WHAT’S GOING ON WITH NORMANDALE LAKE?
NORMANDALE LAKE IMPROVEMENT PROJECT

The City of Bloomington and the Nine Mile Creek Watershed District are partnering on a lake improvement project. The multi-step project will involve a lake drawdown, herbicide treatment, and alum treatment to improve the health of Normandale Lake. These treatments will target:

- ALGAL BLOOMS
- CURLY-LEAF PONDWEED
- BAD SMELLS

DID YOU KNOW?
Normandale is a shallow, man-made lake. The District and the City of Bloomington created it in the mid-1970s to control flooding.

WHAT WILL I SEE?
You will notice low water levels in Normandale from late summer to the following spring. After the lake refills, and the project is complete, a healthier plant population will grow in the lake and you should see less algae.

PROJECT INFORMATION
Find up to date project details and timelines at: blm.mn/nlwq and ninemilecreek.org

BRING IT HOME!
You can help keep Normandale Lake healthy by cleaning leaves and trash from the surface of stormdrains by your house.
Sign up at: adopt-a-drain.org
** MANAGEMENT PRACTICES: TIMING & COSTS  
NORMANDALE LAKE IMPROVEMENT PROJECT  

**DID YOU KNOW?**  
Normandale Lake is less than 4 feet deep in most spots. Before the lake was constructed in the mid-1970s for flood control, the area was a wetland and farm field.

**PROJECT TIMING & COSTS**

<table>
<thead>
<tr>
<th>Management Practice</th>
<th>Proposed Timing</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lake Drawdown</td>
<td>Fall 2018</td>
<td>$310,000-$420,000</td>
</tr>
<tr>
<td>Herbicide Treatment</td>
<td>Spring 2019</td>
<td>$100,000 per year</td>
</tr>
<tr>
<td>(2-5 Years)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alum Treatment</td>
<td>Spring 2019</td>
<td>$140,000</td>
</tr>
</tbody>
</table>

**PROJECT FUNDING**

This project is funded by the Nine Mile Creek Watershed District, in partnership with the City of Bloomington.

**PROJECT INFORMATION**

Find up to date project details and timelines at: blm.mn/nlwq
LAKE DRAWDOWN
NORMANDALE LAKE IMPROVEMENT PROJECT

WHAT IS A DRAWDOWN?
A drawdown is when water is emptied from a lake. It is used to control curly-leaf pondweed, an invasive plant, in shallow lakes. By emptying Normandale Lake and exposing the lake bottom to freezing temperatures, curly-leaf pondweed turions (reproductive structure) are killed, stopping the plant from growing. A lake drawdown can also reduce the release of phosphorus from the lake bottom. Too much phosphorus in a lake is undesirable because it causes algae blooms, one of the green, gunky materials that grows on the surface of the lake.

PROJECT DETAILS
- Lake drawdown will begin using a pump and small existing pipe in mid-August
- Upon installation, a larger pipe will continue the drawdown
- Close pipe in March and allow lake to refill by April

QUICK INFO
What: Drawdown to kill curly-leaf pondweed and reduce phosphorus
Timing: Late summer 2018-spring 2019
Cost: $310,000-$420,000
User Impacts: Users will notice low water levels in Normandale from late summer to the following spring.

DID YOU KNOW?
Starting the lake drawdown in mid-August cues turtles to leave the lake and travel up or downstream to find a new home to overwinter in.

PROJECT INFORMATION
Find up to date project details and timelines at: blm.mn/nlwq
WHAT IS AN HERBICIDE TREATMENT?
An herbicide treatment is used to kill undesirable plants. Endothall, an herbicide that targets curly-leaf pondweed, will be applied in the spring from a boat. It will target any of the invasive plants that remain after the drawdown. Endothall is most effective when applied in late April or early May. This timing also minimizes impacts to native plants that begin growing later in the season.

PROJECT DETAILS
• Treat remaining curly-leaf pondweed, an invasive plant
• Successive treatments for 2-5 years may be necessary
• Needs permits from the MN Department of Natural Resources and Army Corps of Engineers

QUICK INFO
What: Herbicide treatment for curly-leaf pondweed
Timing: spring 2019
Cost: $100,000
User Impacts: Users will see a treatment boat applying herbicide on the lake, up to a few days.

DID YOU KNOW?
The District did a drawdown and herbicide treatment on Northwest and Southwest Anderson Lakes in Eden Prairie. Curly-leaf pondweed was reduced in the lakes and water quality improved.
WHAT IS AN ALUM TREATMENT?
Aluminum is applied to the lake from a boat as a solution of alum (aluminum sulfate). It forms floc, a fluffy substance, that settles to the lake bottom. The aluminum binds with phosphorus in the sediment to prevent it from going back into the water. Too much phosphorus in a lake is undesirable because it causes algae blooms, one of the green, gunky materials that grows on the surface of the lake. Alum application will occur in the spring, before significant aquatic plant growth, allowing a more effective treatment.

PROJECT DETAILS
• Treatment to control internal phosphorus loading
• Treatment may be repeated in the future (in 5-10 years)

QUICK INFO
What: Alum treatment to reduce phosphorus
Timing: spring 2019
Cost: $140,000
User Impacts: Users will see a treatment boat applying alum on the lake, up to a few days.

DID YOU KNOW?
Alum treatments are safe and the floc is harmless to water creatures and aquatic plants. No adverse effects on spawning habitats have been noted.