



**Waterford Waterway Management District
Special Meeting
Agenda
Saturday February 13th, 2021
10 AM
Tichigan Lions Civic Center
6710 Big Bend Road, Waterford WI 53185**

This meeting will be held in person and online using Zoom

- 1. Call to Order**
- 2. Presentation on 2021 Budget Amendment for Harvesting Equipment Purchase**
- 3. Q&A**
- 4. Motion to approve request for budget amendment**
- 5. Meeting Adjourned**



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- 1. Call to Order--10:07AM. Commissioners present: Margaret, Alex, Greg, Margaret, Grant, Dan. Scott present on Zoom.**
- 2. Presentation on 2021 Budget Amendment for Harvesting Equipment Purchase. Bill McCormick presented.**
- 3. Q&A--See below**
- 4. Motion to approve request for budget amendment-- Motion Approved by riparian voters 117-11 In person votes 65-4. Online votes 51-7.**
- 5. Meeting Adjourned 11:32 AM**

Q&A

Waterford Lake equipment usage? Yes. Equipment may not fit.

Percentage of usage river vs. lake? Shallow bays on lake. River-Nav lanes. 42 acres of Nav-Lanes. Difficulty to get to all of those in a season. We are leaving other methods of weed control to cover all areas.

Increased EWM. Is there increase focus? ProcellaCOR has been looked into.

Targeting Buena Lake. Will use EcoHarvester and ProcellaCOR.

Speed of Eco Harvester? Unload points? Marina by Docs. Library Launch. River launch. Tom Hintz launch. Various private launches. Access point in Buena Lake.

Lead time to build machine? Will it be available this summer? Eco will take \$4200 down payment. Will start to build on Feb. 15. Manufacturer states it will be ready by May.

Will it work on Lilly pads? Yes, according to other lake associations. DNR frowns on lilly pad removal.

Why won't DNR approve since its already approved in Wisconsin? It is a new piece of equipment. 5 years. DNR doesn't fully understand equipment. They fear it crosses into dredging and causes turbidity. Craig Helker wants others in DNR to make decision with him.

Is there a self unloader on machine? What about the trailer? Yes. Conveyor in bed of harvester. The trailer is a conveyor trailer.

Explain ROI. Year 2 and 3? Based on assumptions from year-to-year. Reduced expenses accordingly with assumptions based on reduced DASH, and chemical treatments.

Are demo costs used towards purchase? They are additional costs to the purchase.

How long does it take to fill the machine? It depends on thickness of weeds. It could be 7 - 30 minutes. It goes 2-3 MPH loaded. 10 MPH empty.

Why is the second harvester double the price of the first harvester? Potential for new machine to be bigger and thus more expensive. Clarify that we are only voting on this years budget.

Will bay by the main sandbar be included for treatment by the machine? Yes.

Has Starry Stonewart Weed been found on our waterway? We are not aware of it.

Will it stored under cover? Yes. At boat and farm. Indoors.

Since it reduces future weed growth, why would we need another one in the future? Navigational lanes are first to be addressed. EWM outbreak on our waterway. There are 194 acres of EWM that can be managed as well. Huge area that may require another harvester.

Manufacturers warranty? 1 year warranty. Inland Lakes will be used to maintain after warranty.

Restocking fee if not approved? \$3100. Due to our specifications on the machine. Non-standard stainless steel fasteners.

Will DNR approve extra areas, not just channels? Yes. DNR may approve other areas, especially with EWM. This will be better for river current areas.

Why don't we use more than 40 hours a week, especially during warranty? Too much boat traffic. Too busy on the waterway on weekends.

