To: City of Maple Grove **Date: August 18, 2014**
Attn: Rick Lestina

From: Rice Lake Area Association

Subject: Rice Lake Drawdown request for 2014-2015

Why do a drawdown?

The invasive Curlyleaf Pondweed (CLP) plant has been increasing in overall growth the past several years to reach a density level not seen since prior to the last series of drawdowns ending in 2004-2005. CLP grows under the ice over the winter and prevents native (good) plants from getting established. CLP also adds abundant amounts of nutrients, such as phosphorous, to the water column, which leads to severe algae blooms after the CLP breaks loose from the lake bottom and dies off in late spring/early summer.

Aquatic plant surveys were conducted by Freshwater Scientific Services (FSS) in early June (Curlyleaf Pondweed bed delineation) and July (point-intercept) to measure the degree of native and non-native vegetation. Preliminary reports from FSS confirmed heavy CLP growth and the recommendation to treat the problem with a drawdown.

A fish survey conducted by Blue Water Science (BWS) in July 2014 confirmed that the winterkill experienced this past season severely reduced the overall fish population, especially the game fish in the lake (largemouth bass, crappie, bluegill, northern pike and perch). BWS recommended that a drawdown would help eliminate the remaining fish mass and allow the lake to start over with a game fish population by restocking. (Note: DNR West Metro Fisheries also supported a drawdown without aeration to reduce what fish were left in the lake.)

Goals and expectations

- Improved water quality
- Improved water clarity
- Change the balance of the lake from algae-dominated to plant-dominated with native plants
- Improve the fishery

What benefit will the public receive from this treatment?

The public will be able to boat, swim, fish and use the lake for normal recreational purposes, if the CLP growth is reduced. Those who walk, bike and run around the 3.7 trail around Rice Lake would also benefit from a water body which would not exhibit non-native matted, surface vegetation with heavy algae blooms which make the area undesirable. Dissolved oxygen levels should increase as more nutrients are removed from the water column, resulting in better water clarity and quality.

What other benefits will result with this treatment?

Game fish would also benefit from a habitat of native plants and better water quality. Plans by the Rice Lake Area Association (RLAA) to NOT aerate during the winter drawdown (to further reduce non-native fish like Common Carp and Bullhead) will help create an environment for stocking game fish in 2015 to help turn the lake balance.

Is the drawdown supported by the homeowners?

A door-to-door signature campaign has been conducted to the 104 private riparian property owners on Rice Lake/Elm Creek and xx signatures were received supporting the effort (3 were against). The drawdown is also supported by several public entities and other parties, including:

- City of Maple Grove
- Freshwater Scientific Services
- Blue Water Science
- Three Rivers Parks District
- DNR/West Metro Fisheries
- DNR/Aquatics (based on APS)

Drawdown Permit

The existing permit on record with the DNR (#65-1239) can be amended by the City for application toward the 2014-2015 drawdown request.

Is the Drawdown a "one-time" effort?

No, a drawdown is most effective if conducted over a period of several years, based on what the overall objectives are for this activity. For a drawdown on Rice Lake to take place, RLAA would like to insure the following objectives are considered over the course of a 3-year period:

- Year 1
  - Reduce the CLP growth
  - Complete the reduction of the rough fish population (based on results of the upcoming fish survey) by not aerating the lake to support a fish population.
  - Construct an Exclusion Area for growing native vegetation without the impact of fish presence.
  - Use the exposed shoreline to conduct a complete & comprehensive assessment for erosion.
- Year 2
  - Reduce the CLP growth
  - Aerate to support the fish population
  - Continue supporting Exclusion Area
  - Add more native plants as needed
  - If carp become a problem, take steps to reduce their impact
- Year 3
  - Reduce CLP
  - Aerate (to support fish)
  - Take down Exclusion area fencing, leaving newly established vegetation to grow
  - Shoreline stabilization and restoration (where needed)

What negative impact will the drawdown have?

The negative impacts of a drawdown are few in nature compared to the benefits. Here are some potential negative impacts:

- Open water lake use will be reduced from mid-October through early ice out (April/May).
- Ice rinks will need to be moved out to deeper water (maximum drop for a drawdown on Rice Lake is 6 feet, leaving up to 5 feet of water in some areas).
- Some aquatic species such as frogs and turtles may be at risk if they do not find suitable shelter in time.
  - Note: The DNR local hydrologist has asked RLAA to conduct the drawdown early enough before winter (mid-October) to give these critters sufficient time to find winter-over shelter.
- There may be a continuation of algae growth during the first year after a drawdown as the vegetation community shifts from a non–native to native variety.

Have previous drawdowns been successful in the past?

The latest drawdown conducted in 2004-2005 was deemed to be the most successful, although immediate results may not have been achieved in Year 1 (algae the following year due to lack of vegetation; fish population slow to recover, although there was no winterkill). Drawdowns were conducted in 2002-2003 and 2003-2004. Rice Lake has not needed to treat CLP since that last drawdown, gaining over 10 years of relief.

Supporting Documentation for this request

- Preliminary fish survey from BWS
- Preliminary aquatic plant surveys from FSS
- Riparian signatures
- Past drawdown
  - 2004-2005 drawdown recommendation
  - 2002-2003 drawdown survey results