

Wisconsin Department of Natural Resources SWIMS Project Summary

General Project Information

Project ID: CLMN-WaterLevel-2953800

Name: Citizen Water Level Monitoring - Annabelle Lake

Type: Citizen Lake Monitoring

Subtype: Water Level Monitoring

Status: ACTIVE

Start Date: 1/1/2010

End Date: 12/31/2099

Purpose: Record low water levels in some areas of Wisconsin affect both the health and recreation of lakes. In some inland lakes, low water levels have stranded nearshore habitat, left piers hundreds of feet from shore and rendered boat landings unusable. To address the growing concern for lake health brought on by drought, changing climate, and groundwater withdrawals, the Wisconsin Department of Natural Resources and the University of Wisconsin-Extension have developed a citizen-based, statewide lake-level monitoring effort.

Objective: Citizen volunteers will record lake levels once a week on the same day (e.g. every Monday) at approximately the same time of day under calm conditions. For each monitoring event, a visual reading of the lake level should be recorded on the datasheet and a photograph of the water level on the staff gage should be taken and submitted to the statewide coordinator or uploaded to SWIMS as part of the quality assurance process. Volunteers will enter their field data into the SWIMS database following each survey so that extreme water level changes (> 4/10ft in one week) can be documented as soon as possible. In addition to the water level reading, the bubble levels attached to the staff gage will be checked to verify that the staff gage has not shifted since the previous monitoring activity.

Comments:

Outcome: Citizen volunteers lake level measurements by visually reading a staff gage, which is scale (made out of enameled steel and marked in feet and tenths) placed in the lake bed to show the elevation of the water surface. The staff gage is calibrated by referencing the numbered height on the gage to the surveyed elevation of the water surface at the time of installation (Harrelson et al., 1994). Volunteers will also enter their lake level data into the Surface Water Integrated Monitoring System (SWIMS) database. Trained professionals will install the staff gage and perform all surveys (following installation, mid-season, and at removal) of the staff gage. They will also be responsible for removing the gage and entering all survey data into SWIMS each year.

Study Design:

QA Measures:

People

Name	Role	Status	Start Date	End Date	Organization	Comments
Dittberner, Leah	TEAM_MEMBER	ACTIVE	6/6/2014			
Kretschmann, Anne	TEAM_MEMBER	ACTIVE	8/22/2013		North Lakeland Discovery Center	
Lockwood, Andrew	TEAM_MEMBER	ACTIVE	6/6/2014			
Vogt, David R	TEAM_MEMBER	ACTIVE	1/1/2010			
WATRAS, CARL J	COORDINATOR	COMPLETE	1/1/2010	3/29/2021	Wisconsin DNR	
Watras, Carl J	COORDINATOR	ACTIVE	3/29/2021			

Project Statuses

Date	Reported By	Status	Comments
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Actions

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Action	Detailed Description	Start Date	End Date	Status
Monitor Water Level	Wisconsin Department of Natural Resources and the University of Wisconsin-Extension have developed a citizen-based, statewide lake-level monitoring effort.	1/1/2010	12/31/2099	IN_PROGRESS

Monitoring Stations

Station ID	Name	Comments
10006023	Annabelle Lake	

Assessment Units

WBIC	Segment	Local Name	Official Name
2953700	1	Junction Creek	Junction Creek
2953800	1	Anna Lake	Annabelle Lake

Lab Account Codes

Account Code	Description	Start Date	End Date
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Forms

Form Code	Form Name
WATER_LEV2016	Water Level Monitoring Data Sheet
WATER_LEV2016MET	Water Level Monitoring Data Sheet (metric)

Methods

Method Code	Method Description
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Fieldwork Events

Start Date	Status	Field ID	Station ID	Station Name
5/20/2010	COMPLETE	50	10006023	Annabelle Lake
5/29/2010	COMPLETE	59	10006023	Annabelle Lake
6/5/2010	COMPLETE	66	10006023	Annabelle Lake
6/12/2010	COMPLETE	73	10006023	Annabelle Lake
6/19/2010	COMPLETE	80	10006023	Annabelle Lake
6/26/2010	COMPLETE	87	10006023	Annabelle Lake
7/3/2010	COMPLETE	94	10006023	Annabelle Lake
7/10/2010	COMPLETE	101	10006023	Annabelle Lake
7/17/2010	COMPLETE	108	10006023	Annabelle Lake
7/24/2010	COMPLETE	115	10006023	Annabelle Lake
7/31/2010	COMPLETE	122	10006023	Annabelle Lake
8/7/2010	COMPLETE	129	10006023	Annabelle Lake
8/14/2010	COMPLETE	136	10006023	Annabelle Lake