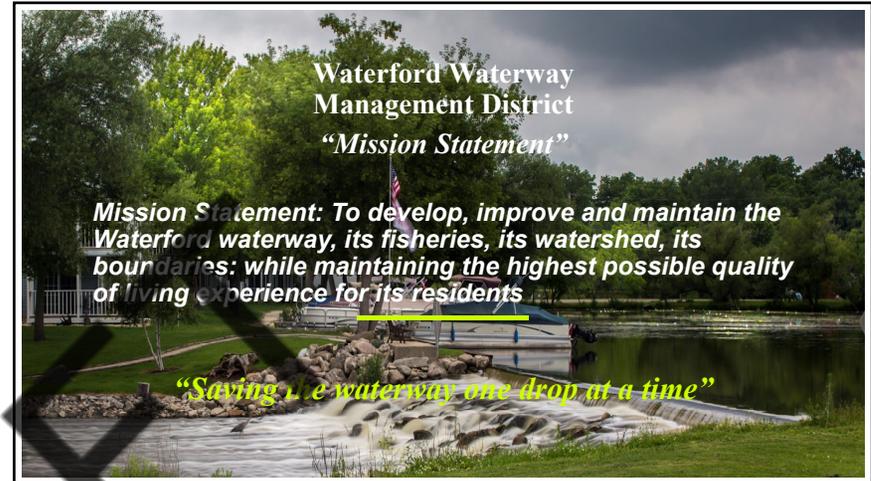
Use a dump trailer? Lots of manual labor. Safer to have conveyor system.

What if DNR revokes permit in subsequent years? Other methods in use today can be used. Will have to look at selling assets. We could address in future budgets. Recent DNR meeting showed interest in relationship with us looking at long term.

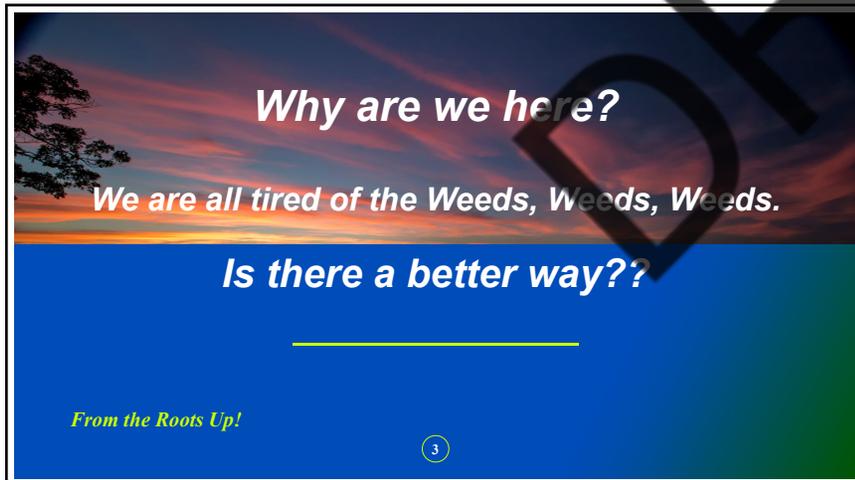
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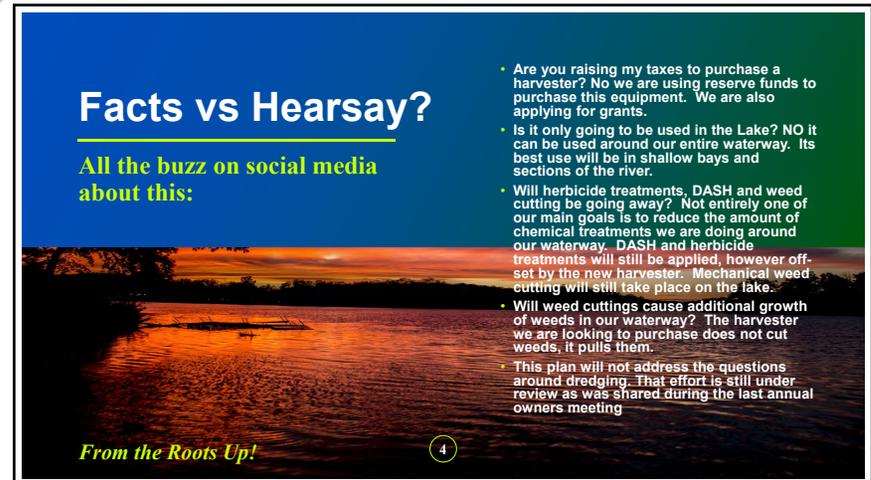
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History of Challenges:

The recent years:

- WWMD was developed in 2003
- Focus has been on challenges with water run-off, silt deposits and weeds
- Problems created by the floods of 2008, areas that had very little weeds are now choked out with weeds.
- We have had a significant increase of Aquatic Invasive Species (Eurasian Milfoil-EWM)
- To effectively manage aquatic plants we have to have a plan. In 2015, the WWMD had our Lake Management Plan developed by Onterra and was approved by the Wisconsin DNR.
- Every year we submit our weed management permit requests to the DNR for approval.
- All lakes/streams in WI are owned by the public. The WDNR recognizes that the public enjoys recreating on the waterway, however there needs to be a balance between weed harvesting and recreation.

