

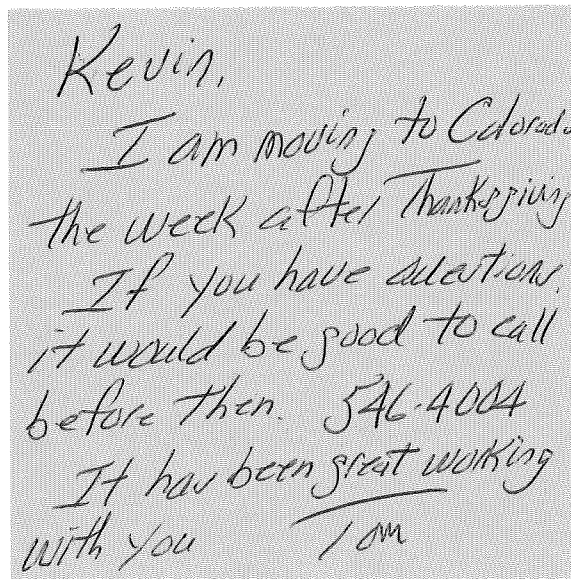
Final Report for Project AIRR-057-09

The attached documents, reports and emails are related to the Rapid Response Project initiated in the spring of 2009. All of these documents are the result of efforts made by the Town of Three Lakes, the Three Lakes Waterfront Association, and Onterra, LLC.

Thanks to these efforts along with the funding provided by the Wisconsin DNR through a Rapid Response Grant, the Eurasian Water Milfoil infestation that was discovered in the channel between Long Lake and the Burnt Rollways Dam has been controlled.

The documents speak for themselves in terms of the efforts that were made between 2009 and 2011 to identify and control the EWM infestation.

Tom Harris
Past President, TLWA



Kevin,
I am moving to Colorado
the week after Thanksgiving
If you have suggestions,
it would be good to call
before then. 546-4004
It has been great working
with you Tom

INTRODUCTION & PROBLEM IDENTIFICATION

During the summer of 2006, Eurasian water milfoil (EWM) was located approximately 0.25 mi. upstream from the Burnt Rollways Dam, Oneida County, WI (Map 1). As a result of that finding, the Wisconsin Department of Natural Resources (WDNR) issued an Aquatic Invasive Species (AIS) Early Detection and Rapid Response Grant to the Town of Three Lakes.

In the spring of 2007, Onterra, LLC ecologists surveyed the area and created a 0.5-acre treatment site over a scattered occurrence of EWM (Map 2). That area was treated by Schmidt's Aquatic Plant Control during May 2007. A post treatment survey completed during that summer yielded no EWM sightings within the treatment area, but did locate two small clumps of EWM immediately across the channel (Map 2).

The area was monitored by volunteers from the Three Lakes Waterfront Association, Inc. (TLWA) from the spring of 2007 through the summer of 2008. In August of 2008 TLWA monitors located scattered occurrences of EWM within much of the channel and as a result contacted the WDNR for guidance.

On September 5, 2008 Onterra ecologist Tim Hoyman, once again visited the area and mapped numerous occurrences of EWM between the Burnt Rollways Dam and the northern boundary of Long Lake, Oneida County. As a result of that survey, an 11.8-acre treatment area was recommended to the Town of Three Lakes and the TLWA. Attachment A contains the letter report and proposed treatment map provided to the town and TLWA following the survey.

Over the course of the next several months members of the TLWA met with WDNR staff, town officials, and representatives from the Unified Lower Eagle River Chain of Lakes Commission (ULERCLC) to discuss the EWM located above the Burnt Rollways Dam and potential EWM occurrences in the Eagle River between the dam and Cranberry Lake. As a result of those meetings, it was agreed upon by the entities that the project proposed here would extend from the Long Lake outlet, over the Burnt Rollways Dam and end approximately 0.25 mi upstream of the Chain-O-Lakes Campground and Resort (Map 1). The remaining area of the Eagle River leading to Cranberry Lake will be managed through an existing AIS control project being conducted by the ULERCLC.

