours of Service: 24,584 + additional staff at regional locations (9200 hours) = 33,784
Total Estimated Cost for Inspectors: $574,328

Minneapolis Lakes: Chain of Lakes, Nokomis
Mandatory inspections currently occur at the three public launches operated by the Minneapolis Parks and Recreation Board. Inspectors are present throughout most of the day and season. Launches are chained and locked when no inspector is present. Adding a place for boats to be decontaminated would add convenience for users. This is seen as a stand-alone program, and MCWD would continue to cost-share the program.
Current cost-share level: $80,000 annually

Dutch, Virginia, St. Joe, Auburn, Steiger, Zumbra, Parley & Wassermann Lake
Non-staffed hours: Proof-of-inspection required to be placed in drop-box

Use-level	Access Name	Program Level	Estimated Staff Hours	Roaming Inspector Hours
Low	Dutch	Service Level 2	0	5,888
Low	Virginia	Service Level 2	0	
Low	St. Joe	Service Level 2	0	
Low	Auburn	Service Level 2	0	
Low	Steiger	Service Level 2	0	
Low	Zumbra	Service Level 2	0	
Low	Parley	Service Level 2	0	
Low	Wassermann	Service Level 2	0	

Total Hours of Service: 5,888
Total Estimated Cost for Inspectors: $100,096

Long, Piersons & Christmas Lake
Non-staffed hours: Proof-of-inspection required to be placed in drop-box

Use-level	Access Name	Program Level	Estimated Staff Hours	Roaming Inspector Hours
Medium	Long	Service Level 1	2,564	0
Medium	Piersons	Service Level 1	2,564	0
Medium	Christmas	Service Level 1	2,564	0

Total Hours of Service: 7,692
Total Estimated Cost for Inspectors: $130,764

Lake Minnewashta
Non-staffed hours: Proof-of-inspection required to be placed in drop-box

Use-level	Access Name	Program Level	Estimated Staff Hours	Roaming Inspector Hours
High	Minnewashta	Regional Station 1	2,944	0

Total Hours of Service: 2,944 + additional staff at regional locations (2,944 hours) = 5,888
Total Estimated Cost for Inspectors: $100,096

Off-site Regional Station
Victoria area

Use-level	Access Name	Program Level	Estimated Staff Hours	Roaming Inspector Hours
	Victoria	Regional Station 3	1,152	0

Total Hours of Service: 1,152
Total Estimated Cost for Inspectors: $19,584

Private Homeowner Association Launches

Boat launches in the ownership of HOAs would need to voluntarily register with the local city or agency. HOAs would be required to identify the specific boats to be launched at the site. The HOA would need to certify that each of these boats is registered to an HOA member, and is not trailered to other waterbodies. If and when a boat does travel to another waterbody, it can only be launched at the HOA launch once it has passed a sanctioned Clean Drain Dry inspection and received a proof-of-inspection tag.

Commercial Marinas

All commercially-owned boat launches would need to voluntarily register with the LMCD. Existing marina permits would be modified to require that marinas check all boats for a proof-of-inspection tag prior to launch. Tags would need to be saved and recorded. Launches must be secured when marina staff is unavailable to review these boats for inspection tags. Under a Memorandum of Understanding with the LMCD, facilities and boat haulers that provide winterization and/or quick launch services may be authorized to launch specific boats without inspection. These facility operators and haulers would need to establish a clear chain of custody verifying these boats stay in-basin and are not trailered to other waterbodies.

Residential Boat Launches

Residential boat launches are those that are owned by individual landowners, and which are not used for commercial purposes. Residential launches are proposed to be regulated under the mandatory inspection program. In order to operate, each owner of a residential launch would need to voluntarily register with the local city or agency, and identify the specific boats to be launched at the site. The landowner would need to certify that each of these boats is registered to the landowner,and is not trailered to other waterbodies. If and when a boat travels to another waterbody, it could only be launched once it has passed a sanctioned Cleaned-Drained-Dry inspection and received a proof-of-inspection tag. Residential boat launches would not easily be enforced, and would ultimately rely on the honor system.

Fire Lanes

Cities should adopt a self-inspection certification training as a requirement for permits to use fire lanes.

