

Preserving and Enhancing the Lake Minnetonka Experience since 1967

Lake Minnetonka Vegetation & AIS Master Plan Update Harvesting Program Review

LMCD Board Meeting Work Session

December 11, 2019

Presented by: LMCD Board Director Bill Cook

**EOR Inc. &
Blue Water Science**



Review Basis of Harvesting

- Effectiveness
- Efficiencies
- Economies
- Recommendations

Status and Findings

- LMCD did not harvest in 2019
- LMCD conducted Lake Vegetation Survey to fill voids from other permit applications
- Lake equilibrium with Eurasian Watermilfoil (EWM) and Curly-leaf pondweed (CLP) is moving target
 - Herbicide treatments seem effective and appear to reduce EWM and CLP on annual basis
 - Weather patterns may have significant impacts on abundance of CLP and other vegetation in Lake Minnetonka.
- Flowering Rush
 - Moves slowly
 - Intermixed with native species
 - Not rapidly spreading in the lake as feared
- Zebra Mussels
 - Water clarity changes
- Additional LIDs being considered

Community Engagement & Feedback

- Outlined Community Engagement Plan at Beginning of Process
 - Significant Time Spent on Communications and Engagement
- Updates
 - Website
 - Social Media
 - Media Releases and Interviews
 - Direct Contact- presentations, phone, emails, walk-ins, and at lake
 - Emails- cities, licensees, lake service providers, bay captains, residents and other sign ups, etc.
- Feedback
 - Interactive Webpage- Everyone
 - Survey- Everyone
 - Technical Advisory Group
 - Cities

Interactive Mapping & Survey

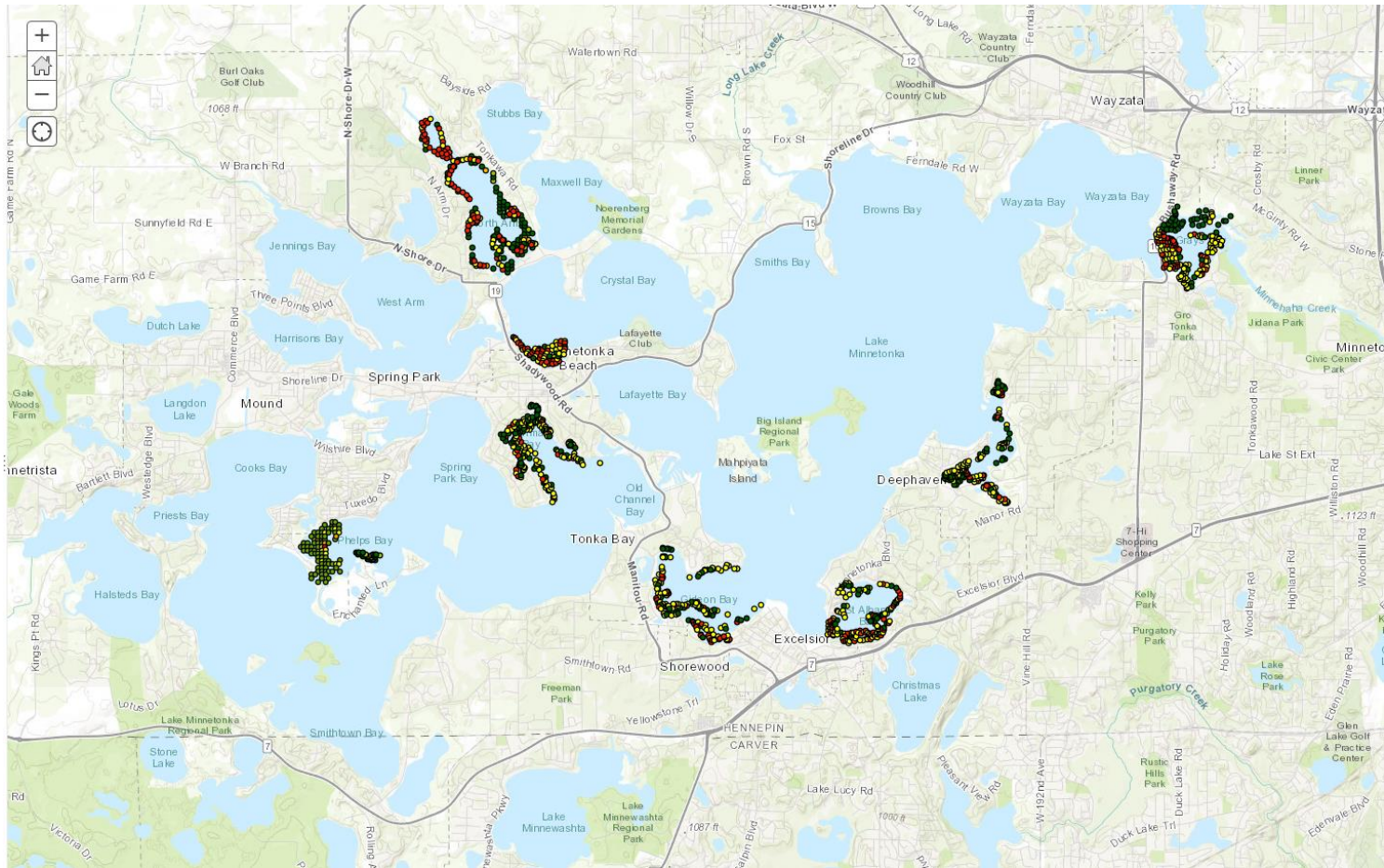
- Feedback Summarized in Public Comments Document
- Only Highlights of reported problematic vegetation next slides