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8/20/2010	COMPLETE	142	10006023	Annabelle Lake
8/29/2010	COMPLETE	151	10006023	Annabelle Lake
9/4/2010	COMPLETE	157	10006023	Annabelle Lake
4/29/2016	COMPLETE		10006023	Annabelle Lake
5/6/2016	COMPLETE		10006023	Annabelle Lake
5/20/2016	COMPLETE		10006023	Annabelle Lake
5/27/2016	COMPLETE		10006023	Annabelle Lake
6/3/2016	COMPLETE		10006023	Annabelle Lake
6/10/2016	COMPLETE		10006023	Annabelle Lake
6/17/2016	COMPLETE		10006023	Annabelle Lake
6/24/2016	COMPLETE		10006023	Annabelle Lake
7/1/2016	COMPLETE		10006023	Annabelle Lake
7/8/2016	COMPLETE		10006023	Annabelle Lake
7/22/2016	COMPLETE		10006023	Annabelle Lake
7/29/2016	COMPLETE		10006023	Annabelle Lake
8/5/2016	COMPLETE		10006023	Annabelle Lake
8/12/2016	COMPLETE		10006023	Annabelle Lake
8/19/2016	COMPLETE		10006023	Annabelle Lake
9/2/2016	COMPLETE		10006023	Annabelle Lake
9/9/2016	COMPLETE		10006023	Annabelle Lake
9/23/2016	COMPLETE		10006023	Annabelle Lake
10/21/2016	COMPLETE		10006023	Annabelle Lake
10/28/2016	COMPLETE		10006023	Annabelle Lake
11/4/2016	COMPLETE		10006023	Annabelle Lake
11/11/2016	COMPLETE		10006023	Annabelle Lake
5/5/2017	COMPLETE		10006023	Annabelle Lake
5/12/2017	COMPLETE		10006023	Annabelle Lake
5/19/2017	COMPLETE		10006023	Annabelle Lake
5/26/2017	COMPLETE		10006023	Annabelle Lake
6/2/2017	COMPLETE		10006023	Annabelle Lake
6/9/2017	COMPLETE		10006023	Annabelle Lake
6/16/2017	COMPLETE		10006023	Annabelle Lake
6/23/2017	COMPLETE		10006023	Annabelle Lake
6/30/2017	COMPLETE		10006023	Annabelle Lake
7/7/2017	COMPLETE		10006023	Annabelle Lake

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7/14/2017	COMPLETE		10006023	Annabelle Lake
7/21/2017	COMPLETE		10006023	Annabelle Lake
8/4/2017	COMPLETE		10006023	Annabelle Lake
8/11/2017	COMPLETE		10006023	Annabelle Lake
8/18/2017	COMPLETE		10006023	Annabelle Lake
8/25/2017	COMPLETE		10006023	Annabelle Lake
9/1/2017	COMPLETE		10006023	Annabelle Lake
9/8/2017	COMPLETE		10006023	Annabelle Lake
9/15/2017	COMPLETE		10006023	Annabelle Lake
9/22/2017	COMPLETE		10006023	Annabelle Lake
10/13/2017	COMPLETE		10006023	Annabelle Lake
10/20/2017	COMPLETE		10006023	Annabelle Lake
10/27/2017	COMPLETE		10006023	Annabelle Lake
11/3/2017	COMPLETE		10006023	Annabelle Lake

Documents

Title	Description	Author	Published	Comments
Annabelle Lake Water Quality Report, Wisconsin	Annabelle Lake is a 194 acre lake located in Vilas County. It has a maximum depth of 30 feet. Visitors have access to the lake from a public boat landing. Fish include Musky, Panfish, Smallmouth Bass, Northern Pike and Walleye. The lake's water is moderately clear.		1/31/2016	
Annabelle Lake, Wisconsin Photo	Annabelle Lake is a 194 acre lake located in Vilas County. It has a maximum depth of 30 feet. Visitors have access to the lake from a public boat landing. Fish include Musky, Panfish, Smallmouth Bass, Northern Pike and Walleye. The lake's water is moderately clear.			
Annabelle_Lake	Photos of lake level benchmark			All lake level benchmarks are spikes in trees or stumps near the lake shore.
Annabelle_Lake2	Photos of lake level benchmark			All lake level benchmarks are spikes in trees or stumps near the lake shore.

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Annabelle_Lake_Survey	Site map of lake level benchmark and staff gauge. Survey information to derive sea level elevations of the benchmark.		An RTK GPS unit obtained the sea level elevation of a point in an open area near the benchmark. This was often a point on the pier. The RTK-GPS unit generally obtains sea level elevations with ~2 cm accuracy. Then a survey level and stadia rod were used to survey the difference in elevation between the spike in the tree and the point with GPS-derived sea level elevation. The survey was repeated twice to ensure that the calculated sea level elevations of the spike were within 0.5 cm of one another.
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Budget

Combined Budgets:

Combined WSLH:

Combined Total: \$0.00

Funding

Organization	Source	Type	Amount	Start Date	End Date
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