

**ALPOA Presentation to
Benzie County Watershed
Coalition
October 24, 2017**

What motivated our efforts with the township was the continual encroachment of Eurasian Water Milfoil (EWM) into our area and the infestation of nearby Duck Lake in Interlochen.

- “ The competent way in which that lake association and the Green Lake Township government handled the discovery of EMW showed the way yet also illuminated the obstacles to successful treatment outcomes.**
- “ Central to that quick, effective response and our fears was the need for and present dearth of vital first-year money, without which a robust, initial-year response is not possible.**

What motivated our efforts with the township was the continual encroachment of Eurasian Water Milfoil (EWM) into our area and the infestation of nearby Duck Lake in Interlochen.

This led ALPOA to instruct me to approach or township board with both a warning and an plan for pre-emptive action. What follows is what I presented to the Almira Township board last December.

**ALPOA Invasive Species
Preparation and Prevention**

**Almira Township Board Meeting
December 2016**



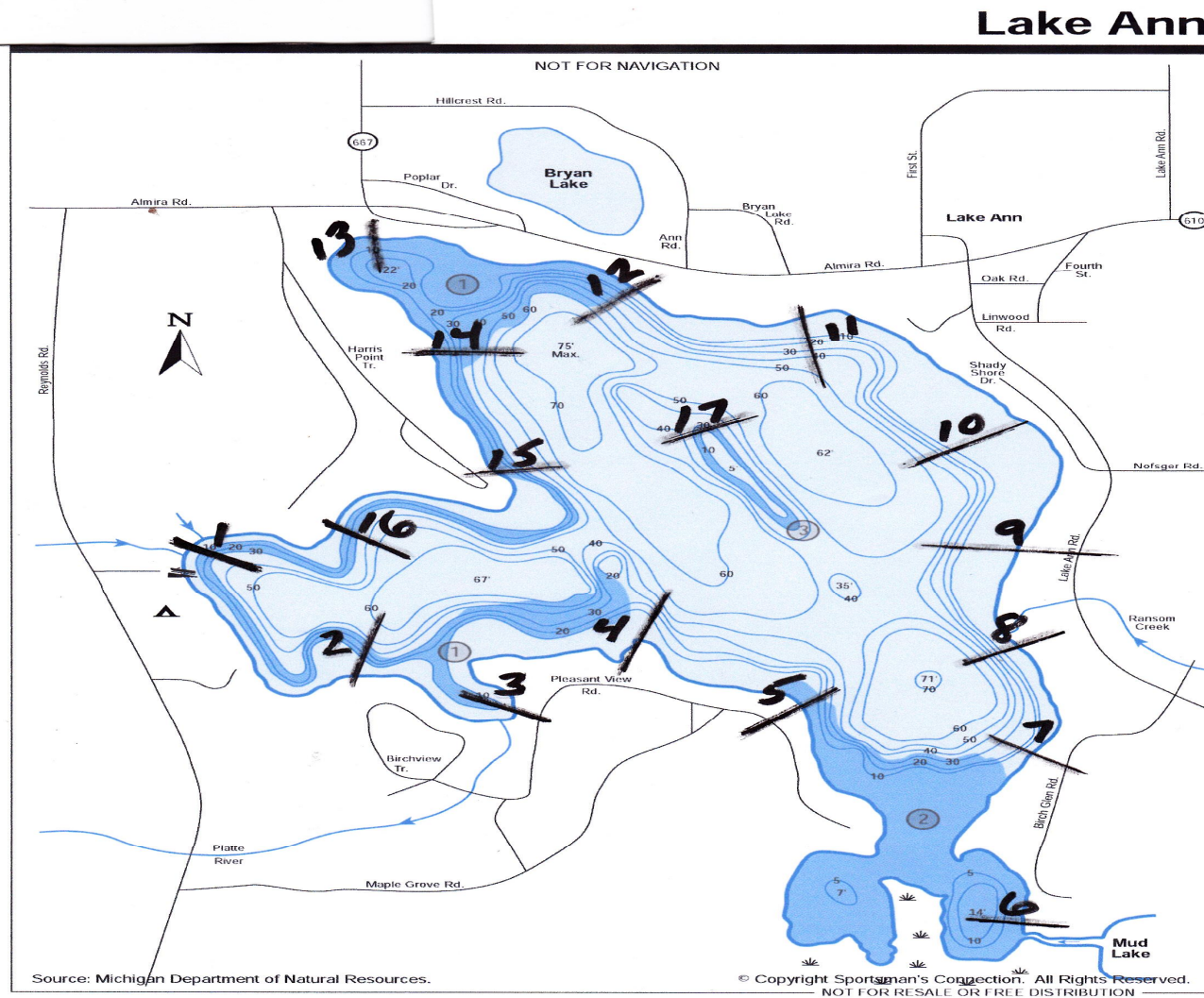
Invasive Species Committee

- We learned how to **identify** native and non-native aquatic plant species.
- We're **educating** our members on what to look for and how to report any sightings.
- We learned that we needed to create a **baseline** for future comparisons
- Most importantly, we learned how to **survey** our lake, measure and document results which we do annually

