Final Report

Gilmore Lake Education, Monitoring and Planning Project

Project AEPP-196-10

Submitted to the
Wisconsin Department of Natural Resources

By the

Gilmore Lake Association
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Introduction

Gilmore Lake is a 389-acre groundwater drainage lake in northwestern Washburn County. The lake is mesotrophic, with good water clarity, a productive fishery, and high aesthetic appeal. During the spring-summer period, Gilmore Lake receives heavy recreational use. Users include property owners and their guests as well as visitors who trailer their boats in and out of the single public landing. A map of Gilmore Lake is attached to this application (Figure 1)

Gilmore Lake has been at high risk for invasion and colonization by Eurasian watermilfoil (EWM) for most of the past decade. Two nearby popular waters, Nancy Lake (3 miles by road) and the Minong Flowage (only two miles away), are heavily infested with EWM, and a new infestation was discovered in the St. Croix Flowage (~10 miles) in 2007. Boaters (both residents and day users) frequently trailer their craft between Gilmore and the infested lakes.

Eurasian watermilfoil has the potential to colonize much of the Gilmore Lake littoral and sublittoral area. EWM creates dense stands, with emergent fronds forming thick mats at the water's surface. These floating mats would interfere with boating and water-contact sports, impact the fishery, and reduce aesthetic value.

Despite a strong program of boat inspection (CBCW), monitoring, and education, a pioneer colony of EWM was confirmed in Gilmore Lake in August 2009, a month after we applied for this grant. The Gilmore Lake Association (GLA) quickly implemented its rapid response plan, which proved true to its name. The GLA applied for and received a Early Detection, Rapid Response grant within a few weeks.; it will be active through 2012. The GLA then hired two experienced consultants: 1) Matt Berg (Endangered Resource Services) to dive and delineate the extent of the EWM colony; and 2) Dale Dressel (Northern Aquatic Services) to chemically treat it. An area of 2.1 acres parallel to the south shore (see map) was subsequently treated with 2,4D in late September. Boundaries of this area are marked with buoys to warn boaters away. Mr. Berg also performed a whole-lake sampling survey for EWM in September. He found no additional EWM, but commented that the native aquatic vegetation was very diverse.

Despite confirmation of localized EWM in Gilmore Lake, the GLA remains committed to its program of education, planning and prevention. In particular, boat inspections are needed to prevent further import to as well as export of EWM from Gilmore Lake. Objectives of this project were:

1. Education: To inform lake users of the threat posed by EWM and teach them procedures to prevent its introduction.
2. Boat Inspection: To prevent transport of EWM into and out of Gilmore Lake by boaters using the public landing.
3. Lake Monitoring: To thoroughly survey Gilmore Lake to determine the distribution of EWM so that control measures can be applied.

4. Planning: To update the Early Detection, Rapid Response plan.

This report details the methods and results pertaining to these objectives. Because EWM is a continuing peril, the report concludes with recommendations and plans for future work pursuant to these objectives.

Education

Education of all lake users is the single best tool to prevent an EWM invasion. The boat inspection program has a strong educational component, but other educational efforts are required. To that end, The GLA's Milfoil Committee (Bill Doeden, Burt King, John Ney, Russ Robinson and Ron Tracy) undertook several actions as described in the project application. These include:

1. Mailings: The Fall 2009 and Spring 2010 GLA newsletters, which were sent to all Gilmore Lake property owners, contained articles about EWM and this project (Attachments A and B). Membership in the Gilmore Lake Association had doubled in the past few years and now exceeds 70% of property owners
2. Workshop: An EWM identification and control workshop was held in conjunction with the annual meeting of the Gilmore Lake Association June 26, 2010.. John Ney updated members on the continuing EWM project, and provided both live and preserved specimens of EWM and look-alike natives, northern milfoil and coontail. Attendees were also: 1) informed of how to take samples of suspected EWM and bring them to the Milfoil Committee for initial confirmation 2) status of ur EWM colony; and 3) ecological and economic impacts of EWM. Members in attendance totaled 49 (see Attachment C).
3. Kiosk and Signage : An informational kiosk was constructed and installed at the public boat landing in late April 2007. The kiosk supplements the AIS/EWM warning signs provided by the WDNR. It includes a two-sided 4'x4' board posted with boat inspection procedures, photos of local EWM infestations, and a contour map of Gilmore Lake highlighting areas of potential infestation. The kiosk is stocked as well with brochures about AIS in general and EWM in particular, maps of area infestations, boating and water safety laws, etc. It is updated monthly, May-September. Innovative signage was developed (by Burt King) and attached to the kiosk in early 2010 (Figure 2). In staircase fashion, it lists the steps boaters should follow to prevent AIS introductions. The reverse side of "launch" , is "drain" for boaters exiting the lake. Placement of the signage makes its message obvious to every boater.

Boat Inspection

Methods

As in past years, we relied primarily on paid inspectors. The inspection schedule was designed to intercept periods of high launch activity, i.e. weekends and major holidays. The weekend inspection schedule included : Friday 2-6 p.m., Saturday 8a.m-6p.m. and Sunday, 8 a.m to 4 p.m.. for a total of 22 hours per weekend. Inspectors worked an

additional 10-hr shift on the Monday of the 3 holiday weekends. This schedule eliminated the split-shift, midday gap on weekend days that was problematic in prior years .Volunteer inspectors were used to supplement paid inspectors during the extended July 4 and Labor Day holiday periods. Seven volunteers worked a total of 20 hours as boat inspectors (Table 1). Volunteer inspectors were trained by John Ney. The performance of all volunteer boat inspectors was monitored daily and that of our paid inspectors, Jim Hoyt and Judy Dalbec, on a frequent basis by one or more members of the Milfoil Committee.

All inspectors followed a consistent and rigorous procedure of inspection and communication as detailed in CB/CW instructions. They distributed AIS informational materials provided in CB/CW kits and recorded data on the WDNR Watercraft Daily Work Diary form.

Results

Daily diary worksheets were entered into the Aquatic Invasive Species section of the Surface Water Integrated Monitoring System (SWIMS) database and are not included in this report in lieu of summary statistics. A total of 775 boat inspections were conducted involving 1,698 boaters at the Gilmore Lake public landing in 460 hours of contact inspection time in 2010. These numbers have been quite consistent over 4 years of boat inspections. The average boats/hr was 1.35 in 2007, 1.68 in 2008, 1.70 in 2009 and 1.68 in 2010. Inspectors rarely found vegetation on boats entering the lake. However, two trailers were found to have EWM clinging to them. One of these two parties was adamant that they should be allowed to launch anyway, and had to be denied under threat of police intervention. Despite that, most parties new that transport of aquatic vegetation is now illegal and behaved accordingly. As in the past, ~10% of boats came from lakes with known EWM infestations

Lake Monitoring

Monitoring for EWM was conducted by boat one day per month, May through September around the shallow perimeter of the lake and in offshore waters <15' deep. On the advice of Matt Berg, our aquatic plant consultant, we modified our approach. In the past, our two-man crew followed *Aquatic Invasive Species Monitoring Procedures* (Laura Herman, Citizens Lake Monitoring Program 2006), which relies heavily on rake samples from specific sites. For 2010, our crew relied on what is termed a" meandering" survey of the entire littoral zone (~5-12" depth of Gilmore Lake (see Figure 1 for depth distribution. The crew was experienced in spotting potential EWM. In that event, the rake sampler was used to check for confirmation. The meandering survey is visual and so requires high water clarity, with high skies and little wave action. However it greatly increases the total area surveyed. In addition to these monitoring efforts, Matt Berg and crew did a point-intercept aquatic plant survey involving ~500 samples in July 2010. No EWM was found on any survey beyond the extent of the pioneer colony treated in 2009. However, within this 2 acre area, two small stands of EWM persisted, having survived the chemical treatment. Mr. Berg removed these by hand on three separate dates, but

regrowth always occurred. Another chemical treatment is planned for the summer of 2010, when EWM is actively growing and hence most vulnerable to herbicide uptake.

