



Minneapolis Park and Recreation Board
Cedar Lake and Lake of the Isles Master Plan
Community Advisory Committee (CAC) Water Quality Subcommittee Meeting #2

4/14/2022 6:00-8:00pm
Zoom Online Video Call

MPRB Staff and Consultants Present: Emma Pachuta (Project Manager), Madeline Hudek; Erica Christensen (TENXTEN), Maura Rockcastle (TENXTEN), Pat Conrad (EOR), Joe Pallardy (EOR)

CAC Subcommittee Members Present: Anna Eleria (Subcommittee Chair), Craig Wilson, Drew McGovern, Jim Romlin, Nan Dreher

CAC Members Absent: Constance Pepin, Laura Kinkead, Win Rockwell (CAC Chair)

Public: Throughout the evening approximately 18 members of the public joined the meeting

WELCOME AND INTRODUCTION

Emma welcomed everyone to the meeting and asked the subcommittee members to introduce themselves followed by staff and project consultants. Following introductions, Emma went through a land acknowledgment, the agenda, CAC group agreement, public online forum guidelines. Emma then turned the presentation over to Anna to go through the meeting purpose for the evening. Anna then turned the presentation over to Pat.

WATER QUALITY PRESENTATIONS AND CAC QUESTION AND ANSWER

Following the introductions Pat from EOR presented three presentations related to water quality with time for CAC questions between each one.

Limnology 101

Pat shared a Limnology 101 – An Overview of Drivers Influencing Lake Character presentation with the group before opening it up for questions from the CAC. (*view the [presentation slides](#) or watch the [video of the presentation](#) for details*)

(CAC) Internal loading numbers – are they generally consistent year to year?

- (Project Staff) The two charts are relative to one another, proportion varies

(CAC) Phosphorus and nitrogen loads – What are the primary sources? For example: dog poop, fertilizer, other?

- (Project Staff) Comes from everything, lawns have fertilizer, atmospheric deposition (dust), leaf material, plant material.

(CAC) Residential, commercial, etc. – How do streets and public infrastructure fit in?

- (Project staff) What was shown for land cover were land use groupings from previous diagnostic study, can be split many different ways. It's about the confidence of different sources, which is done through monitoring.

(Project Staff) I will get into this further into the presentation. There's a lot of different solutions to these things. Green infrastructure, raingardens and other practices to reduce nutrient loading.

(CAC) What is the loads index by acreage of residential versus other uses?

- (Project staff) Pie chart shows acreage breakdown. Load chart would need to be multiplied by percentages in pie chart to get an idea of the phosphorus

(CAC) Better from a loading standpoint to have a wet year or dry year?

- (Project staff) Better in 2021, worse water quality in a wet year.
- (CAC) Can't be controlled, but good to know.

Public comments from the chat:

- Can loading be calculated per acre for each source? E.g., is load proportionate to acreage?
- does lake of the isles even earn a lake classification since it really is an enhanced dredged wetland/
 - DNR considers it a lake.
 - why does dnr consider it a lake? what qualifies it as a lake? Is it safe to swim in Isles?
- Where does the P come from? Is it in something other than lawn fertilizer?
- I think CAC member's question is important. Acreage doesn't necessarily tell us where the heaviest source of phosphorous is coming from.

Context

Pat shared Context – How are Lake Conditions Evaluated? presentation with the group before opening it up for questions from the CAC. Information in the presentation is influenced by the feedback from the first meeting and the questions that were asked. ([view the presentation slides](#) or [watch the a video of the presentation](#) for details)

(CAC) Have we made improvements since the standards have been put in place?

- (Project staff) Lines are the state standard and the dots are the goals established by clean water partnership (*refers to graph on presentation slide*). The Clean Water Partnership standards are more stringent than the state standards.

There's a lot of information being shared tonight. We will be recording these presentations and sharing them on the project page so folks can go through at their own pace.

Public comments from the chat:

- How is it that Lake Harriet and Lake Bde Maka get A ratings for their lake quality vrs C, C- ratings for Cedar/Isles? Harriet and Bde are phosphorus laden residential zones with no wild/natural/ filtration of runoff? Why?
 - I think it's because Harriet & Bde Maka Ska aren't getting the stormwater from St. Louis Park and the rest of the Watershed District.

- (Project staff) Cedar and Isles are acting as "treatment basins" for Harriet and Bde Maka Ska - they trap Phosphorus before it reaches the downstream lakes.
- Noteworthy that the LAURI scale is all about human use of lakes, not how healthy the lakes are.
 - (CAC) I had that same thought.
 - Good point. I was wondering about the same thing.
- I apologize for my ignorance--I have no idea what the LAURI scale is?
 - I may have spelled in wrong. It is the scale used by the MPRB to rate rates. It is about 3 slides back.
 - Lake Aesthetic and User Recreation Index = LAURI
- (Project Staff) In case it's helpful to know - we recognize this is a lot of information to share out at one meeting. We will be posting videos of each presentation on the webpage so that this information is available at any time
 - Thanks Emma, will be helpful to know what the aquatic recreation parameters are (even though they are indicated as being met)
 - That's great Emma, thank you!
- We saw the slide on what the deep and shallow lake standards are on the topic state index. Will we see a slide that shows where Cedar and Isles are relative to those standards?
- Did the grit chambers work? There haven't been any more installed around Isles and Cedar.
- Does removing milfoil Harvesting Lower phosphorus?
 - (Project staff) Yes - EWM harvesting does remove phosphorus