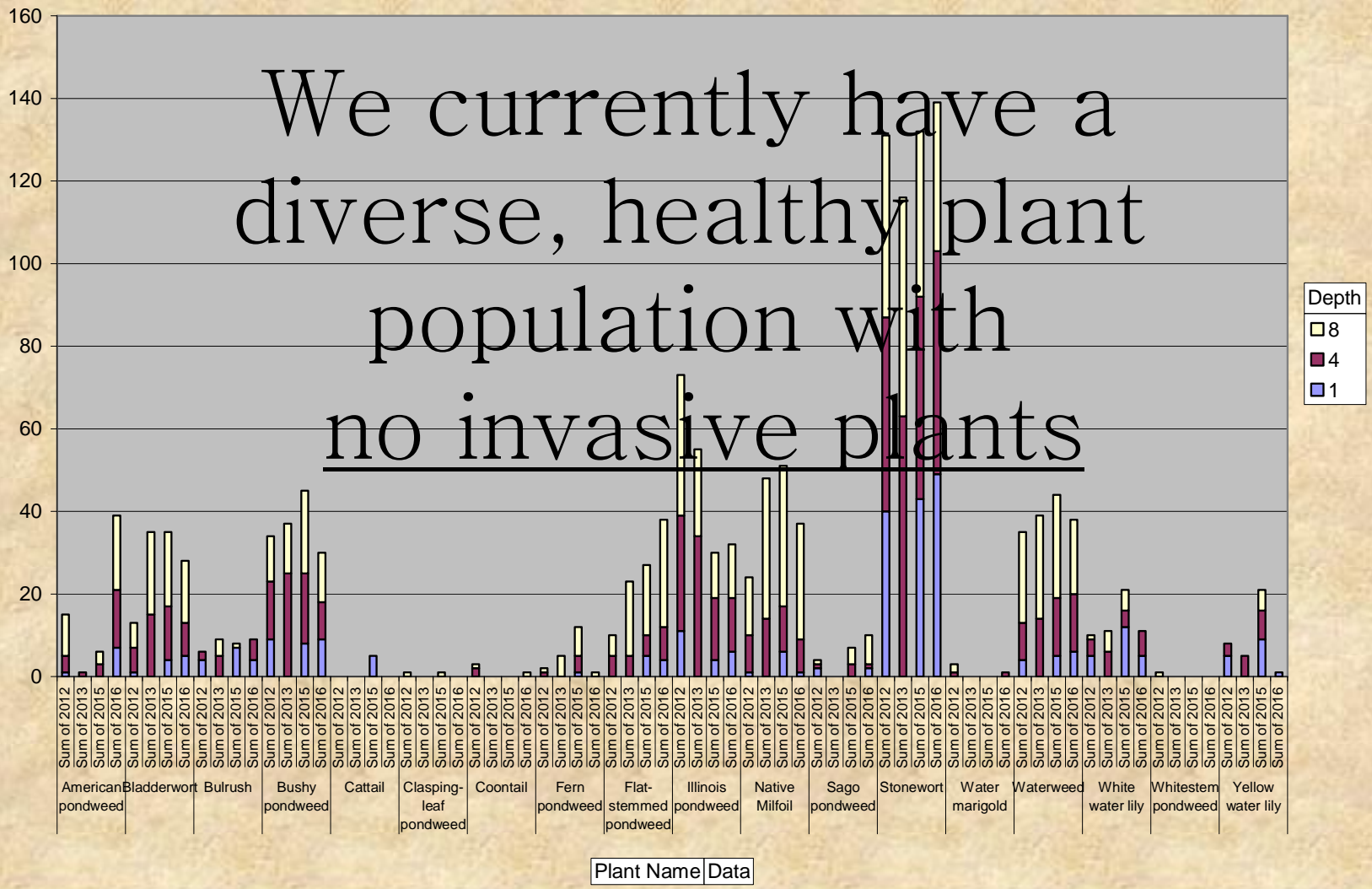
We began monitoring our lake in 2012 using plant surveys



We rake/sample three depths at 17 set transects



We track year-to-year plant growth densities by species and location



Plant Name | Data



Several exotic plants in Michigan concern us, among them are:

Eurasian Water- Milfoil or EWM



Hydrilla



Starry Stonewort

Eurasian water-milfoil (E.M.W.)



