

Wisconsin Department of Natural Resources
SWIMS Project Summary

General Project Information

Project ID: ACEI17916

Name: SILVER LAKE MANAGEMENT DISTRICT: Silver Lake HWM Control & Prevention

Type: Aquatic Invasives Grant

Subtype: Aquatic Invasives Control

Status: COMPLETE

Start Date: 4/15/2016

End Date: 6/30/2018

Purpose: The Silver Lake Mgmt District is sponsoring an AIS control grant on Silver Lake, Waushara County. The goals of the project - control H-EWM populations on a lake-wide basis & enhance the likelihood of long-term control.

Project activities include: Plan a whole-lake pelletized fluridone herbicide, conduct whole-lake herbicide treatment, conduct herbicide concentration monitoring, conduct native plant and HWM population monitoring, conduct (SAV) bio-volume monitoring, update Invasive Species Management Plan, conduct (CBCW) & increase resident volunteer monitoring activities.

Project deliverables include: Submit annual - monitoring & control strategy assessment reports which include results of treatments & recommendations for future mgmt; annual summary of CBCW activities, Submit final report, to District Lake Coordinator, which details & compares all results, makes future mgmt. recommendations and summarizes stakeholder involvement activities.

This scope summarizes the project detail provided in the application and does not negate tasks/deliverables described therein.

Objective:

Comments: Grantee is SILVER LAKE MANAGEMENT DISTRICT

Outcome:

Study Design:

QA Measures:

People						
Name	Role	Status	Start Date	End Date	Organization	Comments
Heath, Eddie	LEAD_EQUIPMENT	ACTIVE	6/2/2016		Onterra, LLC	
Ruhland, Mike	APPLICANT	ACTIVE	6/2/2016		Silver Lake Management District	
SePRO Research,	LABORATORY	ACTIVE	6/2/2016			
Silver Lake Management Distric	GRANT_RECIPIENT	ACTIVE	6/1/2016		Silver Lake Management District	

Project Statuses

Date	Reported By	Status	Comments
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Actions

Action	Detailed Description	Start Date	End Date	Status
Grant Awarded	Grant ACEI17916 awarded	4/15/2016	6/30/2018	COMPLETE

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APM Chemical Permit Request		Chemical Permit Details	9/26/2016	10/1/2016	APPROVED
Details: Parameter		Value/Amount	Units	Comments	
APM Plan		N			
APM Plan Agree		N			
Advance Notification		N			
Broad-leaved cattail (Typha latifolia)		N			
Business Location License		N/A			
CO - 15 days		Y			
CO – Date Sent		9/26/2016			
CO-Date_Received		9/26/2016			
CONTROL_INVASIVES		N			
CONTROL_OTHER		N			
Category 5 Certification Number		N/A			
Chemical Permit ID		3636			
Chemicals - Approved		Clipper at 2.1 Lbs/acre, Tribune@ 1 gal/ac, captain @ 1gal/ac			
Common arrowhead (Sagittaria latifolia)		N			
Common reed (Phragmites australis)		N			
Common waterweed (Elodea canadensis)		N			
Control - Algae		N			
Control - Emergent water plants		N			
Control - Floating water plants		N			
Control - Nuisance algae		N			
Control - PL		N			
Control - Submerged water plants		Y			
Coontail (Ceratophyllum demersum)		N			
Curly-leaf pondweed (Potamogeton crispus)		N			
Entered in SharePoint		N			
Estimated Acres		1			
Eurasian water-milfoil (Myriophyllum spicatum)		N			
Expiration Date		10/1/2016			
Fee		45			
Field - 15 days		N			
Field Issued By		Heidi_Bunk			
Filamentous Algae		N			
Improvement - swimming		N			

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Details: Parameter	Value/Amount	Units	Comments		
Lake Surface Area					
Large Duckweed (Spirodela polyrhiza)	N				
Large Scale Treatment Form	N				
Large-leaf pondweed (Potamogeton amplifolius)	N				
Maintain - Other Text	Hybrid Milfoil				
Maintain navigational channel	N				
Maintain private access - boating	N				
Maintain private access - fishing	N				
Muskgrasses (Chara)	N				
NUISANCE_CAUSED_OTHER	Y				
Native Plants	N				
Next Steps	Sent to Heidi				
Payment Number	5018				
Permit County	Kenosha				
Permit End Year	2016				
Permit Latitude	42.5508				
Permit Longitude	-88.1534				
Permit PLSS Section	17 01N20E				
Permit Start Year	2016				
Permit WBIC	747900				
Permit Year	2016				
Pithophora	N				
Planktonic Algae	N				
Private Pond	N				
Purple loosestrife (Lythrum salicaria)	N				
Sensitive Area	N				
Softstem bulrush (Schoenoplectus tabernaemontani)	N				
Sogo pondweed (Stuckenia pectinata)	N				
TREATMENT_AREA	Silver Lake				
Treatment Date	N				
Treatment Date	N				
Treatment Record - Received	N				
Treatment Record - Scanned	N				
Waterbody Type	LAKE				
APM Chemical Treatment Record	Chemical treatment details	10/5/2016	10/5/2016	COMPLETE	

