

Minocqua Kawaguesaga Lakes Protection Association

EWM Management & Monitoring Project Update Meeting
August 3, 2024

Eddie Heath
Onterra LLC
Lake Management Planning

ACEI-345-24
ACEI-346-24

MINOCQUA / KAWAGUESAGA LAKES PROTECTION ASSOCIATION

1

Presentation Outline

- Aquatic Plant Management Planning
- MKLPA's APM Plan
- Ongoing EWM Control Project
- Conclusions & Discussion

Onterra LLC
Lake Management Planning

2



3

Complexity of Lake Ecosystems

- Aquatic ecology is a quest to understand as many of the variables as possible and their magnitude of influence
- Lake management is figuring out how to support ecosystem function in the face of human presence
 - Lakes are not swimming pools
 - Learn how to make your system the best version of itself
 - While non-native, EWM is established in this system and likely always will be

Onterra LLC
Lake Management Planning

4

What is an APM Plan?

- An Aquatic Plant Management Plan needs to be updated at 5-year increments
 - Particularly for grants/permits related to aquatic plant management (AIS control grants, NR107, NR109)
 - Whole-lake point-intercept survey needs to be completed within last 5 years
 - Management action in grant or permit needs to be supported by Plan
- In November 2023, the MKLPA finalized the updated *Aquatic Plant Management Plan* for managing the Minocqua-Kawaguesaga System
 - Based upon the MKLPA's capacity (grants are a bonus, not relied upon)
 - Addressing primarily riparian desires & concerns
 - Attempts to be complimentary to other Plans
 - Acknowledges the Public Trust Doctrine
 - Will be updated again ~2028, inclusion of Comp Mgmt Plan components

Onterra LLC
Lake Management Planning

5

2023 Implementation Plan

- Goal 1:** Ensure the MKLPA has a Functioning and Up-to-Date Management Plan
- Goal 2:** Monitor Aquatic Vegetation
- Goal 3:** Prevent Establishment of New Aquatic Invasive Species
- Goal 4:** Actively manage EWM to keep the population from negatively affecting water recreation and navigation, while maintaining a healthy and vibrant ecosystem

Onterra LLC
Lake Management Planning

6

Integrated Pest Management (IPM)

Using a combination of methods that are more effective when applied collectively as part of defined strategy than when conducted separately

Onterra LLC
EAW Management Planning

7

NR107 (Herbicide) & NR109 (Mechanical)

Purpose

- Management of *nuisance-causing* aquatic plants in a manner consistent with sound ecosystem management and where the loss of ecological values is minimized

Interpretation in Northern WI (NOR APM Strategy)

- No herbicide use for native plants, even if nuisance causing
- Needs to be outlined in a management plan to conduct either
- Encourages the management technique with the least ecological impact, which is often inferred as manual-removal>mechanical>herbicide

Onterra LLC
EAW Management Planning

8

Implementation Plan - Goal 4

Goal 4: Actively manage EWM to keep the population from negatively affecting water recreation and navigation, while maintaining a healthy and vibrant ecosystem

Action: Conduct Integrated Pest Management Program towards EWM

Hand-Harvesting/DASH – primary and preferred method for scale-appropriate occurrences

Herbicide Treatment – primary method for larger and denser occurrences. Understand regulatory concerns, encouraged to find ways to utilize this tool as an environmentally safe way as possible

➔ **Trigger:** *dominant, highly dominant, or surface matting*, high use areas and high riparian frontage prioritized

Mechanical Harvesting – reservations about this method, but may be only option in face of regulatory opposition

Onterra LLC
EAW Management Planning

9

2023 EWM Mgmt Plan - Herbicide

“uncertainty about interactions between the herbicide and walleye larvae, and the potential for young of the year walleye to be predated after reduction or removal of their plant refuges”
-Ty Krajewski, WDNR

Site	Area	Avg Depth (ft)	Volume (per acre-ft)	PGU Rate	PGU Total
B-23	18.0	7.5	135.0	0.2	27.0
B-24	18.0	7.5	135.0	0.5	67.5
B-25	18.0	7.5	135.0	0.5	67.5
TOTAL	54.0	22.5	765.0	1.2	361.5

Onterra LLC
EAW Management Planning

10

2024 EWM Mgmt Plan - Herbicide

Site	Area	Avg Depth (ft)	Volume (per acre-ft)	PGU Rate	PGU Total
B-23	18.0	7.5	135.0	0.2	27.0
B-24	18.0	7.5	135.0	0.5	67.5
B-25	18.0	7.5	135.0	0.5	67.5
TOTAL	54.0	22.5	765.0	1.2	361.5