Drop Boxes

Drop Boxes needed at 23 sites.
Estimated Cost: $5,000

Coordinator Position

Estimated Cost: $50,000

Proof of Inspection Tags

100,000 tags
Estimated Cost: $10,500

Decontamination Units

5 total units needed. DNR typically has 2 that it keeps at Lake Minnetonka, so 3 additional would need to be purchased assuming DNR agrees to keep those 2 on Lake Minnetonka.
Estimated Cost: $60,000

Total Cost Breakdown

Item	Estimated Cost
Watercraft Inspection Services	$1,004,868
Installation of Drop Boxes at 23 sites	$5,000
Coordinator Position	$50,000
Proof of Inspection Tags	$10,500
Decontamination Units	$60,000

Estimated Total Cost Without Enforcement and Ordinance: $1,130,368

Scenario 2: Mandatory Inspections (Enforceable Ordinance in place)

Public Access – watercraft inspector service levels

The service level numbers are used to identify different operational hours and service times of watercraft inspectors. Service level 1 provides staffing hours for medium and high use lakes, while service level 2 is a recommended program for low use lakes. Regional station numbers provide different operating hours and dates for the regional inspection stations.

Service Level 1. Pre Memorial Day: May 1 – May 22 (22 days), 7am-6pm (242 hours)
Memorial Day – Labor Day: May 23 – Sept. 7 (108 days), 5am – 9pm (1,728 hours)
Post Labor Day: Sept. 8 – Oct. 31 (54 days), 7am-6pm (594 hours)

Service Level 2. Roaming Inspectors: 8 hour shifts (5am–1pm, 1pm-9pm), 8 inspectors per day, 64 hrs/day, 7 days/week May 1 – Oct. 31 (11,776 hours)

Regional Station 1. May 1 – Oct. 31, 5am-9pm with decontamination services, 2 inspectors, (2,944 hours)

Regional Station 2. May 1 – Oct. 31, 3am-9pm with decontamination services, 2 inspectors, (3,312 hours)

Public Access Details

Watercraft Inspector Staffing Levels

Use-level	Access Name	Program Level	Estimated Staff Hours	Roaming Inspector Hours
	Regional Station	Regional Station 1	2,944 x2 staff	0
	Regional Station	Regional Station 1	2,944 x2 staff	0
	Regional Station	Regional Station 1	2,944 x2 staff	0
	Regional Station	Regional Station 1	2,944 x2 staff	0
	Regional Station	Regional Station 2	3,312 x2 staff	0
High	Grays Bay	Service Level 2	0	Roaming Program (Share 11,776 hours)
High	Maxwell Bay	Service Level 2	0	
High	North Arm	Service Level 2	0	
High	Minnetonka Regional Park	Service Level 2	0	
High	Spring Park	Service Level 2	0	
High	Minnewashta	Service Level 2	0	
Medium	Wayzata Bay	Service Level 2	0	
Medium	Carsons Bay	Service Level 2	0	
Medium	Halsted Bay	Service Level 2	0	
Medium	Cooks Bay	Service Level 2	0	
Medium	Christmas Lake	Service Level 2	0	
Medium	Piersons Lake	Service Level 2	0	
Medium	Long Lake	Service Level 2	0	
Low	Phelps Bay	Service Level 2	0	
Low	North Waseca Fire Lane	Service Level 2	0	
Low	Dutch	Service Level 2	0	
Low	Virginia	Service Level 2	0	
Low	St. Joe	Service Level 2	0	
Low	Auburn	Service Level 2	0	
Low	Steiger	Service Level 2	0	
Low	Zumbra	Service Level 2	0	
Low	Parley	Service Level 2	0	
Low	Wassermann	Service Level 2	0	

Total Hours of Service: 41,952
Total Estimated Cost (with roaming inspectors): $713,184
Total Estimated Cost (without roaming inspectors): $512,992

Minneapolis Lakes: Chain of Lakes, Nokomis
Mandatory inspections currently occur at the three public launches operated by the Minneapolis Parks and Recreation Board. Inspectors are present throughout most of the day and season. Launches are chained and locked when no inspector is present. Adding a place for boats to be decontaminated would add convenience for users. This is seen as a stand-alone program, and MCWD would continue to cost-share the program.
Current cost-share level: $80,000 annually

Private Homeowner Association Launches

Boat launches in the ownership of HOAs would be required to register with the local city or agency. HOAs would be required to identify the specific boats to be launched at the site. The HOA would need to certify that each of these boats is registered to an HOA member, and is not trailered to other waterbodies. If and when a boat does travel to another waterbody, it can only be launched at the HOA launch once it has passed a sanctioned Clean Drain Dry inspection and received a proof-of-inspection tag.