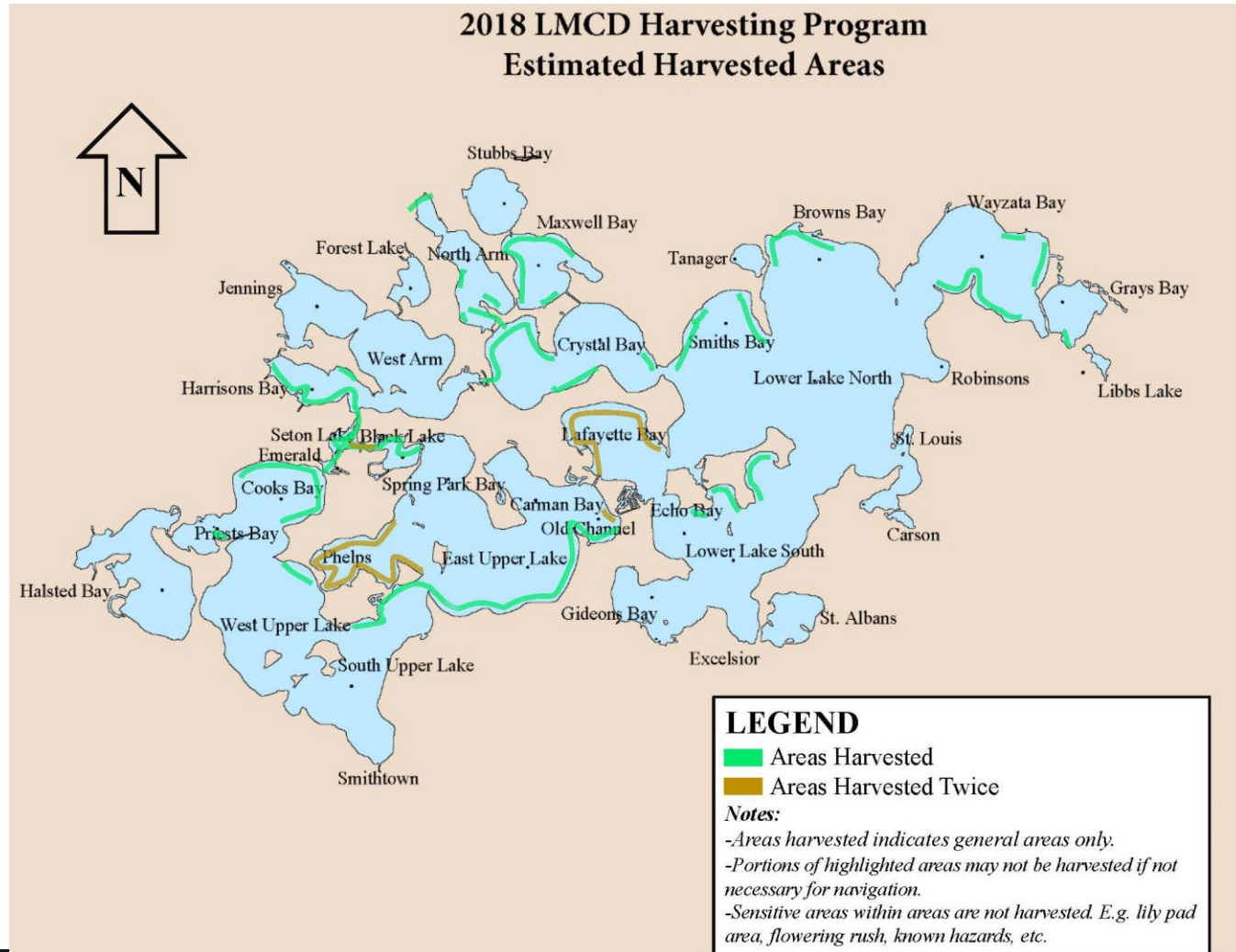
Effectiveness of Harvesting Program

- Effectiveness
 - Less than 6% of the littoral zone
 - Little effect on native species
 - With early harvesting regrowth will occur
 - LMCD constrained to summer harvesting season to match staff availability which limits capacity to address CLP and allows aquatic plants to reach nuisance conditions before management enacted
 - LMCD harvesting operations and boat traffic comparison
 - Weed Cutting and Floating material production
 - Boat propellers cut weeds on each pass and generate continual floating materials
 - Harvesters bulk cut weeds and in some cases generate concentrated floating materials, also pick up floating materials
 - Weed Transportation
 - Harvesters potentially transfer weeds to areas between cutting and hauling
 - Boat traffic transfers weeds at higher concentrations with lake currents, wind and boat hitchhikers
 - Boat propeller cutting of weeds and spread calculated to be greater than LMCD Harvesting operations

Bays with Herbicide Treatment



Harvested Areas 2018



Efficiencies of Harvesting Program

- Operations
 - Limited staffing depends primarily on field staff and needs to further emphasize strategic management and communications elements
 - Supervision of field staff needs to be improved
 - Field surveys of pre and post operation harvesting needs to be made
 - Locations need to be identified based on scientific knowledge of the areas, in addition to observational and customer feedback

Economies of Harvesting

- Equipment does not have to be replaced in 2020
 - Equipment operates well with routine maintenance, review mechanical and technical advancements
 - Shown as needing replacement for simplification of an economic analysis
 - Equipment needs safety upgrades that are routine or suggested if only feasible
