



Item 6E.  
BCWMC 9-21-17

## Bassett Creek Watershed Management Commission

### MEMO

To: Bassett Creek Watershed Commissioners  
 From: Laura Jester, Administrator  
 Date: July 11, 2017

**NOTE:** Recommendations 1- 5 were approved at the July Commission meeting. At this meeting we'll consider recommendations 6 -16, as time allows.

**RE: APM/AIS Committee Recommendations**

[Please note: All committee meeting agendas, notes, presentations, and materials can be found at: <http://www.bassettcreekwmo.org/document/meeting-materials-minu.>]

#### **Background and Initial Committee Work**

The BCWMC Aquatic Plant Management/Aquatic Invasive Species Committee met on eight occasions from June 2016 to June 2017 to discuss and consider the Commission's role in these issues. The committee included commissioners and alternate commissioners; Commission Engineers Chandler and Rattei; TAC members from Plymouth and Golden Valley; representatives of Sweeney Lake, Parkers Lake, and Medicine Lake; and representatives from Three Rivers Park District (TRPD), Minneapolis Park and Rec Board, Hennepin County, Metropolitan Council, and the Department of Natural Resources (DNR).

In order to guide their discussions, the committee identified types of projects where the Commission should have a role in APM/AIS. Reflecting the goals of the BCWMC Watershed Management Plan, the committee decided on the following levels of involvement:

PRIMARY OBJECTIVE of PROJECT	Commission should be involved	Commission should be involved only as a partner	No Commission role; although may be outcome of project
Activities that improve water quality	X		
Activities that improve habitat and the overall ecology of the waterbody	X		
Activities that protect the function or capacity of Flood Control Project	X		
Activities that improve recreation		X	
Activities that improve or protect human health and safety		X	
Activities that improve aesthetics			X

The committee noted that “recreation” is a broad term that means different things to different people and that improving water quality, in turn, improves recreation. The committee noted that effects on recreation would be taken into consideration for any Commission project or program and the Commission could partner with others on recreation-based projects. Although there wasn’t complete consensus, most committee members agreed that projects which have the primary objective of improved recreation should not be led by the Commission. Alt. Commissioner Holter believe the Commission should have “improved recreation” included as a primary focus of the Commission’s work and role in these issues.

In order to help determine where Commission involvement should be concentrated, the committee reviewed a map and description of the different classifications of waterbodies in the watershed, the locations and descriptions of different AIS already in the watershed and in nearby watersheds, and a list of impaired waterbodies in the watershed. (See Table 1)

The committee also received a presentation from the DNR on the latest studies, observations, and monitoring results regarding control of curly-leaf pondweed (CLP), and a presentation from TRPD on a whole-lake treatment on Medicine Lake that was part of a collaborative pilot project conducted in 2004 – 2006.

Table 1. BCWMC Waterbodies

<b>Waterbody</b>	<b>BCWMC Classification<sup>1</sup></b>	<b>AIS Present</b>	<b>Impairment/TMDL completion date and reference</b>	<b>Local Partners</b>
Medicine Lake	Priority 1 deep lake	CLP, Eurasian watermilfoil, carp	Nutrients 2011: <a href="https://www.pca.state.mn.us/water/tmdl/medicine-lake-excessive-nutrients-tmdl-project">https://www.pca.state.mn.us/water/tmdl/medicine-lake-excessive-nutrients-tmdl-project</a>	TRPD, AMLAC
Parkers Lake	Priority 1 deep lake	CLP, Eurasian watermilfoil	Chloride 2016 <sup>2</sup>	
Sweeney Lake	Priority 1 deep lake	CLP, yellow iris, carp	Nutrients 2011 <a href="https://www.pca.state.mn.us/water/tmdl/sweeney-lake-total-phosphorus-tmdl-project">https://www.pca.state.mn.us/water/tmdl/sweeney-lake-total-phosphorus-tmdl-project</a> Chloride 2016 <sup>2</sup>	Homeowners Assoc.
Twin Lake	Priority 1 deep lake	CLP, carp	None	
Wirth Lake	Priority 1 deep lake	CLP, Eurasian watermilfoil	Nutrients 2010 (since delisted) <a href="https://www.pca.state.mn.us/water/tmdl/wirth-lake-excess-nutrients-tmdl-project">https://www.pca.state.mn.us/water/tmdl/wirth-lake-excess-nutrients-tmdl-project</a> Chloride 2016 <sup>2</sup>	MPRB
Northwood Lake	Priority 1 shallow lake	CLP	Nutrients – no TMDL	Friends of Northwood
Westwood Lake	Priority 1 shallow lake	CLP		Westwood Nature Center
Cavanaugh (Sunset) Pond	Priority 2 shallow lake			
Crane Lake	Priority 2 shallow lake	CLP		
Lost Lake	Priority 2 shallow lake	CLP		
Main Stem Bassett Creek	Priority stream	CLP	Chloride 2016 <sup>2</sup> + Bacteria 2014 <sup>3</sup>	Friends of Bassett Creek
North Branch Bassett Creek	Priority stream		Bacteria 2014 <sup>3</sup>	
Plymouth Cr.	Priority stream		Chloride 2016 <sup>2</sup> + Bacteria 2014 <sup>3</sup>	
Sweeney Br. Bassett Cr.	Priority stream			