Commercial Marinas

All commercially owned boat launches would be required to register with the LMCD. Existing marina permits would be modified to require that marinas check all boats for a proof-of-inspection tag prior to launch. Tags would need to be saved and recorded. Launches must be secured when marina staff is unavailable to review these boats for inspection tags. Under a Memorandum of Understanding with the LMCD, facilities and boat haulers that provide winterization and/or quick launch services may be authorized to launch specific boats without inspection. These facility operators and haulers would need to establish a clear chain of custody verifying these boats stay in-basin and are not trailered to other waterbodies.

Residential Boat Launches

Residential boat launches are those that are owned by individual landowners, and which are not used for commercial purposes. Residential launches are proposed to be regulated under the mandatory inspection program. In order to operate, each owner of a residential launch would be required to register with the local city or agency, and identify the specific boats to be launched at the site. The landowner would need to certify that each of these boats is registered to the landowner,and is not trailered to other waterbodies. If and when a boat travels to another waterbody, it could only be launched once it has passed a sanctioned Cleaned-Drained-Dry inspection and received a proof-of-inspection tag.

Fire Lanes

Cities should adopt a self-inspection certification training requirement for permits to use fire lanes for boat docking and access.

Drop Boxes

Drop Boxes needed at 23 sites.
Estimated Cost: $5,000

Coordinator Position

Estimated Cost: $50,000

Proof of Inspection Tags

100,000 tags

Estimated Cost: $10,500

Decontamination Units

5 total units needed. DNR typically has 2 that they keep at Lake Minnetonka, so 3 additional would need to be purchased assuming DNR agrees to keep those 2 around Lake Minnetonka.

Estimated Cost: $60,000

Enforcement of mandatory boat inspections

Once an enforceable ordinance was in-place requiring mandatory boat inspections prior to launch, enforcement would be needed to hold users accountable and maintain the strength of the program.

Estimated cost of enforcement for program: 400 to 800 Hours over 184 days at an estimated $75/hour = $30,000 - $60,000

Total Cost Breakdown

Item	Estimated Cost
Watercraft Inspection Services	$512,992 - 793,184
Installation of Drop Boxes at 23 sites	$5,000
Coordinator Position	$50,000
Proof of Inspection Tags	$10,500
Decontamination Units	$60,000
Enforcement	$30,000 - $60,000
Legal Costs	unknown

Estimated Total Cost With Enforcement of Ordinance: $668,492 to $978,684

After initial investment, annual operational cost is estimated at: $603,492 to $913,684

Approximate Levels of Funding for Watercraft Inspections Currently On-going within MCWD

Agency	2014 Investment in Watercraft Inspections & Decontamination	Notes
MCWD	$315,000	Cost-share funds & grants for decontamination units
MPRB	$100,000	Cost-share with MCWD
Carver County	$14,300	Cost-share with MCWD
LMCD	$23,800	Cost-share with MCWD
City of Shorwood	$23,250	Cost-share with MCWD
TRPD	$8,000	
MN DNR	(2013 data) 8,300 hours (equivalent to ~$141,100 if $17/hr)	

Funding level for watercraft inspections and decontamination by MCWD: $315,000
Approximate funding level for watercraft inspections and decontamination by other agencies within the MCWD: $310,350

Obstacles and Limitations

- Program would require DNR approval or potential legislative authority granted.
- Many local laws would need to be adopted.
- Priorities for law enforcement.
- Potential costs to hire law enforcement for dedicated activity or patrol.
- Enforcing ordinances on private land such as HOA launches, private homes, commercial marinas, etc., will likely be problematic.
- Potential legal costs defending program and authority for it.
- Partners and users "buy-in".

Overview of Costs Scenarios

Program	Estimated Cost	Description
Scenario 1: Voluntary - Mandatory Inspection Program (No ordinance in-place)	$1,130,368	Heavy presence of watercraft inspectors at all medium to high use accesses, roaming inspector program at low use launches. Voluntary compliance from private launches.
Scenario 2: Mandatory Inspections (Enforceable Ordinance in place)	$668,492 to $978,684	More staffing at regional stations, less at public accesses. Optional roaming inspector program for more coverage. Enforceable ordinance in place with a larger presence of enforcement officials. Private launches would be required to comply, however, enforcement on private launches would be difficult.