Onterra LLC
EAW Management Planning

11

2024 EWM Mgmt Plan - Herbicide

Site	Area	Avg Depth (ft)	Volume (per acre-ft)	PGU Rate	PGU Total
B-23	18.0	7.5	135.0	0.2	27.0
B-24	18.0	7.5	135.0	0.5	67.5
B-25	18.0	7.5	135.0	0.5	67.5
TOTAL	54.0	22.5	765.0	1.2	361.5


Onterra LLC
EAW Management Planning

12

Florpyrauxifen-benzyl (ProcellaCOR™)

Select extracted text from WDNR's chemical fact sheet:

- No drinking water or recreational use restrictions, including swimming and fishing, and no restrictions on irrigating turf. Short waiting period for non-agricultural irrigation purposes.
- Practically nontoxic to freshwater fish and invertebrates, birds, bees, reptiles, amphibians and mammals
- There are no risks of concern to human health since no adverse short- or long-term effects, including a lack of carcinogenicity or mutagenicity.
- Detailed information on field applications is limited (first in 2019 in WI, one site in each of Minc & Kawaga treated in 2019)
- Non-target impacts to select native plants inevitable
- Fish managers have concern for impacts to larval fishes if treatment timing overlaps



Onterra LLC
Lake Management Planning

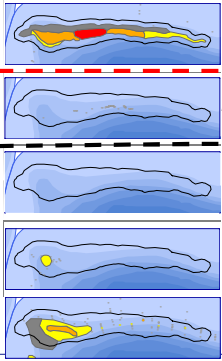
13

North Twin Lake (Vilas Co.)

EWM

ProcellaCOR Treatment: June 17, 2019
Application Area: 14.3 acres
Application Rate: 8.0 PDU

Manual Removal Efforts



- Late-Summer 2018 (Pre-Treatment)
- Late-Summer 2019 (3 months post-treat)
- Late-Summer 2020 (1-year post-treat)
- Late-Summer 2021 (2-years Post-treatment)
- Late-Summer 2022 (3-years Post-treatment)

Onterra LLC
Lake Management Planning

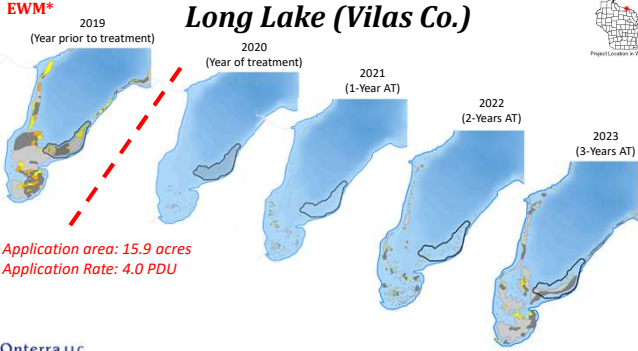
14

Long Lake (Vilas Co.)

EWM*

2019 (Year prior to treatment)
2020 (Year of treatment)
2021 (1-Year AT)
2022 (2-Years AT)
2023 (3-Years AT)

Application area: 15.9 acres
Application Rate: 4.0 PDU

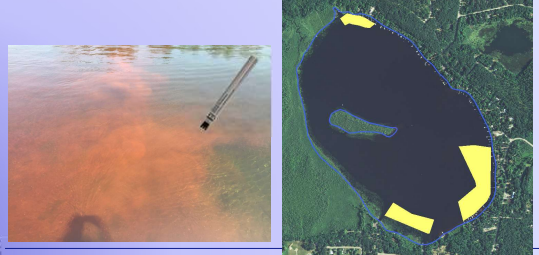


Onterra LLC
Lake Management Planning

15

Herbicide Treatment on Loon Lake

- Tracer Dye (Rhodamine WT)
- ~24 acres of 305 acre lake (7.8%)

