

Brice Prairie Conservation Association Dredging Project

Presented by Mike Todd

August 30, 2023

Project Summary

- The Brice Prairie Conservation Association is sponsoring a project that:
- Creates a nearshore fish overwintering area to augment Lake Onalaska's diminishing overwintering fish habitat
- Restores a nearshore summer and winter fishery, easily accessible from shore and nearby Mosey boat landing
- Creates an alongshore boat channel:
 - with water deep enough for watercraft to navigate
 - free of summertime surface vegetation mats, providing oxygenated water and edge habitat to support fish and other aquatic life
- Creates an affordably maintainable nearshore sediment trap, capturing longshore-drift sediment which will reduce shallowing of Lake Onalaska offshore areas and prolong overwintering habitat project life
- If we achieve funding goals, project will occur in fall of 2024. Past projects included public and private funding.

Lake Onalaska Boat Routes

-  Existing Channel (deweeded route)
-  Proposed BPCA Dredging Project
-  Transit from Schafer's to existing channel



A Bit of History



Courtesy of Anita Lemke circa summer 1985; a Red Sails canoe race; note the width of the channel

- Mid 1960's, permit secured from the Wisconsin Public Service Commission
- Project occurred in approximately the same area to create a recreational boat access channel for nearby residents
- The dredged material was placed on the nearby island just south of the dredged area
- The steel sheet piles were placed at the west end of the island to contain the dredged material
- Last dredging project was 1989

Overview



- Dredging project will run from Red Pines to Schafer's parallel to North Shore Drive and then link with existing 9 foot channel to Dresbach
- Dredging commences after fall harvest; year depends on when funds raised
- Expect to dredge approximately 18,500 cubic yards of material to de-water at Metallics site and then transport to Strupp site
- Hydraulic dredging is the method
- Will need to dig out sediment trap by mechanical means every few years
- Sediment samples taken and analyzed by Braun Intertec at request of Metallics; result no issues to crop land

Project Milestones

- Approximate cost of project is \$230,000 and most of this is figured AT COST to our friendly neighborhood dredger
- Initiated permit through United States Corps of Engineers (USACE) in October 2022
- Public comment period November 7-22, 2022
- Brice Prairie Conservation Association (BPCA) agreed to support this project in March 2023 since the project aligns with the organization's goals
- Braun Intertec took sediment samples at request of Metallica to determine dewatering location
- Completed Go Fund Me/Venmo/PayPal/Bank Account mechanisms June 14, 2023
- Received approved DNR permit July 7, 2023
- Expect to receive approved USACE permit this week
- Will initiate Fish and Wildlife refuge permit in September 2023
- Continue to raise funds and apply for matching grants

Donations to Fund Project

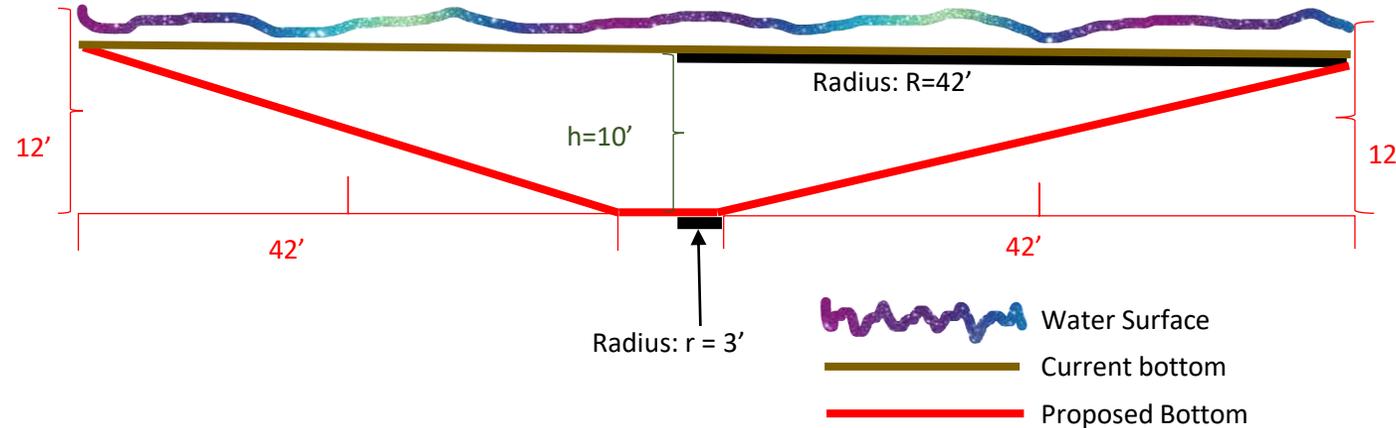
- **Fundraising Goal—\$200,000**
- Contributions are tax deductible
- Project referred to in funding sources as “Lake Onalaska Dredge”
- Go to <https://gofund.me/9bfa9f17> to donate; or
- Venmo the BPCA at @LakeOnaDredging; or
- Make checks payable to the “Brice Prairie Conservation Association” and please write in the memo section—“Lake Onalaska Dredge”.
- Suggestions regarding potential grants or other funding are welcome

