

Notice: Use of this form is required by the DNR for any application filed pursuant to ch. NR 198, Wis. Adm. Code. Personal information collected on this form, including such data as your name, address, phone number, etc., will be used for management and enforcement of DNR programs, and is not intended to be used for any other purpose. Information may be made accessible to requesters under Wisconsin's Open Records laws (s. 19.32-19.39, Wis. Stats.) and requirements.

Section I: Application Type

Check one:

- Education, Prevention & Planning
 Early Detection & Response
 Established Infestation Control

| Legislative District Numbers | | To determine your legislative district, go to http://165.189.139.210/WAML/ Type in complete address, next screen shows information. |
|------------------------------|----------|--|
| Senate | Assembly | |
| 10 | 28 | |

Section II: Applicant Information

| | | | | | |
|---|--|--|---|--|--|
| Applicant Big, Round, and Church Pine Lakes P&R District | | | Type of Eligible Applicants | | |
| Waterbody Name Big and Round Lakes | | | <input type="checkbox"/> County | <input type="checkbox"/> Tribe | <input type="checkbox"/> Other Gov't Unit |
| Project County/Township/Section/Range Polk County/T32N R18W and T33N R18W | | | <input type="checkbox"/> City | <input type="checkbox"/> Sanitary Dist. | <input type="checkbox"/> Nonprofit Org. |
| Authorized Representative Named by Resolution Steve Oswald | | | <input type="checkbox"/> Village | <input checked="" type="checkbox"/> Dist. | <input type="checkbox"/> College, School, etc. |
| Authorized Representative Title APMP Committee Chair | | | <input type="checkbox"/> Town | <input type="checkbox"/> Assoc. | <input type="checkbox"/> Federal |
| Address 1901D 60th Ave | | | Project Contact Name Jerry Tack | | |
| City Osceola | | | Project Contact Title Treasurer | | |
| State WI | | | Address 542 Round Lake Ct. | | |
| ZIP Code 54024 | | | City Osceola | | |
| Daytime Phone (area code) (651) 248-8827 | | Evening Phone (area code) (651) 248-8827 | | State WI | |
| E-mail Address cri.steveo@gmail.com | | Daytime Phone (area code) (715) 294-2739 | | ZIP Code 54020 | |
| | | Evening Phone (area code) (715) 294-2739 | | E-Mail Address tack542@centurylink.net | |

Mail Check to: (if different from applicant)

| | | | |
|----------------|--|----------|-------|
| Name and Title | | Address | |
| Organization | | City | State |
| | | ZIP Code | |

For DNR Use Only

| | | | |
|--|--|-------------------------------|---|
| Application Type | Date Received | Date Reviewed (AIS/LC/RC) | AIS/Lake /River Coordinator Approval /Date |
| Waterbody ID# | Adequate Public Access <input type="checkbox"/> Yes <input type="checkbox"/> No | | Environmental Grants Specialist Approval / Date |
| Eligible Project <input type="checkbox"/> Yes <input type="checkbox"/> No | Eligible Applicant <input type="checkbox"/> Yes <input type="checkbox"/> No | Project Priority Rank | Research / Demo Project <input type="checkbox"/> Yes <input type="checkbox"/> No |
| Prior Grant Award(s) <input type="checkbox"/> Yes <input type="checkbox"/> No | Fiscal Year(s) | Amount Received To Date \$ | Project Awarded <input type="checkbox"/> Yes <input type="checkbox"/> No |

Aquatic Invasive Species (AIS) Control Grant Application

Form 8700-307 (12/11)

Page 2 of 3

Section III: Project Information

| | | | |
|--|-------------------------------------|----------------------------------|--------------------------|
| Project Title APM Plan Implementation | | Proposed Ending Date 12/31/16 | |
| Other Management Units | Letter of Support | Other Management Units | Letter of Support |
| 1. Polk County LWRD | <input checked="" type="checkbox"/> | 4. | <input type="checkbox"/> |
| 2. Town of Alden | <input checked="" type="checkbox"/> | 5. | <input type="checkbox"/> |
| 3. | <input type="checkbox"/> | 6. | <input type="checkbox"/> |

Section IV: Public Access

| | |
|---|----|
| Number of Public Vehicle Trailer Parking Spaces Available at Public Access Sites: | 15 |
| Number of Public Access Sites Including Boat Launches and Walk-ins: | 2 |

Section V: Cost Estimate and Grant Request

| Section V must be completed or application will be returned. Details in support of Section V are welcome. | Project Costs | | |
|--|------------------------|---------------------------|--------------|
| | Column 1 Cash Costs | Column 2 Donated Value | DNR Use Only |
| 1. Salaries, wages and employee benefits | 0.00 | 6,000.00 | |
| 2. Consulting services | 19,000.00 | | |
| 3. Purchased services--printing and mailing | 1,040.00 | | |
| 4. Other purchased services (specify): | | | |
| 5. Plant material | | | |
| 6. Supplies (specify) | 1,700.00 | | |
| 7. Depreciation on equipment | | | |
| 8. Hourly equipment use charges | | | |
| 9. State Lab of Hygiene (SLOH) Costs | | | |
| 10. Non-SLOH Lab Costs | | | |
| 11. Other (specify) | 34,850.00 | | |
| 12. Subtotals (sum each column) | 56,590.00 | 6,000.00 | |
| 13. Total Project Cost Estimate (sum of column 1 plus sum of column 2) | 62,590.00 | | |
| 14. State Share Requested (up to 75% of total costs may be requested) | 46,942.50 | | |

Subject to the following maximum grant amounts:

- Education, Prevention and Planning Projects--up to \$150,000
- Early Detection and Response Projects--up to \$20,000
- Established Infestation Control Projects--up to \$200,000

Use of Federal funding as match: (check box below if applicable)

We are using or planning to apply for Federal funds to be used as match.

If known, indicate source of funding:

Section VI: Attachments (check all that are included)

A. For all applicants: (Refer to instructions for applicability.)

- 1. Authorizing resolution
- 2. Letters of support
- 3. Map of project location and boundaries
- 4. Lake map or river segment with public access sites identified (per Section IV of this application and page 20 of the guidelines)
- 5. Itemized breakdown of expenses
- 6. For projects that entail sending samples to the State Laboratory of Hygiene (SLOH) only: a completed SLOH Projected Cost Form
- 7. Project scope/description:
 - a. Description of project area
 - b. Description of problem to be addressed by project
 - c. Discussion of project goals and objectives
 - d. Description of methods and activities
 - e. Description of project products or deliverables
 - f. Description of data to be collected, if applicable
 - g. Description of existing and proposed partnerships
 - h. Discussion of role of project in planning and/or management of lake
 - i. Timetable for implementation of key activities
 - j. Plan for sharing project results
 - k. Other information in support of project not described above

B. For applicants that are Lake Management Organizations (LMOs), River Management Organizations (RMOs) or Qualified Non-profit Organizations:

- 1. For first time applicant LMOs/RMOs only: A completed Form 8700-226 (Lake Association Organizational Application) or 8700-287 (River Management Organization Application)
- 2. For first time applicant Qualified Nonprofit Organizations only: Copy of IRS 501(c)(3) determination letter and copies of your Articles of Incorporation and Bylaws
- 3. List of national and/or statewide organizations with which you are affiliated
- 4. List of board members' names, including municipality and county of residence. Designate officers
- 5. Documentation of current financial status
- 6. Brochures, newsletters, annual reports or other information about your organization

C. Education, Prevention and Planning Projects: (No additional attachments required.)

D. Early Detection and Response Projects:

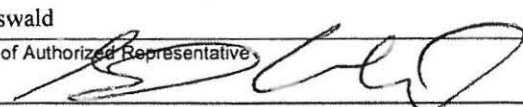
- 1. APM Permit application

E. Established Infestation Control Projects:

- 1. Management Plan
- 2. APM Permit application

Section VII: Certification

I certify that information in this application and all its attachments are true and correct and in conformity with applicable Wis. Statutes.

| | |
|---|--|
| Print/Type Name of Authorized Representative Steve Oswald | Title of Authorized Representative APMP Committee Chair |
| Signature of Authorized Representative  | Date Signed 07/19/13 |

**Church Pine, Round and Big Lake Protection and Rehabilitation District
Board Resolution**

RESOLUTION of the Church Pine, Round and Big Lake Protection and Rehabilitation District

County of Polk, Wisconsin

WHEREAS Church Pine, Round and Big Lakes are important resources used by the public for recreation and enjoyment of natural beauty: and
WHEREAS public use and enjoyment of Church Pine, Round and Big Lakes is best served by protection of Church Pine, Round and Big Lakes from infestation of aquatic invasive species; and
WHEREAS we recognize the need to provide information and education about aquatic invasive species; and
WHEREAS we are qualified to carry out the responsibilities of the aquatic invasive species project.

IT IS THEREFORE, RESOLVED THAT:

The Church Pine, Round and Big Lake Protection and Rehabilitation District requests the funds and assistance available from the Wisconsin Department of Natural Resources under the "Aquatic Invasive Species Grant Program;" and


HEREBY AUTHORIZES, the Church Pine, Round and Big Lake District APM Chair, to act on behalf of the Church Pine, Round and Big Lake Protection and Rehabilitation District to: submit an application to the State of Wisconsin for financial aid for aquatic invasive species grant purposes; sign documents; and take necessary action to undertake, direct, and complete an approved AIS grant. Grant reimbursement forms along with necessary supporting documentation will be submitted within six months of the project completion date.

BE IT FURTHER RESOLVED that the Church Pine, Round and Big Lake Protection and Rehabilitation District will meet the obligations of the AIS project including timely publication of the results and meet the financial obligations under this grant including the prompt payment of our 25% commitment to aquatic invasive species project costs.