Planning

The Gilmore Lake Association is is most fortunate that an Early Detection, Rapid Response Plan was developed under the leadership of Bill Doeden in 2008. The stepwise plan allowed us to proceed quickly when EWM was discovered in August 2009, so that a grant was in place within a month, the area was marked with buoys, and treatment could begin. There has been a lot of interest in our plan: 12 lake associations and Bayfield County have requested copies. In 2010, the RR Plan was reviewed by Bill Doeden and the GLA on-site coordinator, Burt King. for possible updates and revisions. Inasmuch as the GLA had first-hand experience with plan implementation, Bill and Burt were in an ideal position to make any necessary revisions. However, after careful review, they limited changes to updates of the names and addresses of key contacts. A copy of Rapid Response Plan is attached to this report.

Grant Administration and Services

Volunteers, including grant administrators, recorded a total of 151 hours on this project in 2010. (Table 1). Grant administration and services included two meetings of the Milfoil Committee, training and supervising inspectors, lake monitoring, planning and the June 26 workshop as well as data entry and report preparation.

Recommendations and Future Plans

1. We are happy to report that the GLA has received another AEPP gran for 2011 and 2012. Most of the funds will be used for boat inspections

2. The GLA will develop an Aquatic Plant Management Plan. A major part of that has been completed with the aquatic plant survey by Matt Berg to describe baseline conditions.

3. The GLA will continue its efforts to raise funds for a cash reserve should EWM be found to spread within Gilmore Lake or another AIS be introduced. In 2010, a rummage sale raised ~$2,000 for the reserve fund.

4. Because we cannot inspect every entering/leaving boat, education remains a priority. We were encouraged that most boaters claimed to know about EWM and its prevention, and the law on vegetation transport, but we will continue our educational efforts in 2011.

Acknowledgements

We are grateful for advice from Jane Malischke, Environmental Grant Specialist, concerning the financing and application of this project, Kris Larsen of the Spooner DNR

office, and Pam Toshner, Northwest Lake Management Coordinator, for her support in all phases.

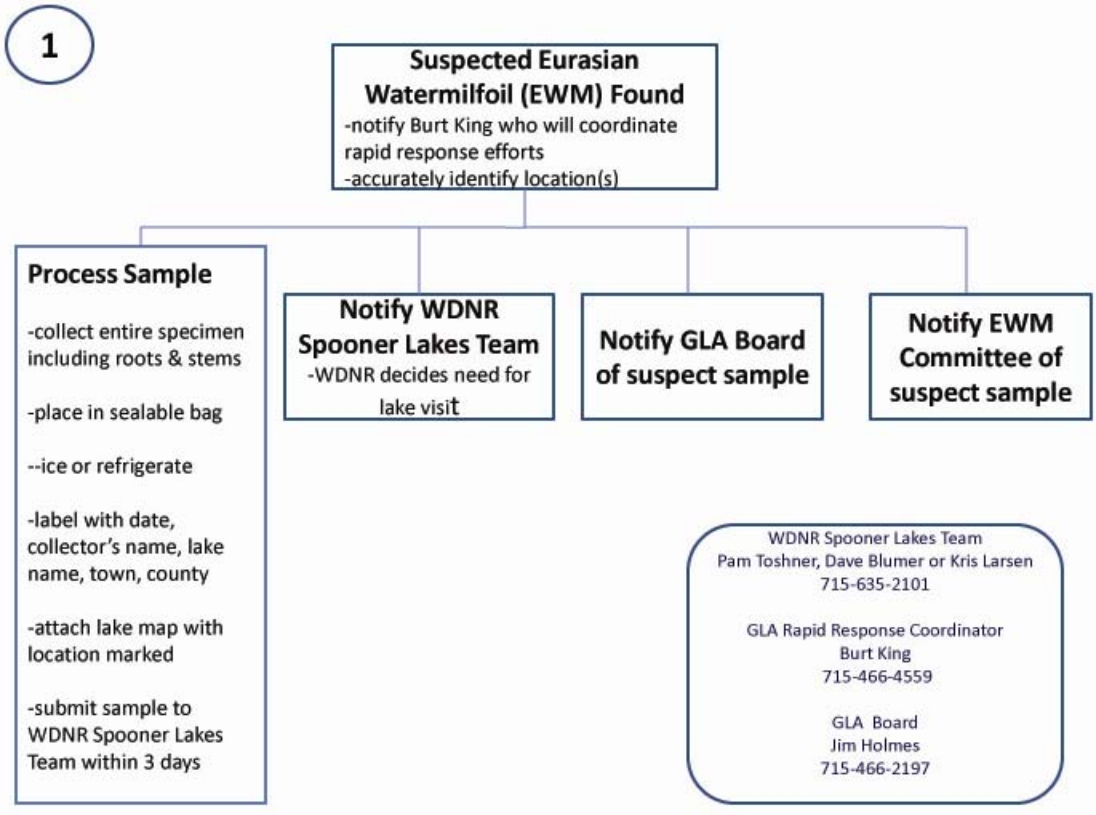
Table 1. Summary of Volunteer Effort (hours).

