

MEMORANDUM

Comfort Lake-Forest Lake Watershed District

To: Board of Managers
From: Mike Kinney
Subject: Eurasian Watermilfoil Management Considerations

Date: August 24, 2017

Introduction

The purpose of this memo is to assist the Board in discussing the benefits and drawbacks of the District managing Eurasian watermilfoil (EWM) on its lakes; specifically Bone, Forest, and Comfort lakes.

The new Watershed Management Plan activity, per the current amendment, for Aquatic Invasive Species (AIS) Management reads as follows:

G. (District-Wide) Aquatic Invasive Species Management: Holistically manage aquatic invasive species in District lakes with a view toward the overall health of the water body. Policies and goals in the CLFLWD Watershed Management Plan are designed around the ecological integrity of water resources within the District. Accordingly, the District's involvement in the long-term management of AIS present will be based on the benefit to ecological systems. Specific procedures and priorities for implementing this complex and multi-faceted activity will be detailed under activity 3011-20A Comprehensive Plan and Policy Development.

This language can be used as a starting point for which the board may prioritize objectives for invasive species management. Factors when considering the District's role in managing EWM:

1. Known life cycle of EWM
2. Benefit to the health of the waterbody via water quality improvement
3. Benefit to the health of the waterbody via native flora/fauna protection (i.e. benefit to ecological systems)
4. Prevention of spread to other waterbodies that do not currently have EWM
5. Benefit to public recreation users (and subsequently local economy via tourism)
6. Benefit to private recreation users (i.e. shoreline homeowners)
7. Precedence for watershed district management of EWM

District staff corresponded with Steve McComas, owner of Blue Water Science, regarding several of the above considerations. Quotes from Mr. McComas are provided below.

Consideration #1: Known life cycle of EWM

EWM growth is mainly limited by lake sediment nitrogen availability. Long-term life cycles of EWM have been observed in other lakes suggesting a predictable initial stem density boom, but then a noticeable decline once sediment nitrogen has been used up. This eventual decline in density is something to consider when weighing long-term management options.

Consideration #2: Benefit to waterbody health via water quality improvement

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It is widely known that, unlike curly-leaf pondweed, EWM does not experience mid-summer die back and subsequent phosphorus release, resulting in water quality degradation. In fact, Mr. McComas has indicated that with the additional leaflet surface from EWM growth, water column total phosphorus could be lowered.

Consideration #3: Benefit to waterbody health via native flora/fauna protection

According to Mr. McComas: “the biggest impact of untreated EWM is recreational and navigational impacts. There are few ecological impacts of not treating EWM. Any EWM treatment should be considered as a treatment for seasonal control. We do not have any good long term control options.” This is to say that EWM treatments do not result in long-term density reduction; they simply reduce density for the current year.

One option the Board may wish to consider is budgeting for annual delineation surveys by Blue Water Science in order to assess whether stem densities may have an ecological impact in any given year. Treatment could be funded from the District’s reserve if the delineation survey predicts significant ecological impacts.

Consideration #4: Prevention of spread to other waterbodies that do not currently have EWM

Theoretically, reducing the abundance of EWM may reduce the instance of boaters traveling through beds, picking up stems on their watercraft, and threatening to spread EWM to other waterbodies if not properly cleaned off before travel and re-launch.

According to Mr. McComas: “treating heavy EWM growth could reduce the potential for the spread of EWM to other lakes. However, there is a potential to spread EWM from boating activities whether EWM is treated or not. Typically not all the EWM is treated anyway. We still rely on boaters to inspect and remove plants from their boat trailers.”

Consideration #5: Benefit to public recreation users (and subsequently local economy via tourism)

Mr. McComas has advised that: “the EWM condition in the nearshore area is primarily a recreational issue along with aesthetic concerns.” While the District’s main focus is water quality improvement via capital improvement projects (as indicated by makeup of the WMP and agreement by multiple board members on a variety of occasions) secondary public benefits may be attained by the management of EWM. Some of these include public recreation benefits (all three lakes with EWM have public boat launches), and subsequently, promotion of local tourism. As we’ve seen through our watercraft inspection survey data, boaters come from all over the state to launch at Forest/Bone/Comfort lakes. Reducing abundance of EWM may improve recreational quality, especially for those boaters that prefer to boat in the shallows, such as carp fishermen. Improving these nearshore areas for public users could result in higher public use, and in theory more local economic stimulation from outside visitors.

Consideration #6: Benefit to private recreation users (i.e. shoreline homeowners)

Within this memo, shoreline homeowners are categorized separately from public users due to 1) their focus on the nearshore area (most boaters other than fishermen generally recreate in deeper waters where plants do not grow) and 2) their less-direct impact on local tourism since they tend to be local residents

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themselves. Due to shoreline owners' direct relationship to the nearshore (littoral) area, they tend to benefit most from aquatic plant management efforts.

Anecdotally, many shoreline residents seem to be in favor of the District treating EWM. At the same time, some residents seem to be dissatisfied with the District's methods/limitations for treating EWM. District staff has had significant correspondence with a variety of shoreline homeowners that have expressed frustration regarding treatment area delineation methods (e.g. some shoreline owners would prefer all EWM stems are treated, not just the nuisance growth areas as delineated by Blue Water Science), and treatment area limitations (e.g. the DNR permit limits on treating near water lilies). This year, the District did not treat EWM on Bone Lake due to observed low densities during the delineation survey. It appeared that treatment of EWM had already occurred; presumably by shoreline homeowners. Additionally, many shoreline homeowners seem to desire general control of aquatic plants, invasive or otherwise. This type of treatment is the focus of the DNR's Aquatic Plant Management permit, which is specifically targeted for private shoreline homeowners for recreational benefits/watercraft access to open water.

If benefiting shoreline homeowners is a goal for the District, the Board may want to consider whether the District's methods and governmental limitations make it a suitable candidate for meeting that goal. It might be possible that the lake associations are better suited for this goal. If the Board wanted the District to subsidize treatments by lake associations, they might consider the program that the Chisago Lake Improvement District (LID) currently has wherein the lake associations are in control of the treatments; they do the surveying and contracting. The LID reimburses the lake associations for most of the cost. More details on this program are available upon request.

Consideration #7: Precedence for watershed district management of EWM

Currently, neither District staff nor Mr. McComas are aware of any other watershed districts that treat EWM. This is largely due to the lack of water quality impact.