- Additional Program Elements would cost the LMCD about \$50,000 per year
 - Without consideration of additional harvesting
 - Lake Management Professional (LMP)
 - Additional Training for Harvester operators
 - Safety
 - Mechanical Operations
 - Effective Harvesting Techniques
 - Additional Management and Field Supervision Time
 - Continued and Additional Floating Weed Collection
 - Other value-added services- trash and site cleanup, solar lights, complaints, hazards, and other intellectual lake knowledge
- Budget Impact
 - 10% increase in Municipal Dues on top of cost of living and cost of doing business increases

Recommendations

- Initiate 3-year Pilot Study
 - LMCD does not operate any harvesters
 - Harvesting will be contracted as follows:
 - Scope based on communications with Fisheries, Bay Captains and residents
 - Floating weed removal required for any harvesting operation
 - Harvesting only occur in navigation areas and greater than 150 feet from the shore
 - LMCD to hire a Lake Manager/Lake Scientist (Lake Management Professional)
 - Conduct annual pre-treatment and post treatment vegetation surveys
 - “No cut” areas should be mapped
 - Annual vegetation surveys should be made and updated
 - Annual updates to LMCD Board

Starry Stonewort Protection Plan

- No effective preventive program in Minnesota
- No approvals available through MN DNR Staff for pilots
- Need a new approach
 - Coordinated approach with MN DNR, LMA
 - Stay tuned
- Should have an early detection system in place
- Should have a rapid response ready to go

Questions & Board Direction

- Questions?
- Board Direction
 - 2020 Harvesting Program
 - AIS Strategy Input and Lake Management Professional
 - At formal meeting, requesting motion to approve the recommendations of EOR/Blue Water Science report as identified in the Recommendation Slide in this presentation.