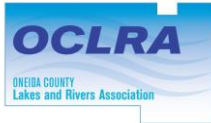
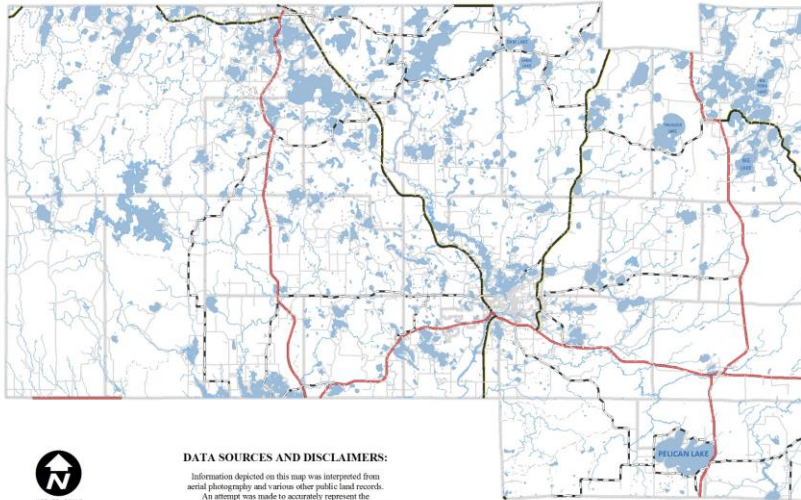


Economic Value of Lakes & Rivers in Oneida County

Original Report Date: 6/2016. Revised 7/2018



Surface Water of Oneida County



NOT TO SCALE



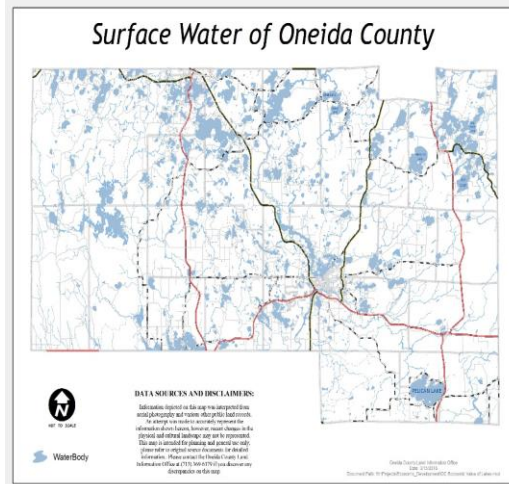
DATA SOURCES AND DISCLAIMERS:

Information depicted on this map was interpreted from aerial photography and various other public land records. An attempt was made to accurately represent the information shown herein, however, recent changes in the physical and cultural landscape may not be represented. This map is intended for planning and general use only. Please refer to original source documents for detailed information. Please contact the Oneida County Land Information Office at (715) 369-6179 if you discover any discrepancies on this map.

Oneida County Land Information Office
Date: 3/15/2018
Document Path: W:\Projects\Economic_Development\OCC Economic Value of Lakes.mxd

Water Facts – Oneida County

- ▶ 1,129 lakes, 428 named
- ▶ 78,509 acres of surface water
- ▶ 9.9% of County is surface water
- ▶ Major watersheds:
 - ▶ Upper Wisconsin River
 - ▶ S. Fork Flambeau River
 - ▶ Flambeau River
 - ▶ Wolf River
 - ▶ Lake Dubay
- ▶ The *Northern Highland Ecological Landscape*, of which Oneida County is part, has one of the highest concentrations of freshwater lakes in the world, rivaled globally only by northern Minnesota, Ontario, and Finland.



Sustaining the Wealth of Oneida County

How our lakes & rivers impact:

- ▶ Waterfront property values
- ▶ Second home ownership
- ▶ Our residents' quality of life
- ▶ Tourism
- ▶ Economic health of the county

The traditional premise...

Healthy Waters are Critical to the Northwoods Economy

- ▶ Waterfront property owners and lake & river users contribute significantly to the local economy.
- ▶ The economy of the Northwoods depends on people who want to live and recreate in the most lake rich area of the United States.
- ▶ If lake and stream water quality deteriorates, waterfront property values will also erode, resulting in a decline in the tax base.

Can these assumptions be monetized ?