From the roots up!



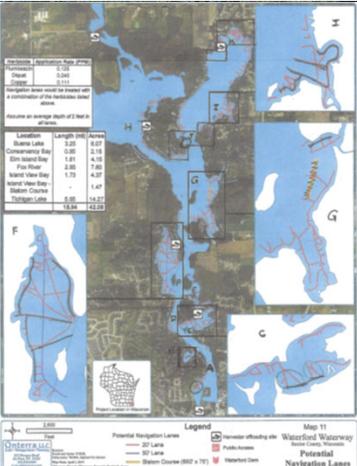
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Current treatment Methods:

Navigation lane targeted efforts

- **Navigation Lane Targeting**
 - WDNR recognizes that riparian owners have to get their watercraft safely out onto the waterway.
 - A large amount of your tax dollars goes towards maintaining weeds in the navigation lanes for riparian's to get their watercraft out from their piers or lifts into the main channel of the river or deeper water on the lake.
 - Lanes are 30' Wide.
 - The WWMD contracts various services to help maintain the navigation channels:
 - Herbicide treatment
 - Mechanical cutting
 - D.A.S.H. (Diver Assisted Suction Harvesting)

From the Roots Up!



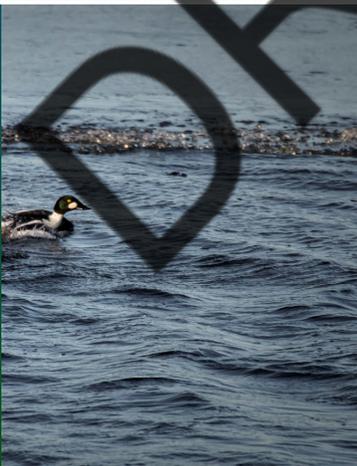
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Current Methods (Cont.):

Pro's & Con's for these methods:

- **Herbicide Treatments:**
 - **Pro's:**
 - Its fast to apply
 - Widely accepted by the WDNR
 - **Con's:**
 - Addition of chemicals to the water
 - Have to wait for plants to grow
 - Can't apply until first week in June
 - 28-days between applications
 - Not very effective where there's a current.
 - Plant decay creates muck/silt

From the Roots Up!



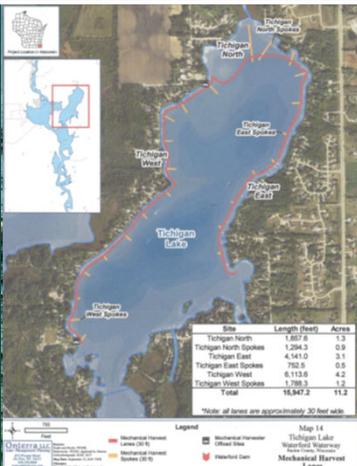
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Current Methods (Cont.):

Pro's & Con's for these methods:

- **Mechanical Cutting:**
 - **Pro's:**
 - Widely accepted by the WDNR
 - No limit as to how much harvesting we do over the approved areas.
 - **Con's:**
 - Current plan will not allow us to cut in 3' or less of water.
 - Slow process 2-3 MPH
 - Weeds grow back!
 - \$200/hr. contracted rate

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Current Methods (Cont.):

Pro's & Con's for these methods:

- **D.A.S.H. Treatments:**
 - **Pro's:**
 - In some areas we see less weeds than the year before.
 - **Con's:**
 - Extremely slow process
 - Very expensive due to slow process and \$165/hour.

From the Roots Up!

