

## Wisconsin Department of Natural Resources SWIMS Project Summary

### General Project Information

**Project ID:** AEPP-079-07  
**Name:** GOLDEN SANDS RC&D: Emily EWM-Crayfish  
**Type:** Aquatic Invasives Grant  
**Subtype:** Aquatic Invasives Education  
**Status:** COMPLETE  
**Start Date:** 04/01/2007  
**End Date:** 12/31/2009  
**Purpose:** Golden Sands RC&D, in conjunction with the Friends of Lake Emily, proposes to implement a Clean Boats, Clean Waters program with paid field staff who will also organize EWM hand-pulling parties, map EWM concentrations with GPS, produce a end-of-season map for comparison with past years and issue news releases and news letters to enhance community awareness. Field staff to also conduct a study rusty crayfish in conjunction with the UW Stevens Point Invasives and Exotic Species class.  
**Objective:**  
**Comments:** Grantee is GOLDEN SANDS RC&D  
**Outcome:**  
**Study Design:**  
**QA Measures:**

### People

Name	Role	Status	Start Date	End Date	Organization	Comments
Golden Sands RC&D Council	GRANT_RECIPII	COMPLETE	04/01/2007	12/31/2009	Golden Sands RC&D Council, Inc.	
Skawinski, Paul	TEAM_MEMBER	COMPLETE	04/01/2007	12/31/2009	UW-Extension Lakes Program	

### Project Statuses

Date	Reported By	Status	Comments
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### Actions

Action	Detailed Description	Start	End Date	Status
Control Invasive Species		04/01/2007	12/31/2009	PROPOSED
Issue News/Media Release		04/01/2007	12/31/2009	PROPOSED
Grant Awarded	AEPP-079-07Emily EWM-Crayfish	04/01/2007	04/01/2007	COMPLETE
Grant Awarded	AEPP-079-07	04/01/2007	12/31/2009	COMPLETE
Watercraft Inspections Clean Boats, Clean Waters	17934203	04/01/2007		PROPOSED

### Monitoring Stations

Station ID	Name	Comments
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### Assessment Units

WBIC	Segment	Local Name	Official Name
189800	1	Emily Lake	Lake Emily

### Lab Account Codes

Account Code	Description	Start Date	End Date
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### Forms

Form Code	Form Name
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### Methods

Method Code	Description
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### Fieldwork Events

Start Date	Status	Field ID	Station ID	Station Name
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### Documents

Title	Description	Author	Published	Comments
EURASIAN WATER MILFOIL ASSESSMENT	Eurasian water milfoil (EWM) ( <i>Myriophyllum spicatum</i> ) is an exotic aquatic plant that has been gaining notoriety across the United States for its extremely aggressive invasive nature. Native to the Eurasian continent, it has been inadvertently introduced to water bodies across the U.S. by boaters, recreationalists and various aquatic industries. Once introduced, EWM, a champion of reproductive ingenuity, spreads rapidly via stolons or fragmentation. The submersed aquatic plant goes through two flowering periods each summer, after which, it fragments into many pieces. Each fragment may sprout roots and can remain afloat and stay viable for several weeks until it drifts to a suitable site, where it can become another plant. A perennial, the plant may wait out the winter under the ice, intact, and will be growing and well established by April or May, much sooner than native aquatics. It will grow rapidly, reach the water surface and then spread into a dense, tangled mat, shading out the sunlight the other plants need. This dense mat also increases the dissolved oxygen fluxuations, carbon dioxide fluxuations, pH fluxuations and the temperature stratification of the water, and it inhibits water circulation. The EWM aggressively out-competes the native aquatic plants, which results in a rapid decrease in the diversity of the lake's plant community. This in turn decreases the diversity of the insect and fish populations. Dense growth of EWM can impede predator-prey relationships between fish, stunting the growth of the larger fishes as it reduces their ability to see prey. The tangled mats at the water surface can become dense enough to strand boaters, become a safety hazard for swimmers, and create a stagnant breeding ground for mosquitoes. (Jester 1998)	Amy L. Thorstenson	12/01/2005	
EURASIAN WATER MILFOIL ASSESSMENT	Eurasian water milfoil (EWM) ( <i>Myriophyllum spicatum</i> ) is an exotic aquatic plant that has been gaining notoriety across the United States for its aggressively invasive nature.	Amy L. Thorstenson	12/01/2006	