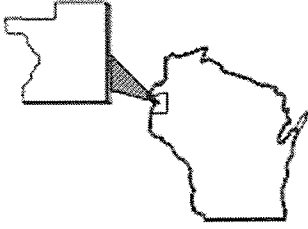
Adopted this 8th day of July, 2013.

By a vote of 5 in favor, 0 against, 0 abstain.

By:


Gary Ovick, Chairman

Church Pine, Round and Big Lake Protection and Rehabilitation
District



POLK COUNTY LAND & WATER RESOURCES DEPARTMENT

100 POLK COUNTY PLAZA—SUITE 120 BALSAM LAKE, WI 54810

PHONE: 715-485-8699 FAX: 715-485-8601

TIM RITTEN, DIRECTOR: 715-485-8631

December 6, 2012

Alex Smith
WDNR
810 W. Maple St.
Spooner, WI 54801

Dear Mr. Smith,

The Polk County Land and Water Resources Department (LWRD) is pleased to support the Church Pine, Round, and Big Lakes Protection and Rehabilitation District in their application for an Aquatic Invasive Species Control Grant to implement their Aquatic Plant Management Plan and Clean Boats, Clean Waters watercraft inspection program.

Goal 1, Objective 1A of the Polk County Land and Water Resource Management Plan, adopted by the County Board and approved by the state is to “prevent, control, or eliminate aquatic invasive species to protect the integrity of our surface water resources.” In addition, Goal 3 is to “support and develop the human resources in Polk County that manage our natural resources—both LWRD and volunteer management groups. The support of this grant application allows LWRD to advance these goals.

LWRD believes that effective AIS control campaigns are most effective with combined efforts. Over the past five years LWRD has developed a strong relationship with the District. Staff have monitored for new AIS populations and offered educational support at annual meetings and CBCW programming events.

The District has taken part in several innovative AIS prevention projects including: installation of an I-LIDS camera at the Church Pine Lake Landing, purchase of lake maps with AIS information, and installation of landing kiosks with AIS information.

LWRD applauds the work that the District has initiated and looks forward to working with them in the future. LWRD is strongly supportive of the District’s application for an AIS Control Grant and will provide the necessary training and support necessary to meet the goals of this grant application including training, plant identification, and ongoing surveillance for AIS.

Sincerely,

A handwritten signature in cursive script that reads "Tim Ritten".

Tim Ritten, Director

Town of Alden

183-155th Street, Star Prairie, WI 54026

Phone: 715-248-7859 email: alden@townofalden.com

FAX: 715-248-7966 www.townofalden.com

November 6, 2012

The town of Alden has an excellent working relationship with the Church Pine, Round and Big Lake Protection and Rehabilitation District. It is a well organized Statutory Lake District that has accomplished wonderful things in attempting to protect and enhance water quality in their chain of lakes. The Alden town hall is the site for their regular meetings and the storage place for the records of the association. It has also been used by the board for educational meetings for residents of the district.

Our town board is happy to support the lake district in applying for an Aquatic Invasive Species Control Grant for 2014 to help support their Aquatic Plant Management Plan and Clean Boats Clean Water program. Our board agrees with the lake district board on the importance of minimizing curly leaf pondweed, purple loosestrife and giant knotweed and to keep other invasive species out of the three lakes.

There is no question that providing a grant to this lake district the money will be used wisely and they will do their very best to fulfill the requirements and conditions that would be part of the grant requirements.

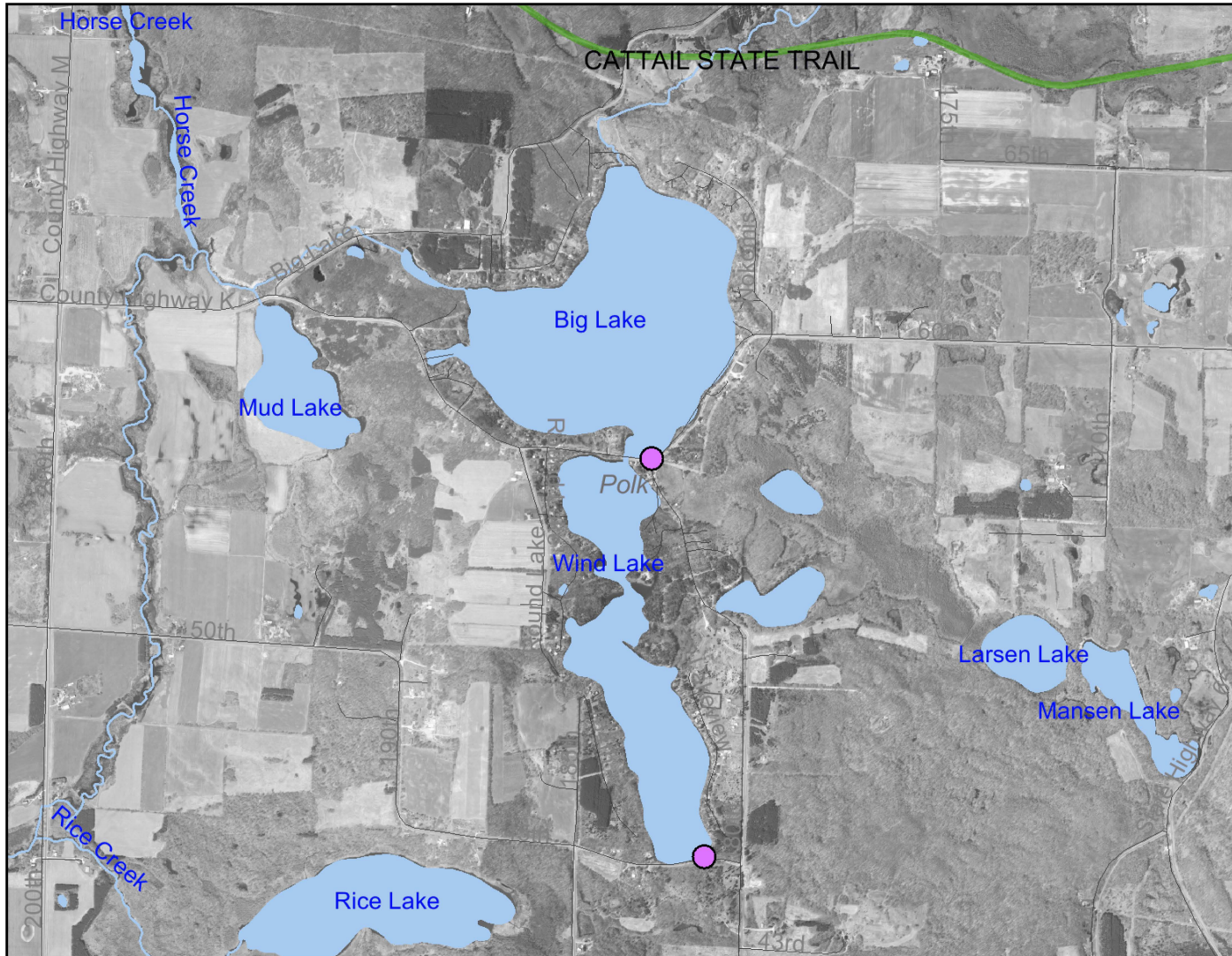
Sincerely,

A handwritten signature in black ink that reads "Brad Johnson". The signature is written in a cursive style with a large, prominent "B" and "J".

**Brad Johnson
Chairman**



Public Boat Access Sites



Legend

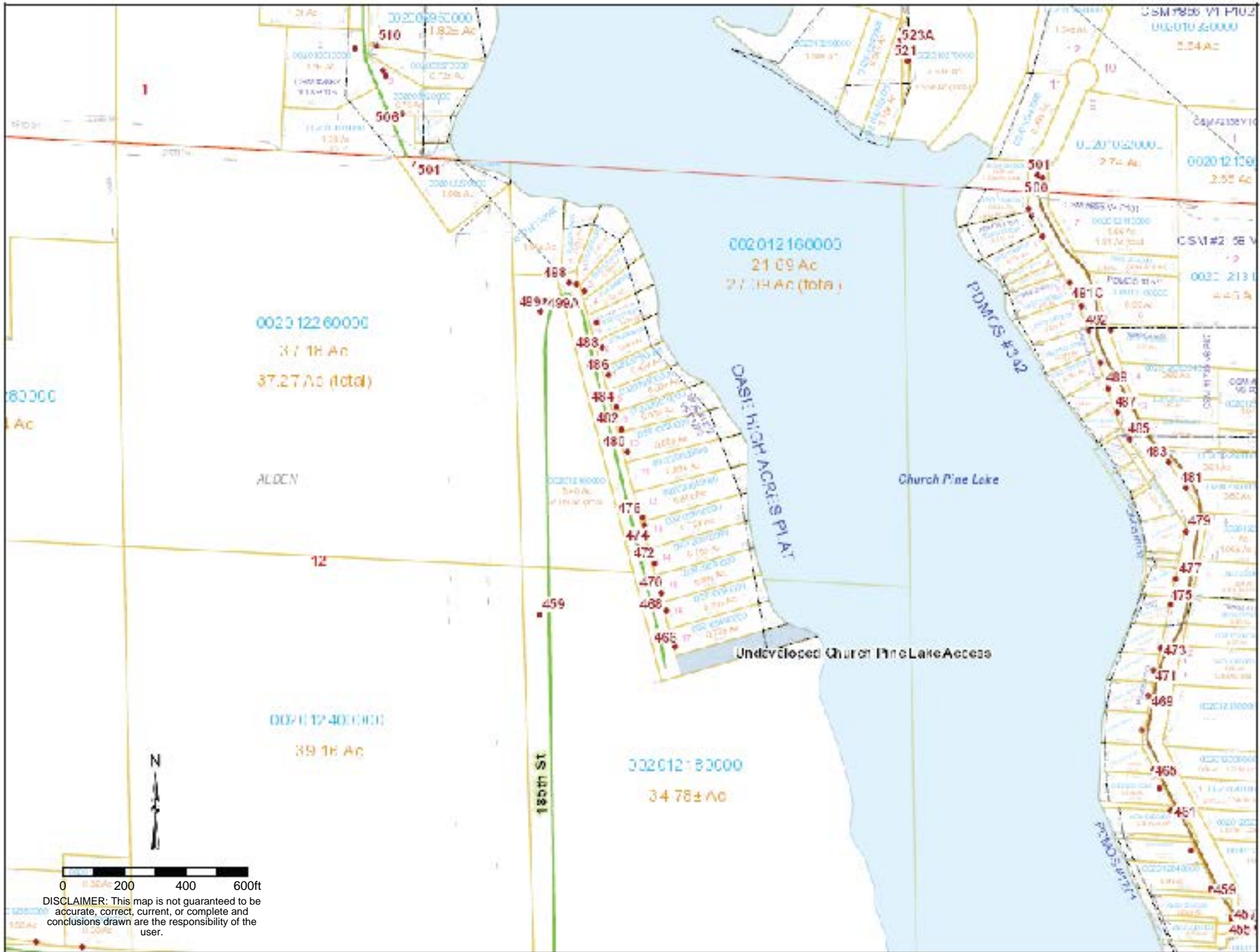
- Verified Boat Access Sites**
- RAMP
 - CARRY-IN
 - UNKNOWN
- Un-Verified Boat Access Sites**
- Not Verified
- Other Features**
- Local Roads
 - Rivers and Streams
 - County Boundary
 - 24K Open Water
 - Municipalities**
 - Village
 - City
 - DNR Managed Lands**
 - Fee
 - Easement
 - Lease

