



PROJECT HISTORY

How It All Began

Each spring, the City of Delafield Lake Welfare Committee has hosted a meeting to inform residents about the current state of Nagawicka Lake and discuss any Lake projects underway. At these meetings, residents began discussing issues related to extreme silting in their areas, such as problems for navigation, fish spawning and maintaining their property values.

As a result of this public input, the Lake Welfare Committee recommended to the Common Council that it pursue hiring a consultant to examine this in greater detail to determine the scope of the issue.

Consultant Recommendation

After lengthy testing and review of the Lake, the consultant recommended the City develop a restoration plan to dredge and restore several areas of Nagawicka. Although residents could individually apply to the DNR to restore their own frontage, a more cohesive plan to dredge and restore larger areas could prohibit rapid re-silting. Additionally, the municipality could apply for grant monies; individual property owners could not.

The Decision to Proceed

Given the large scope of the project, the risk to the greater community's welfare and the opportunity to apply for grants, the Common Council approved filing for a Chapter 30 permit to dredge and restore Nagawicka.

FREQUENTLY ASKED QUESTIONS

Why is maintaining Lake Nagawicka important to greater Delafield?

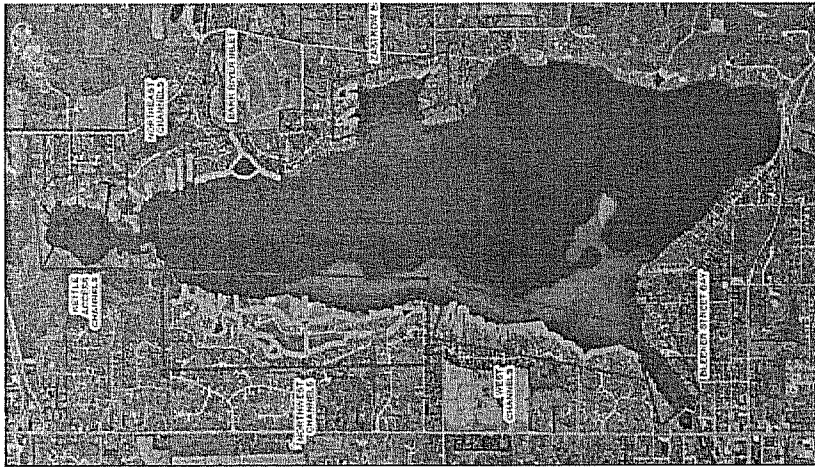
As the City would not allow its roads to crumble, it is crucial to protect such a vital aspect of our community as Lake Nagawicka. The City spends over \$500,000 per year to maintain streets and highways, which is an important infrastructure for residents, businesses and visitors.

Lake Nagawicka supports our ecosystem, recreation, business investment, tourism, and the property tax base of homes on and off the Lake. Nagawicka represents "Lake Country" and the appeal of living in a lake community.

As would be the same with its roads, were the City to allow Lake Nagawicka to decline into an irreparable state, Delafield would not be as desirable to home buyers, business operators or tourists, and the opportunity to draw from such a premium tax base would ultimately be detrimental to all City taxpayers.

Which areas of Nagawicka are affected?

NW Channels, NE Channels, Kettle Access, West Channels, St. John's Bay, Zastrow's Bay, Bark River Inlet Sediment Trap.



Will all of these areas require dredging and restoration?

The five key areas shown by a thick line above are proposed to be dredged and restored. St. John's Bay and the Kettle Access will receive improved navigational channel buoy placements. These two areas have been identified by the WI-DNR to have sensitive aquatic habitats and will not be dredged.

What is dredging?

Sediment from the lake bottom will be "vacuumed" and hydraulically pumped through an underwater pipeline. Starting 3' from the shore in main-lake areas, a prism-shaped cut will be made downward with a 3' to 1' slope. Vacuuming will then extend into the Lake about 50', ending with a 3' to 1' upward slope. The equipment will dredge to a minimum depth of 5' and a maximum depth of 6' in most areas, but will not alter hard bottom. Channel areas are unique and will have slightly different prism cuts. Overall, the project will remove approximately 107,000 cubic yards of silt.

Where does all this silt come from?

The largest sources of silt in Nagawicka come from areas where upland development, farmlands and bare shorelines have allowed storm waters to rush toward the Lake, carrying with it runoff sediment. Additionally, leaves and other lake vegetation naturally continue to break down and compost into lakebed soils.

Based on research compiled by the Southeastern Wisconsin Regional Planning Commission, areas northeast of Nagawicka within the Bark River watershed have contributed the most to silting.