Area	Length	Width	Depth	Volume	Area
Connersway Bay	1.0	0.5	10	50	0.5
Dudgeon Lake	1.5	0.7	10	105	1.0
North Bay	0.8	0.4	10	40	0.3
Round Bay	0.6	0.3	10	30	0.2
Round View Bay	0.4	0.2	10	20	0.1
Round Lake	1.2	0.6	10	72	0.7
Round Lake Big Loop	0.9	0.4	10	36	0.4
Round Lake Channel	0.3	0.1	10	3	0.0
Round Lake	1.1	0.5	10	55	0.6
Total	8.4	4.2	10	420	4.2

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Vision/Goals/Objectives

Focus:

- Chemical reduction in the waterway
- Eco system improvements
- Direct control of weed management efforts (own equipment)
- Fish population improvement
- Enhanced recreational opportunities
- Enhanced real estate values
- Ability to harvest in less than 3' of water
- Remove the weeds from the waterway
- Improvement on challenges of water run-off

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Mechanical Harvesting

How it works:

Hydraulically driven paddle wheels allows for a draft of approx. 8"-12" perfectly suited for shallow operations.

IT PULLS WEEDS!

Weeds are pinched between a drive roller and a drum.

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Mechanical Harvesting

Eco-Harvester Pro's:

- Only Mechanical Harvester that pulls weeds on the market today with close to 100 in use around the world.
- Ideal for use in shallow water.
- Pulling head can skim as well as dive down 4' to pull weeds.
- Holds 4.5 cubic yards of weeds approx. 2,000 lbs.

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Mechanical Harvesting

Eco-Harvester Con's:

- Only three in use within state of WI, DNR is seeking to better understand this equipment.
- WWMD will be required to perform a demonstration to the DNR in May prior to permit approvals
- Harvest speeds efficiency is an unknown at this time.



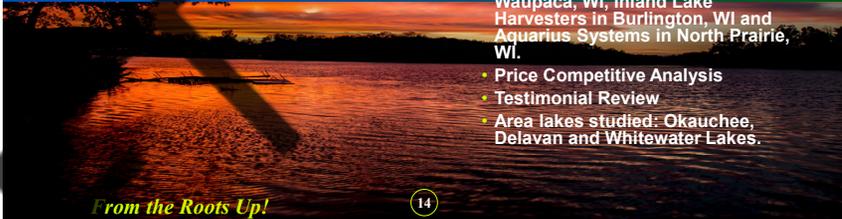
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Research

Education

- WWMD has spent two years studying options
- Lakes Studied: Clear Lake in Lincoln, County, Chetek Lakes Association in Barron, County
- Reference research: Alex Smith of the WDNR.
- Company visitations: Silver Mist in Waupaca, WI, Inland Lake Harvesters in Burlington, WI and Aquarius Systems in North Prairie, WI.
- Price Competitive Analysis
- Testimonial Review
- Area lakes studied: Okauchee, Delavan and Whitewater Lakes.



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Research

Education (Cont.):

- Pro's & Con's of volunteer vs Contracted labor
- Auxiliary equipment to be more efficient.



From the Roots Up!

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Research

Education (Cont.)

- Chetek Lakes Association Annual Harvest Numbers:



Year	Lloads Harvested
2016	182
2017	154
2018	131
2019	91
2020 (as of AUG 1)	43

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Risks

- **DNR Demonstration – May not receive a permit**
 - *Risk Mitigation – Restocking of the harvester*
- **Efficiency of harvester:**
 - *Planning to use mechanical cutting, Herbicide and DASH to fill in the gaps*
- **Conditions of the waterway: Wind may be a factor**
- **Labor Force issues: Contract labor.**
- **Weather: May 31st – September 17th Approx. 18 weeks**
- **Severity of weed issues in certain locations**

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Operating Plan

Equipment, Labor, Storage, Weed Disbursement

Equipment:

- Additional locations to dock harvester
- Off load sites need to have paved ramps
- Off season storage at Bolton farm. In doors.
- Off loading at Tom Greil's farm
- Spare parts for equipment operation and maintenance

Labor:

- Contract labor – Midwest Irrigation retired police officers
- 40-hours/week
- One operator on the harvester, one driving the truck/trailer
- Local equipment repair company secured