0 3000 6000 9000 ft.



Scale: 1:30,159

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.



DISCLAIMER: This map is not guaranteed to be accurate, correct, current, or complete and conclusions drawn are the responsibility of the user.

Church Pine, Round, and Big Lakes, Polk County Aquatic Invasive Species Plan Implementation

August 1, 2013

Project Area

The project includes three lakes in southwestern Polk County: Church Pine (107 acres), Round (38 acres), and Big (259 acres) Lakes. A map of the project area is included as an attachment. **(Point B1c)**

This grant project will continue implementation of the approved Aquatic Plant Management Plan for Church Pine, Round and Big Lakes (December 2010). This grant project is taken directly from the APM plan. The plan and this project continue extensive efforts the Church Pine, Round, and Big Lakes Protection and Rehabilitation District (the Lakes District) has undertaken to address concerns related to invasive species. The project will continue plan implementation through the end of 2015 when an updated aquatic plant management plan will be in place. This grant project supports an updated plant survey and aquatic plant management plan.

Public Access and Use (Points F1 and F2)

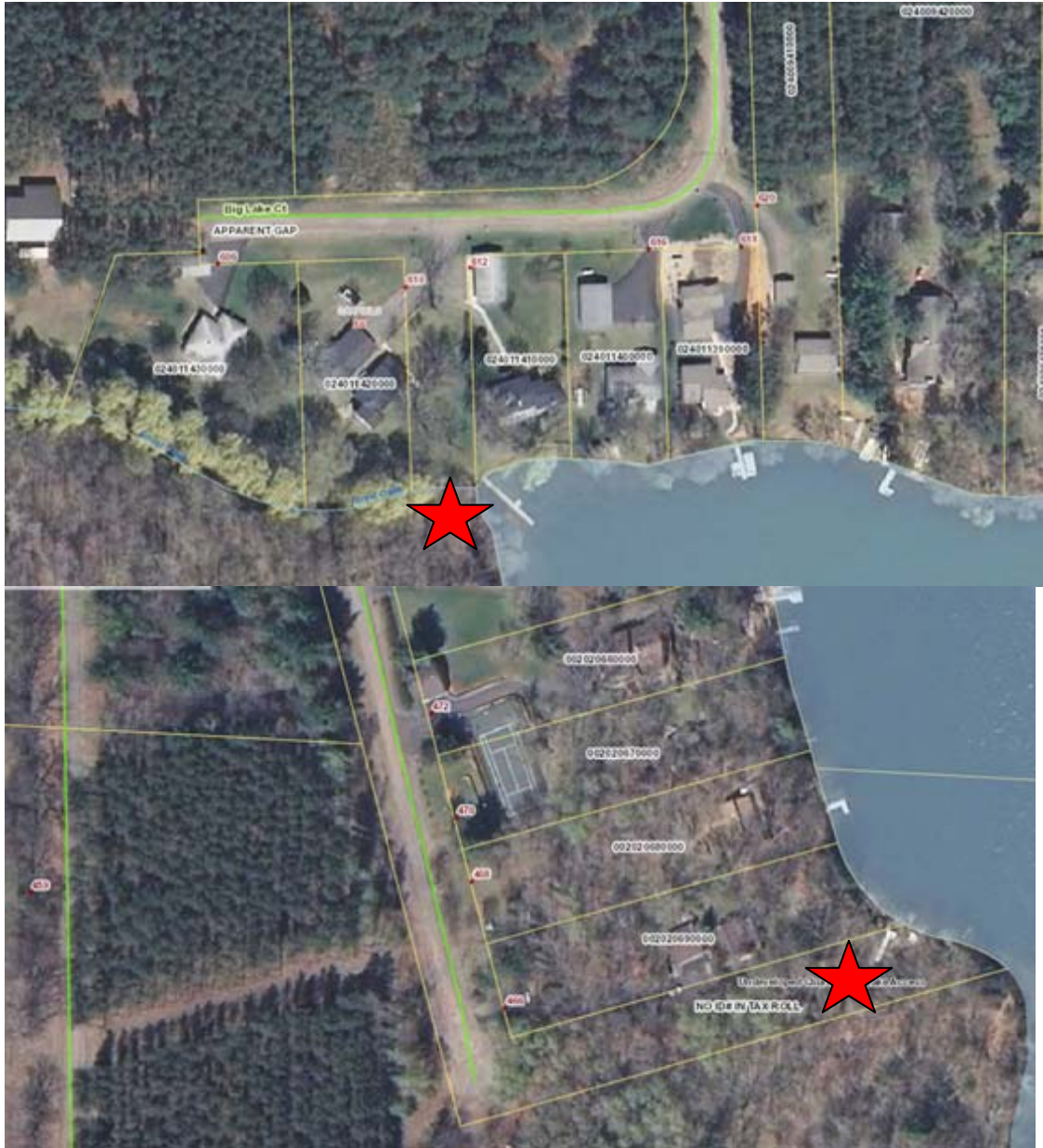
There are two boat landings in the project area. One is at the southern end of Big Lake along County Highway K. The second is at the southern end of Church Pine Lake. Many people use this landing as swimming area. There is additional parking within a block of the Church Pine boat landing at West Immanuel Lutheran Church. There are 15 spaces for boats and trailers at the 2 public access points.

Burkhaven Resort serves project lakes with boat and canoe rental. More information is available on their web site: <http://www.burkhaven.com/>

Access Points

There are two undeveloped access points to our lakes.

The first picture below (all from Polk County GIS) is an access point off of Big Lake Ct. on Big Lake. It runs to the dam which controls the water level. This is owned by the town of Garfield. The second picture is an access point on the west side of Church Pine off of 184th St. which is owned by the town of Alden. This second access point is also shown on Polk County's new Recreational Map as an access point.



Big Lake attracts around 250 anglers for an annual fishing tournament. Proceeds go toward fish stocking.

Threatened and Endangered Species

The Natural Heritage Inventory map of Polk County indicates occurrences of aquatic listed species in the sections where project lakes are located. A species list is available to the public only by Town and Range.

T32N R18W included the following aquatic species

| | | |
|----------------------------|------------------|-------------------|
| <i>Cardamine pratensis</i> | Cuckoo flowers | Special Concern |
| <i>Fundulus diaphanous</i> | Banded Killifish | Special Concern/N |
| <i>Senecio congestus</i> | Marsh Ragwort | Special Concern |

T 33N R18W also has the Banded Killifish present.

Special Lake Designations (Point C2)

The map titled *DNR Lake Designations* shows Sensitive Areas for Big Lake and Church Pine Lake. It also indicates that Big Lake and Round Lake are classified as Areas of Special Natural Resource Interest (ASNRI).

The Department of Natural Resources completed Sensitive Areas Designations in September of 1998. Purple Loosestrife was present in three of four designated areas on Big Lake. Control of purple loosestrife was recommended. The plant was not found on Church Pine Lake.

2009 Plant Survey Results

| | Church Pine | Round | Big | North Central Hardwoods |
|---|-------------|-------|------|-------------------------|
| Number of plant species | 38 | 40 | 32 | |
| Number of non-native species | 0 | 2 | 2 | |
| FQI | 35.8 | 36.7 | 29.2 | 20.9 |
| Mean Coefficient of Conservatism | 6.53 | 6.2 | 5.96 | 5.6 |

Plant survey results in the table above show that the FQI and mean Coefficient of Conservatism are above the average for the North Central Hardwoods region.

Purple Loosestrife

Annual meeting reports in 2006 and 2007 confirm that purple loosestrife occurs on Big Lake in several areas and is present in fewer areas Round Lake. None is reported on Church Pine Lake. There is also mention of beetles brought in a few years prior to 2006 by DNR, and there was an expectation that more will be introduced.

The 2009 plant survey found numerous locations of individual plants or small clumps of purple loosestrife along the shoreline of Round Lake. It was also observed in a few locations on Big Lake. Two of these locations had growth that was large and quite dense.