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Details: Parameter	Value/Amount	Units	Comments
Air Temperature	68		
Air Temperature Units	F		
Aqua-Pro Acres	0		
Aqua-Pro Gallons	0		
Aquaneat Acres	0		
Aquaneat Gallons	0		
Aquashade Acres	0		
Aquashade Pounds	0		
Aquastar Acres	0		
Aquastar Gallons	0		
Aquathol Acres	0		
Aquathol Gallons	0		
Aquathol K Acres	0		
Aquathol K Gallons	0		
Aquathol Super K, # Acres	0		
Aquathol Super K, # Pounds	0		
Aquathol, # Acres Gallons	0		
Aquathol, # Pounds	0		
Avast Acres	0		
Avast Gallons	0		
Captain XTR, # Acres	0		
Captain XTR, # Gallons	0		
Clearcast Acres	0		
Clearcast Gallons	0		
Clearigate Acres	0		
Clearigate Gallons	0		
Contains Herbicide totals	Y		
Coontail (Ceratophyllum demersum)	SP		
Copper Acres	0		
Copper Liquid, # Acres	0		
Copper Liquid, # Gallons	0		
Copper Pounds	0		
Citrine Acres	0		
Citrine Liquid Acres	0		
Citrine Liquid Gallons	0		
Citrine Plus Acres	0		
Citrine Plus Liquid Acres	0		
Citrine Plus Liquid Gallons	0		
Citrine Plus Pounds	0		
Citrine Pounds	0		

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Details: Parameter	Value/Amount	Units	Comments
Cutrine Ultra Acres	0		
Cutrine Ultra Gallons	0		
DMA 4 IVM Acres	0		
DMA 4 IVM Gallons	0		
Diquat Acres	0		
Diquat Gallons	0		
Diquat Liquid Acres	0		
Diquat Pounds	0		
Duration of Chemical Residualts	5		
Endotholl Acres	0		
Endotholl Liquid Acres	0		
Endotholl Liquid Gallons	0		
Endotholl Pounds	0		
Eurasian water-milfoil (Myriophyllum spicatum)	TS		
Filamentous Algae	SP		
Floridone Acres	0		
Floridone Gallons	0		
Glyphosate Acres	0		
Glyphosate Gallons	0		
Glyphosate Liquid Acres	0		
Glyphosate Pounds	0		
Green Clean Acres	0		
Green Clean Gallons	0		
H2O2 Acres	0		
H2O2 Pounds	0		
Habitat Acres	0		
Habitat Gallons	0		
Harvester Acres	0		
Harvester Gallons	0		
Herbicide Treatment and Water Use Restriction Signs Posted in Accordance with NR 107?	Y		
Hydrothol Acres	0		
Hydrothol Gallons	0		
Imazapyr Acres	0		
Imazapyr Gallons	0		
Large Duckweed (Spirodela polyrhiza)	SP		
Nautique Acres	0		
Nautique Gallons	0		

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Details: Parameter	Value/Amount	Units	Comments
Navigate Acres	0		
Navigate, # Pounds	0		
Onsite Supervision	No		
Permit County	Kenosha		
Permit Year	2016		
Person Completing Form	James Scharl		
Phycomycin Acres	0		
Phycomycin Pounds	0		
Polaris Acres	0		
Polaris Gallons	0		
Refuge Acres	0		
Refuge Gallons	0		
Reward Acres	0		
Reward Gallons	0		
Reward Liquid Acres	0		
Reward Pounds	0		
Rodeo Acres	0		
Rodeo Gallons	0		
SCI-62 Acres	0		
SCI-62 Gallons	0		
Sculpin G Acres	0		
Sculpin G Pounds	0		
SeClear Acres	0		
SeClear Gallons	0		
ShoreKlear Acres	0		
ShoreKlear Gallons	0		
Sonar AS Gallons	0		
Sonor AS Acres	0		
Touchdown Pro Acres	0		
Touchdown Pro Gallons	0		
Treatment Date	10/5/2016		
Treatment End Time	11:30		
Treatment Start Time	10:30		
Tribune Acres	0		
Tribune Gallons	0		
Vectobac Acres	0		
Vectobac Gallons	0		
Water Temperature	66		
Water Temperature Units	F		
Water Use Restriction - Animal Water	N		