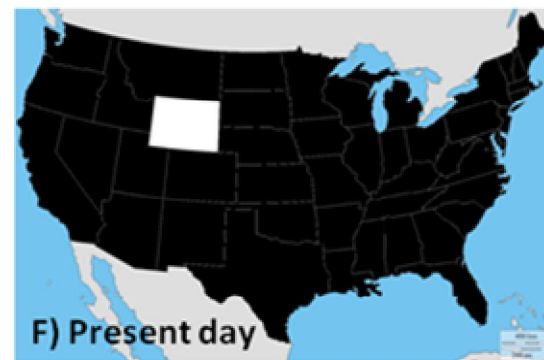
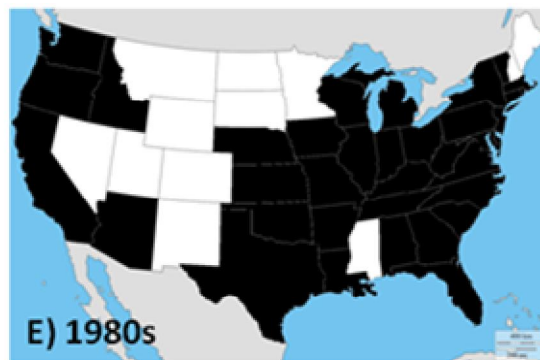
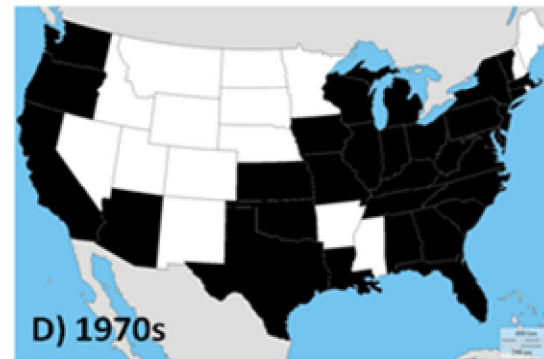
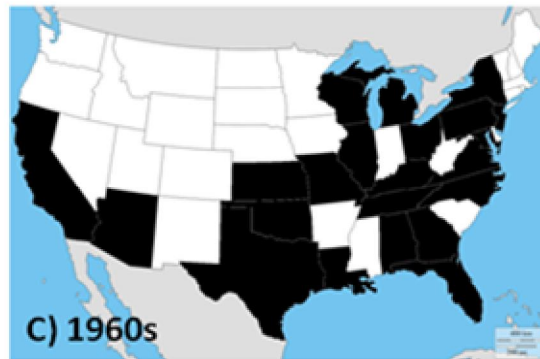
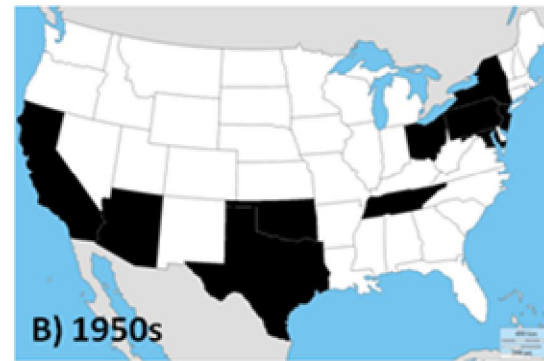
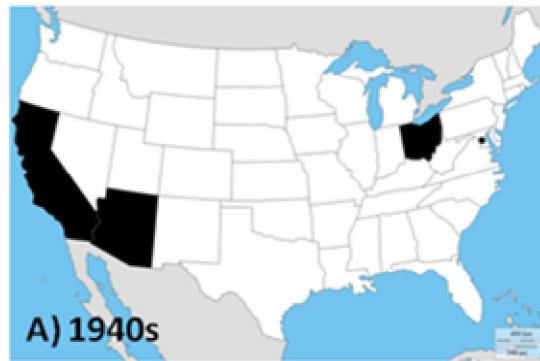
Myriophyllum spicatum L.

EWM and Native Water Milfoil



Hard to detect yet if left untreated can infest
an entire mid-sized lake in two years

Eurasian Water Milfoil Infestations



EWM Incursions in Midwest



Long Lake, Duck Lake, Crystal Lake, Portage Lake , Little Platte Lake
ALL have Eurasian Water Milfoil

What is E.M.W.; why worry?

- “ EWM is an **aggressive** invasive species that first came to North America over 60 years ago. It grows and spreads rapidly.
- “ It has an **earlier growing season** than native aquatic plants which allows it to out-compete other plants for photosynthesis often resulting in killing of native plants. Before ice-out, it begins growing.
- “ EWM **spreads easily through fragmentation**. Pieces of a plant break off and easily root in a new location.
- “ These **fragments become entangled on prop shafts or boat trailers**. If not caught and removed, the EWM fragment can be easily deposited into another (EWM-free) lake by the unsuspecting boat owner.

What is E.M.W.; why worry?