Giant and Japanese Knotweed

A recent Polk County Land and Water Resources rapid response grant project **(Point D1)** found several locations of Giant and Japanese Knotweed in Polk and Burnett County. Three of the sites are on or near Big Lake and another is near Round and Church Pine. This grant expires at the end of 2013. **(Point B2)**

Eurasian water milfoil

Eurasian water milfoil is not found on project lakes nor are there any water bodies within five miles with EWM present. However the lakes are within close proximity (50 miles) of the Twin Cities. With Eurasian water milfoil present in many urban Twin Cities lakes, the danger of transporting plant fragments on boats and motors is very real.

Lakes District efforts focus on prevention of Eurasian Water Milfoil.

Curly leaf pondweed

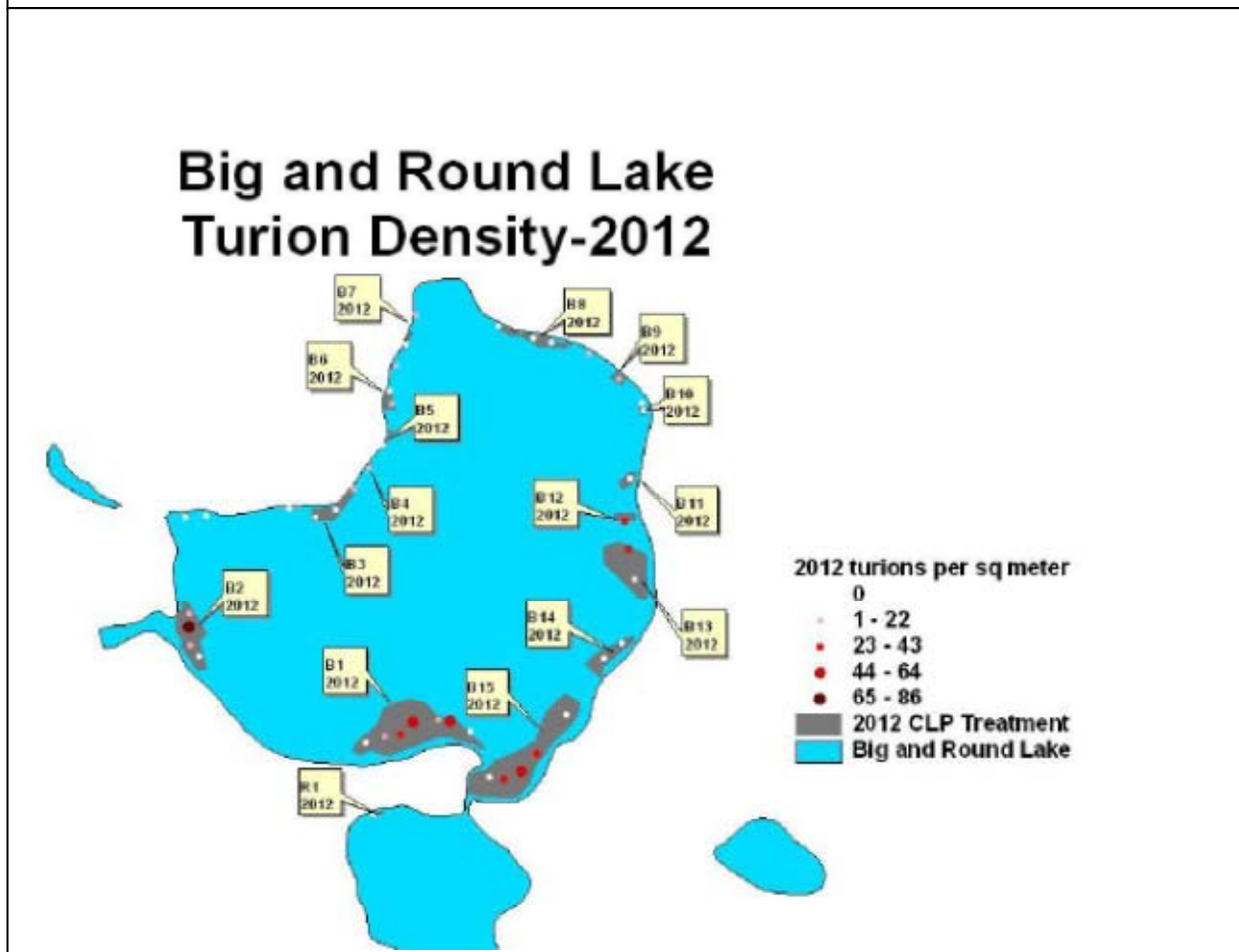
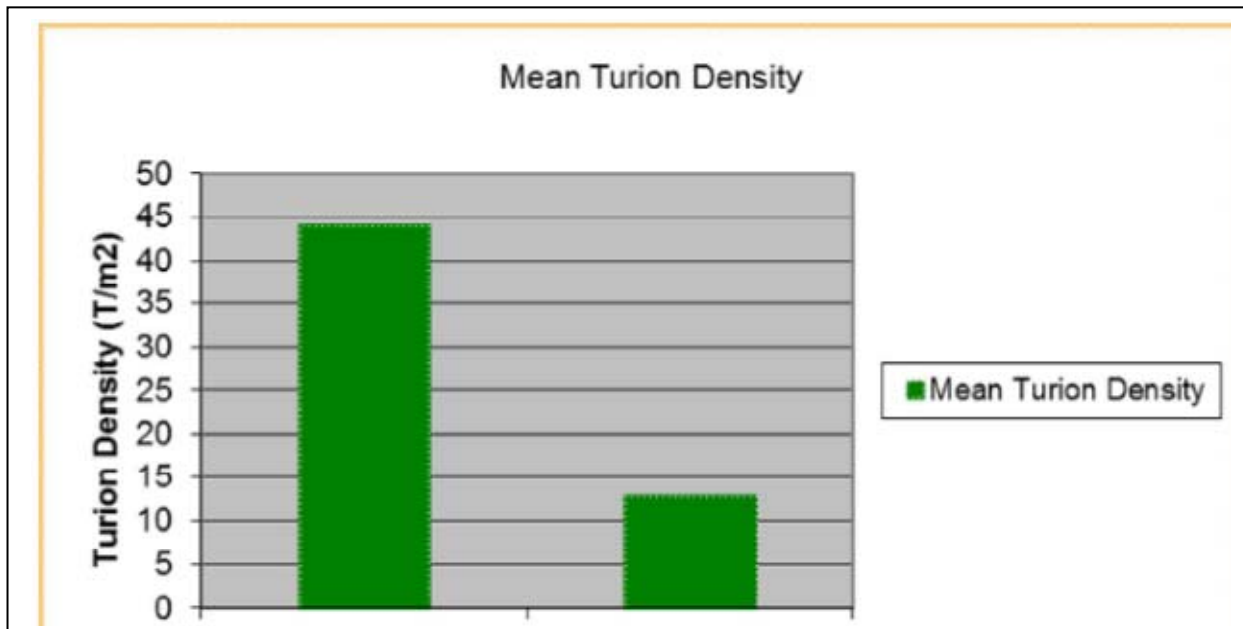
Curly leaf pondweed is present in Big, Round, and Church Pine Lakes – most of the dense growth of curly leaf pondweed is in Big Lake. Curly leaf has been successfully treated with endothall early in the season in 2011, 2012, and the treatment will continue into 2013. Treatments have resulted in nearly complete removal of CLP during each treatment period, and treatment acres declined from 25 in 2011 to 20 in 2012. In 2013, 20.9 acres were treated.

The entire area with CLP growth is treated in Round Lake. This amounted to .10 acres in 2011, .08 acres in 2012, and .05 acres in 2013. The littoral zone is about 59% of this 30 acre lake or 18 acres. CLP is therefore present in only 0.3 % of the littoral zone of Round Lake. **(Point D2)**

| <i>CLP Data</i> | <i>Measured</i> |
|---------------------------------------|---------------------------------|
| <i>Post-treatment 2011</i> | 0.04 or 4% |
| <i>Pre-treatment</i> | 0.75 or 75% |
| <i>Post-treatment</i> | 0.11 or 11% |
| <i>Change</i> | Reduced ¹ (-0.64) |
| <i>Significant</i> | Yes ($p=3.7 \times 10^{-38}$) |

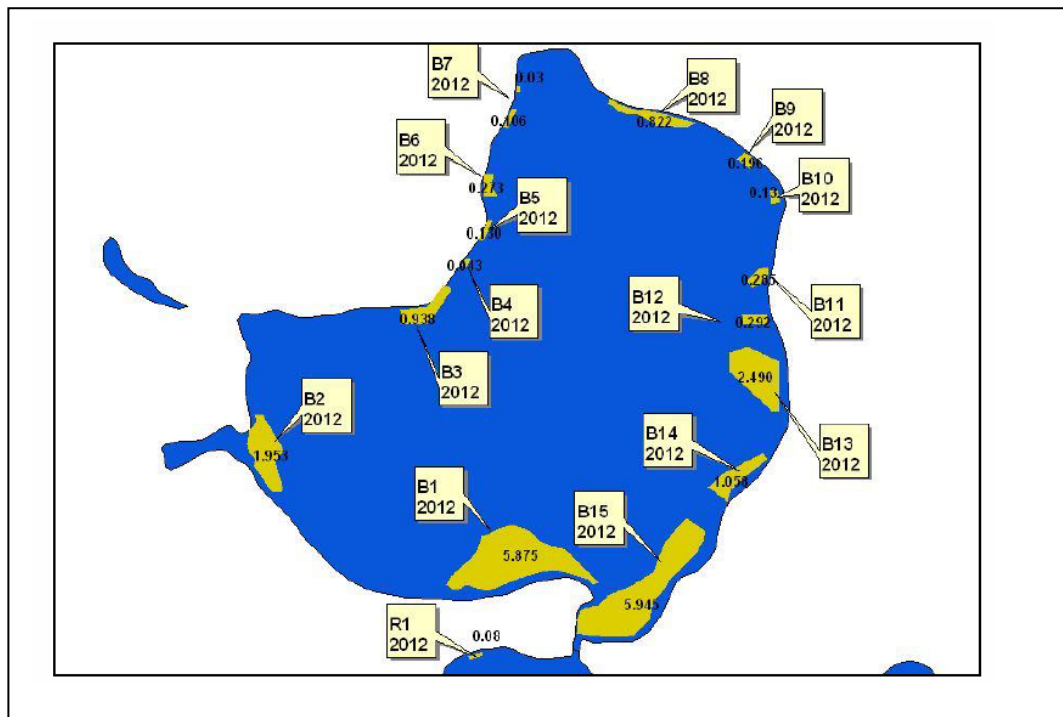
Table 2: Frequency change data before and after treatment.