Current Conditions

Pat shared a Current Conditions – What is the Current Condition of Each Lake? How has it Changed Over Time? presentation with the group before opening it up for questions from the CAC. Information in the presentation is influenced by the feedback from the first meeting and the questions that were asked. (*view the [presentation slides](#) or watch the a [video of the presentation](#) for details*)

(CAC) How effective were the Cedar Wetlands at reducing pollutants into the lakes?

- (Project Staff) Treatment facility has been very successful. Jury is out on how effective it is now. There is a shelf life on these types of facilities, so there may be some issues with it short circuiting. Works by directing a pipe from Twin Lake to the facility before filtering into the lake. There were innovative treatments done over the years and this was one of them.
- (CAC) Minnehaha Creek Watershed District (MCWD) manages that, is there a plan to have it dredged soon?
 - (Project Staff) Data suggests it's good now and it will be looked at again in 2025. Management of the facility is a complicated structure between City of Minneapolis, Park Board, City of St. Louis Park, and MCWD.

(CAC) Learned a lot, thank you for the presentation. Helpful if it were in a written format to share with the community. These lakes are treatment basins of sorts for nutrients coming from upstream, especially coming from St. Louis Park. Can you explain how watershed districts work and prevent/deal with impacts upstream so it doesn't impact downstream and the legal enforcement options are.

- (Project Staff) What you're describing is crux of water management – how to get folks upstream to take care of land upstream to not impact downstream. Example of how watersheds typically work: Upstream is undeveloped farmland and then runoff flows to city and river, water is pulled

out for drinking water that has pollutants in it. Watershed districts established to work through these issues across jurisdictions. From a strategy standpoint, the most effective way to treat water is where it falls, rather than downstream.

(CAC) Will there be information about the enforceability of watershed districts?

- (Project staff) Yes, at a future meeting. State has standards, which is based to local governments. Only certain activities have a permit to discharge pollutants – can be discussed at a future meeting.

(CAC) Thanks for the presentation, very helpful. In addition to issues of watershed nutrient loading. What's balance of that and addressing removal of invasive species (Example: Eurasian milfoil and carp) or removal of sediment. Does this need to happen alongside watershed treatment?

- (Project staff) That's one of the tools of the toolbox, one of the different ways to manage the resource. Different objectives are being accomplished by doing different things. Nutrients are practices and strategies to eliminate and reduce loads to the lake and opportunities to stop internal dynamics/rerelease of nutrients. Dredging comes up a lot. Limited dredging is an opportunity, but dredging is super expensive. Weight of sediment is mostly water, so need to store it nearby and wait for it to dewater or haul trucks of mostly water away. Also have to watch out for what sediment you're disposing and if it needs to be disposed of in a certain way.
- (CAC) From professional perspective, especially due to the concentrations of phosphorus at the bottom of Cedar Lake, the strategies need to be both. One thing this group will suggest is the development of a lake management plan for both lakes which include more diagnostics of the lake which will include magnitude of pollutant sources and relative contributions.
- (Project staff) Agree completely. The alum treatments that were done in the 1990s, there's been a lot of advancements in the technology since then. There are also a lot of new techniques for treating in-lake pollutant sources. Alum treatments and regulations have changed over time. Early on, regulatory bodies wanted all other treatment options to be used first and now it's looked at as a tool in the toolbox and more acceptable technology.

(CAC) Alum was much more effective in Cedar than Isles and it has to do with the water depth?

- (Project staff) Yes

(CAC) Would need to look at different solutions for Cedar and Isles?

- (Project staff) Yes. Looking at when and where plant harvesting occurs.

(CAC) Seems like gravitating to alum as a treatment option for Cedar Lake. Is that a budgetary item covered by MPRB? How expensive are alum treatments? is that a feasible short-term solution for Cedar? Should Brownie be treated with Alum as well as Twin Lake? Seems like a necessary step for longer term health for Cedar.

- (Project staff) EOR has designed alum treatments for many lakes. In designing them, a cost benefit analysis could be done, which is followed by a case study for prioritization. This would be done as a future project.

(CAC) Chloride is becoming more and more of an issue in urban water bodies. Does MPRB monitor for chloride in the lakes and if so, have you had a chance to look at the data?

- (Project staff) Didn't dig into chloride issues. They are being somewhat addressed at a regional level for different management strategies for deicing. Metro area has been aggressively looking

at this and strategies are being worked on. Regional or city-wide solution rather than something that's being addressed at the master plan scale.

(CAC) Changing climate, precipitation is increasing in intensity and volume. How much of a factor is that playing into the water quality trends?