PROJECT SCOPE AND TIMELINE

Spring Pretreatment Assessment (May 2009)

A qualitative assessment would be completed prior to the herbicide application to verify conditional treatment area extents (Attachment A Map) and to inspect the condition of the EWM occurrences within the project area (Map 1). Upon completion of the inspections, Onterra would provide a letter report to the Town of Three Lakes, the TLWA and WDNR describing the results of the assessment and any recommended changes to the treatment plan. If changes are suggested, Onterra would provide the updated treatment areas to the applicator once the updated plan is approved by the WDNR, town and TLWA.

Quantitative monitoring of the treatments would also be completed following protocols disbursed by the Wisconsin Department of Natural Resources (WDNR) in the winter of 2008.

This protocol calls for the monitoring of target plants (EWM) and native plants before and after treatments. Pretreatment surveys are completed the summer before treatment and the spring of the treatment. Post treatment surveys are completed the summer following treatment and the next spring following the treatment. Native plant species are only monitored as a part of the summer surveys when they are at their peak biomass. Please note, that due to the late start of the project, no summer pretreatment data were collected. Further, due to the unknown nature of EWM occurrences downstream from the Burnt Rollways Dam, no point-intercept layouts have been created for this project. At least a minimum of 100 points would be used to monitor the treatments.

Herbicide Application (May 2009)

If river flows are negligible, a licensed applicator would apply granular 2,4-D within the treatment areas created by Onterra and approved by the Town of Three Lakes, TLWA, and WDNR. Dose rates would be selected based upon water depth and EWM densities. The use of an early-season treatment strategy will reduce impacts on native dicots while increasing effectiveness against EWM.

If flows are too great, they would dilute the herbicide concentrations below target levels; therefore, a new treatment plan would need to be developed. At this time, it is not known what the new plan would include, however specialists from the WDNR and US Army Corps of Engineers would be consulted in the development of the new treatment plan.

Manual Removal (Summer 2009)

Manual removal by hand or through the use of rakes would be completed by TLWA volunteers throughout the summer of 2009. These efforts would be focused upon areas of light EWM occurrence, such as the untreated waters south of the proposed treatment areas (Attachment A Map) and in the actual treatment areas following treatment.

Summer Post Treatment Assessment (Late Summer 2009)

A site visit would be completed by Onterra ecologists during late July or August following the treatment to assess its effectiveness and map remaining and new areas of infestation. Please note that the entire project area would be surveyed from the surface during this visit to discover newly infested sites. The quantitative sub-sample sites would also be revisited to collect the post treatment data.

