

Wisconsin Department of Natural Resources SWIMS Project Summary

General Project Information

Project ID: SPL39518
Name: MANITOWOC COUNTY LAKES ASSN: Economic Impacts of Water Clarity; Manitowoc Co; MCLA
Type: Lakes Grant
Subtype: Small Scale Lake Planning
Status: COMPLETE
Start Date: 02/15/2018
End Date: 12/31/2018
Purpose: The Manitowoc County Lakes Association is sponsoring a project to evaluate how lake water clarity impacts property values in Manitowoc County.

Project final deliverables include: all data collected and a final report of the findings developed by the University of Wisconsin - Eau Claire describing lake water clarity and property values for Manitowoc County.

This scope summarizes the project detail provided in the application and does not negate tasks/deliverables described therein. Data, records, and reports, including GIS-based maps, and digital images, must be submitted to the Department in a format specified by the regional Lake Biologist.

If consultant is to provide final report, it is recommended that Grantee provide DNR Lake Coordinator with a draft for comment on report adequacy prior to making final payment to the consultant. DNR to receive both paper and electronic .pdf copies of the final report along with, or prior to submission of grantee's final payment request

Objective:
Comments: Grantee is MANITOWOC COUNTY LAKES ASSN
Outcome:
Study Design:
QA Measures:

People

Name	Role	Status	Start Date	End Date	Organization	Comments
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Project Statuses

Date	Reported By	Status	Comments
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Actions

Action	Detailed Description	Start	End Date	Status
Grant Awarded	The Manitowoc County Lakes Association is sponsoring a project to evaluate how lake water clarity impacts property values in Manitowoc County. Project final deliverables include: all data collected and a final report of the findings developed by the University of Wisconsin - Eau Claire describing lake water clarity and property values for Manitowoc County.	02/15/2018	12/31/2018	COMPLETE

Monitoring Stations

Station ID	Name	Comments
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Assessment Units

WBIC	Segment	Local Name	Official Name
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WBIC	Segment	Local Name	Official Name
20	5	Fischer Park Beaches, Lake Michigan	Lake Michigan
20	6	Hika Park Bay Beach, Lake Michigan	Lake Michigan
20	7	Red Arrow Park Beach, Lake Michigan	Lake Michigan
20	8	Ymca Beach, Lake Michigan	Lake Michigan
20	9	Memorial Drive Wayside Beach, Lake Michigan	Lake Michigan
20	10	Neshota Park Beach, Lake Michigan	Lake Michigan
20	11	Point Beach State Park Beach, Lake Michigan	Lake Michigan
20	12	Lake Michigan	Lake Michigan
20	31	Warm Water Beach, Lake Michigan	Lake Michigan
20	99	Waldo Area Beach	Lake Michigan
45	1	Manitowoc Harbor	Manitowoc Harbor
47	1	Two Rivers Harbor	Two Rivers Harbor
45100	1	Cedar Lake	Cedar Lake
45400	1	Glomski Lake	Glomski Lake
45500	1	Graf Lake (Long)	Graf Lake
45700	1	Inch Lake	Unnamed
45800	1	Kasbaum Lake	Kasbaum Lake
45900	1	Lindeman Lake	Lindeman Lake
46200	1	Little Sly Lake	Little Sy Lake
46300	1	Ranger Lake	Ranger Lake
46400	1	Scout Lake	Scout Lake
46700	1	Shoe Lake	Shoe Lake
48300	1	Unnamed Lake	Unnamed
48400	1	Un Lake	Unnamed
48500	1	Un Lake	Unnamed
48600	1	Un Lake	Unnamed
48700	1	Un Lake	Unnamed
48750	1	Un Lake	Unnamed
48760	1	Un Lake	Unnamed
48790	1	Un Lake	Unnamed
48800	1	Un Lake	Unnamed
48900	1	Un Lake	Unnamed
49000	1	Un Lake	Unnamed
49100	1	Un Lake	Unnamed
49300	1	West Lake	West Lake
49400	1	Weyers Lake	Weyers Lake
50700	3	Sheboygan River	Sheboygan River
57200	1	Millhome Creek	Millhome Creek
57700	1	Local Water	Unnamed
57800	1	Unnamed Tributary To Sheboygan River (Gooseville Creek), Manitowoc County	Unnamed
57900	1	Sy Lake	Sy Lake
58000	1	Wilke Lake	Wilke Lake
58200	1	Praeder Lake	Prueder Lake
58400	1	Rockville Flowage	Rockville Flowage
62300	1	Pigeon River	Pigeon River
62300	2	Pigeon River	Pigeon River
62900	1	Meeme R.	Meeme River