Friends of Lake Onalaska

- There is also a sign-up for those interested in creating a non-profit membership group that could raise funds on an annual basis for lake maintenance
- Can include anyone interested in preserving the lake from Onalaska, to French Island, La Crosse, Dresbach, etc.
- Creating a non-profit that includes such a larger population could significantly impact future projects as it will create an annual income.
- Also looking for board members as well. So, please sign up if you haven't already.

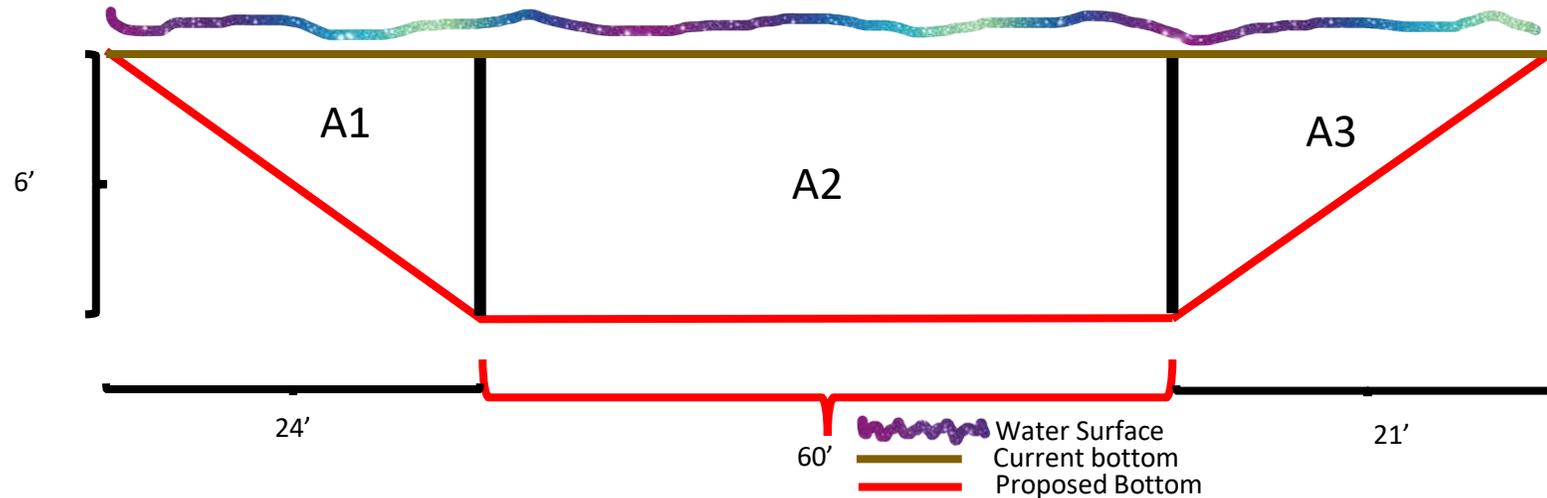
Back-up Slides

Sediment Trap



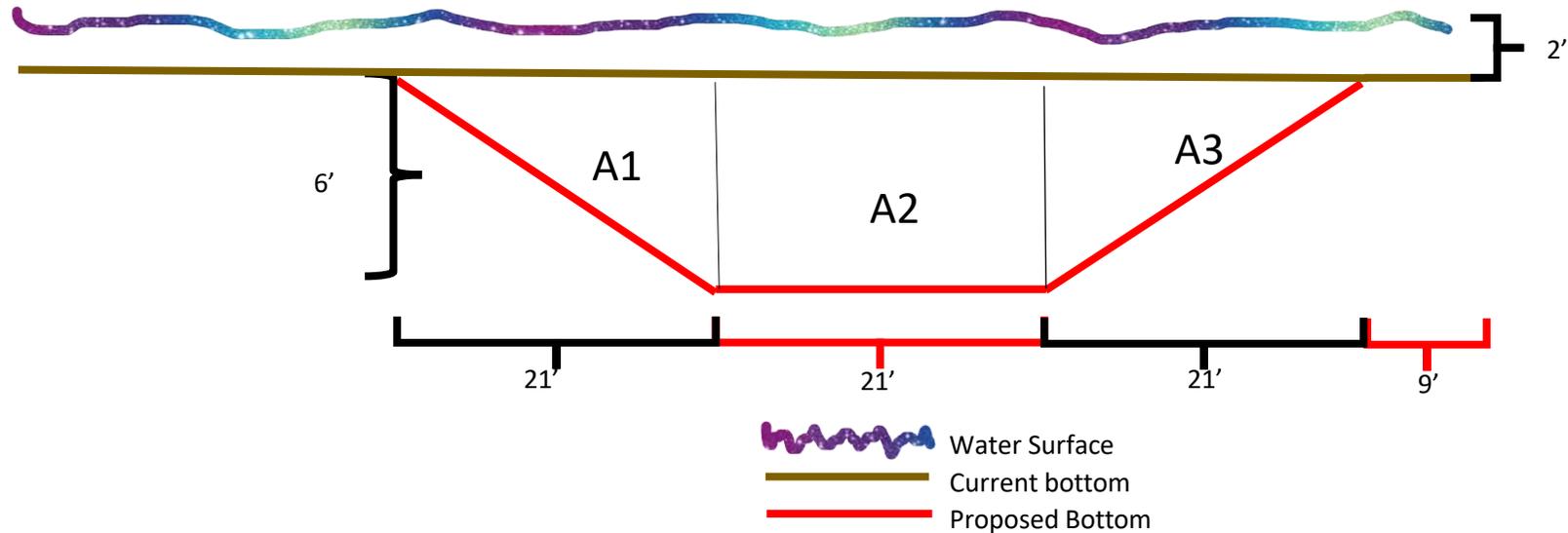
Cross Section of Sediment Trap. Approximate representation of a cross section of the current and proposed dredging for a sediment trap (red circle in figure 1). Current water depth is 2' and proposed dredge depth is 12' in the center sloping to current depth (2') with a top radius of 42'. Volume of material to be dredged in a truncated cone with a radius of 3' at the bottom and 42' at the surface. $(1/3) * \pi * h * (r^2 + r * R + R^2) = 19,866 \text{ ft}^3 = 736.5 \text{ yd}^3$. Slope of the cone sides will be approximately 1:4.15.

Fish Habitat