Sediment turion analysis also shows promising results with sediment turion density decreasing from 44 to 12.8 turions per square meter from 2011 to 2012. A map of the turion density at each sample point is included below.





Curly Leaf Pondweed (CLP) Beds on Big and Round Lake - 2009



CLP Beds - 2012

Ongoing Invasive Species Control and Education Efforts

Purple Loosestrife Control

The Lake District hired Dale Dressel, with Northern Aquatic Services to chemically treat purple loosestrife from 2009 through 2012. Purple loosestrife costs have declined with successful herbicide treatments. They totaled \$3,126 in 2009; \$820 in 2010, \$763 in 2011, and \$870 in 2012. Dale cut stems and treated plants with glyphosate. A homeowner has also released beetles in one large patch on Big Lake. Both control methods will continue during the grant period. **(Point E1) (Point G1)**

Knotweed Control

The Polk County LWRD has found and treated Giant/Japanese Knotweed on Big Lake. This treatment will end in 2013 after which the Lakes District will take over control through contract. **(Point B2)**

Lake District Education and AIS Prevention Activities

Education of lake homeowners occurs primarily through the Church Pine, Round, and Big Lakes web site (www.bigroundpine.com), spring and fall lake district meetings, and newsletters. The Lake District also educates lake residents and visitors and provides boat and trailer inspections through a Clean Boats, Clean Waters program.

Boat Landing Monitoring

The monitoring consultant Steve Schieffer checked the landings in July 28, 2011 using SCUBA and found Chinese mystery snails on Big Lake. Jeremy Williamson (Polk County LWRD) checked the Big Lake Landing and Steve Schieffer checked the Church Pine Landing in 2012. No additional invasive species were found. Pontoon Classes in 2012 included identification of invasive species.

Clean Boats, Clean Waters (Point A1)

The Clean Boats, Clean Waters program educates lake users regarding actions that prevent invasive species from entering lakes and records lake users' behavior. Because of the threat of introduction of invasive aquatic species, preparation for a Clean Boats, Clean Waters project began in 2006. In that year, two lake residents attended DNR training. The Lake District also acquired inspector T shirts and hats.

The Clean Boats Clean Waters inspections were launched in 2007. Residents who attended training in 2006 provided training for other volunteers. Coordinators were assigned for the Church Pine and Big Lake boat landings, and aquatic invasive species (AIS) signs were posted at these landings. Volunteers worked over 14 weekend days (57 hours) inspecting 57 boats with 2 potential AIS introductions avoided. Volunteers also looked for EWM at the boat landings in 2007. The program struggled in 2008 with fewer volunteers participating and deteriorating record keeping. Coverage at the boat landings went down to about 4 weekend days (22 hours) and 24 boat inspections.

In 2009, the Lake District hired 4 students working every weekend from 6 to 10 a.m. with 2 assigned per landing on Big Lake and Church Pine Lake. There were also ongoing “drop by” visits by the 16 volunteer adults. The Lake District funded the program without grant assistance in 2009.

Department of Natural Resources grants supported the Clean Boats Clean Waters program in 2010, 2011, and 2012. Grant support has allowed expansion of the program. Inspectors staff the boat landings one weeknight, Saturdays, Sundays, and holidays beginning the weekend before Memorial Day and ending the weekend after Labor Day. An adult staffs the Church Pine Landing and students staff the Big Lake Landing. They are paid \$10-12 per hour. Adult volunteers check in with the student inspectors periodically. Board members attend training and assist with data base entry and reporting. Heidi Hazzard coordinates the program and enters the data into the DNR database.

Landing Inspections

| Landing | Boats 2009 | Boats 2010 | Boats 2011 | Boats 2012 |
|--------------------|-------------------|-------------------|-------------------|-------------------|
| Big Lake | 86 | 273 | 442 | 429 |
| Church Pine | 118 | 260 | 414 | 382 |

In 2012 inspectors worked 663 hours at the landings reaching 1942 people.

Polk County Land and Water Resources Department (LWRD)

The Lakes District will continue to coordinate training and educational activities with the Polk County Land and Water Resources Department. County staff is also willing to provide plant identification assistance.

Pontoon Classrooms

On July 20th, 2012 and August 9th, 2012 pontoon classrooms were held for members of the Church Pine, Round, and Big Lake Protection and Rehabilitation District. The classroom held on July 20th was attended by five adults and the classroom held on August 9th was attended by nine children and one adult.

Several owners have installed shoreland restoration projects on project lakes working with the Polk County Land and Water Resources Department.

On September 13th, 2012 a shoreline restoration workshop was held for members of the Church Pine, Round, and Big Lake Protection and Rehabilitation District at the Alden Town Hall. The two hour workshop began at 3 pm and lasted over two hours. Eight attendees gained valuable information regarding shoreline restoration and rain gardens and were offered numerous educational handouts including: native plant lists for Polk County, rain garden designs, and grids to design a project of their own.¹

¹ Katelin Holm, Polk County LWRD. Email communication December 4, 2012.

Lake District Lake Management Activities (Point G1)

Water Quality Study

The Lake District is assisting the Polk County LWRD in a water quality study of the lakes. Study tasks completed by the Lake District over this past year include:

- Collect lake level monitoring data
- Implement shoreland quality inventory
- Assist in locating shoreland owners interested in shoreline restoration
- Provide input by participating in the sociological survey
- Distribute the sociological survey
- Provide financial assistance of up to \$5,000
- Attend and assist with educational programs
- Communicate with LWRD to assist with project implementation
- Develop goals and strategies for lake planning
- Make information public by relaying project updates to lake residents
- Distribute final report to lake residents and post the report on the District website

A draft lake management plan is under public review through August 1, 2013.

Native Plant Bank Stabilization

The lake district completed dredging of the channel to maintain navigation between Round Lake and Church Pine Lakes. The dredging was completed in the fall of 2012. As part of the project, the disturbed bank was seeded with a "short dry native grass/forbs mix" from Agassis Seed company in Minneapolis. It is a mixture of 10 different native wild flowers.

Purple Loosestrife Control

The Lake District hired Dale Dressel, with Northern Aquatic Services to chemically treat purple loosestrife from 2009 through 2012. Lake district volunteers have also raised beetles to control growth in a larger patch.

Problems to be Addressed

1) Eurasian water milfoil introduction threatens project lakes.

There is a high risk that Eurasian water milfoil and other aquatic invasive species may become established in project lakes. Many fishermen travel from the Twin Cities, Minnesota metropolitan area, and access the lakes at the boat landings. With Eurasian water milfoil present in many urban Twin Cities lakes, the danger of transporting plant fragments on boats and motors is very real. According to the Minnesota Sea Grant Office:

Eurasian water milfoil can form dense mats of vegetation and crowd out native aquatic plants, clog boat propellers and make water recreation difficult. Eurasian water milfoil has spread to over 150 lakes [in Minnesota], primarily in the Twin Cities area.

Department of Natural Resource scientists have also found Eurasian water milfoil in the nearby Wisconsin counties of Burnett (Ham, Shallow, and Round Lakes), Barron (Beaver Dam, Horseshoe, Sand, Kidney, Shallow, Duck, and Echo Lakes), and St. Croix (Bass Lake, Goose Pond, Little Falls Lake, Lake Mallalieu, and Perch Lake). In Polk County, EWM is found in Long Trade, Horseshoe, and Pike Lakes.

2) Curly leaf pondweed impacts Big Lake and threatens to spread to other project lakes.

With extensive curly leaf pondweed growth in the littoral zone of Big Lake, it may impact summer phosphorus levels and water quality. Three years of control has resulted in significant progress, but turions are still present in lake sediments to cause new CLP growth. In this project, the threat of spread is immediate within the system of three lakes. While there is extensive coverage in Big Lake, there is little in Round Lake, and even less in Church Pine.

Curly leaf pondweed is specifically designated as an invasive aquatic plant (along with Eurasian water milfoil and purple loosestrife) to be the focus of a statewide program to control invasive species in Wisconsin.

The Wisconsin Comprehensive Management Plan for Aquatic Invasive Species describes curly leaf pondweed impacts as follows:

It is widely distributed throughout Wisconsin lakes, but the actual number of waters infested is not known. Curly-leaf pondweed is native to northern Europe and Asia where it is especially well adapted to surviving in low temperature waters. It can actively grow under the ice while most plants are dormant, giving it a competitive advantage over native aquatic plant species. By June, curly-leaf pondweed can form dense surface mats that interfere with aquatic recreation. By mid-summer, when other aquatic plants are just reaching their peak growth for the year, it dies off. Curly-leaf pondweed provides habitat for fish and invertebrates in the winter and spring when most other plants are reduced to rhizomes and buds, but the mid-summer decay creates a sudden loss of habitat. The die-off of curly-leaf pondweed also releases a surge of nutrients into the water column that can trigger algal blooms and create turbid water conditions. In lakes where curly-leaf pondweed is the dominant plant, the summer die-off can lead to habitat disturbance and degraded water quality. In other waters where there is a diversity of aquatic plants, the breakdown of curly-leaf may not cause a problem.²

² Wisconsin's Comprehensive Management Plan To Prevent Further Introductions and Control Existing Populations of Aquatic Invasive Species. Prepared by: Wisconsin Department of Natural Resources. September 2003.