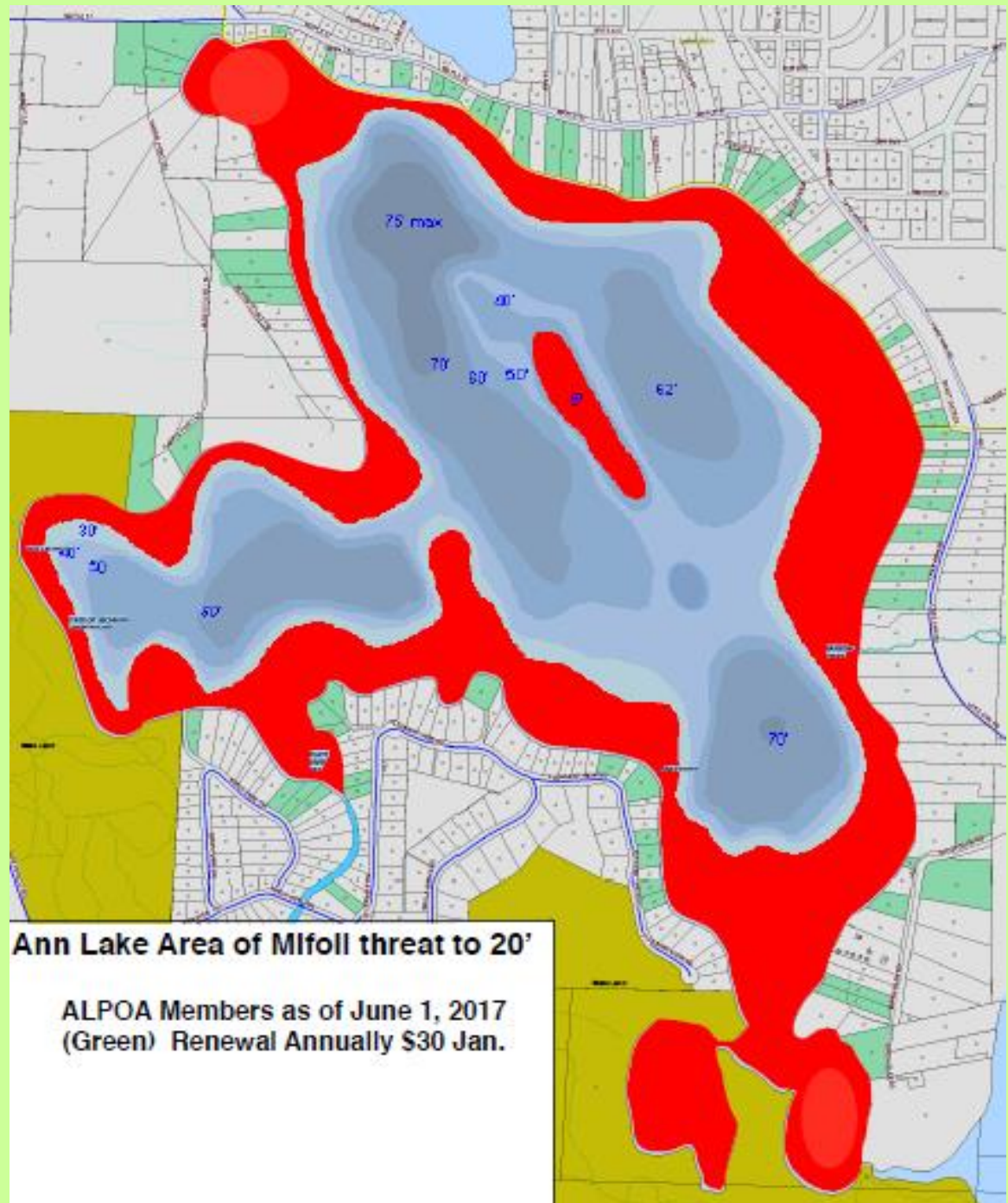
- “ EWM grows in water up to **depths of 20 feet** making shallow lakes more susceptible to widespread infestation.
- “ When left unmanaged, EWM will grow, creating **extensive and thick matting on the lake surface**. These dense mats make the infested area un-navigable to boat traffic, swimming and other recreational activities
- “ Once in a lake’s aquatic plant community, **EWM can never be completely eradicated**, only managed