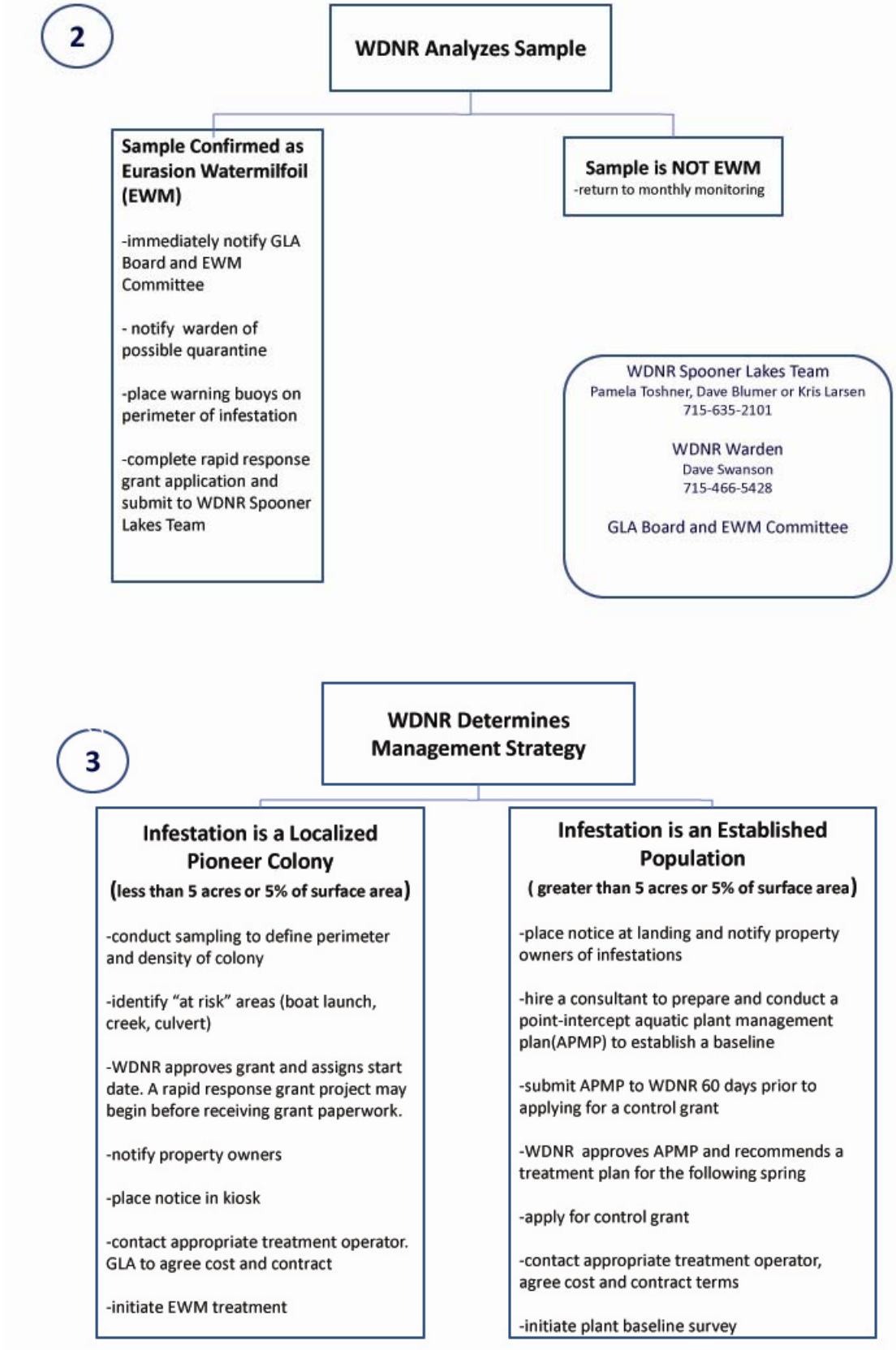
Category	Total Hours
Meeting and Planning	30
Training and Supervision	20
Volunteer Inspectors	20
Rapid Response Plan	7
Kiosk Maintenance	5
Kiosk Signage	10
Data Entry	15
Report Preparation	20
Other: 6/26 Workshop Attendance (49 people@ 0.5 hr. each	24
Totals	**151**