Rapid early season growth of curly leaf pondweed forms large, dense patches at the surface in some areas of Big Lake. This canopy overtops most native aquatic plants, shading them and significantly slowing their growth. The canopy lowers water temperature and restricts absorption of atmospheric oxygen into the water. The dense canopy formed often interferes with recreational activities such as swimming and boating.

In late spring, curly leaf pondweed dies back, releasing nutrients that may lead to algae blooms. Resulting high oxygen demand caused by decaying vegetation can adversely affect fish populations. The foliage of curly pondweed is relatively high in alkaloid compounds possibly making it unpalatable to insects and other herbivores.

Curly leaf pondweed management requires monitoring

The Lake District will conduct aquatic plant monitoring activities to assess the effectiveness of curly leaf pondweed management using standard DNR pre and post monitoring methods.

Review and analysis of effectiveness of CLP treatment is needed.

A careful review of CLP treatment monitoring results will help to guide CLP management efforts into the future.

3) Threat of Giant and Japanese Knotweed

Knotweed has been found on Big Lake. Giant knotweed is a prohibited species listed in NR40.04(2)). There is a need to get the word out to lake residents in the hopes of preventing its spread and to eradicate plants that are found near the lakes.

4) Purple Loosestrife is present on project lakes.

Project Goals and Objectives

These project goals and objectives are taken directly from the September 2010 APM plan. Goal 3 addresses maintaining navigation, which is not included in this project.

Goal 1. Prevent introduction of aquatic invasive species and pursue any new introductions aggressively.

Objectives

- A. Boaters inspect, clean, and drain boats, trailers and equipment.
- B. Identify new aquatic invasive species as soon as possible after introduction to the lakes.
- C. Rapidly and aggressively respond to new introductions of invasive species such as Eurasian water milfoil.

Goal 2. Reduce the population and spread of curly leaf pondweed, purple loosestrife, and other invasive aquatic plants.

Objectives: Curly leaf pondweed

Church Pine

- A. Eradicate curly leaf pondweed if found in Church Pine Lake.

Round

- B. Eliminate dense growth at the north end of Round Lake

Big (20 acres of CLP beds currently)

- C. Priority 1: Reduce dense growth of curly leaf pondweed in beds near the boat landing to a mean rake density less than 1.
- D. Priority 2: Reduce dense growth of curly leaf pondweed in remaining beds to a mean rake density of 1.

Objectives: Purple loosestrife and Giant and Japanese Knotweed

- A. Eradicate individual plants
- B. Reduce populations in larger, established areas

Goal 4. Preserve our diverse native aquatic plant community.

Objectives

- A. Maintain native plants to prevent AIS introduction.
- B. Protect native plant sensitive/critical habitat areas – especially areas with emergent vegetation like rushes and cattails.
- C. Increase residents' understanding of the role and importance of aquatic plants and their impacts on them.

Goal 5. Reduce runoff of nutrients and sediment from the lakes' watershed.

Objectives

- A. Reduce runoff from agricultural property.
- B. Reduce runoff from waterfront property.
- C. Better understand the lakes water and nutrient budgets and the sources of phosphorus from the watersheds.

Project Methods and Activities

Actions are taken directly from the Aquatic Plant Management Plan. Some of the activities underway under existing grant ACEI-099-11 are noted. Activities under Goal #5 are underway with Lake District and Polk County LWRD funding and oversight. Actions included in this grant application are highlighted.

Goal 1. Prevent introduction of aquatic invasive species and pursue any new introductions aggressively.

Actions

- 1. Continue a successful Clean Boats, Clean Waters program. (Objective A) ACEI-099-11
 - 2. Monitor regularly for invasive species introduction at areas of high public use such as the boat landings using volunteers, divers, and/or other comprehensive, reliable method. (Objective B) **(Point A3)** Citizen monitors will be trained during this grant project.
 - 3. Follow the Eurasian Water Milfoil Rapid Response plan (Appendix D). (Objective C)
 - 4. Investigate and pursue available monitoring and control measures for priority invasive species such as Eurasian water milfoil and zebra mussels. (Objective B, C)
 - 5. Install and monitor surveillance cameras at boat landings. (Objective A) ACEI-099-11
 - 6. Investigate charging landing fees to carry out AIS prevention activities. (Objective A)
 - 7. Investigate restricting access to one boat landing on the lakes (Objective A)
2. Reduce the population and spread of curly leaf pondweed, purple loosestrife, and other invasive aquatic plants.

Actions: CLP

- 1. Hand pull any curly leaf pondweed found growing in Church Pine Lake. Use herbicide treatment only if hand pulling is not effective or practical. (Objective A) **(Point E1)**

2. Control CLP growing in dense beds using low-dose, early season Endothall treatment or other accepted method. (Objectives B, C, D)
 - a. Select tentative beds for treatment in July of previous year (APM Lead or APM Advisory Committee)
 - b. Select APM contractors (Herbicide Contractor, APM Monitor) in December (Board) *Northern Aquatic Services is the selected contractor*
 - c. Apply for APM permits in January or February (*underway*)
3. Conduct DNR specified and required third-party pre and post herbicide monitoring for CLP herbicide treatment. (Objectives B, C, D)
4. Map beds of curly leaf pondweed annually. Look for curly leaf pondweed growth in Church Pine where reported in 1997 in transects 11 and 13. (Objective A-D)

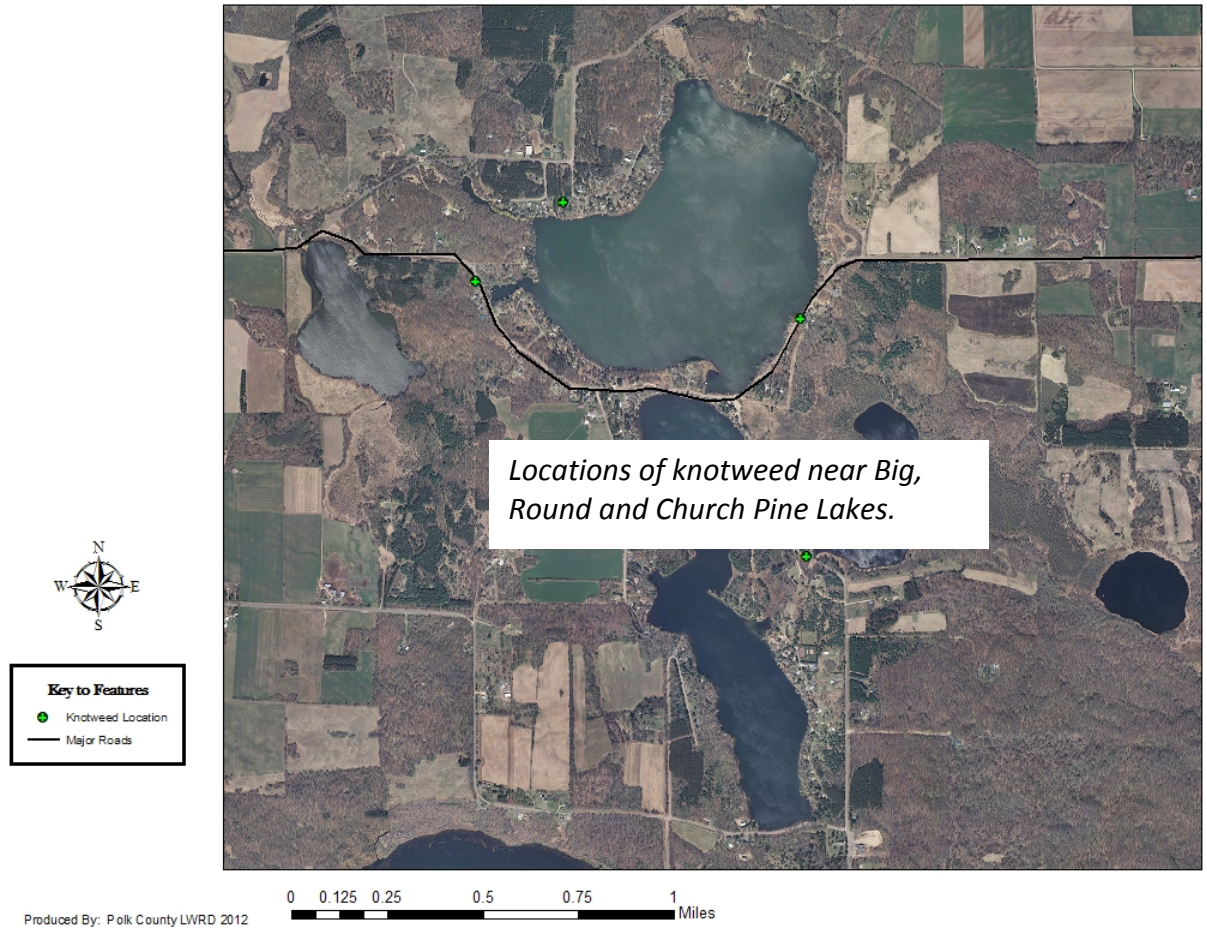
The lake district participated in an herbicide concentration study to be led by John Skogerboe of the Army Corps of Engineers. Volunteers collected water samples as directed by the study design in order to fine-tune herbicide application rates for Big Lake. These studies will be continued during the grant period. Results will also provide guidance for lakes across the state. (Point J1)

Actions: Purple Loosestrife

1. Hire contractor to cut/apply herbicides to individual plants/patches. (Objective A and B) **(Point G1)**
2. Release beetles in inaccessible patches. (Objective B)
3. Map purple loosestrife growth (how often) to monitor progress toward objectives. (Objective A, B)

Actions: Giant and Japanese Knotweed (Point B2)

Giant knotweed (a prohibited species listed in NR40.04(2)) and Japanese knotweed will be managed cooperatively with the Polk County LWRD in a manner similar to purple loosestrife for this grant. A recent Polk County rapid response grant project located several populations of the two invasive species. The Lake District will assist by educating lake residents about the threat of these invasive species and the need to remove them if found on their property. **The Lake District will also assist with identification and locating new populations in the project area through 2013. Currently identified sites are shown in the map below. In 2014 – 2015, control efforts will be carried out. The contractor hired to control purple loosestrife will also be hired to control knotweed.** Polk County staff will provide updated knotweed locations at the end of 2013 and along with landowner contact information.



