



**Waterford Waterway Management District  
Navigation and Hydraulic Management Committee**

**07.06.2021**

**Vision:**

To provide rapid and continuous impact to riparian owners who struggle to navigate from their piers to the lake and river and increase navigability for all users in the channels adjacent to those properties.

**Objective:**

The objective of this project is to address and improve water depths in areas adjacent to the channels already identified in the past as requiring dredging, but at a smaller scale that may be approved and funded at a faster pace than previous dredging efforts with minimal or no engineering/consulting costs. The project would follow the guidelines of an existing DNR dredging permit for individual riparian owners allowing up to 50 cubic yards of sediment per property to be removed each year for the next three years. One permit per year will be filed for approximately 500 owners, at a cost that the majority of owners will agree to by vote, which would then be added to tax levies.

**Goals:**

Begin dredging in fall of 2021

Remove 50 cubic yards per year of sediment in front of approximately 500 properties, for three years, totaling 75,000 cubic yards removed

Dredging only after Labor Day and before Christmas

Achieve main channel depths between 3-5 feet deep in project areas

Achieve depths from shorelines to main channels of up to 5 feet deep

65% of project funds paid by directly affected owners

19% of project funds paid by other owners

15% of project funded paid by government grants

1% of project paid by donations/sponsors from local businesses

Maximum out of pocket from affected owners \$400/year for 10 years



## **Narrative:**

This small scale dredging plan is based on a current Wisconsin Department of Natural Resources standing permit, WDNRGP20-2018, which allows for any riparian owner to dredge up to 50 cubic yards of sediment per year from their shoreline out to the channel, provided they complete paperwork for the application and follow the rules set forth by the DNR. This project takes that individual permit and multiplies it by 500 - a collective permit representing 500 riparian owners, united under one permit. By forming a comprehensive project that promises 25,000 or more cubic yards to be removed per year, the project draws the attention of dredging operations that can provide the lowest cost per cubic yard due to the larger scale as compared to one owner, or even a group of ten owners, that would pay a significantly higher cost per cubic yard due to high mobilization costs and a relatively small amount of sediment to be removed.

Unlike the 500,000 cubic yard project that has been on the table for years, this project will most likely be achieved using mechanical dredging, with dewatering to take place on sediment barges. The carry water will drain back into the river on the way to the offloading site, eliminating the need for dewatering boxes, large tracts of land, soil testing in the dewatering areas, and most importantly, concerns from the DNR about nitrates and ammonia seeping into wells. The removed sediment will be spread on farmers' fields, 3" deep, with no more than 3,000 cubic yards on any one site. The WWMD has secured approval from nearby local farmers, reducing the distance for hauling the sediment. The DNR also will agree to allow for disposal on State-owned fields to the west of our waterway.

Discussions with dredging operators lead us to believe this project can start in October and wrap up each year in December. Dredging starts at the shoreline, and will cover a path as wide as 30% of the linear feet of shoreline per owner, all the way out to the navigation channel. Once 50 cubic yards has been removed from in front of a parcel, it will be considered complete for the calendar year. The next year, another 30% of the linear feet of the shoreline will be dredged. Ultimately, in the final year of dredging, 90% of the shoreline will have been dredged. If a typical pier is 4' wide, and we won't be able to dredge less than a foot from the piers, then we will have essentially dredged the entire shoreline of a typical 60' wide lot.



## **Schedule:**

- 6.16.21 Board meeting regarding only dredging and board approval to proceed
- 6.26.21 Gather 500 signatures w/ financial backing approval from directly affected owners
- 7.20.21 Send out RFP to dredging companies
- 7.30.21 Complete permit application with DNR
- 8.14.21 Riparian owner special meeting and vote to approve project
- 8.14.21 Award dredging project to lowest bidder
- 8.25.21 Finalize financing
- 9.07.21 Mobilization of dredging begins
- 09.07.21 Dredging in Conservancy Bay begins
- 09.08.21 Disposal of sediment begins on Barbian property
- 09.18.21 Dredging in Tichigan bays begins
- 10.01.21 Secure grant from Fox River Commission
- 10.11.21 Dredging southeast of the lake begins
- 10.18.21 Dredging Island View Bay begins
- 10.20.21 Legal work completed and tax levy determinations with Racine County
- 10.25.21 Dredging in Buena Lake begins
- 10.25.21 Disposal of sediment begins on farm fields east of town
- 11.08.21 Dredging in Elm Island Bay begins
- 11.22.21 Dredging north of dam begins
- 12.03.21 Dredging for 2021 completed
- 12.10.21 Dredging equipment demobilized and off of waterway

Similar schedule for 2022

Schedule for dredging to start in September of 2023

Review opportunity for aeration equipment to begin in spring 2024 to maintain depths.