Sources of Economic Value

- ▶ **Waterfront Property Values**
 - ▶ Assessed value of our waterfront properties (tax rev)
 - ▶ Property values retained by maintaining good water quality
- ▶ **Seasonal Residents**
 - ▶ Impact of seasonal residents on the local economy
 - ▶ Seasonal resident spending maintained by preserving good water quality
- ▶ **Full-Time Residents**
 - ▶ Economic impact of annual spending from waterfront owners
 - ▶ Impact of County resident spending maintained by preserving water quality
- ▶ **Tourism**
 - ▶ Tourism contribution to the economy

Sources of Economic Value Waterfront Property Assessments

- ▶ All residential properties assessed value: \$5.7 billion
- ▶ All residential waterfront properties: **\$4.3 billion**
 - ▶ Waterfront properties are **76%** of total assessed value
- ▶ Tax Revenues from residential waterfront properties:
 - ▶ Annual property tax revenue: **\$38.4 million**
 - ▶ Annual school tax revenue: \$18.8 million
 - ▶ Annual local tax revenue: \$7.4 million

Notes:

Waterfront = properties adjacent to lakes, flowages, & rivers

Properties = general residential + general undeveloped

Source: OC Land Information Office

Impact of Poor Water Quality on Property Values

- ▶ Tainter Lake study (1999 – 2010)
 - ▶ 3,186 real estate transactions over 10 years on 7 Wisconsin lakes indicated lakes with poor water quality had property values 2 to 3 times lower than lakes with good water quality.
- ▶ Delavan Lake Study (1987 – 2003)
 - ▶ Improved water quality resulted in a 70% higher property values than nearby non-restored lakes.
- ▶ Estimated impact of water quality degradation on OC waterfront properties
 - ▶ **Potential loss* of 50% of asset value, or \$2 billion over next 8-10 years.**

** Assuming no change in property tax rate*

Source: see references at end of report.

Sources of Economic Value Seasonal Residents

How many waterfront residents are seasonal ?

- ▶ Determining seasonal waterfront residents
 - ▶ Identified all waterfront homes with value > \$10K
 - ▶ Determined how many of the waterfront households applied for *resident lottery credit*, implying that they are residents
- ▶ The Results:
 - ▶ 10,316 seasonal homeowners
 - ▶ **74% of waterfront homeowners are seasonal**
 - ▶ \$3.9 billion = total value of seasonal waterfront properties
 - ▶ 55% of OC total residential value is seasonal homes
 - ▶ **90%** of total waterfront property value is seasonal homes

See Township seasonal homeowner compilation detail at end of report.

Sources of Economic Value Seasonal Residents

- ▶ Seasonal homeowner spends an average \$67.26/day while at vacation home.
(Compilation of 4 different UW-Whitewater FERC studies. See references at end of study.)
- ▶ Seasonal homeowners spend an average of 75 days at their waterfront home.
- ▶ Contribution from seasonal homeowners to the local economy is estimated to be **\$52 million/year**
(10,316 seasonal residents X 75 days X \$67.26 = \$52 million)
- ▶ Sales tax contribution: \$2.6 million/year
- ▶ Conclusion: Seasonal homeowners make a significant contribution to the local economy

Impact of Poor Water Quality on Seasonal Resident Spending

- ▶ FERC studies indicate a waterfront homeowner would expect to spend less time at their cabin if the water quality became degraded.
- ▶ Delavan Lake residents indicated that they would spend an average of a week less at the lake if the water quality became degraded.
- ▶ Conclusion: The potential direct impact to the local economy is estimated to be a **loss of \$4 million per year.**

Source: FERC Lake studies documented on the reference page

Sources of Economic Value Visitor & Tourist Spending

- ▶ Our lakes & rivers are a primary reason that
 - ▶ Tourists visit here
 - ▶ Individuals purchase second homes here
 - ▶ Locals choose to live here
- ▶ Full-time waterfront residents spending:
 - ▶ Each household average: \$40,000 per year
 - ▶ Total spending: **\$141 million**
(3,534 full-time residents X \$40,000=\$141 million)
- ▶ Visitor & Tourist spending in the northwoods region
 - ▶ Oneida County: **\$197 million** (2014)
 - ▶ Vilas County: \$203 million

Source: <http://industry.travelwisconsin.com/research/economic-impact>
County Economic Impact

Impact of Poor Water Quality on Visitor Days

The Link Between Visitor Perceptions and Spending

- ▶ Studies indicate that many visitors would avoid the area if they **perceived** a decline in water quality.
 - ▶ Revenue loss could be as much as **\$100 million**
- ▶ In New Hampshire half to two-thirds of visitors would decrease or cease their visit if they perceived a decline in water clarity and purity, natural views and scenery, crowding levels and water levels and flows.

The Economic Impact of Potential Decline in New Hampshire Water Quality: The Link Between Visitor Perceptions, Usage, and Spending. Anne Nordstrom. May 2012, The New Hampshire Lakes, Rivers, Streams and Ponds Partnership.
http://des.nh.gov/organization/divisions/water/wmb/lakes/economic_values.htm

Recap. . .#1 Sources of Economic Value Waterfront Property Assessment

Waterfront Property Values

- ▶ Waterfront Assessed Value **\$4.3 billion**
- ▶ Property Tax Revenue **\$38 million**

Property Value Loss* due to Poor Water Quality

- ▶ **\$2 billion** asset value
- ▶ **\$19 million** property tax income

*Assuming no change in property tax rate

Recap. . . #2

Sources of Economic Value Seasonal Resident Spending

Contribution of Part Time Residents to the Local Economy

▶ **\$52 million** per year

Loss of Seasonal Resident Spending due to Poor Water Quality

▶ **\$4 million** per year

Recap...#3

Sources of Economic Value Tourists & Full-time Residents

Tourism contribution to the economy

▶ **\$197 million** (2014)

If water quality is perceived to be declining . . .