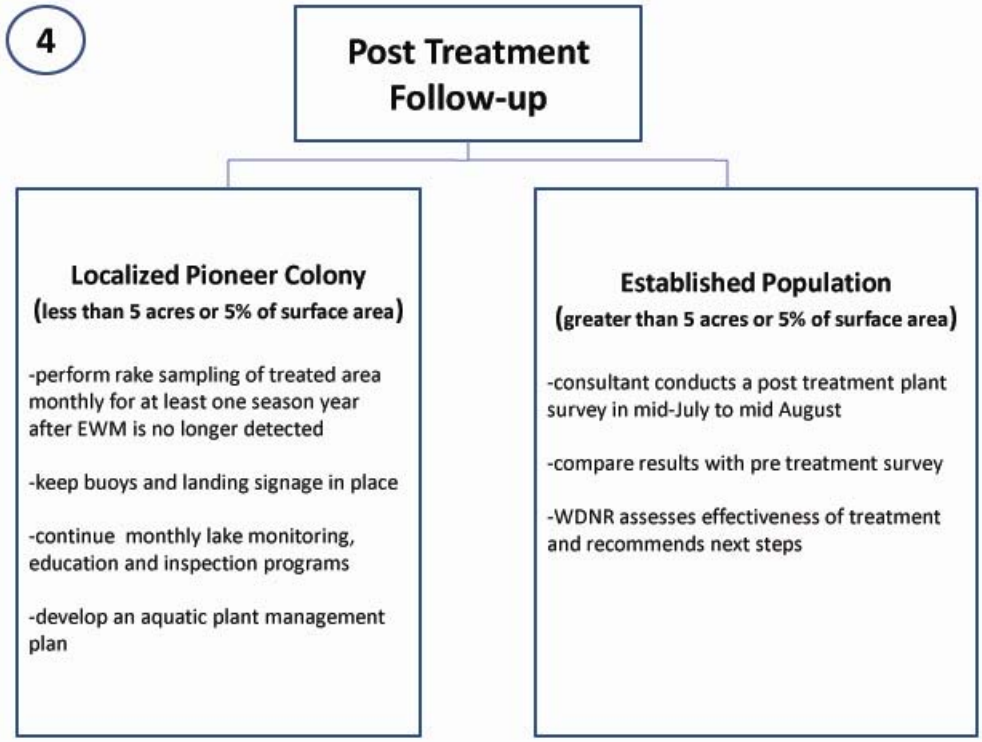
EURASIAN WATERMILFOIL (EWM) RAPID RESPONSE PROTOCOL

Prepared by the Gilmore Lake Association
2008

7/11/08




2
WDNR Analyzes Sample
Sample Confirmed as Eurasion Watermilfoil (EWM)
-immediately notify GLA Board and EWM Committee
- notify warden of possible quarantine
-place warning buoys on perimeter of infestation
-complete rapid response grant application and submit to WDNR Spooner Lakes Team
Sample is NOT EWM
-return to monthly monitoring
WDNR Spooner Lakes Team
Pamela Toshner, Dave Blumer or Kris Larsen
715-635-2101
WDNR Warden
Dave Swanson
715-466-5428
GLA Board and EWM Committee
3
WDNR Determines Management Strategy
Infestation is a Localized Pioneer Colony
(less than 5 acres or 5% of surface area)
-conduct sampling to define perimeter and density of colony
-identify "at risk" areas (boat launch, creek, culvert)
-WDNR approves grant and assigns start date. A rapid response grant project may begin before receiving grant paperwork.
-notify property owners
-place notice in kiosk
-contact appropriate treatment operator. GLA to agree cost and contract
-initiate EWM treatment
Infestation is an Established Population
(greater than 5 acres or 5% of surface area)
-place notice at landing and notify property owners of infestations
-hire a consultant to prepare and conduct a point-intercept aquatic plant management plan(APMP) to establish a baseline
-submit APMP to WDNR 60 days prior to applying for a control grant
-WDNR approves APMP and recommends a treatment plan for the following spring
-apply for control grant
-contact appropriate treatment operator, agree cost and contract terms
-initiate plant baseline survey



Aquatic Plant Control Services

Lake Management, Inc
10400 18th St North