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Details: Parameter	Value/Amount	Units	Comments
Water Use Restriction - Crop Irrigation	N		
Water Use Restriction - Drinking Water	N		
Water Use Restriction - Fish Consumption	N		
Water Use Restriction - None	N		
Water Use Restriction - Other Irrigation	N		
Water Use Restriction - Swimming	N		
White water lily (Nymphaea odorata)	SP		
Wind Direction	SSW		
Wind Speed	5-10		

APM Chemical Permit Request	Chemical Permit Details	3/5/2018	3/12/2018	APPROVED
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Details: Parameter	Value/Amount	Units	Comments
Broad-leaved cattail (Typha latifolia)	N		
Business Location License	N/A		
CO - # days	5		
CO - 15 days	Y		
CO – Date Sent	3/12/2018		
CO-Date_Received	3/5/2018		
CONTROL_OTHER	N		
Category 5 Certification Number	N/A		
Chemical Permit ID	5618		
Chemicals - Approved	Weedar 64, Freelex, Platoon (all liquid 2,4-D), Navigate, Cutrine Ultra, Cutrine Granular, Hydrothol19(liquid)		
Comments	N/A		
Common arrowhead (Sagittaria latifolia)	N		
Common reed (Phragmites australis)	N		
Common waterweed (Elodea canadensis)	N		
Control - Algae	N		
Control - Emergent water plants	N		
Control - Floating water plants	N		
Control - Nuisance algae	N		
Control - PL	N		
Control - Submerged water plants	Y		

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Details: Parameter	Value/Amount	Units	Comments
Coontail (Ceratophyllum demersum)	N		
Curly-leaf pondweed (Potamogeton crispus)	N		
Entered in SharePoint	Y		
Estimated Acres	26		
Eurasian water-milfoil (Myriophyllum spicatum)	Y		
Fee	670		
Field - # days	Y		
Field Issued By	Heidi_Bunk		
Filamentous Algae	N		
Improvement - swimming	N		
Lake Surface Area			
Large Duckweed (Spirodela polyrhiza)	N		
Large Scale Treatment Form	N		
Large-leaf pondweed (Potamogeton amplifolius)	N		
Maintain - Other Text	Starry Stonewort		
Maintain navigational channel	N		
Maintain private access - boating	N		
Maintain private access - fishing	N		
Muskgrasses (Chara)	N		
NUISANCE_CAUSED_OTHER	Y		
Native Plants	N		
Next Steps	Heidi Bunk		
PLSS_DIRECTION	E		
PLSS_RANGE	19		
PLSS_SECTION	27		
PLSS_TOWNSHIP	11		
Payment Number	2084		
Permit County	Washington		
Permit End Year	2018		
Permit Latitude	0		
Permit Longitude	0		
Permit PLSS Section	27 11N19E		
Permit Start Year	2018		
Permit WBIC	36200		
Pithophora	N		
Planktonic Algae	N		
Private Pond	N		

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Details: Parameter	Value/Amount	Units	Comments		
Purple loosestrife (<i>Lythrum salicaria</i>)	N				
SharePoint Submittal	N				
Softstem bulrush (<i>Schoenoplectus tabernaemontani</i>)	N				
Sago pondweed (<i>Stuckenia pectinata</i>)	N				
TREATMENT_AREA	Silver Lake				
Treatment Date	N				
Treatment Date	N				
Treatment Record - Received	N				
Treatment Record - Scanned	N				
Waterbody Type	LAKE				
APM Chemical Permit Request	Chemical Permit Details	6/26/2018	6/29/2018	APPROVED	

Details: Parameter	Value/Amount	Units	Comments		
Broad-leaved cattail (<i>Typha latifolia</i>)	N				
Business Location License	N/A				
CO - # days	4				
CO - 15 days	Y				
CO – Date Sent	6/29/2018				
CO-Date_Received	6/26/2018				
CONTROL_OTHER	N				
Category 5 Certification Number	N/A				
Chemical Permit ID	6682				
Chemicals - Approved	Aquaneat (glyphosate)				
Comments	N/A				
Common arrowhead (<i>Sagittaria latifolia</i>)	N				
Common reed (<i>Phragmites australis</i>)	Y				
Common waterweed (<i>Elodea canadensis</i>)	N				
Control - Algae	N				
Control - Emergent water plants	N				
Control - Floating water plants	N				
Control - Nuisance algae	N				
Control - PL	N				
Control - Submerged water plants	N				
Coontail (<i>Ceratophyllum demersum</i>)	N				