- (Project staff) Complicated issues. Increases in volumes have an impact and change in timing of rainfall events has been doing strange things to the lakes. Unpredictable weather trends change what's happening in lakes – go out today and see water is super clear, but some lakes will already have plants growing. With ice on lakes being reduced, there's more time that the lake is active. Can't provide a quantitative difference, however there are impacts happening to the lakes.

Public comments from the chat:

- I want a comparison to the other lakes in the chain!
 - (Project staff) You can see data for other lakes on the MPCA website. Example - Harriet: <https://webapp.pca.state.mn.us/surface-water/impairment/27-0016-00>
- Very nice presentation, Patrick. Do climate factors, including precipitation and ambient temperatures, have a significant impact on the water quality metrics? Have zebra mussels been found in either Cedar or Lake of the Isles, and if so, have they impacted water quality etc.? What are the downsides, if any (besides cost) to alum treatments?
- Great job in educating us. How about alum for twin lakes?
- What is the MPRB doing now to work with SLP to get them to have less impact on our lakes?
- Does the ratio of the volume of the lake to the area of the drainage basin impact the lake water quality?
- Is there a way to extract the phosphorus from the water? The ground water pumped from SWLRT tunnel cells during construction is being routed to the sanitary sewer because of high phosphorus levels. What is being done with the phosphorus or is it just dumped into the Mississippi at the sewage treatment plant?
 - Good question. Also, once LRT construction is complete the water will no longer be pumped into the sanitary sewer, this is temporary during construction
- What is realistic timeframe for alum treatment of Cedar? Can this group actually change/accelerate that process?

PUBLIC COMMENT TIME

Following the discussion, Emma transitioned the conversation to public comment time and explained that it was a time for community members to make comments related to the master plan. Emma asked folks to write 'yes' or their name in the chat box if they wanted to share feedback verbally. Folks could also write feedback in the chat box during this time (recorded below).

- (Public) Does harvesting have an effect on reducing phosphorus? How much of an effect can this group have in the process of getting Cedar ready for an alum treatment?
 - (Project staff) Dredging can be an economical approach to reducing harvesting. There are some opportunities to shift current harvesting practices. To get an alum treatment running information for a grant needs to be submitted by August.

- (Public) Canada goose droppings at Lake of the Isles. Going around in the fall, incredible to see the amount of droppings on the path and flowing into the water. Does that impact water quality?
 - (Project staff) Yes. In the early days of the Clean Water partnership there were goose round ups, not sure that's still done.
- (Public, *in chat*) Post LRT construction completion, the tunnel water will follow stormwater flows meaning it will go to the lake
- (Public, *in chat*) Time to harvest the geese? Food shelves need meat.
- (Public, *in chat*) Thank you EOR for your informative presentation, expertise and transparency. Much appreciated.
- (Public, *in chat*) Please bring back the clean water partnership
 - (Public, *in chat*) Ditto
- (Public, *in chat*) Very much appreciate the high value of the presentation tonight
- (Public) Thanks for the great presentation. To my eyes, there's definite trends, understand the causes are not known. That means these projects need to be done soon rather than later. Biden administration recently announced a billion dollars will be available for conservation purposes. I hope this can be looked into if funding is needed. Lake quality is essential for the identity of the city.
- (Public) Thanks, terrific presentation and great refresher on limnology. Strongly agree with approaching a dual approach to watershed and in lake treatments. Glad to hear you'll consider cost of both approaches. Concerned that if in lake treatments are most cost effective, may give up on upstream approaches. Emphasis should be on upstream approaches.
- (Commissioner Abene) Very well presented, hope it's recorded. Alum is treating where we are now. Preventing this in the future by working in the watershed will be very important. Clean Water Partnership was partially successful because it was water focused.
- (Public) Another simple issue - Lake of the Isles and the dog park. There was a recent article in the Star Tribune on dog park residue runoff into the lakes. A lot of dogs and wondering where that ends up, could be Lake of the Isles, just an opinion.
- (Public, *in chat*) On a related "water" issue...Every 5-10 yrs there is an extreme weather event leading to serious flooding and negative impacts on the shoreline, parklands (loss of trees/turf) and covering portions of the walking path at Lake of the Isles. I recall that the MPRB installed a gravity pump by which lake levels could be lowered by moving water from Harriet, Bde and Isles into Minnehaha creek. My understanding is that this pump is no longer in use? Also, in the mid 1990's there was very serious flooding and MPRB instituted a plan by which high water levels were moved from Isles through Cedar and Brownie Lakes, under Hwy 394 and into the Mississippi River. Whether this would still be an option I do not know. Could staff discuss with the watershed district if there are any options presently available that could be employed to mitigate damage at Lake of the Isles at such time the next extreme weather event occurs? (Last such event was in 2014)
 - Helpful information
- Tunnel water after completion of construction will go to sanitary sewer not storm sewer.
 - LRT tunnel water info I am sharing has been documented by David Davies
- VERY thankful you are a Commissioner Cathy Abene.
- Current LRT water routing to sanitary sewer is temporary CAC pls evaluate lrt tunnel waters