Long Lake Milfoil Infected Area



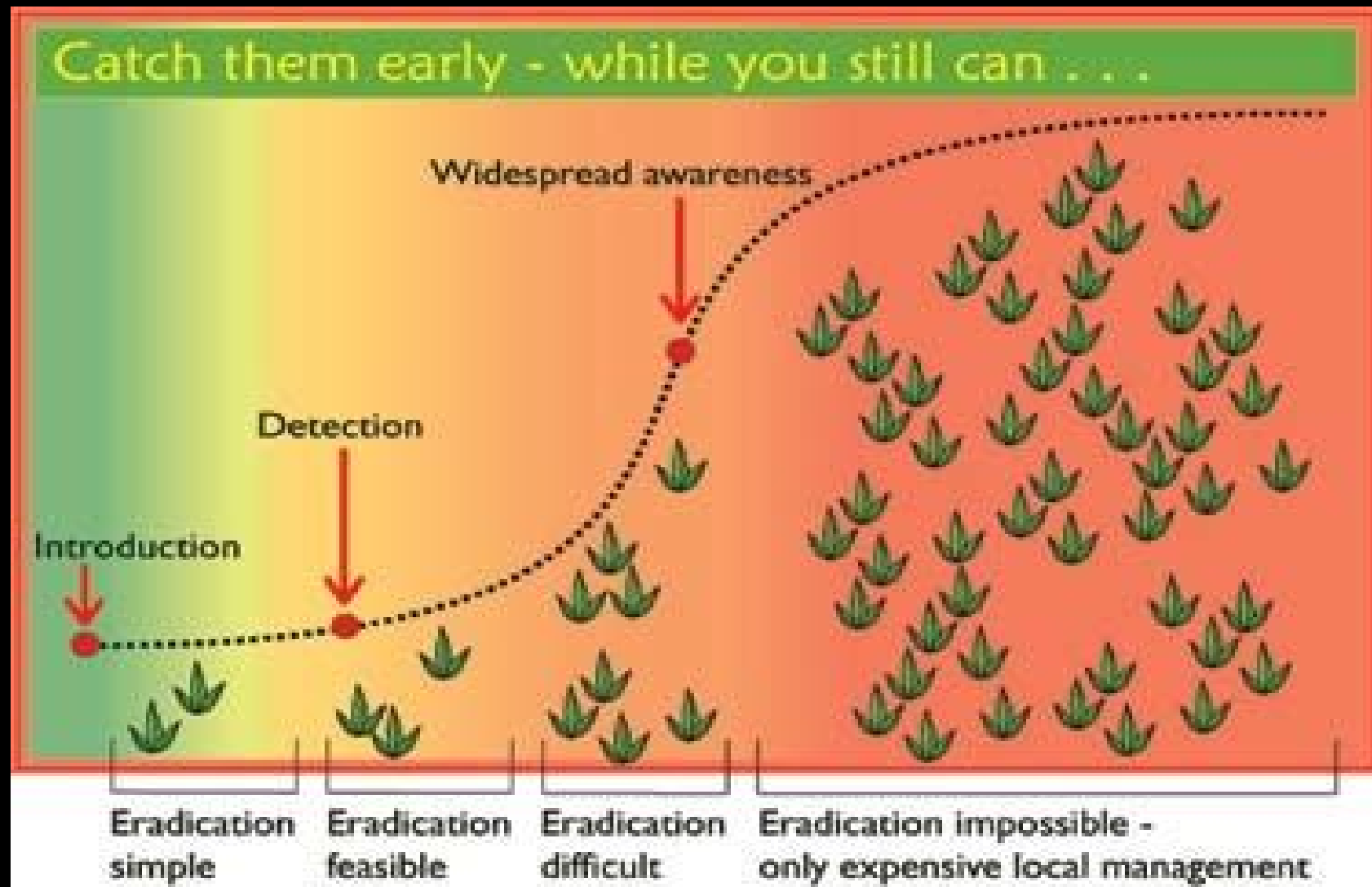
Annual Treatment Areas

These areas within Ann Lake would prove suitable for EMW infestation.



Studies done in Washington State comparing properties on lakes with EWM compared to lakes without EWM found that property values on lakes with EWM were 19% lower on average than comparable values of properties on non-infested lakes.

Early identification and treatment is key!



**Houghton Lake botched this lesson
and taught us what not to do**





Houghton Lake 2000

**Largest lake in
Michigan at
22,000 acres**

**EWM discovered in
1994, problem ignored
by County**

**Widespread infestation
confirmed in 1999**

**By 2001 50% of lake
infested with est. 4,000
acres completely
topped-out**



Burned out motors, hampered navigation and recreation led to a 30% drop in tourism



Treatments began in 2001



Treatments were effective but by then, very expensive



Houghton Lake in 2000 before fluridone treatment. Source: ReMetrix, Inc.

Houghton Lake 2000



Houghton Lake in 2002 after fluridone treatment. Source: ReMetrix, Inc.

Houghton Lake 2002

Special Assessment District or
S.A.D. formed in 2001 with goal
of establishing
\$5,000,000 in funding within the
S.A.D. over the next 10 years for
on-going treatment.

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It would have been much less
expensive if there hadn't been a
7 year delay.

Artist creates
paint-chip mosaic
ETC., Page 1B

Record-setting
TC Titans bow out
Sports, Page 1C

High: 84 Low: 66
Page 6C

TRaverse CITY RECORD EAGLE

FRIDAY

Friday, June 17, 2016

\$1.00 DAILY/\$2.00 SUNDAY

TORCH LAKE Party patrol

Increased police
presence set for July
4 Torch Lake bash

BY MARK JOHNSON
mjohnson@record-eagle.com

TRAVERSE CITY — Law enforcement agencies don't want Torch Lake history to repeat itself. The Michigan State Police, Michigan Department of Natural Resources, and Kalkaska and Antrim County sheriff's departments plan to increase the law enforcement presence at the Torch Lake sandbar area over the Fourth of July weekend in hopes of preventing a replica of the alcohol-fueled 2015 Independence Day bash that saw more than 10,000 revelers and hundreds of citations.

SEE PARTY PAGE 2A



Special to the Record-Eagle/
U.S. Coast Guard Air Station Traverse City
U.S. Coast Guard crews fly over
the Torch Lake sand bar during
the Fourth of July holiday in 2015.

Tending the green



Kris Slater, groundskeeper at Dunes Golf Club in Empire, cuts grass on a rainy afternoon. Slater said the weather helped him get certain tasks done without interfering with golfers, and vice versa. "The less I get golf balls fired at me, the better," he said.

Record-Eagle/Jan-Michael Stump

INVASIVE SPECIES

Eurasian watermilfoil moves to Duck Lake

Township sets up
special assessment
district for cost

BY CAROL THOMPSON
cthompson@record-eagle.com

TRAVERSE CITY — Ed Dewey aims to prevent Duck Lake from turning into a web of weeds. Dewey, president of the Green

& Duck Lakes Association, reported the first account of invasive Eurasian watermilfoil on Duck Lake in May. He and other lakeside property owners identified the plant in July.

"If you let it go, it can take over your lake and it will choke out all of the native plants in your lake and will affect the fish growth," Dewey said.