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WBIC	Segment	Local Name	Official Name
63000	2	Unnamed Alternate Trib Direction	Unnamed
63100	1	Un Lake	Unnamed
63200	1	Unnamed Creek To Spring Lake	Unnamed
63600	1	Un Spring	Un Spring
63700	1	Spring Lake	Spring Lake
63800	1	Little Pigeon Lake	Little Pigeon Lake
64000	1	Pigeon Lake	Pigeon Lake
64100	1	Unnamed Cr. To Pigeon River	Unnamed
64200	1	Horseshoe Lake	Horseshoe Lake
64300	1	Karstaedt Lake	Karstaedt Lake
64400	1	Unnamed Cr To Pigeon River	Unnamed
64600	1	Spring Pond	Spring Pond
65400	1	Centerville Creek	Centerville Creek
65600	1	Centerville Flowage	Centerville Flowage
65700	1	Unnamed Trib	Unnamed
65800	1	Fischer Creek	Fischer Creek
65800	2	Fischer Creek	Fischer Creek
65900	1	Local Water	Unnamed
66000	1	Point Creek	Point Creek
66100	1	Unnamed Trib (T18n, R23e, S32)	Unnamed
66200	1	Un Lake	Unnamed
66300	1	Pine Creek	Pine Creek
66300	2	Pine Creek	Pine Creek
66300	3	Pine Creek	Pine Creek
66400	1	Unnamed Trib (T18n, R23e, S27)	Unnamed
66500	1	Un Trib (T18n, R23e, S22)	Unnamed
66600	1	Grosshuesch Lake	Grosshuesch Lake
66700	1	Waack Lake	Waack Lake
66800	1	Carstens Lake	Carstens Lake
66900	1	Calvin Creek	Calvin Creek
67100	1	Gass Lake	Gass Lake
67200	1	Hartlaub Lake	Hartlaub Lake
67300	1	Silver Creek	Silver Creek
67300	2	Silver Creek	Silver Creek
67400	1	Silver Lake	Silver Lake
67500	1	Unnamed Trib (T19n, R23e, S28)	Unnamed
67600	1	Unnamed Trib (T19n, R23e, S28)	Unnamed
67700	1	Teek Lake	Teek Lake
67900	1	Vetting Lake	Vetting Lake
68000	1	Unnamed Trib (T18n, R23e, S07)	Unnamed
68100	1	English Lake	English Lake
68300	1	Bullhead Lake	Bullhead Lake
68400	1	North Eaton Twin Lake	Eaton Twin Lakes
68500	1	Quarry Lake	Quarry Lake
68700	1	South Eaton Twin Lake	Eaton Twin Lakes
68800	1	Un Lake	Unnamed
68900	1	Un Lake	Unnamed
69000	1	Un Lake	Unnamed

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WBIC	Segment	Local Name	Official Name
69200	1	Un Lake	Unnamed
69300	1	Un Lake	Unnamed
69400	1	Un Lake	Unnamed
69600	1	Un Lake	Unnamed
69800	1	Un Lake	Unnamed
69900	1	Un Lake	Unnamed
70000	1	Un Lake	Unnamed
70100	1	Un Lake	Unnamed
70200	1	Un Lake	Unnamed
70500	1	Un Lake	Unnamed
70600	1	Un Lake	Unnamed
70700	1	Un Lake	Unnamed
70800	1	Un Lake	Unnamed
70900	1	Un Spring	Un Spring
71000	1	Manitowoc River (Main Stem)	Manitowoc River
71000	2	Manitowoc River	Manitowoc River
71000	3	Manitowoc River	Manitowoc River
71300	1	Branch River (Main Stem)	Branch River
71300	2	Branch River	Branch River
71300	3	Branch River	Branch River
71400	1	Unnamed Creek (T20n R22e S24)	Unnamed
71500	1	Unnamed Creek (T20n R22e S27)	Unnamed
71600	1	Unnamed Stream (T19n, R22e, S3)	Unnamed
71700	1	Hemptions Lake	Hempton Lake
71750	1	Tributary to Hemptions Lake	Unnamed
71800	1	Unnamed Creek (T20n R22e S7)	Unnamed
71900	1	Unnamed Creek (T20n R22e S20 Nese)	Unnamed
72100	1	Kellners Lake	Kellners Lake
72400	1	Unnamed Trib (T19n R22e S17)	Unnamed
72500	1	Un Lake	Unnamed
72600	1	Schisel Creek	Unnamed
72600	2	Schisel Creek	Unnamed
72600	3	Schisel Lake Outlet	Unnamed
72700	1	Bergene Lake	Bergene Lake
72800	1	Schisel Lake	Schisel Lake
73100	1	Clarks Mills Pond	Clarks Mills Pond
73500	1	Unnamed Creek (T19n R22e S31)	Unnamed
73600	1	Mud Creek (Left, Hills) T18n, R21e, S12	Mud Creek
73700	1	Unnamed Creek (T18n, R21e, S13) Trib To St. Nazianz	Unnamed
73800	1	Unnamed Trib (T18n, R21e, S13)	Unnamed
74000	1	Neumeyer Lake	Neumeyer Lake
74100	1	Un Lake	Unnamed
74200	1	Un Lake	Unnamed
74300	1	Lake Mary	Lake Oschwald
74400	1	Unnamed Trib (T18n, R21e, S14)	Unnamed
74500	1	Unnamed Trib (T18n, R22e, S15)	Unnamed
74600	1	Unnamed Trib (T18n, R22e, S22)	Unnamed