4. Preserve our diverse native aquatic plant community.

Actions

1. Limit native plant management in sensitive areas to narrow corridors (30 feet maximum width). (Objective B)
2. Implement strict adherence with treatment standards (early CLP treatment prior to native plant growth) and monitoring methods prior to and following herbicide treatment. (Objective A, B)
3. Limit removal of native plants to areas with severe navigation problems or nuisance conditions. (Objective A, B, C)
4. Use methods outlined in Goal 6 to deliver messages regarding native plant values. (Objective C)
5. Complete a point intercept survey of project lakes.

6. Update the Aquatic Plant Management Plan

5. Reduce runoff of nutrients and sediment from the lakes' watershed.

Actions

1. Address loading of agricultural pollutants from the north end of Big Lake. (Objective A)
2. **Encourage waterfront property owners to reduce runoff from their land. (Objective B)**
This action has been underway for several years. Many projects to reduce runoff and improve habitat on waterfront property were completed as part of the Horse Creek Priority Watershed project. These included shoreland habitat restoration projects: 20 on Church Pine, 10 on Big, and 4 on Round. At an average of 70 feet per project, this totals about 2400 feet of shoreline on project lakes. Projects such as rain gardens were also completed. While the Horse Creek Priority Watershed project has expired, limited funding is available for similar projects from the Polk County Land and Water Resources Department.
3. Complete water quality and watershed studies to better understand nutrient loading to the lakes. (Objective C)
The Polk County Land and Water Resources Department is assisting the Lake District with a study of water quality on project lakes. The study includes lake sampling, tributary sampling, temperature and oxygen profiles, zooplankton and algae characterization, watershed modeling, water quality recommendations, and a management plan. This project is supported by a lake planning grant. Lake District volunteers are providing in-kind support.
4. Identify best management practices to limit inputs of nutrients and sediment to the lakes. (Objective A, B)

6. Educate the public regarding aquatic plant management.

Gather and assemble public information materials for distribution to lake residents and visitors. Written materials will be distributed at boat landings and at Lake District meetings. Existing UWEX and DNR resources will be used whenever feasible.

Conduct an educational workshop regarding aquatic plant management. The workshop will also be used to gather public input of lake homeowners and visitors for the development of the aquatic plant management plan. It will occur at a Lake District meeting.

Train volunteers to identify EWM and conduct surveillance monitoring for early detection in project lakes

Update web site to expand aquatic plant management information.

Write and distribute newsletter articles with EWM and other aquatic plant management information.

Post state AIS signs and distribute brochures to encourage lake users to clean plants from boats and equipment and to drain live wells and to inform them about aquatic transport laws. The lake district will also distribute a map with AIS information developed specially for the district.

Monitoring and Assessment

Eurasian water milfoil

Consultants and volunteers will check for the presence of Eurasian water milfoil and other invasive plants at all areas of high public use. **(Point A3)**

Evaluation

Short-term success will be measured by the post treatment CLP and native plant density measurements. Over the long term, success will be measured by the reduction of CLP according to plan objectives for each lake.

Another measure of long-term success is lack of establishment of Eurasian Water Milfoil, and lack of spread of Giant and Japanese Knotweed and Purple Loosestrife.

Products or deliverables / data collected

- ✓ CLP bed mapping
- ✓ CLP pre and post monitoring
- ✓ Turion monitoring results
- ✓ Maps of AIS locations and treatment sites
- ✓ Boat landing monitoring (consultant and volunteer reports)
- ✓ Workshops and presentations
- ✓ Example newsletter articles

Existing and Proposed Partnerships

The Lakes District will use local and state resources and work together with available agency staff to implement this project. Polk County staff will also assist the Lake District with AIS education, AIS monitor training, a water quality study of the lakes, shoreline restoration projects, and lake ecology information.

Existing Plans or Management Efforts (how is project consist with these)

Invasive aquatic species prevention through education is a priority of the **Polk County Land and Water Plan** as shown in the goal and activity below.

Goal 3: Preserve, protect, and enhance riparian areas, wetlands, and aquatic and upland plant communities. Prioritize these sites to preserve the most pristine sites.

- E. *Control invasive species to protect the integrity of resources.*
 - 1. *Work with other agencies to coordinate programs and distribute information.*
 - 2. *Conduct eradication training to landscapers and public.*

Polk County has a **Do Not Transport Ordinance** to remind lake users about its requirements. It is illegal to transport aquatic vegetation on boats and equipment in Polk County.

The Lake District has recently taken a very active role in ensuring that the Do Not Transport Ordinance and state regulations are enforced on project lakes. These efforts will aid in enforcement throughout Polk County. (Point A2) This involvement followed an incident in September 2010 where a Polk County deputy was dispatched to the boat landing after ten boats and trailers were found with both fresh and old aquatic plants present. This deputy was not familiar with the Polk County ordinance. As a result, the Lake District has been coordinating efforts for more effective enforcement with Polk County and DNR. These have included 1 meeting and 2 conference calls. Future plans include confirming 2011 commitment of Polk County Sheriff's Department to water patrol; establishing training for DNR and Polk County deputies regarding weed transport laws; obtaining commitment for enforcement resulting from ILIDS camera video; and discussion at the May Lake District meeting. Future discussions will include Eric Lindberg the owner of Environmental Sentry Systems.

The Sheriff's Department Boat Patrol is also involved in enforcing the Do not Transport Ordinance. The strategy is to create a law enforcement presence on the Lakes that influences compliance with both AIS and Boating ordinances. Shirley Rossing is a deputy sheriff. While she has not issued a citation for AIS her presence on the lakes and landings reinforces all ordinances that relate to AIS and Boating. The District has purchased a boat and leases it to the Sheriff. We pay the net of all expenses after DNR reimbursement to the Sheriff. This has been the system for at least 5 years.

The Wisconsin Department of Natural Resources (WDNR) and the St. Croix Partner Basin Team identify the control of invasive species as a high priority issue in the **St. Croix Basin Plan**.

Recent and imminent introductions of exotic and out of place endemic species threaten ecological balance and the very existence of many native species at all trophic levels. The growing list of exotic species and their expanding range may prove to be an insurmountable obstacle to maintain healthy natural aquatic systems.

Project Timeline

The project will be implemented over a three year time period. A project timeline is included in the APM Implementation Plan tables that follow. Some of the 2014 costs are covered by carry-over from the previous AIS control grant. These are not included in the control budget spreadsheet.

APM Implementation Plan

| 1. Prevent introduction of aquatic invasive species and pursue any new introductions aggressively. | | | | | | |
|--|--------------------------------|-----------------|----------------------|-----------------|----------------------|---------------------|
| Actions | Timeline | Cost 2014 | Volunteer Hours 2014 | Cost 2015/16 | Volunteer Hours 2015 | Responsible Parties |
| 1. Clean Boats, Clean Waters (apply for simple grant each year) | Memorial Day through Labor Day | \$9,100 | 150 | \$9,100 | 150 | CBCW Committee |
| 2. Monitor areas of high public use (grant eligible) | July/August | \$500 | | \$500 | | Consultant/Diver |
| 3. Set up a Eurasian Water Milfoil Contingency Fund | | \$2,500 | | \$2,500 | | Treasurer |
| 4. Zebra mussel monitoring (grant eligible) | Annually | \$0 | 5 | \$0 | 5 | Polk LWRD |
| 6. Investigate charging landing fees to fund prevention actions | | | 20 | | 20 | Lake District Board |
| 7. Investigate restricting access to reduce risk of invasive species introduction | | | 20 | | 20 | Lake District Board |
| SUBTOTAL GOAL 1 | | \$33,143 | 303 | \$14,691 | 140 | |
| Existing grant funding | | \$8,500 | | \$0 | | |
| Potential grant funding (@ 75%) | | \$4,750 | | \$8,018 | | |