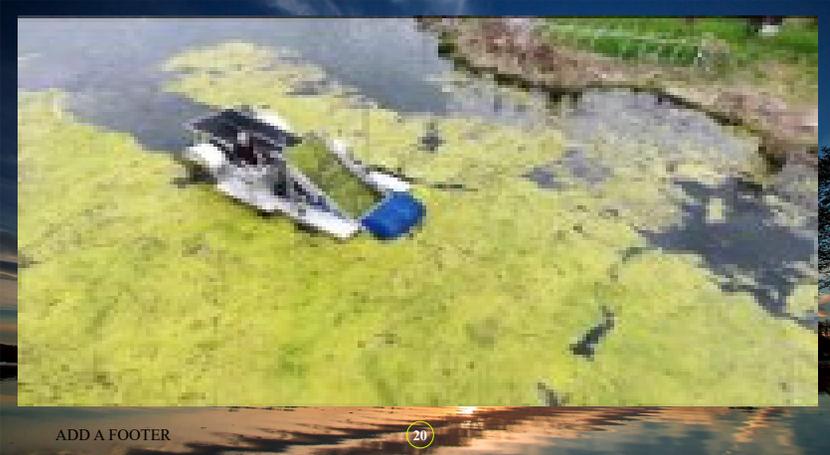
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Mechanical Harvesting in Operation

From the Roots Up! 19

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ADD A FOOTER 20

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Purchase Costs	Year 1	Year 2	Year 3
Purchase Costs			
Eco Harvester	88,849.00		
Trailer	38,000.00		
Truck	25,000.00		
Contingency	5,000.00		
Demonstration Fee	4,200.00		
Possible Transfer Barge		177,000.00	
Possible 2 nd Harvester/Cutter			\$160,000

Purchase Breakdown:

Taxes for 2021 will not be increased as a part of this proposal.

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Operating Costs	Year 1
Depreciation	\$30,370
Contract Labor	\$45,000
Operating Costs	\$14,310
Contingency	\$5,000
Total Operating Costs	\$94,680

Operating Costs Include:

- Insurance
- Fuel
- Annual Maintenance
- Storage
- Spare parts

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R.O.I.	Year 1	Year 2	Year 3
Cost of Equipment	\$152,000		
Labor	\$45,000		
Operating Costs	\$14,000		
Total	\$211,000		
Savings	\$50,000	\$75,000	\$75,000
Total 3 Years			\$200,000

Return on Investment (ROI) projected to be within 3 years

Annualized expense reductions in Chemical and D.A.S.H services

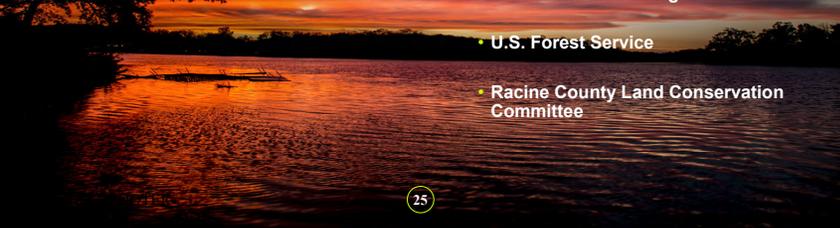
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Grant Applications:

We are exploring several options:

- WDNR Wisconsin Waterways Commission has a "Surface Water Grant" Program. If awarded the WWMD could receive up to 30%-35% funding towards the purchase of the harvester.
- Federal Grants through the USDA.
- U.S. Forest Service
- Racine County Land Conservation Committee



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Thank You

"For helping manage from the Roots Up"!!!!

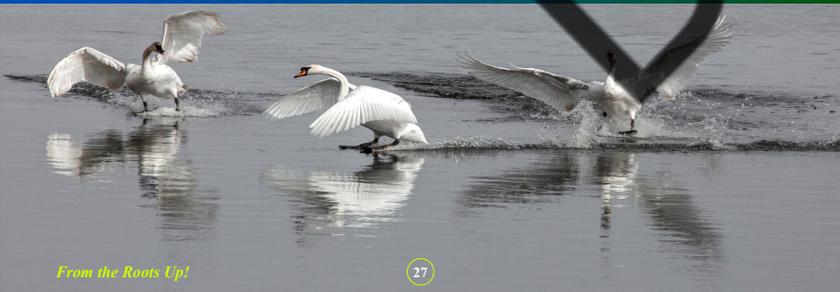


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QUESTIONS?

We value your input and feedback



From the Roots Up!

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