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WBIC	Segment	Local Name	Official Name
74700	1	Fenske Lake	Fenske Lake
74800	1	Lutzke Lake	Lutzke Lakes
74900	1	South Lutzke Lake	South Lutzke Lake
75000	1	Mud Creek (Reedsville) T19n, R21e, S34	Mud Creek
75000	2	Mud Creek (Reedsville) T19n, R21e, S34	Mud Creek
75200	1	Local Water	Unnamed
75300	1	Unnamed Trib (T19n, R21e, S23)	Unnamed
75500	1	Unnamed Trib (T19n, R21e, S02)	Unnamed
75600	1	Unnamed Trib (T19n, R21e, S23)	Unnamed
75700	1	Unnamed Creek (T18n, R21e, S23)	Unnamed
77100	1	Unnamed Creek (T20n T20e S34)	Unnamed
77500	1	Long Lake (Big Long)	Long Lake
77600	1	Boot Lake	Boot Lake
77900	1	Manitowoc R. So. Branch	South Branch Manitowoc River
78700	1	Cedar Creek	Cedar Creek
78900	1	Hayton Creek	Hayton Creek
79100	1	Un Lake	Unnamed
79300	1	Steinthal Lake	Steinthal Lake
79500	1	Peterson Lake	Peterson Lake
79600	1	Mud Lake	Mud Lake
82500	1	Little Manitowoc River	Little Manitowoc River
82500	93	Lake Michigan - Blue Rail Marina Beach	Little Manitowoc River
82700	1	Un Spring	Un Spring
82800	1	Hidden Lake (Turtle)	Hidden Lake
83200	1	Un Lake	Unnamed
83300	1	Un Lake	Unnamed
83400	1	Un Lake	Unnamed
83500	1	Un Lake	Unnamed
83600	1	Un Lake	Unnamed
83700	1	Un Lake	Unnamed
83800	1	Unnamed Trib to Lake Michigan	Unnamed
84000	1	East Twin River	East Twin River
84000	4	East Twin River	East Twin River
84100	1	Johnson Creek	Johnson Creek
84300	1	Jambo Creek	Jambo Creek
84300	2	Jambo Creek	Jambo Creek
84400	1	Unnamed Trib T21n, R23e, S15 Nene	Unnamed
84500	1	Unnamed Trib T21n, R23e S09 Ssw	Unnamed
84600	1	Harpt Lake	Harpt Lake
84700	1	Mott Lake	Mott Lake
85500	1	Tisch Mills Creek	Tisch Mills Creek
86000	1	Unnamed Trib 22n, 24e, 32swne	Unnamed
86100	1	Unnamed Trib 21n, 24e, 4 Nwnw	Unnamed
87000	1	West Twin River	West Twin River
87000	2	West Twin River	West Twin River
87000	3	West Twin River	West Twin River
87000	4	West Twin River	West Twin River
87000	5	West Twin River	West Twin River