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Details: Parameter	Value/Amount	Units	Comments
Curly-leaf pondweed (Potamogeton crispus)	N		
Entered in SharePoint	N		
Estimated Acres	0.07		
Eurasian water-milfoil (Myriophyllum spicatum)	N		
Expiration Date	11/1/2018		
Fee	20		
Field - # days	Y		
Field Issued By	Heidi_Bunk		
Filamentous Algae	N		
Improvement - swimming	N		
Lake Surface Area			
Large Duckweed (Spirodela polyrhiza)	N		
Large Scale Treatment Form	N		
Large-leaf pondweed (Potamogeton amplifolius)	N		
Maintain navigational channel	N		
Maintain private access - boating	N		
Maintain private access - fishing	N		
Muskgrasses (Chara)	N		
NUISANCE_CAUSED_OTHER	N		
Native Plants	N		
Next Steps	Heidi Bunk		
Other Plants	Phragmites		
PLSS_DIRECTION	e		
PLSS_RANGE	14		
PLSS_SECTION	14		
PLSS_TOWNSHIP	03		
Payment Number	WP-00014050		
Permit County	Walworth		
Permit End Year	2018		
Permit Latitude	42.7254		
Permit Longitude	-88.5657		
Permit PLSS Section	14t03r14e		
Permit Start Year	2018		
Permit WBIC	741700		
Pithophora	N		
Planktonic Algae	N		
Private Pond	N		

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Details: Parameter	Value/Amount	Units	Comments
Purple loosestrife (Lythrum salicaria)	N		
SharePoint Submittal	Y		
Softstem bulrush (Schoenoplectus tabernaemontani)	N		
Sogo pondweed (Stuckenia pectinata)	N		
TREATMENT_AREA	Silver Lake		
Treatment Date	N		
Treatment Date	N		
Treatment Record - Received	N		
Treatment Record - Scanned	N		
Waterbody Type	WETLAND		
APM Chemical Treatment Record		10/10/2019	NO_TREATMENT

Details: Parameter	Value/Amount	Units	Comments
Contains Herbicide totals	N		
Did Treatments Occur	N		
Permit County	Washington		
Permit Year	2018		
Person Completing Form	Brian Suffern		

Monitoring Stations		
Station ID	Name	Comments
10044709	Big Silver Lake - NW (Herbicide Monitoring Site 1)	
10044710	Big Silver Lake - SE Foxtail Bay (Herbicide Monitoring Site 5)	
10044712	Big Silver Lake - W side of S Basin (Herbicide Monitoring Site 3)	
703120	Silver Lake - Deep Hole - North Basin	
703018	Silver Lake - Deep Hole South Basin (Near Wautoma)	

Assessment Units			
WBIC	Segment	Local Name	Official Name
107900	1	Silver Lake (Big)	Silver Lake

Lab Account Codes			
Account Code	Description	Start Date	End Date

Forms	
Form Code	Form Name

Methods	
Method Code	Method Description

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Fieldwork Events				
Start Date	Status	Field ID	Station ID	Station Name

Documents				
Title	Description	Author	Published	Comments
2017 Big Silver Lake HWM Monitoring and Control Development Report	Big Silver Lake, Waushara County, is a seepage lake with a maximum depth of 48 feet and a mean depth of 21 feet. The lake area as determined through a heads-up digitization of the lake from a 2015 aerial photograph is approximately 360.3 acres. This mesotrophic lake has a relatively small watershed. Only when water levels are full pool does water exchange occur with Irogami Lake via a culvert under State Hwy 21. Four exotic species are known to exist in Silver Lake: banded mystery snail, curly leaf pondweed, Eurasian water milfoil, and zebra mussel. Genetic analysis confirms that the invasive milfoil population is comprised of both EWM and hybrid water milfoil. Subsequent discussion using "HWM" will represent the collective invasive milfoil population of Silver Lake unless specifically referenced otherwise.	Onterra LLC	1/1/2018	
Surface Water Grant Project Lab Costs	Lab costs for grant received by Silver Lake Management District.			

Budget

Combined Budgets:
Combined WSLH:
Combined Total: \$0.00

Funding					
Organization	Source	Type	Amount	Start Date	End Date