| 2. Reduce the population and spread of curly leaf pondweed, purple loosestrife, and other invasive aquatic plants. | | | | | | |
|--|---------------------|-----------------|----------------------|-----------------|----------------------|--|
| Actions | Timeline | Cost 2014 | Volunteer Hours 2014 | Cost 2015 | Volunteer Hours 2015 | Responsible Parties |
| Curly Leaf Pondweed | | | | | | |
| 1. Hand pull curly leaf pondweed in Church Pine Lake | June | | 10 | | 10 | Board/Volunteers |
| 2. Control CLP with low dose, early season Endothall application | | | | | | |
| a. select beds for treatment | August (prev. Year) | | | | | Lake District Board |
| b. select APM contractors | January | | 20 | | 20 | Lake District Board |
| c. apply for APM permits | February | \$425 | 5 | \$425 | 5 | Board Herbicide Contractor |
| d. complete herbicide treatment | May | \$16,000 | 5 | \$16,000 | 5 | Board Herbicide Contractor |
| 3. Conduct pre and post monitoring | May and June | \$1,500 | | \$1,500 | | Lake District Board Monitoring Consultant |
| 4. Map beds of curly leaf pondweed | June | \$500 | | \$500 | | Lake District Board Monitoring Consultant |
| 5. Map turions | August | \$500 | | \$500 | | |
| Purple Loosestrife and Knotweed | | | | | | |
| 1. Cut/treat plants | July/August | \$1,000 | | \$1,000 | | Herbicide Contractor |
| 2. Grow and release beetles | May – July | 0 | 40 | 0 | 40 | Volunteer |
| 3. Map knotweed and purple loosestrife locations and extent | September | \$250 | | \$250 | | Monitoring Consultant or Herbicide Contractor |
| SUBTOTAL GOAL 2 | | \$19,395 | 95 | \$19,395 | 95 | |

| 4. Preserve our diverse native aquatic plant community. | | | | | | |
|---|----------|----------------|----------------------|----------------|----------------------|--|
| Actions | Timeline | Cost 2014 | Volunteer Hours 2014 | Cost 2015 | Volunteer Hours 2015 | Responsible Parties |
| 1. Sensitive area management limited to 30 foot corridors | Ongoing | \$0 | 0 | \$0 | 0 | Lake District Board Herbicide Contractor |
| 2. Follow treatments standards and monitoring protocol | Ongoing | \$0 | 0 | \$0 | 0 | Lake District Board Herbicide Contractor Monitoring Consultant |
| 3. Limit removal of native plants | Ongoing | \$0 | 0 | \$0 | 0 | DNR Lake District Board |
| 4. Deliver educational messages | Ongoing | \$0 | 0 | \$0 | 0 | Lake District Board |
| 5. Update the aquatic plant point intercept survey | 2014 | \$3,500 | | | | Lake District Board Monitoring Consultant |
| 6. Update the aquatic plant management plan | 2015 | | | \$4,000 | 50 | Lake District Board Planning Consultant |
| SUBTOTAL GOAL 4 | | \$3,500 | 0 | \$4,000 | 50 | |

| 5. Reduce runoff of nutrients and sediment from the lakes' watershed. ³ | | | | | | |
|--|----------|-----------|----------------------|-----------|----------------------|---|
| Actions | Timeline | Cost 2014 | Volunteer Hours 2014 | Cost 2015 | Volunteer Hours 2015 | Responsible Parties |
| 1. Consider methods to address agricultural pollution. | | | | | | Lake District Board Polk County LWRD |
| 2. Encourage waterfront property owners to reduce runoff. | | | | | | Lake District Board |
| 3. Complete water quality and watershed studies. | | | | | | Lake District Board |
| 4. Identify and implement preferred best management practices | | | | | | Lake District Board |
| SUBTOTAL GOAL 5 | ? | ? | ? | ? | ? | |

³ Implementation for this goal will be developed by the committee following plan approval.

| 6. Educate the public regarding aquatic plant management. | | | | | | |
|---|-------------|-----------|----------------------|-----------|----------------------|---|
| Actions | Timeline | Cost 2014 | Volunteer Hours 2014 | Cost 2015 | Volunteer Hours 2015 | Responsible Parties |
| 1. Update web site | Ongoing | \$500 | 20 | \$500 | 20 | Lake District Board |
| 2. Annual meeting/special meetings | Summer/Fall | \$20 | 20 | \$20 | 20 | Lake District Board |
| 3. Workshops/small group meetings | Summer | \$200 | 20 | \$200 | 20 | Lake District Board Volunteers DNR Polk LWRD |
| 4. Mailings/handouts | Ongoing | \$200 | 20 | \$200 | 20 | Lake District Board Volunteers |
| 5. Brochures | | \$300 | | \$300 | | Lake District Board Volunteers |
| 6. Clean Boats, Clean Waters Supplies | | \$650 | | \$650 | | Lake District Board Volunteers |
| SUBTOTAL GOAL 6 | | \$ | 80 | \$ | 80 | |

Plan for Sharing Project Results

Project results will be shared through deliverables previously described including educational workshops, the aquatic plant management plan, invasive species monitoring maps, boat landing contact sites, and aquatic plant survey reports. A final report (in electronic format) will summarize these results. Newsletter articles and presentations at the Lake District's annual meetings will report project results to lake residents.

Itemized Budget (see attached)

Additional Information

Outline of discussions regarding county and state do not transport rules
Purple loosestrife beetle article

Law Enforcement/DNR Update
12/11/10

The following update is a result of an incident at the Big Lake Landing - Saturday September 11th. 10 Bass Fishing boats and trailers contained both old and new aquatic plants. Polk County deputy who was dispatched was not familiar with the Polk Co. Law and relied on the DNR representative for the 'state' law that are somewhat different.

As a result we identified some current "Challenges":

1. Understanding the existing Weed Transport Law(s)

Both Polk County and state prohibiting aquatic plant transport are parallel (backing into water with aquatic plants and transporting of aquatic plants are violations)

Polk County Law is somewhat more stringent; Adding, aquatic plants must be removed immediately after launching at a safe location.

2. Enforcing The Law(s)

Any law enforcement officer can enforce the law. i.e. State Law, DNR Representative and Polk County Law Enforcement. Currently, DNR is going through budget restrictions.

3. Dangerous launch site

Need a 3-Way Stop Sign at the Big Lake Landing - Country Road K

Past Efforts/Meetings & Conference Calls;

October 4th, 2010: (B Balck, Jerry Schlagel, Gary Ovick and Tim Moore Polk County Sheriff attended). Subject - synchronize understanding between the Sheriff and the DNR.

The local DNR representative (Jessie Ashton) failed to attend.

October 22nd, 2010: Teleconference (Erin McFarlane DNR, Balck, Schlagel, Ovick, Hazzard attended); Subject - better understand the Aquatic Plant laws and enforcement.

Since Erin focused on education there was not definitive answers during this call, however, several ideas were suggested / discussed that are being advanced by the DNR. i.e. Refining the CBCW Violation Report to include data required for enforcement and to whom the reports will be sent for action.

November 23rd, 2010: Teleconference (Wisconsin DNR: Randy Stark (608-266-1115), Greg Stacey, Supervisor of Water Guards), David Zebro, B Balck, Ovick, Hazzard, Schlagel attended)

Objectives (Results)

1. Understand the Law Associated with the Transport of Aquatic Plants
(Confirmed variation between stat and county law.)
2. Clarify enforcement of the law (DNR vs. County)
(Confirmed County and DNR can write citations.)
3. Clarify the role of the boat inspectors (How and to whom to report violations)
(Confirmed violation report will be revised to clarify data and process.)
4. The use of cameras for enforcing the law.
(Confirmed cameras do play a role in controlling violations, but placement, lighting, range etc must be considered to capture registration and preferably operator.)

Future Plans:

Meeting with both the outgoing (Tim Moore) and incoming (Pete Johnson) Polk County Sheriffs within the next month to:

1. Confirm 2011 commitment to water patrol.
2. Establish training with DNR and Polk County Deputies regarding the weed transport laws via Tim Werner - District Water Guard
3. Obtain a commitment regarding the use of the ILID cameras should violators be identified.
4. Inviting to attend the May Lake Association Meeting (Water Patrol and Aquatic Plant enforcement discussion)

By Bruce Balck

'Operation Beetle' project to battle invasive plant

To help eradicate an invasive plant species called Purple Loosestrife, the Lake District of Churchpine, Round and Big Lakes recently partnered with the Wisconsin DNR and Meyer Middle School of Riverfalls Wisconsin on a project called 'Operation Beetle.'

River Falls Meyer Elementary school science teacher, Karen Ye was contacted by Bruce Balck a resident of Churchpine lake and member of the lake district's aquatic plant committee about the possibility of this project. Balck said that "Ms. Ye immediately volunteered because this project paralleled her lesson plan objectives that she teaches as a part of her science curriculum". In mid-April the Purple Loosestrife root balls and beetles were obtained and were raised in the school's greenhouse by Karen's students.

The beetles called *Galerucella* were obtained from Brock Woods of the Wisconsin Department of Natural Resources (DNR). Karen said that "Brock has been an incredible resource on this project from providing the



Lake residents Gary Ovick, David Zanick, Bruce Black and Meyer Elementary teacher Karen Ye. Submitted photo

beetles and netting as well as providing a wealth of educational materials."

Purple loosestrife is an aggressive perennial plant of European

and Asian origin found in 47 states of the the United States and is commonly found along marshy areas and shorelines.

Purple loosestrife is a significant

problem because it displaces native wetland plants and can become the dominant plant, thereby reducing plant diversity and changing the ecosystem of a

wetland. A single purple loosestrife plant with multiple stems can produce up to two million seeds that are easily dispersed along rivers and waterways.

The leaf-feeding beetles reduce the growth and reproduction of purple loosestrife. The adult beetles feed on the leaves of purple loosestrife and lay their eggs. Once the eggs have hatched, the larvae feed on the leaves and stems as they move down into the soil. The larvae cause the most damage to the plant and reduce the number of seeds produced.

The beetles feed primarily upon purple loosestrife and either move on or die without the presence of Purple Loosestrife. The beetles were released the first week of June on the north marsh area of Big Lake. "It may take several years for the Loosestrife to be completely eradicated but is well worth the effort" Balck said.

For further information on the use of the biological control of Purple Loosestrife: http://www.dnr.state.wi.us/org/es/science/publications/ss981_2003.htm