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WBIC	Segment	Local Name	Official Name
87000	6	West Twin River	West Twin River
87300	1	Shoto Lake (Impoundment)	Shoto Lake
87500	1	Unnamed Trib. T20n, R24e, S30 Sene	Unnamed
87600	1	Francis Creek	Francis Creek
87700	1	Unnamed Trib T20n, R23e, S11swne	Unnamed
87800	1	Unnamed Trib.T 21n, R23e, S29 Nenw	Unnamed
87900	1	Tuma Lake (Ording)	Tuma Lake
88000	1	Kriwanek Creek	Kriwanek Creek
88000	2	Kriwanek Creek	Kriwanek Creek
88000	3	Kriwanek Creek	Kriwanek Creek
88200	1	Neshota River	Neshota River
88300	1	Black Cr (Buck Creek)	Black Creek
89900	1	Devil's River	Devils River
89900	2	Devils River	Devils River
90000	1	Unnamed Trib to Devils River T21n, R22e, S09 Nwnw	Unnamed
90100	1	Molash Creek	Molash Creek
90200	1	Un Creek	Unnamed
90300	1	Unnamed Stream T21nr24e S25	Unnamed
3000159	1	Tributary to the Kriwanek Creek	Unnamed
3000159	2	Tributary to the Kriwanek Creek	Unnamed
3000161	1	West Twin River Trib	Unnamed
3000306	1	Unnamed	Unnamed
3000463	1	Unnamed Lake	Unnamed
5019923	1	Local Water	Unnamed
5020364	1	Unnamed Stream	Unnamed
5020440	1	Unnamed Stream	Unnamed
5020513	1	Unnamed Stream	Unnamed
5020517	1	Unnamed Stream	Unnamed
5020540	1	Unnamed Stream	Unnamed
5020585	1	Unnamed Stream	Unnamed
5020629	1	Unnamed Stream	Unnamed
5020712	1	Unnamed Stream	Unnamed
5020742	1	Unnamed Stream	Unnamed
5020760	1	Unnamed Stream	Unnamed
5020832	1	Local Water	Silver Stream
5020837	1	Unnamed Stream	Unnamed
5020850	1	Unnamed Stream	Unnamed
5020884	1	Unnamed Stream	Unnamed
5020900	1	Unnamed Stream	Unnamed
5020992	1	Unnamed Stream	Unnamed
5021000	1	Unnamed Stream	Unnamed
5021022	1	Unnamed Stream	Unnamed
5021049	1	Unnamed Stream	Unnamed
5021058	1	Unnamed Stream	Unnamed
5021125	1	Unnamed Stream	Unnamed
5021140	1	Unnamed Stream	Unnamed
5021205	1	Unnamed Stream	Unnamed

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WBIC	Segment	Local Name	Official Name
5021209	1	Unnamed Stream	Unnamed
5021226	1	Unnamed Stream	Unnamed
5021236	1	Unnamed Stream	Unnamed
5021245	1	Unnamed Stream	Unnamed
5021266	1	Unnamed Stream	Unnamed
5021331	1	Unnamed Stream	Unnamed
5021396	1	Unnamed Stream	Unnamed
5021439	1	Unnamed Stream	Unnamed
5021444	1	Unnamed Stream	Unnamed
5021445	1	Unnamed Stream	Unnamed
5021512	1	Unnamed Stream	Unnamed
5021530	1	Unnamed Stream	Unnamed
5021565	1	Unnamed Stream	Unnamed
5021569	1	Unnamed Stream	Unnamed
5021583	1	Unnamed Stream	Unnamed
5021594	1	Unnamed Stream	Unnamed
5021639	1	Unnamed Stream	Unnamed
5021647	1	Unnamed Stream	Unnamed
5021653	1	Unnamed Stream	Unnamed
5021677	1	Unnamed Stream	Unnamed
5021696	1	Unnamed Stream	Unnamed
5021741	1	Unnamed Stream	Unnamed
5021772	1	Unnamed Stream	Unnamed
5021866	1	Unnamed Stream	Unnamed
5021894	1	Unnamed Stream	Unnamed
5021902	1	Unnamed Stream	Unnamed
5021932	1	Unnamed Stream	Unnamed
5022014	1	Unnamed Stream	Unnamed
5022047	1	Local Water	Unnamed
5022061	1	Unnamed Stream	Unnamed
5022066	1	Unnamed Stream	Unnamed
5022105	1	Unnamed Stream	Unnamed
5022137	1	Unnamed Stream	Unnamed
5022169	1	Unnamed Stream	Unnamed
5022177	1	Unnamed Stream	Unnamed
5022182	1	Unnamed Stream	Unnamed
5022202	1	Unnamed Stream	Unnamed
5022207	1	Unnamed Stream	Unnamed
5022209	1	Unnamed Stream	Unnamed
5022214	1	Unnamed Stream	Unnamed
5022248	1	Unnamed Stream	Unnamed
5022249	1	Unnamed Stream	Unnamed
5022364	1	Unnamed Stream	Unnamed
5022414	1	Unnamed Stream	Unnamed
5022445	1	Unnamed Stream	Unnamed
5022483	1	Unnamed Stream	Unnamed
5022485	1	Unnamed Stream	Unnamed
5022492	1	Unnamed Stream	Unnamed