Marine on the St Croix, MN 55047
Phone: 651-433-3283
Fax; 651-433-5316
Email: info@lakemanagementinc.com

Aquatic Engineering, Inc
P.O. Box 3634
LaCrosse, WI 54602
Phone: 866-781-8770
Fax: 608-781-8771
Email: info@aquaticengineering.org

Lake Restoration, Inc
12425 Ironwood Circle
Rogers, MN 55374
Phone: 763-428-9777
Fax: 763-428-1543
Email: lrmail@lakerestoration.com

Midwest Aqua Care
10001 Great Plains Blvd
Chaska, MN 55318
Phone: 877-430-0143
Email: support@midwestaquacare.com

Northern Aquatic Services, Inc
1061 240th St
Dresser, WI 54009
Phone: 715-755-3507

Aquatic Plant Management Plan Consultants*

Northern Environmental 330 South 4th Avenue Park Falls, WI 54552	Phone: 800-498-3913 Website: www.northernenvironmental.com Email: rwatkins@northernenvironmental.com
Onterra, LLC 135 S Broadway, Suite C DePere, WI 54115	Phone: 920-338-8860 Website: www.onterra-eco.com Email: thoyman@onterra-eco.com
Aquatic Engineering LaCrosse, WI	Phone: 866-781-8770 Website: www.aquaticengineering.org Email: info@aquaticengineering.org

*** The APMP consultant should not be the same company that is providing the control (treatment) service**

CONTACTS

WDNR Spooner Lakes Team Phone: 715-635-2101
Pamela Toshner, David Blumer or Kris Larsen

WDNR Warden – Dave Swanson Phone: 715-466-5428 (office); 715-466-5358 (home)

GLA Board of Directors

	Lake Phone	Other Phone	Email
Jim Holmes*	715-466-2197		rjholmes1931@charter.net
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Russ Robinson	715-466-5152		russrobinson@centurytel.net
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Bill Doeden	715-466-2676	630-907-9414	wgdoeden@comcast.net

**rapid response coordinator -in his absence another coordinator is to be identified by the EWM Committee