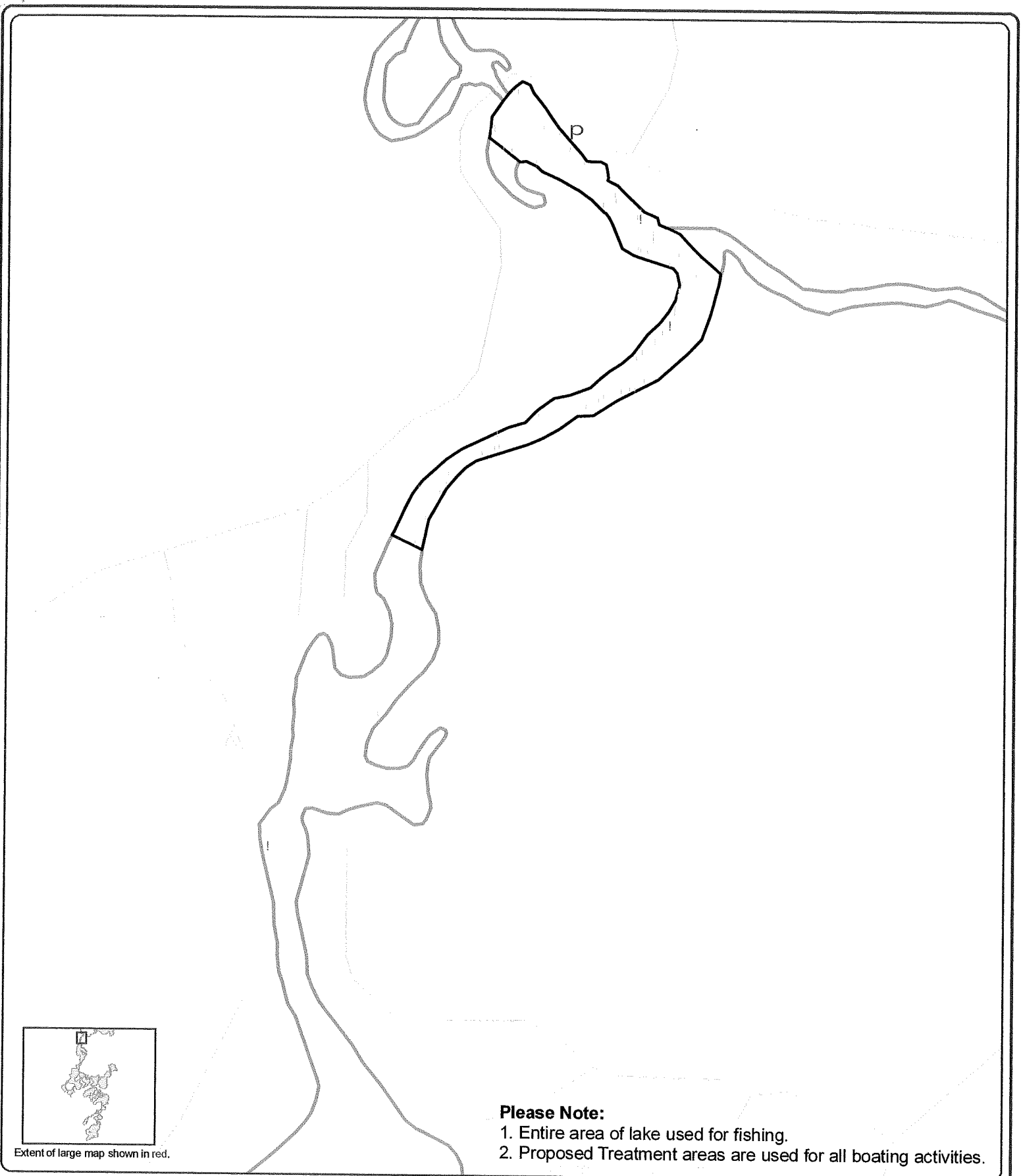
Treatment Report (Late Fall 2009)

A report would be completed discussing the results of the surveys and outlining the subsequent year's treatment plan. The report would be provided to the WDNR, town, and TLWA in hardcopy and electronic formats.

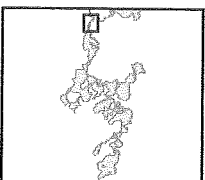
PROJECT COST BREAKDOWN

The budget displayed below was created using the best information at the time of this writing. As discussed in the introduction, Onterra surveyed the Eagle River upstream from the Burnt Rollways Dam to Long Lake; therefore, accurate information is available for that area which lends itself to a reasonable estimate of treatment & monitoring costs. Those costs are displayed within the table below. However, the remainder of the project area on the downstream side of the dam is without information; therefore, it is impossible to estimate the costs of completing an herbicide treatment and monitoring its effectiveness. Those costs are contained with the contingency amount of \$11,690.00.

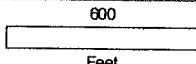
EWM Rapid Response Project	Cash Costs	Donated Value
Consulting Services		
Initial Assessment (completed)	\$260.00	
Mapping & Treatment Area Creation (completed)	\$260.00	
Spring 2009 Pretreatment Assessment & Reporting	\$1,480.00	
Summer 2009 Post Treatment Assessment & Reporting	\$2,055.00	
Grant Writing	\$260.00	
Travel	\$1,490.00	
<i>Subtotal</i>	<i>\$5,805.00</i>	
Herbicide Application		
Proposed Treatment 11.8 acres at 150 lbs/acre	\$8,142.00	
WDNR Conditional Permit Fees	\$320.00	
Travel	\$204.00	
Treatment and Monitoring Contingency	\$11,690.00	
<i>Subtotal</i>	<i>\$20,356.00</i>	
Volunteer Efforts		
Initial Survey (2 hours)		\$24.00
Project Administration (20 hours)		\$240.00
Manual Removal (20 hours)		\$240.00
<i>Subtotal</i>	<i>\$26,161.00</i>	<i>\$504.00</i>
Total Project	\$26,665.00	
State Share Requested	\$19,998.75	






Please Note:
 1. Entire area of lake used for fishing.
 2. Proposed Treatment areas are used for all boating activities.