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WBIC	Segment	Local Name	Official Name
5022641	1	Unnamed Stream	Unnamed
5022643	1	Unnamed Stream	Unnamed
5022656	1	Unnamed Stream	Unnamed
5022731	1	Unnamed Stream	Unnamed
5022757	1	Unnamed Stream	Unnamed
5022763	1	Unnamed Stream	Unnamed
5022803	1	Unnamed Stream	Unnamed
5022902	1	Unnamed Stream	Unnamed
5022909	1	Unnamed Stream	Unnamed
5023365	1	Local Water	Unnamed
5023704	1	Manitowoc River Trib	Unnamed
5024580	1	Point Creek Unnamed Tributary	Unnamed
5024769	1	Local Water	Unnamed
5024977	1	Local Water	Unnamed
5025176	1	Local Water	Unnamed
5025264	1	Osman Trib to Meeme River	Unnamed
5025291	1	Local Water	Unnamed
5025392	1	Local Water	Unnamed
5025420	1	Fischer Creek	Unnamed
5025710	1	Meeme River	Unnamed
5552131	1	Local Water	Unnamed
5552146	1	Local Water	Unnamed
5552197	1	Local Water	Unnamed
5552234	1	Local Water	Unnamed
5552390	1	Local Water	Unnamed
5553101	1	Local Water	Unnamed
5553302	1	Local Water	Unnamed
5553409	1	Local Water	Unnamed
5553470	1	Local Water	Unnamed
5553480	1	Local Water	Unnamed
5553513	1	Local Water	Unnamed
5553561	1	Local Water	Unnamed
5553597	1	Local Water	Unnamed
5553611	1	Local Water	Unnamed
5553786	1	Local Water	Unnamed
5553805	1	Local Water	Unnamed
5553824	1	Local Water	Unnamed
5553828	1	Local Water	Unnamed
5553876	1	Local Water	Unnamed
5553929	1	Local Water	Unnamed
5553945	1	Local Water	Unnamed
5553957	1	Local Water	Unnamed
5553972	1	Local Water	Unnamed
5554006	1	Local Water	Unnamed
5554767	1	Local Water	Unnamed
5554866	1	Local Water	Unnamed
5555058	1	Local Water	Unnamed
5555145	1	Local Water	Unnamed

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WBIC	Segment	Local Name	Official Name
5555377	1	Local Water	Unnamed
5555470	1	Local Water	Unnamed
5556014	1	Local Water	Unnamed
5556107	1	Local Water	Unnamed
5556212	1	Local Water	Unnamed
5556441	1	Local Water	Unnamed
5556503	1	Local Water	Unnamed
5556521	1	Local Water	Unnamed
5556527	1	Local Water	Unnamed
5557249	1	Local Water	Unnamed
5557522	1	Local Water	Unnamed
5557837	1	Local Water	Unnamed
5558278	1	Local Water	Unnamed
5558375	1	Local Water	Unnamed
5558388	1	Local Water	Unnamed
5558444	1	Local Water	Unnamed
5558511	1	Local Water	Unnamed
5558574	1	Local Water	Unnamed
5558645	1	Local Water	Unnamed
5558695	1	Local Water	Unnamed
5558738	1	Local Water	Unnamed
5558760	1	Local Water	Unnamed
5559316	1	Local Water	Unnamed
5559317	1	Local Water	Unnamed
5559491	1	Unnamed Lake	Unnamed
5559640	1	Local Water	Unnamed
5560113	1	Local Water	Unnamed
5560194	1	Local Water	Unnamed
5560290	1	Local Water	Unnamed
5560292	1	Local Water	Unnamed
5586096	1	Local Water	Unnamed
5586342	1	Local Water	Unnamed
5586350	1	Local Water	Unnamed
5586381	1	Local Water	Unnamed
5589082	1	Local Water	Unnamed

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
The Impact of Water Clarity on Home Prices in Manitowoc, Calumet, Kewaunee and Sheboygan Counties, Wisconsin	We were tasked with answering the question of: How does water clarity affect housing values within Manitowoc County? To do this within this study, we examined over 8000 housing sale transactions within a four-county region including and adjacent to Manitowoc County. In order to evaluate water clarity, satellite data from the Wisconsin DNR was utilized. Using hedonic modeling, we find that a one-foot increase in water clarity will result in a 3.2% increase in home values for properties located within 250 meters of a lake. This proposes a clear economic rationale for improving water quality in lakes within this region.	Dr. David Wolf, Dr. Thomas Kemp, and Ms. Megan Roehl		

Budget

Combined Budgets:
Combined SLOH:
Combined Total:

Funding

Organization	Source	Type	Amount	Start Date	End Date
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