LAKE WELFARE COMMITTEE MEMBERS

DISTRICT	NAME	PHONE #	EMAIL ADDRESS
1	Gary Pratt	367-0703	gp@wi.rr.com
2	Jerry Bills, Chair	367-5915	glbills@sbcglobal.net
3	Jerry Dunnick	646-5244	jdunnick@wi.rr.com
3	Dave Greenway	646-9281	dgreenway@wi.rr.com
4	Jerry Burg	646-8344	bur08@wi.rr.com
5	Gayle Gaborsky	303-4151	Mike42tc@mac.com
6	Lynn Morrison, Ald.	414-588-3308	lmorrison@ci.delafield.us
6	Don Tills	646-4093	tillsd@milwpc.com
6	Ken Wiedmeyer	646-3409	kwiedmeyer@wi.rr.com
7	Kent Attwell, Chair	367-1982	kent.attwell@ge.com
Nashotah	Rich Lartz	367-8440	rlartz4451@aol.com
Nashotah	Louis Scopp	646-8969	lscopp@wi.rr.com

IMPORTANT DATES

Nov 12	6 pm	Monthly Lake Welfare Meeting	City Hall Lower Level
Dec 10	6 pm	Monthly Lake Welfare Meeting	City Hall Lower Level
Jan 14	6 pm	Monthly Lake Welfare Meeting	City Hall Lower Level
Feb 11	6 pm	Monthly Lake Welfare Meeting	City Hall Lower Level
Mar 11	6 pm	Monthly Lake Welfare Meeting	City Hall Lower Level
April 7		REFERENDUM VOTE	7 am – 8 pm
			DPW on Main Street
			or
			Christ The King Church
			Corner of Genesee
			and West Shore Drive

ADDITIONAL INFORMATION SESSIONS

For each of the areas being restored, meetings will be held to address details and questions pertaining to that particular area. You will receive a personal invitation to those meetings. They are tentatively planned for February and March.

How will the Lake Restoration Project be funded?

For those who will have lakebed dredging in front of their property, they will be given a special assessment for the full cost of their portion of the area's project. There will be at least 10 years for riparians to reimburse the City, which is similar to when sewers were installed.

All City of Delafield residents will share in the cost of improving those areas designated as for the common good, such as the Bark River Inlet Sediment Trap and any City-owned properties. All City property taxpayers will pay approximately \$.07 per \$1,000 of assessed value each year for 10 years (\$14 for a \$200,000 property, or an approximate 10-year total of \$140).

The City will continue to pursue grants, private endowments and the potential sale of the dewatered soil to help fund portions of the project.

How much is it going to cost me and my family?

The exact cost will be determined prior to Common Council approval of referendum language. Currently, estimates for lake residents who have 50' of their shoreline area dredged will pay \$8,000 (paid over 10 years). Riparians in the affected areas with lengthy shorelines will have considerably higher assessments. The Lake Welfare Committee will work with the City to distribute cost estimates to each affected property owner in the dredging areas when firm bids have been received from contractors.

Will there be a referendum to determine whether or not to proceed?

A referendum will be held in 2009, at which time residents can determine the fate of Nagawicka Lake and the City of Delafield.

What can we do to prepare for the referendum vote?

Mark the April 7 referendum vote on your calendar. Call three friends who live off the Lake and ask them to vote on the referendum. On April 7, call those friends again and remind them to vote. Make it a social event – vote together and go for coffee after!

What is the Lake Welfare Committee's Mission?

The Lake Welfare Committee "LWC" is dedicated to studying all problems and issues relating to Nagawicka Lake and the Bark River within the City limits, and to making recommendations to the Common Council concerning solutions.

Other than contacting Lake Welfare Committee members, how can I get more information and review the Chapter 30 permit and full Restoration Plan?

Go to the City website: www.cityofdelafield.com
Use the arrow to scroll down in "What's New"
Click on "Lake Nagawicka Restoration Project"

Is there a way to prevent the silt from reaching the Lake?

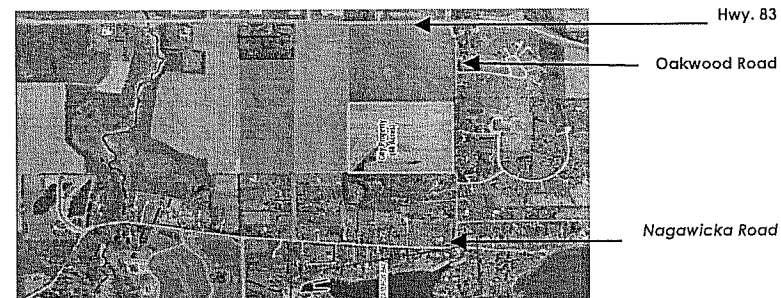
If the DNR approves the dredging of a sediment trap at the mouth of the Bark River near the Sylvester Drive area, the intention is to have silt deposit into the trap, from which maintenance dredging can occur. Removing sediment from one small area more frequently is more cost effective in the long run.

Additionally, the Lake Welfare Committee intends to work more closely with upland communities, such as Hartland, Pewaukee and Brookfield, to provide greater awareness to this issue and hopefully affect positive future changes.