Extent of large map shown in red.



Legend

-  Proposed 2009 Treatment Area (11.8 acres)
- EWM Small Colony (August '08)**
-  Single or Few Plants
-  Many Plants or Clumps of Plants

- EWM Large Colony (Sept. '08)**
-  Highly Scattered (*none found*)
-  Scattered (*none found*)
-  Dominant
-  Highly Dominant (*none found*)
-  Surface Matting (*none found*)

Onterra LLC
 Lake Management Planning
 135 South Broadway Suite C
 De Pere, WI 54115
 920.338.8860
 www.onterra-eco.com

Sources:
 Aquatic Plants: Onterra, Sept. 2008
 Orthophotography: NAIP 2005
 Map date: January 30, 2009

Eagle River
 Oneida County, Wisconsin
**2009 Proposed
 EWM Treatment Areas**

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Eagle River below Burnt Rollway Dam

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Christmas

Cruises

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thoyman@onterra-eco.com
To 'WILLIAM and MARY LOCHTE', Tom Harr...

5/14/09
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Hello Everyone,

On Tuesday, May 12th, Eddie Heath and I completed our pretreatment survey of the Eagle River downstream of the Burnt Rollways Dam. At the time of the survey, the weather perfect with little wind in the channel and relatively bright skies. We were able to see well into the water to easily ID submersed aquatic plants. We surveyed the entire channel from Cranberry Lake to the dam.

During our survey, we found varying degrees of EWM within the sites we had created as a part of the Lower Eagle River Chain AIS Project. These findings were expected with the last treatment site being just upstream from campground on the river. That site essentially served as the end point for the Lower Eagle River Chain Project and the start of the Three Lakes Rapid Response Project (see attached map).

Within the Three Lakes Project portion of the river, we entered all areas that we could get our boat into, which is a little less than 18" of water. Fortunately, we did not find any EWM within that portion of the river. We did find quite a bit of whorled milfoil (*Myriophyllum verticillatum*) within the channel which could be mistaken for EWM by the untrained eye. We have prepared a sample of the whorled milfoil for vouchering by Dr. Robert Freckmann at UWSP.

This is a very interesting finding as it is almost exactly what Gil Roshenthal said would be found last summer.

We have started our surveys on the Lower Eagle River Chain and will continue those through a portion of next

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week. We will be working on the Eagle River upstream of the Burnt Rollway Dam during the week of May 25th to prepare for Cliff Schmidt's scheduled treatment of the area on May 29th.

As always, if anyone has questions, please let us know.