## Costs

\$625,000 to \$875,000	2021
\$625,000 to \$875,000	2022
\$625,000 to \$875,000	2023
\$1,875,00 to \$2,625,000	Total

Assuming no financing help from grants or donations, and entire project is financed up front, \$510 per year from each directly affected (D.A.) owner, and \$100 per year from each indirectly affected owner. Indirectly affected owners (I.A.) are owners on the lake or river whose shoreline is not in need of dredging, but likely takes (or will take) their boat into these areas.

The taxy levy would be added to the owner's taxes that are paid in December of 2021 or January of 2022.

*A contract would be awarded to the lowest bidder who can meet our needs for the first year. The contract will give the WWMD pricing and options to continue dredging in 2022 and 2023, and will include pricing for 2024 and 2025.*

*A review will be completed after the first year to evaluate the contractor's work, determine if we will pursue the additional year options, or continue the project at all in the following years.*



## **Physical Description of Areas to Be Dredged:**

### ***Elm Island Bay & Fowlers Bay***

From 4622 Empire Lane *East* to 4732 N River Bay Road  
From 28811 Elm Island Drive *West* to 29333 Elm Island Dr  
From 28910 Elm Island Drive *West* to 29030 Elm Island Dr  
From 5020 Elm Island Circle *Northwest* to 4946 Elm Island Circle  
From 4918 Elm Island Circle *South* to 4800 Elm Island Circle

### ***Buena Lake***

From 4735 Riverside Road *North* to 4901 Riverside Road  
From 4909 Riverside Road *North* to 5239 Riverside Road  
From 5409 Scenery Drive *North* to 5737 Scenery Drive  
From 5724 W Peninsula *South* to 5401 Peninsula Dr W

### ***Island View Bay (50 Properties, 2,500 CY per year)***

From 28702 Gawin Dr *West* to 28712 Gawin Dr  
From 5718 Island View Dr *Southeast* to 5633 Island View Ct  
From 28810 Wood Dr *East* to 28713 Wood Dr  
From 5700 N River Bay Rd *North* to 5962 N River Bay Rd

### ***Conservancy Bay to Mouth of Tichigan Lake***

From 29214 Forest Isle Lane *West* to 29314 Forest Isle Lane (Includes Dickinson Ln)  
From 29318 Orchard Land *West* to 29429 Riverview Lane  
From 6732 Channel Road *South* to 6400 Channel Road  
From 6401 Tichigan Road N *Northeast* to 6437 Tichigan Road N  
From 29205 White Oak Lane *East* to 29134 White Oak Lane  
6522 Buena Park Rd  
From 6601 Riverside Dr *Southwest* to 6301 Riverside Rd

### ***Tichigan Bays***

From 6411 Willow Ln *North* to 6621 Willow Ln (includes Willow Ct)  
From 29129 Beechwood Ln *East* to 29103 Beechwood Ln

### ***Burma Road Bays***

From 6824 Burma Rd *South* to 6704 Burma Rd  
From 28636 Beach Dr *West* to 6725 Irma Ln (Includes Irma Ct)



### ***East River Bay Road Bays***

From 6472 Blue Heron Point Dr *South* to 6422 Blue Heron Point Dr

From 6320 Crane Ct *South* to 6300 Crane Ct

From 6240 Briarwood Cir *Southeast* to 28801 Briarwood Cir

From 6520 Washington Rd *East* to 6425 Washington Rd

From 6328 River Bay Rd *South* to 6212 River Bay Rd N

### ***Waterford Lake***

From 30304 Beach View Ln *West* to 30408 Beach View Ln

From 4313 Glacier Cir *North* to 4323 Glacier Cir

From 4329 Waterford Dr *East* to 4435 Waterford Dr

From 4420 Riverside Rd *South* to 4412 Riverside Rd

### ***War Bonnet Lane & Back Side of Island View Ct (9 Properties, 450 CY per year)***

From 28967 War Bonnet Lane *South* to 29031 War Bonnet Lane (Excludes

From 5710 Island View Ct *East* to 5618 Island View Ct

### ***Fox Isle Condos & Marina Cove Condos***

300 Foxwood Dr *North* to 405 Fox Isle Park

From 230 Milwaukee St N *North* to 636 Oak Lodge Road (includes Marina Ct)

### ***What About Linda's Canal (16 Properties, 800 CY per year)***

From 6645 Heidelberg Circle *South* to 6601 Heidelberg Cir

From 28837 Beach Dr *South* to 28837 Beach Dr

From 6632 Canal Ln *South* to 6600 Canal Ln

### ***Heidelberg Court (8 Properties, 400 CY per year)***

From 6616 Heidelberg Court *South* to 6504 Heidelberg Court



**Changing our world. One drop at a time.**