SEE LAKE PAGE 2A

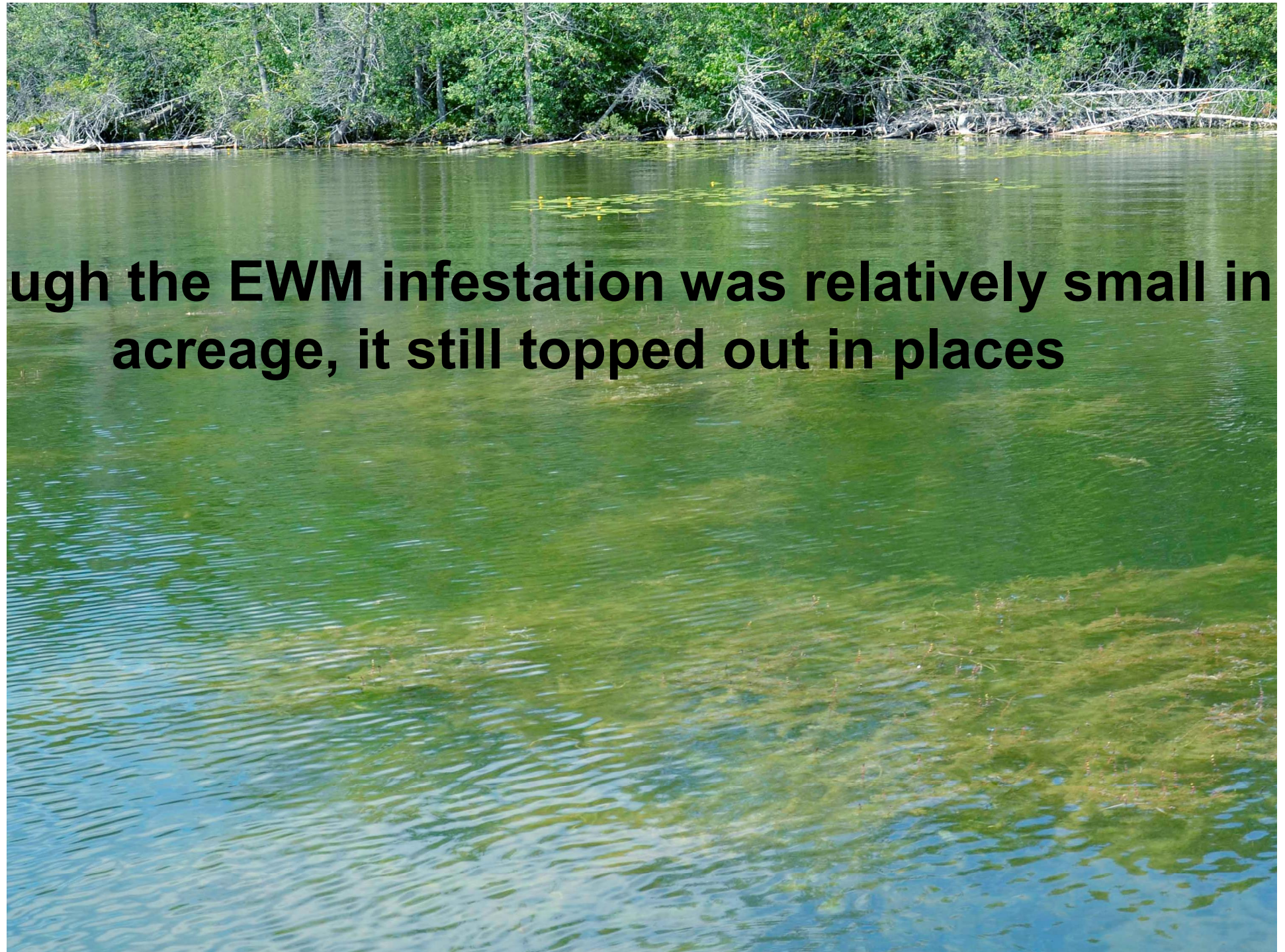


Jim Chatel, left, pours a chemical used to kill watermilfoil into Duck Lake while Shannon Le steers the boat.

Record-Eagle

EWM Discovered early in 2015 during a volunteer lake survey



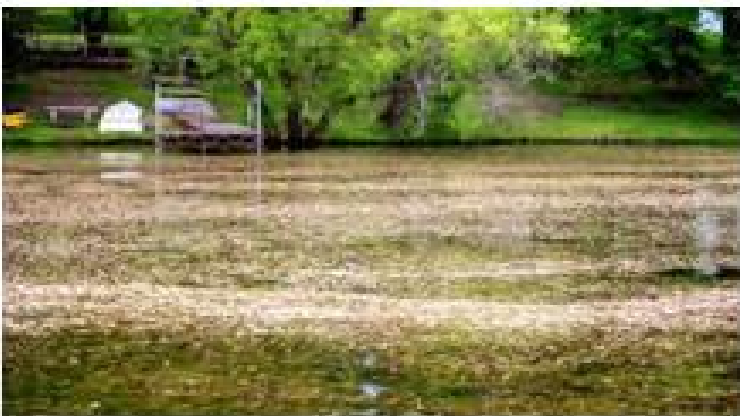


Although the EWM infestation was relatively small in acreage, it still topped out in places

Clearly, something had to be done



And Duck Lake and Green Lake Township
taught us how to go about it.



Close co-operation between Green Lake Township and Duck Lake residents led to great 1st year results:

- “ Duck Lake is 1930 acres (Ann Lake: 530) and 34 acres were found to be infested
- “ First year budget for treatment was \$22-29K
- “ Lake Assoc. contributed the initial \$10,000, the Township picked up the rest.
- “ Total first year cost came in well under \$20,000 second treatment deemed not needed.
- “ S.A.D. goal \$30K per year for 7 years.
- “ 2017 survey and treatment was paid for by the S.A.D. which was quickly established.
- “ **(2017 Survey results: could not find any EWM!!)**

This shows us that the first year is vital!