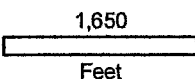
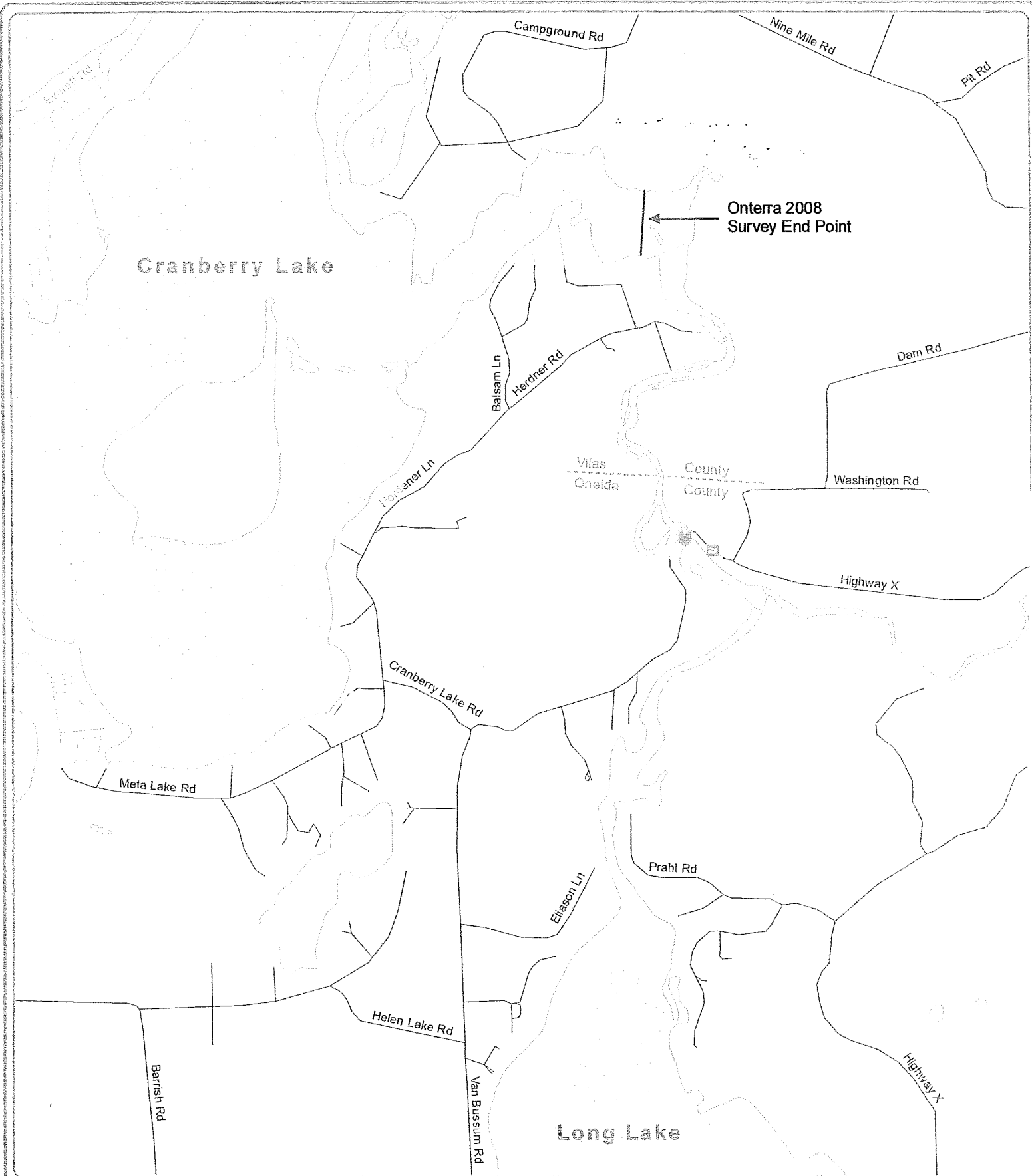
Thank you,

Tim

Tim Hoyman, CLM
 Aquatic Ecologist
 Onterra, LLC
 135 South Broadway Suite C
 De Pere, WI 54115
 Voice: 920.338.8865
 Fax: 920.338.8865
 Email: thoyman@onterra-eco.com
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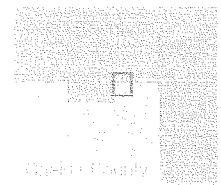
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Sources:
 Hydrology: WDNR
 Roads: WDNR

Map Date: November 5, 2008



Extent of large map shown in red.

Legend

-  Burnt Rollway Dam
-  Boat Landing

**Three lakes and
 Eagle River Chains**
 Oneida & Vilas Counties, Wisconsin

Project Extents

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Three Lakes Chain Billing and Activities Update

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To Tom Harris, 'Norris Ross', 'Werner, Jack'

8/12/10

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Hi Tom,

Per your request, this email updates the Three Lakes Waterfront Association on our project-related activities and billing regarding the projects we have on the Three Lakes Chain.

