

## Wisconsin Department of Natural Resources SWIMS Project Summary

### General Project Information

**Project ID:** LPL-1260-09

**Name:** VILLAGE OF BARNEVELD: Birch Lake Diagnostic Study-Pt. 1

**Type:** Lakes Grant

**Subtype:** Large Scale Lake Planning

**Status:** COMPLETE

**Start Date:** 10/1/2008

**End Date:** 6/30/2010

**Purpose:** The Village of Barneveld proposes to complete a diagnostic study on Birch Lake, Iowa County, to assess current water quality conditions and use impairments. The project activities include: 1. estimating nutrient and sediment inputs, 2. assessing in-lake conditions and 3. assessing current condition of the outlet structure, and potential impacts to both impoundment and trout stream below the dam. Deliverables for this grant include a water resources appraisal report as part of the overall lake management plan, and all applicable ranking question deliverables. The DNR will be provided with both a paper copy and an editable electronic copy of the final report. The project results will be disseminated to the public by local newspaper and public meetings.

**Objective:**

**Comments:** Grantee is VILLAGE OF BARNEVELD

**Outcome:**

**Study Design:**

**QA Measures:**

### People

Name	Role	Status	Start Date	End Date	Organization	Comments
Marshall, David W	TEAM_MEMBER	COMPLETE	10/1/2008	6/30/2010	Underwater Habitat Investigations, LLC	
Village of Barneveld,	GRANT_RECIPIENT	ACTIVE	10/1/2008	6/30/2010	Village of Barneveld	

### Project Statuses

Date	Reported By	Status	Comments
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### Actions

Action	Detailed Description	Start Date	End Date	Status
Diagnostic/Feasibility Assessment	27003505	10/1/2008		PROPOSED
Grant Awarded	The Village of Barneveld proposes to complete a diagnostic study on Birch Lake, Iowa County, to assess current water quality conditions and use impairments. The project activities include: 1. estimating nutrient and sediment inputs, 2. assessing in-lake conditions and 3. assessing current condition of the outlet structure, and potential impacts to both impoundment and trout stream below the dam. Deliverables for this grant include a water resources appraisal report as part of the overall lake management plan, and all applicable ranking question deliverables.	10/1/2008		COMPLETE

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### Monitoring Stations

Station ID	Name	Comments
253165	Birch Lake - Center of the Lake	
253166	Trout Creek - Below Birch Lake Dam	
10040860	Trout Creek Inlet to Birch Lake	

### Assessment Units

WBIC	Segment	Local Name	Official Name
1243100	2	Trout Creek	Trout Creek

### 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	Method Description
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### Fieldwork Events

Start Date	Status	Field ID	Station ID	Station Name
5/14/2009 13:45	COMPLETE	TCO	253166	Trout Creek - Below Birch Lake Dam
5/14/2009 14:30	COMPLETE	TC1	10040860	Trout Creek Inlet to Birch Lake
5/14/2009 15:00	COMPLETE	BL	253165	Birch Lake - Center of the Lake
6/7/2009 7:40	COMPLETE	TC1	10040860	Trout Creek Inlet to Birch Lake
6/7/2009 8:10	COMPLETE	TCO	253166	Trout Creek - Below Birch Lake Dam
6/18/2009 9:00	COMPLETE	TCI	10040860	Trout Creek Inlet to Birch Lake
6/18/2009 10:30	COMPLETE	TCO	253166	Trout Creek - Below Birch Lake Dam
6/18/2009 11:30	COMPLETE	BL	253165	Birch Lake - Center of the Lake
6/27/2009 20:00	COMPLETE	TCI	10040860	Trout Creek Inlet to Birch Lake
7/8/2009 10:00	COMPLETE	TC1	10040860	Trout Creek Inlet to Birch Lake
7/22/2009 9:30	COMPLETE	TCI	10040860	Trout Creek Inlet to Birch Lake
7/22/2009 10:10	COMPLETE	TCO	253166	Trout Creek - Below Birch Lake Dam
7/22/2009 10:45	COMPLETE	BL	253165	Birch Lake - Center of the Lake
8/8/2009 8:10	COMPLETE	TCI	10040860	Trout Creek Inlet to Birch Lake
8/8/2009 8:25	COMPLETE	TCO	253166	Trout Creek - Below Birch Lake Dam
8/19/2009 16:00	COMPLETE	BL	253165	Birch Lake - Center of the Lake
8/19/2009 16:20	COMPLETE	TCI	10040860	Trout Creek Inlet to Birch Lake
8/19/2009 16:30	COMPLETE	TCO	253166	Trout Creek - Below Birch Lake Dam

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Documents				
Title	Description	Author	Published	Comments
Birch Lake Management Plan	Consistent with previous surveys conducted by the WDNR in the early 1990s, lake monitoring results demonstrated that Birch Lake exhibits conditions typical for degraded (eutrophic) impoundments. For four decades, this small impoundment has trapped eroded soil and nutrients from the surrounding watershed depositing sediment as thick as five feet in some areas. These conditions have favored the growths of dense water weed (Elodea) beds and filamentous algae. The dense plant growths undermine recreational uses and the ecological balance in the lake. Dissolved oxygen levels fluctuate at extreme levels and create stressful conditions for aquatic life. The water quality problems documented previously and in 2009 will continue unless management is targeted to reverse the long term sedimentation in the lake. In spite of the degraded water quality, the bluegill population offered decent angling opportunities where open water could be found. In May 2009, the average bluegill length was about 6.9 inches with a range of 5.7 inches to 8.1 inches. Panfish typically become stunted in weedy impoundments but that was not the case for Birch Lake. Perhaps low recruitment due to poor water quality prevented overpopulation and stunting?	Agrecol Environmental Consulting	1/1/2010	

### Budget

**Combined Budgets:**

**Combined WSLH:**

**Combined Total:** \$0.00

### Funding

Organization	Source	Type	Amount	Start Date	End Date
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