- “ Suspect weeds needs to be professionally **identified** down to exact species.
- “ Professional **lake management firms** need to be contacted, sent RFQs and bids evaluated. Township bidding rules apply if the township is helping fund it.
- “ **First year funds** need to be quickly provided.
- “ Entire lake needs to be **surveyed in detail** (i.e. 300 transects were sampled in Duck Lake).
- “ Each riparian needs to provide **written permission** to treat lake in front of their property.
- “ Ideally, **treatment begins in the spring.**
- “ Subsequent treatments ideally are **funded by a S.A.D.**

What *actually* took take place in the first few months before treatment

- " Review fund raising examples
- " Develop Special Assessment District (SAD) Scope Statement
- " Township review of Scope
 - " o Township determines SAD district
 - " o Identify Ownership rights
 - " o Develop Benefit Formula
 - " o Develop SAD impact address list
 - " o "Township to hold ""Hearing of Necessity"""
 - " o Schedule & publish meeting
 - " o Send postcards to participants
 - " o Hold Meeting
- " Determine content of permission letter
- " Draft permission letter
- " Township review of permission letter
- " Distribute permission letter using impact address list
- " Monitor returns, calculate % approval
- " Township Prepares Plans Costs
- " Township Holds Public Hearings
- " Township Determines Payment
- " Develop Treatment Area Impact Permission Plan
- " Create treatment area address list
- " Develop treatment area permission letter
- " Mail treatment area permission letter
- " Monitor/confirm permission approval
- " Re-contact non-responses
- " Identify townships involved
- " Review findings with Township Supervisors
- " Develop Initial Funding Comm. Plan
- " Put information in winter newsletter
- " Mail Informative/impact letter to riparian's
- " Post Information on Social Media
- " Get Treatment Cost Est/Timing
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Why not get as many of these tasks done well before any invasive aquatic plant is discovered? Especially if this ensures a solid first year response

ALPOA comes before this Board

- ❖ Remind you of the threat and the Duck Lake experience dealing with it.
- ❖ Suggest a partnership with ALPOA to burden share in the joint preparation for the inevitable.
- ❖ Encourage a united effort with both prevention and response strategies which are unhurried, well thought out, efficient and effective.

ALPOA poised to help if and when

- “ We have copies of bid documents (RFQs), permission letters, permission letter forms, SAD resolutions all provided by Duck Lake. This should save township legal costs.
- “ We have lists of lake management vendors and references to facilitate township bidding procedures
- “ We are prepared to help generate, monitor and follow-up on residents' treatment permission letters and subsequent SAD communication.
- “ We can provide a lot of the leg work if the township provides us with their support.

We both have skin in the game, the Township and Ann Lake Residents.

May we suggest today:

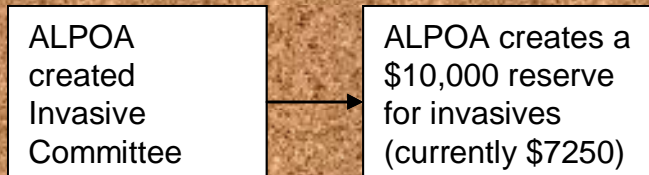
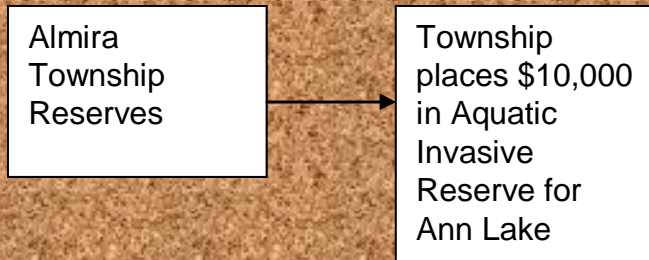
- “ Dollar matching Invasive Preparation Fund with Township dollars for the first year or
- “ We contribute initial \$10,000 with the Township contributing the rest until a Special Taxing District or S.A.D. 😞
is created.

Either way we show ownership of the problem with the expectation the Township assures us “they have our back”.

50/50 Recommendation from ALPOA

Preparation

No fund expenditures

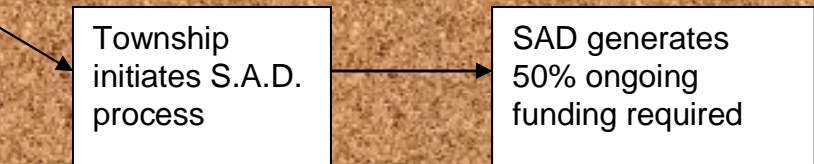
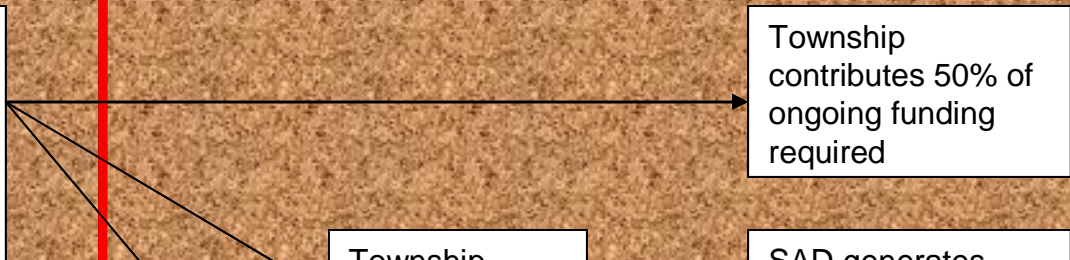


ALPOA annually surveys for invasive plants.