Eagle River Channel AIS Response Project

Our last activity with the project was on May 5, 2010 when Eddie Heath and Dan Cibulka completed a pretreatment survey on the channel. As a result of that survey we recommend that a treatment not be completed on the channel this year. I have attached Eddie's letter report here for your review. Also, I have included **Invoice 429** that includes the creation of the final letter report scheduled in the grant and the completion of the May survey, which was not originally in the project. This summer's channel survey (and that of Long Lake) looking for EWM, is covered by the Planning Grants we successfully applied for in February 2010 (See **Project Cost Breakdown 92**). As we have done in the past, we will help the TLWA set up the treatments, if needed, within the channel for next spring. A spring pretreatment survey would not be covered by the Planning Grant, but would be reimbursable under the AIS Rapid Response Grant, if funds remain in it (I am pretty sure they do). Based upon your updates, I know the grant has been extended.

Long Lake Management Planning Project

All field surveys included in this project have been completed as well as the bulk of the data analysis. The stakeholder survey has also be created and provided to the

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group. Jack did a great job soliciting comments on the base survey we provided to the planning committee he created. The majority of the group's comments and suggestions were included within the survey that was eventually accepted by the WDNR, and as I understand it, sent out by Jack to the property owners around Long Lake. I believe it is due for return around the end of the month. Once the surveys are returned and the results are tallied by the committee members into an Onterra-supplied spreadsheet, we will analyze the data and create numerous charts.

Our next step in this project is to hold the first planning meeting where we will deliver the results of our studies to the Planning Committee Jack has assembled. I have sent out a couple of dates to Jack and expect to hear if either will work soon.

I have included a Project Cost Breakdown for this project's fourth phase (**PCB 84**), which was funded during the August 2009 grant cycle. Phase IV contains the data analysis and report creation costs. I have also included an invoice (**Inv 432**) for a portion of the costs within Phase IV. Those costs cover a portion of the data analysis we have completed for the project. Also included are **Invoices 430 and 431**, which include the completion of the stakeholder survey, the water quality sampling visits and analysis, related travel costs, and some of the fishery data compilation costs.

Three Lake Chain Management Planning Project – Virgin, Whitefish, and Big Lakes

The costs of this project are covered under 8 grant applications we successfully applied for in February 2010. As a reminder, the grant also covers the AIS Education and Prevention components the TLWA are completing this year. Basically, to cover the planning project costs and those of the association AIS activities, we needed to spread everything over 8 grants. We can apply for 2 Planning Grants per lake, per grant cycle. To apply for 8 grants we needed to include 4 lakes within the project – Virgin, Whitefish, Big, and Long Lakes. Really, the only work we are completing on Long this year is the EWM Peak Biomass Survey discussed above. However, we have spread the costs of all the project tasks, including our work and that of the TLWA, over all 8 grants. This can be seen in the cost breakdowns included within the grant application packet sent out last February.

As with our other projects, I have loaded all of the Onterra-billable costs associated with the 8 grant applications within our accounting software. The costs are categorized as they are in the grant application cost breakdowns and separated among the project (grant) phases in the same way. I have included 8 project cost breakdowns (**PCB 85-92**) that list the

Onterra-billable project costs that were included in each of the 8 grant applications. As with the other projects we have with the association, our billing is formatted in a similar manner as the project cost breakdowns. Each grant phase will be billed separately based upon the project cost breakdowns I have attached here. We only invoice for the work we have completed. Please note that the costs of the project were not separated by the tasks associated for each lake (e.g., only Big Lake costs are in the Big Lake phases). In order to include all of our costs, along with the cash costs and the volunteer time in the association's AIS education work, and still remain under the state project caps, we had to be very creative in allocating the costs between the individual grant phases. For example, in **PCB 91**, which is for Long Lake Phase I, we have included costs for completing a curly-leaf pondweed survey, a point-intercept survey, and the plant community mapping. We are not completing those surveys on Long Lake this year. In fact, we completed those surveys on Long Lake last summer and the association has already paid us for them.

As of yesterday evening, we have completed all of the aquatic plant studies on Virgin, Whitefish, and Big Lakes. We have also completed the zebra mussel sampling and 4 out of 6 water quality samplings. As far as fieldwork goes, we still need to complete the Long Lake and Eagle River Channel EWM Peak Biomass Surveys and the shoreline assessment on the three upper lakes, and the fall and winter water quality samplings on those lakes as well. The Long Lake/Channel surveys will be completed later this month or in September. The shoreline assessments will be completed in September or October. As always, we will be working during the fall and winter on entering and analyzing all of the data we collected over the spring and summer. We will also be working with Norris to put together the stakeholder survey for the upper 3 lakes as well. My hope is to have the first planning meeting for Virgin, Whitefish, and Big Lakes next spring, if the folks are available.