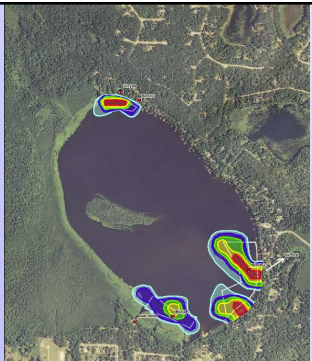


Onterra LLC
Lake Management Planning

16

1 HAT

- 75-100%
- 50-75%
- 25-50%
- 10-25%
- 5-10%

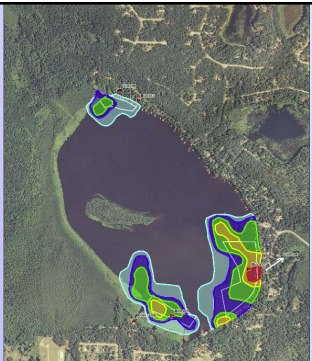


Onterra LLC
Lake Management Planning

17

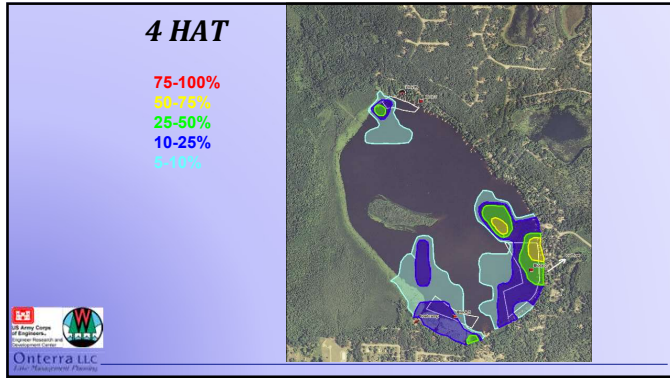
2.5 HAT

- 75-100%
- 50-75%
- 25-50%
- 10-25%
- 5-10%

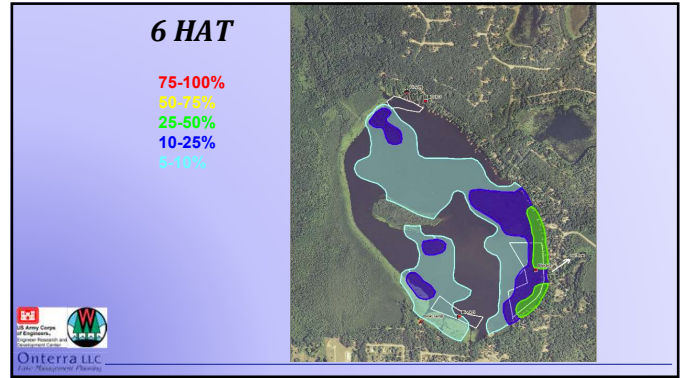


Onterra LLC
Lake Management Planning

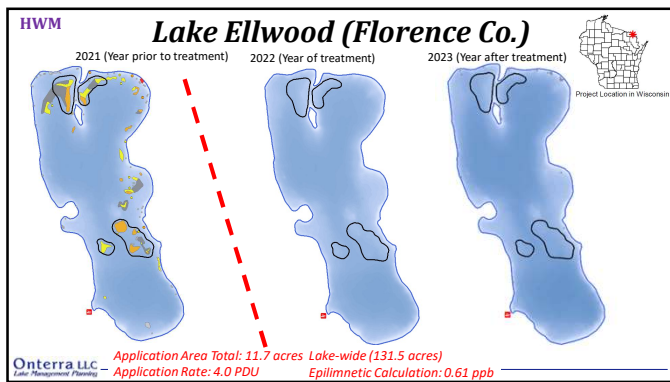
18



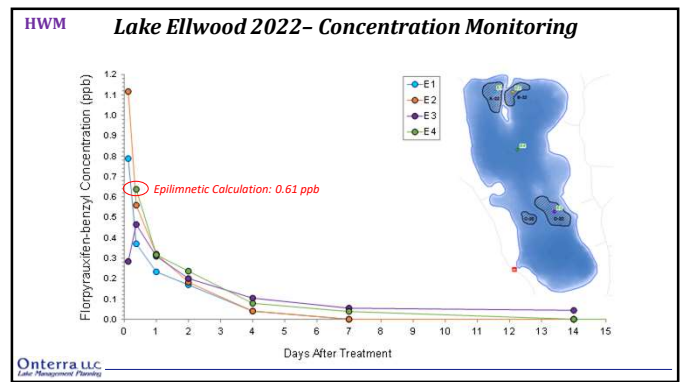
19



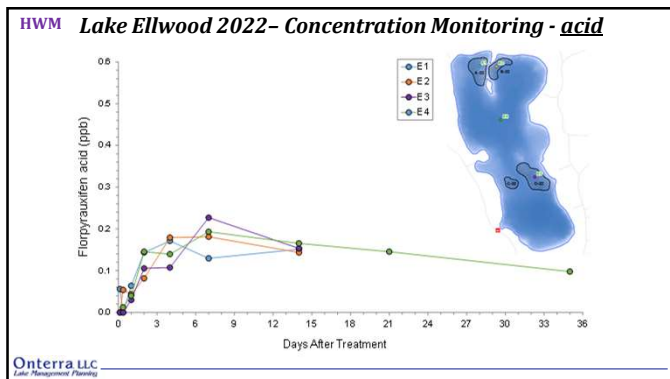
20



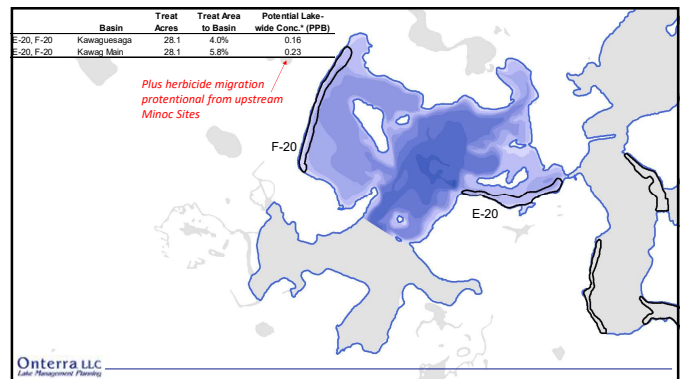
21



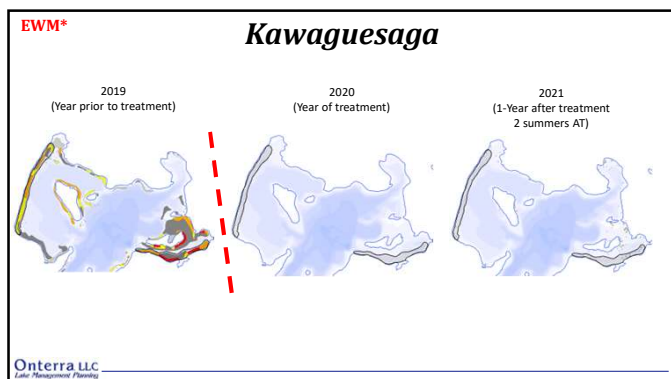
22



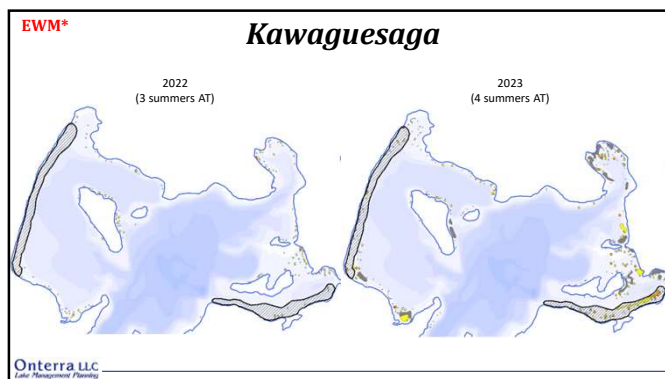
23



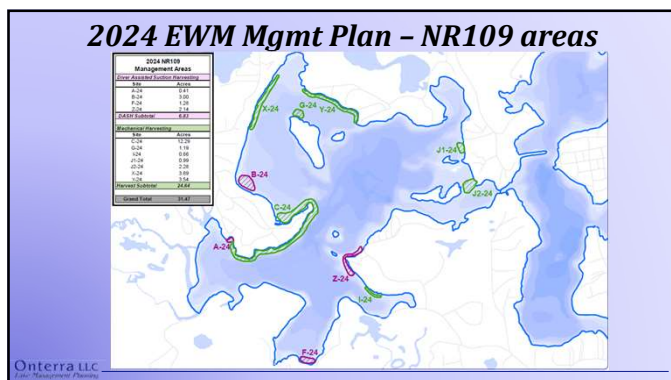
24



25



26



27

EWM Propagation

- Produces seed, but low viability (unless crossed w/ NWM)
- Spread primarily through fragments, a vegetative clone

Auto-fragment

- Purposefully produced
- High energy storage
- Higher viability

Allo-fragment

- Mechanical breakage
- Low energy storage
- Lower viability

Onterra Opinion: Ability to manage spread from fragments on most established systems is overstated.

Onterra LLC
Lake Management Planning

28

Next Steps

- Assess the 2024 management activities – herbicide treatment, DASH, & mechanical harvest
- Use the 2024 Late-Season EWM Mapping Survey to create initial strategy for 2025
 - Identify areas that meet herbicide treatment triggers within APM Plan
 - Meet with WDNR to determine sites of likely approval
 - Backfill other areas with DASH or mechanical harvesting
- Understand funding and limitation
 - WDNR grant program increasingly designed to disfavor repeat grant recipients
 - MKLPA has received \$422K in WDNR grants since starting with Onterra in 2019
 - WDNR has more say in management & monitoring approaches when partially funded by a grant
 - Grant pre-apps due Sept 15 (final Nov 15)

Onterra LLC
Lake Management Planning

29

Thank You

Onterra LLC
Lake Management Planning

Onterra LLC
Lake Management Planning

30