Invasive Plant Found

Response

Upon verification of serious invasive aquatic plant discovery



First year funding:
ALPOA \$10,000
Township \$10,000

Year 1 activities
* hire firm
* confirm invasive outbreak
* complete 1st year treatment

Subsequent activities
• Annual treatments
• Progress assessments

Why I am happy to present this to the Benzie County Watershed Coalition you today:

- “ To remind us all of the threats we are monitoring and suggest that local lake associations will be the first to discover any invasive threats and must be armed to do so.
- “ To emphasize that in fighting invasives aquatic plants, the first year is vital; fast and efficient work needs to be done by local volunteers and the Township to save property values and costs.
- “ To suggest all such parties begin working together now as private/public partnerships, under no time pressure, to ensure a fast 1st year response; this to save time and any last minute rancor. As an example:

So how did Almira's Board respond?

- “ The Township has agreed to go down this path with us to prevent and prepare with some immediate contributions to our prevention effort.
- “ Agreed in principle that in order to meet our side of any future obligations there must be a robust Invasive Species Preparation Fund.
- “ What follows is unprecedented we are told!

Almira Township has agreed to:

- ✓ Use Ann Lake as a prototype for their involvement**
- ✓ Help us with printing and other communication funding to aid prevention**
- ✓ Begin evaluation of potential lake management vendors and select one to get the rigorous procurement process behind us.**
- ✓ Begin forward planning for any S.A.D.'s which may be required in the future. This to think through requirements for their implementation and construction, as well as to save time when time is precious.**

What we are doing NOW with the Township:

- “ **Establish liaison** and open communication between the Township and ALPOA for this issue
- “ Agree on how to **fund future 1st year treatments** needed to respond to an invasive outbreak
- “ **Pre-select a lake management vendor** under Township procurement protocols to save time and ensure quality selection.
- “ **Begin discussing potential S.A.D. terms and parameters**, legal hoops, document creation and management of information dissemination.

Some quick results from our outreach

We worked with the DNR to move existing and install some new signage for the boat launch area, the most likely introduction point.

After we made our case, the signs were changed in one week!





HELP STOP AQUATIC HITCHHIKERS!

To avoid spreading aquatic invasive species

BEFORE launching ... BEFORE leaving:

- Remove aquatic plants and aquatic animals
- Drain lake or river water away from landing
- Dispose of unwanted live bait in the trash

It's the Law... Do not:

- Transport aquatic plants, zebra mussels, or other prohibited species on public roads
- Launch a watercraft or place a trailer in the water if it has aquatic plants, zebra mussels or other prohibited species attached
- Transport water from infested waters

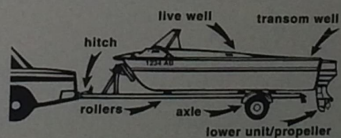
Michigan Department of Natural Resources

CLEAN BOATS CLEAN WATERS



WATERCRAFT CHECK POINTS

Stop Aquatic Invasive Species From Spreading
Check Your Boat Each Time You Leave The Water!



- | | | |
|---------------------------------------|--|---------------------------------------|
| <input type="checkbox"/> Anchor | <input type="checkbox"/> Intake pipe | <input type="checkbox"/> Rollers |
| <input type="checkbox"/> Axle | <input type="checkbox"/> Ladder | <input type="checkbox"/> Prop |
| <input type="checkbox"/> Bail bucket | <input type="checkbox"/> Landing net | <input type="checkbox"/> Spare tire |
| <input type="checkbox"/> Bunks | <input type="checkbox"/> License plate | <input type="checkbox"/> Tackle |
| <input type="checkbox"/> Bow line | <input type="checkbox"/> Motor | <input type="checkbox"/> Tow rope |
| <input type="checkbox"/> Fishing line | <input type="checkbox"/> Wheels | <input type="checkbox"/> Trailer |
| <input type="checkbox"/> Floor | <input type="checkbox"/> Live well | <input type="checkbox"/> Transducer |
| <input type="checkbox"/> Hull | <input type="checkbox"/> Lights/wiring | <input type="checkbox"/> Transom well |

Clean It. Drain It. Dry It.

www.mymisa.org/cbcw

We set up a boat washing and EMW display at Lake Ann Days

There we distributed plant identification material and some great informational stickers for your boat trailers to distribute

We will have doubled our Invasive Species Response Fund to \$10,000

We successfully encouraged the Township to include invasive Informational flyers in our tax bills; a cost the Township Absorbed (~ \$800)

UPDATE

- “ **Two lake management firms have agreed to submit their credentials to the township in our pre-selection efforts.**
- “ **Pearl Lake representatives involved in their phragmites eradication efforts have agreed in principle to join our efforts to work with the township on aquatic plants.**
- “ **We’ve met 90% of our first-year fundraising goal for this effort.**

**Thank you for your
time today.**