CLP = Curly-leaf Pondweed

<sup>1</sup> Priority 1 Lakes– “MDNR Public Waters” Lakes, greater than 10 acres, with public access or adjacent to public land

Priority 2 Lakes – “MDNR Public Waters” Lakes, greater than 10 acres, without public access or adjacent to public land

Priority 1 Streams – “MDNR Public Waters” Watercourses

<sup>2</sup>Twin Cities Metro Area Chloride TMDL: <https://www.pca.state.mn.us/sites/default/files/wq-iw11-06e.pdf>

<sup>3</sup> Upper Mississippi Bacteria TMDL: <https://www.pca.state.mn.us/water/tmdl/upper-mississippi-river-bacteria-tmdl-project>

**Committee Recommendations**

Over the course of four meetings, the committee reviewed and discussed activities related to AIS early detection, rapid response, studies, prevention, and management. The committee determined which APM/AIS activities the Commission should lead and which activities could include the Commission as a partner only. To help develop recommendations, the committee often prioritized the activities, considering the activity’s impact vs. the level of effort needed for the activity.

The committee recommends the following activities by the Commission:

<b>1. EARLY DETECTION TRAINING</b>	
<b>Recommendation:</b> The committee recommends that the Commission cooperate with other organizations on training groups or individuals on early detection of AIS in all waterbodies. Possible Commission activities include advertising training sessions, helping to recruit participants, assisting with venue coordination, reimbursing registration costs for Commissioners and active CAMP volunteers, and providing some modest funding. Because training programs and curriculum already exist, the Commission should not develop its own program.	
Current Activity by Others:	DNR, Hennepin County, TRPD and U of M offer training programs
Priority:	<b>HIGH</b> due to low effort for high impact

<b>2. EARLY DETECTION MONITORING</b>	
<b>Recommendation:</b> The committee recommends that the Commission purchase \$600 worth of zebra mussel sampler plates (approx. 50 plates) with 2017 APM/AIS funds for use by CAMP volunteers and lake residents on Priority 1 lakes and CAMP lakes. Further, the Commission should cooperate with other organizations and/or actively recruit and train volunteers to detect zebra mussels on all Priority 1 lakes, aiming for at least one volunteer in each lake quadrant. Finally, the Commission should consider recruiting one “AIS captain” per lake to field calls and questions from volunteers and to collect samples, as needed, to reduce time spent by Commission administrator.	
Current Activity by Others:	<ul style="list-style-type: none"> <li>• Routine Commission monitoring will detect invasive plants, snails, spiny waterflea, and rusty crayfish in lakes and streams</li> <li>• TRPD performs early detection monitoring on Medicine Lake for zebra mussels (but could use help in expanding program)</li> <li>• MPRB performs early detection monitoring on Wirth Lake</li> </ul>
Priority:	<b>HIGH</b> due to low effort for high impact

<b>3. RAPID RESPONSE PLAN DEVELOPMENT</b>	
<b>Recommendation:</b> The committee recommends that the Commission begin developing a rapid response action plan for key species (including zebra mussels and starry stonewort) in Priority 1 lakes using 2017 APM/AIS budget (up to \$15,000). The Commission should request a proposal from the Commission Engineer to develop lake-specific rapid response plans that consider infestation thresholds for action, consider experience and recommendations of the DNR and other organizations, assign responsible parties, and list possible funding partners for plan implementation. The Commission could request that this committee review the draft plan and implementation recommendations.	
Current Activity by Others:	MPRB has a Zebra Mussel Action Plan for Wirth Lake
Priority:	<b>HIGH</b> due to need to identify responsible parties and funding mechanisms for quickest, most effective response to new infestations.