Cross Section of Fish Habitat. Approximate representation of a cross section of the existing and proposed dredging for fish habitat (yellow polygon in figure 1). Current water depth is approximately 6in-2ft and proposed dredge depth is 8ft. Approximate length of the area dredged will be 300ft and average width will be 105ft. Volume of Area 1 (A1)= $\frac{1}{2} \times 24' \times 6' \times 300' = 21,600\text{ft}^2 = 800\text{yd}^3$. Volume of Area 2 (A2)= $60' \times 6' \times 300' = 108,000\text{ft}^2 = 4,000\text{yd}^3$. Volume of Area 3 (A3)= $\frac{1}{2} \times 6' \times 21' \times 300' = 18,900\text{ft}^2 = 700\text{yd}^3$. Total estimated volume of material to be dredged from the fish habitat site = $5,500\text{yd}^3$.

Recreational Channel



Cross Section of Recreational Navigation Channel. Approximate representation of a cross section of the existing and proposed dredging for a recreational navigation channel (purple area in figure 1). The sides will have a slope of 1:3.5. Volume of Area 1 (A1) and volume of Area 3 (A3) are equivalent and = $\frac{1}{2} \times 6' \times 21' \times 1,050' = 66,150 \text{ft}^3 = 2,450 \text{yd}^3$. Volume of Area 2 (A2) = $6' \times 21' \times 1050' = 132,300 \text{ft}^3 = 4,900 \text{yd}^3$. Total estimated volume of material to be dredged is $9,800 \text{yd}^3$. Assuming an existing depth of 0.5ft and a height of dredged material to be 7.5ft, this amount would increase to $12,250 \text{yd}^3$