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<p>EURASIAN WATER MILFOIL ASSESSMENT 2003</p>	<p>Native to the Eurasian continent, it has been inadvertently introduced to water bodies across the U.S. by boaters, recreationalists, and various aquatic industries. Once introduced, EWM, a champion of reproductive ingenuity, spreads rapidly via stolons or fragmentation. The submersed aquatic plant goes through two flowering periods each summer, after which, it fragments into many pieces. Each fragment may sprout roots and can remain afloat and stay viable for several weeks until it drifts to a suitable site, where it can become another plant. A perennial, the plant may wait out the winter under the ice, intact, and will be growing and well established by April or May, much sooner than native aquatics. It will grow rapidly, reach the water surface and then spread into a dense, tangled mat, shading out the sunlight the other plants need. This dense mat also increases fluctuations in dissolved oxygen content, carbon dioxide content, pH level, and temperature stratification, while also inhibiting water circulation. EWM aggressively out-competes the native aquatic plants, which results in a rapid decrease in the diversity of the lake's plant community. This in turn decreases the diversity of the insect and fish populations. Dense growth of EWM can impede predator-prey relationships between fish, stunting the growth of the larger fishes as it reduces their ability to see prey. The tangled mats at the water surface can become dense enough to strand boaters, become a safety hazard for swimmers, and create a stagnant breeding ground for mosquitoes (Jester 1998).</p> <p>Eurasian water milfoil (EWM) (<i>Milfolium spicatum</i>) is an exotic aquatic plant that has been gaining notoriety across the United States for its extremely aggressive invasive nature. Native to the Eurasian continent, it has been inadvertently introduced to water bodies across the U.S. by boaters, recreationalists and various aquatic industries. Once introduced, EWM, a champion of reproductive ingenuity, spreads rapidly via stolons or fragmentation. The submersed aquatic plant goes through two flowering periods each summer, after which, it fragments into many pieces. Each fragment may sprout roots and can remain afloat and stay viable for several weeks until it drifts to</p>	<p>Amy L. Thorstenson</p>	<p>12/31/2003</p>	

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<p>EURASIAN WATER MILFOIL ASSESSMENT 2004</p>	<p>a suitable site, where it can become another plant. A perennial, the plant may wait out the winter under the ice, intact, and will be growing and well established by April or May, much sooner than native aquatics. It will grow rapidly, reach the water surface and then spread into a dense, tangled mat, shading out the sunlight the other plants need. This dense mat also increases the dissolved oxygen fluxuations, carbon dioxide fluxuations, pH fluxuations and the temperature stratification of the water, and it inhibits water circulation. The EWM aggressively out-competes the native aquatic plants, which rapidly decreases the diversity of the lake's plant community. This in turn decreases the diversity of the insect and fish populations. Dense growth of EWM can impede predator-prey relationships between fish, stunting the growth of the larger fishes as it reduces their ability to see prey. The tangled mats at the water surface can become dense enough to strand boaters, become a safety hazard for swimmers, and create a stagnant breeding ground for mosquitoes. (Jester 1998)</p> <p>Eurasian water milfoil (EWM) (<i>Myriophyllum spicatum</i>) is an exotic aquatic plant that has been gaining notoriety across the United States for its extremely aggressive invasive nature. Native to the Eurasian continent, it has been inadvertently introduced to water bodies across the U.S. by boaters, recreationalists and various aquatic industries. Once introduced, EWM, a champion of reproductive ingenuity, spreads rapidly via stolons or fragmentation. The submersed aquatic plant goes through two flowering periods each summer, after which, it fragments into many pieces. Each fragment may sprout roots and can remain afloat and stay viable for several weeks until it drifts to a suitable site, where it can become another plant. A perennial, the plant may wait out the winter under the ice, intact, and will be growing and well established by April or May, much sooner than native aquatics. It will grow rapidly, reach the water surface and then spread into a dense, tangled mat, shading out the sunlight the other plants need. This dense mat also increases the dissolved oxygen fluxuations, carbon dioxide fluxuations, pH fluxuations and the</p>	<p>Amy L. Thorstenson</p>	<p>12/01/2004</p>	

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	temperature stratification of the water, and it inhibits water circulation. The EWM aggressively out-competes the native aquatic plants, which results in a rapid decrease in the diversity of the lake's plant community. This in turn decreases the diversity of the insect and fish populations. Dense growth of EWM can impede predator-prey relationships between fish, stunting the growth of the larger fishes as it reduces their ability to see prey. The tangled mats at the water surface can become dense enough to strand boaters, become a safety hazard for swimmers, and create a stagnant breeding ground for mosquitoes. (Jester 1998)			
Eurasian Water Milfoil Assessment 2007	Complete summary of study findings (2003 to 2006) and treatment recommendations for the nine subject lakes have been provided in previous reports, which are available in hardcopy or electronic format from Golden Sands RC&D. Contact Amy Thorstenson at 715-346-1264 or thorstea@co.portage.wi.us .	Amy L. Thorstenson	12/01/2007	
Final Report Lake Emily EWM-Crayfish [Portage]	Discusses hand-pulling parties for control of EWM, AIS plant mapping, CBCW boat checks, building community reports, a 2007 rusty crayfish study, a 2008 study by UW-SP on milfoil weevils, and 2008 control methods used.	Paul Skawinski	01/15/2010	

### Budget

**Combined Budgets:**  
**Combined SLOH:**  
**Combined Total:**

### Funding

Organization	Source	Type	Amount	Start Date	End Date
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