Regarding the completed work for this project, I have included **Invoices 433-436**.

Paying the Invoices

We separate our billings to reflect the state grants that are covering the respected costs. This helps with the reimbursement procedures by making it very clear what each dollar is covering. Projects being completed in multiple phases can be paid for with a single check, so I suggest 3 checks be written to cover the invoices attached to this email:

Check 1 (Town of Three Lakes), Eagle River Channel AIS Rapid Response Project (Invoice 429): **\$920.00**

Check 2 (TLWA), Long Lake Management Planning
(Invoices 430, 431, & 432): **\$3,399.55**

Check 3 (TLWA), Virgin, Whitefish, Big, and Long Lake
Management Planning (Invoices 433, 434, 435, & 436):
\$23,627.00

After you have had a chance to read this all over, please feel free to give me a call with questions. I will need to leave my office around 4:30pm.

Thanks much,

Tim

Tim Hoyman, CLM

Aquatic Ecologist

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De Pere, WI 54115

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Fax: 920.338.8865

Email: thoyman@onterra-eco.com

Web: www.onterra-eco.com

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--Forwarded Message Attachment--

From: eheath@onterra-eco.com

To: sislake2@hotmail.com

CC: thoyman@onterra-eco.com; Kevin.GauthierSr@wisconsin.gov;

Kyle.McLaughlin@wisconsin.gov

Subject: Long Lake Channel, Three Lakes Chain of Lakes 2010

EWM Control Strategy

Date: Thu, 6 May 2010 14:00:56 -0500

Greetings Tom,

Earlier this week, we conducted a survey of the entire channel from the Burnt Rollways Dam to the mouth of Long Lake, but particularly paying attention to areas previously known to contain EWM occurrences. During the survey, we only located a single EWM plant and pulled it using a rake. While the weather conditions were great, the visibility of the water was less than ideal. With the extremely low water levels, it appears that the concentrated tannins have decreased the water clarity (brownier). The use of the submersed camera was quite limited under these conditions and we focused these efforts in areas in previously known

dense EWM areas.

As you are aware, we did not find any EWM locations after our post-treatment survey last year. It is also my understanding that no EWM was located by association volunteers after the treatment.

At this time, we do not recommend a treatment occur on the channel. To be clear, this is not because we think that EWM has been eradicated from the system, just that it currently exists at levels in which a treatment is not warranted. Continued monitoring will be important to ensure long-term success of this control strategy. As a part of the next phase of grants your group was awarded for the creation of management plans for Virgin, Whitefish, and Big Lakes, we have included a summer EWM survey for the Long Channel and Long Lake, proper.

As always, feel free to contact Tim or me if you have any additional concerns or questions. Also, I am not sure if you lined up an herbicide applicator for this year's potential treatment. If you did, it will be important to inform them of this strategy.

Eddie J. Heath

Aquatic Ecologist

Onterra, LLC

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Email: eh Heath@onterra-eco.com

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Burnt Rollway Dam EWM Survey

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thoyman@onterra-eco.com

5/20/11

To Tom Harris (sislake2@hotmail.com), McL...

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Hi Tom,

Yesterday, May 19, 2011, Brenton Butterfield and Todd Hanke visited the Eagle River Channel between the Burnt Rollway Dam and Long Lake. They inspected all know EWM areas from the past few years, including the areas hand-harvested by volunteers last summer. They viewed these sites from the surface and using a submersible video camera. With the exception of a single plant, all areas did not produce any findings.

It is my recommendation that there not be a treatment in the channel this spring. As a part of the Phase I Three Lakes Chain management planning project, we still have funds to complete a peak-biomass survey of the channel and Long Lake. That survey will be completed late this summer.

Thank you,

Tim

Tim Hoyman, CLM

Aquatic Ecologist

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