<b>4. RAPID RESPONSE TO NEW INFESTATIONS</b>	
<b>Recommendation:</b> The committee recommends the Commission follow guidance resulting from the rapid response plan.	
Current Activity by Others:	MDNR works with local entities to implement rapid responses
Priority:	No priority level set by committee

<b>5. INVENTORIES AND STUDIES</b>	
“Inventories and studies” could include a very thorough and detailed inventory of all AIS, an assessment of the proximity of AIS to BCWMC waterbodies, an analysis of various pathways of AIS into the BCWMC, and an assessment of vulnerability of each waterbody to various AIS.	
<b>Recommendation:</b> At this time, the committee recommends that additional water quality parameters be added to routine monitoring starting in 2018 in order to assess the vulnerability of waterbodies to harboring AIS; and that water monitoring reports include a brief assessment of vulnerability. In 2018 this additional work, estimated at \$2,800, could come from APM/AIS budget.	
Current Activity by Others:	Henn County analyzed the risk of AIS originating from pet stores & nurseries
Priority:	<b>HIGH:</b> Inventory and general vulnerability analysis with routine monitoring through addition of some water quality parameters  <b>LOW:</b> Developing full blown studies and assessments for every lake

**6. AIS PREVENTION: BOAT LAUNCH AND ACCESS MANAGEMENT**

Activities could include inspections of boats entering/leaving lake for AIS; installation and management of washing stations and/or compost bins at launches; regulation of launch closures/open hours.

**Recommendation:** The committee believes that boat launch owners (including private owners, cities, TRPD, and MPRB) should be responsible for monitoring and managing launches. However, the committee recommends the Commission begin an AIS Prevention Grant Program beginning with the 2019 BCWMC Budget to assist boat launch owners with inspections, equipment purchase, educational signage, staff training, etc.

Current Activity by Others:	<p>TRPD performs inspections during peak hours at their boat launch on Medicine Lake.</p> <p>MPRB closed the boat launch on Wirth Lake to help prevent AIS movement</p>
Priority:	No priority level set by committee.

**7. AIS PREVENTION: AIS EDUCATION**

**Recommendation:** The committee recommends that the Commission add materials and activities regarding AIS to its education and outreach program including 1) providing printed educational materials during events (using existing materials rather than developing new materials); 2) distributing newsletter articles to cities about AIS; 3) adding AIS information to news items on BCWMC website home page; and 4) considering ideas or requests from cities/lake groups for tailored educational materials through Education Committee’s annual work and budget planning.

Current Activity by Others:	TRPD, MPRB, Hennepin County, DNR, and lake groups each provide some level of AIS education through various avenues
Priority:	No priority level set by committee.

**8. AIS PREVENTION: POLICY DEVELOPMENT/ADVOCACY**

Advocating for and/or assisting with policy changes or ordinance development at the local or state level.

**Recommendation:** The committee doesn't recommend Commission involvement at this time. The committee did direct the Administrator to determine if the Commission could be a member of the Minnesota Lakes and Rivers Advocates due their lobbying efforts on AIS at the legislature. Upon review, the Administrator/Legal Counsel determined the Commission cannot be an actual member of the organization. However, the committee suggested that the organization's newsletter could be distributed or posted with BCWMC materials.

Current Activity by Others:	Some lake groups are member of Minnesota Lakes and River Advocates. Park districts and cities may have AIS issues within their policy agendas.
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Priority:	No priority level set by committee.
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**9. MANAGEMENT: MONITORING CURRENT INFESTATIONS**

**Recommendation:** The committee notes that the BCWMC's current routine monitoring program includes monitoring AIS infestations except for fish. The committee recommends that the Commission gather and review existing information on fish surveys during routine lake monitoring to determine if a survey is needed and/or if there are ways to partner with others on surveys. The committee further recommends that the Commission request a presentation from the DNR and others performing fish surveys (such as TRPD and the City of Plymouth) on fish populations in BCWMC waterbodies.