Where will dredged "spoils" go?

A 10,000 foot pipeline will emerge on easement property in Zastrow's Bay and continue across Nagawicka Road onto 15 acres of a 37-acre plot of City-owned land along Oakwood Road and near the end of Hirschman Lane.

The dredged spoils will be deposited within a fenced area and the dewatering process will create a rich soil to be used in developing the property into a future park or it may be used for resale purposes to help offset the project costs.



Are the dredged spoils safe?

Sediment from each of the proposed dredge sites has been tested for multiple sources of potential contamination, including arsenic, copper and lead. All safety requirements have been met by the very stringent testing standards of the DNR. The cost of the project was greatly increased due to the DNR's strict guidelines.

How will the spoils site be protected for future use?

The dredged spoils (silt and water), will be pumped into geotextile bags used for safe dewatering. Underneath the bags will be a low permeable geomembrane liner to restrict water from seeping under the subsoils.

What will happen to all the water that is dredged along with the silt?

All of the over 400,000 gallons per day worth of "carriage" water will be returned to the Lake after the silt is removed in the dewatering process.

Will dredging be disruptive?

For the general public, it should not be very disruptive, other than needing to avoid dredging equipment and emergent pipes with watercraft. The pipeline will be submerged in some areas and floating in others. In all cases, these areas will be well-marked for day and night avoidance.

Where dredging occurs, residents will hear the machinery in operation. This may be a 24-hour issue, but it will be short-term as the dredging moves along to other parts of the Lake.

If the lakebed off your property is slated for dredging, you will need to make a decision about whether or not to install your pier, or perhaps consider removing it earlier than usual. As the process moves forward, the City will provide you with more information about timing so you can plan accordingly.

Do we need to remove our piers and lifts?

The Lake Welfare Committee strongly recommends you remove your pier prior to scheduled dredging. The dredging contractor will NOT dredge within 10' of any pier. A schedule will be provided to help you plan ahead.

Will there be an odor from the dredged spoils?

While we expect an odor to exist, it is not expected to irritate anyone, and it will be temporary. Due to the dewatering process, much of the spoils will be contained, so odors should be limited. There will be no federal or state violations of air emissions during this project. Our consultant has indicated they have never had serious odor issues during past dredging projects.

When will dredging and restoration take place?

Dredging will begin after the spawning season, no later than July of 2009. Restoration projects already began in the fall of 2006 with two demo-sites to show the positive effects of buffer landscaping at the shoreline.

Can we visit shoreline sites which have already been restored?

Absolutely! The first restoration demo-site is located in the northwest channels on Stonebridge Isle, at the home of Herb and Mary Rasmussen, owners of Sandy Bottom Nature Center. Herb and Mary and other area landscaping specialists have helped lake residents establish planting beds made up of beautiful native perennials on their shoreline to eliminate storm water runoff, reduce goose guests and develop deep root systems to prevent erosion.

Another restoration demo-site installed in the fall of 2007 is located along the Bleeker Street launch park area. This site can be reached by land or boat and has already begun showing its beauty and function.

Please visit the demo-sites often to get ideas for your own shoreline (you are encouraged to read the educational signage at each site).

What about the aquatic plants being removed during dredging?

During the permitting process, the Lake Welfare Committee and the DNR performed a plant survey of the Lake. The dominant vegetation in the dredging areas is Eurasian Water Milfoil, a terribly invasive species. In areas where abundant vegetation and fish habitat exist, there most likely will not be much dredging disturbance.

What will happen to the fish?

The DNR will not allow us to dredge during spawning season, so dredging will take place between July and November, with rare exceptions.

We expect a small amount of fish to be taken away in the dredging process, but the noise and activity should dissuade most from entering the area. The Lake Welfare Committee will be working with the DNR to determine fish habitat restoration after project completion.

For the longer term, the fish habitat should be much stronger with clearer water, better spawning areas, improved vegetation and fewer mussels (hopefully a significant addition to the dredged spoils).

What other types of restoration will take place?

A plan has been developed to prevent erosion at the dredged sites with submergent re-vegetation. Where practical, native aquatic plants will also be established in an effort to crowd out the non-native Eurasian Water Milfoil.

Ongoing education of lakeshore owners will also take place to alert residents to the benefits of shoreline buffer landscaping.

Will a public pier be built on St. John's Bay?

Yes, the pier was funded in the 2008 City budget. The Department of Public Works hopes to install it this Fall or early Spring, 2009.

What can residents on and off the lake do to help prevent silting?

Raingardens should be installed on every property on AND off the Lake to capture storm waters from running off grass into streets that eventually rush into the Lake, carrying along sediment collected along the way.

Cars should be washed on grass, instead of on the driveway, where the pollution flows into the street and into waterways.

Downspouts should be directed into gardens instead of hard surfaces. Leaves should be mulched on the lawn during the growing season and composted if collected in the Fall.