Current Activity by Others:	BCWMC's current monitoring program includes surveys of current AIS infestations except fish. TRPD surveys fish on Medicine Lake  City of Plymouth surveys fish on all lakes
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Priority:	No priority level set by committee.
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<b>10. MANAGEMENT: HERBICIDE SPOT TREATMENTS WITH APPROVED PLAN</b>	
Includes spot treating aquatic invasive plants with herbicide (as opposed to treating a whole lake)	
<b>Recommendation:</b> The committee recommends that the Commission perform herbicide spot treatments of aquatic invasive plants where the following conditions are met: 1) treatment of the plant is considered a management tool for improving water or habitat quality according to an approved management plan such as a TMDL; and 2) another entity or organization is sharing the cost of the treatment. (This is consistent with the committee’s recommendation and Commission approval of curly-leaf pondweed control on Medicine Lake in January 2017.)	
Current Activity by Others:	TRPD and MPRB use spot treatments at access points, fishing piers, and beaches. (City of Plymouth previously treated curly-leaf pondweed in Medicine Lake.)
Priority:	No priority level set by committee.

<b>11. MANAGEMENT: HERBICIDE SPOT TREATMENTS WITHOUT APPROVED PLAN</b>	
Includes spot treating aquatic invasive plants with herbicide (as opposed to treating a whole lake)	
<b>Recommendation:</b> The committee recommends that the Commission consider requests for spot treatments on lakes without an approved plan on a case by case basis.	
Current Activity by Others:	TRPD and MPRB use spot treatments at access points, fishing piers, and beaches.
Priority:	No priority level set by committee.



**12. MANAGEMENT: WHOLE LAKE HERBICIDE TREATMENTS**

**Recommendation:** The committee recommends that the Commission consider requests for whole lake herbicide treatments and that the Commission Engineer continue to engage with the DNR regarding this as well as other new treatment methods and technologies.

Current Activity by Others:	TRPD treated curly-leaf pondweed in <a href="#">Medicine Lake through a whole lake herbicide treatment</a> (2004-2006) as part of a pilot program in coordination with the DNR.
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Priority:	No priority level set by committee.
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**13. MANAGEMENT: CARP HARVESTING/FISH BARRIERS**

Common carp can have a significant negative impact on water quality and aquatic vegetation, particularly in shallow lakes.

**Recommendation:** The committee recommends that the Commission consider the need for managing carp populations in Priority 1 lakes if fish surveys and other data indicate that carp are a significant problem.

Current Activity by Others:	TRPD and neighboring watershed organizations have performed or will be performing carp management activities including harvesting and barrier installation.
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Priority:	No priority level set by committee.
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**14. MANAGEMENT: WATER LEVEL MANAGEMENT**

In some lake systems, water levels can be lowered in order to consolidate sediments, encourage native plant growth, and significantly reduce invasive plants such as curly-leaf pondweed.

**Recommendation:** The committee recommends that the Commission consider water level management on a case by case basis if recommended in an approved management plan.

Current Activity by Others:	Neighboring watershed organizations have performed water level management activities.
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Priority:	No priority level set by committee.
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**15. MANAGEMENT: BIOLOGICAL TREATMENT**

Insects are sometimes used to control invasive species, including beetles introduced to control purple loosestrife infestations.

**Recommendation:** The committee recommends that the Commission consider biological control on a case by case basis as a possible future control method and to stay informed on new biological control agents.

Current Activity by Others:	Many entities have released purple loosestrife beetles in the past with great success. The DNR continues to “collect and move” beetles in limited cases.
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Priority:	No priority level set by committee.
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**16. CONVENING LAKE GROUPS TO UNDERSTAND OPTIONS FOR ORGANIZATION**

During the discussion of many of the prevention and management options, it was noted that formal [lake improvement districts](#) may be the best type of organization to implement many of the prevention and management tools noted above and that BCWMC lake groups might need more information about the pros and cons of forming a lake improvement district.

**Recommendation:** The committee recommends that the Commission convene a meeting of lake groups and other interested groups/individuals in the BCWMC and request a presentation from the DNR and other experts to learn about lake improvement districts vs. lake associations and other less formal lake groups.