▶ 50% of visitors would decrease or cease visiting

▶ **Loss of \$100 million**

Full-time resident spending unchanged

▶ **\$141 million**

Conclusion: Total Monetized Value of Oneida County Lakes & Rivers

Assessed property value: **\$4.3 billion**

Annual revenue:

- ▶ Waterfront property tax revenue: \$38 million
- ▶ Seasonal resident spending: \$52 million
- ▶ Full-time waterfront resident spending: \$141 million
- ▶ Visitor & Tourist spending: \$197 million
- ▶ **TOTAL: \$428 million**

Annual loss due to poor water quality

- ▶ Waterfront property tax revenue*: \$19 million
- ▶ Seasonal resident spending: \$4 million
- ▶ Full-time resident spending: not yet studied
- ▶ Visitor & Tourist Spending: \$100 million
- ▶ **TOTAL: \$123 million**

** Assuming no change in property tax rate*

Appendix

- ▶ OC Economy Big Picture: Property Value by Sector
- ▶ OC Economy Big Picture: Sales & Revenue by Sector
- ▶ Assessed Valuation of Waterfront Properties, by Town (2)
- ▶ Tax Revenue from Waterfront Properties, by Town (2)
- ▶ Local Tax Revenue from Waterfront Properties, by Town (2)
- ▶ Analysis of Seasonal Waterfront Property Owners, by Town (2)
- ▶ References
- ▶ Authors & Acknowledgements

Oneida County Economy Big Picture Property Valuation by Sector (2014)

Sector	Property Valuation	% of OC Total
Agricultural	\$ 1,785,000	.03%
Forestry	\$ 592,358,500	8%
Mercantile	\$ 697,234,000	10%
Manufacturing	\$ 56,262,600	.8%
Gen Residential	\$ 5,749,595,800	81%
Total OC Property Value	\$ 7,116,922,400	
Waterfront Residential	\$ 4,347,203,400	61% of OC Tot

Oneida County Economy Big Picture Sales & Revenue (2013)

Sector	Sales & Revenue	% of OC Total
Services *	\$ 848,322,098	26%
Logging & Related	\$ 454,144,151	14%
Retail *	\$ 340,447,680	10%
Construction	\$ 308,601,940	9%
Medical	\$ 286,513,980	9%
Manufacturing, non-forestry	\$ 177,080,902	5%
Tourism *	\$ 158,633,294	5%
Social Services	\$ 23,833,875	1%
Agriculture	\$ 19,313,716	1%
Subtotal Major Sectors	\$ 2,616,891,636	80%
Total OC Sales & Revenue	\$ 3,267,786,491	

* Tourism related sectors = 41%

Assessed Value of Waterfront Properties by Town (2014)

Town	Total Valuation, \$	Waterfront Valuation, \$	% of Total
Cassian	218,136,000	164,512,800	75%
Crescent	225,180,200	164,517,000	73%
Enterprise	80,010,700	58,779,000	73%
Hazelhurst	310,586,900	259,902,800	84%
Lake Tomahawk	204,269,300	152,670,800	75%
Little Rice	66,136,500	44,177,600	67%
Lynne	26,833,000	16,766,200	62%
Minocqua	1,199,711,100	1,012,435,500	84%
Monico	20,036,900	8,788,400	44%
Newbold	475,529,300	342,777,400	72%
Nokomis	200,464,600	141,435,100	71%

Source: OC Land Information Office

Assessed Value of Waterfront Properties by Town (2014)

Town	Total Valuation	Waterfront Valuation	% of Total
Pelican	259,825,800	150,037,100	58%
Piehl	10,649,600	6,318,300	59%
Pine Lake	271,732,100	180,398,500	66%
Schoepke	106,289,000	99,127,000	93%
Stella	61,208,600	39,334,800	64%
Sugar Camp	347,647,600	261,579,500	75%
Three Lakes	976,672,000	869,509,200	89%
Woodboro	161,155,800	124,682,200	77%
Woodruff	295,054,700	190,563,000	65%
Rhinelander	232,466,100	58,891,200	25%
TOTAL	5,749,595,800	\$4,347,203,400	76%

Source: OC Land Information Office

Property Tax Revenue from Waterfront Properties by Town

Town	Total Tax Revenue, \$	Waterfront Tax Revenue, \$	% of Total
Cassian	2,420,941	1,452,648	60%
Crescent	2,295,973	1,452,685	63%
Enterprise	910,590	519,019	57%
Hazelhurst	3,088,155	2,294,942	74%
Lake Tomahawk	1,905,727	1,348,083	71%
Little Rice	786,095	390,088	50%
Lynne	344,183	148,046	43%
Minocqua	13,283,129	8,939,805	67%
Monico	606,971	77,602	13%
Newbold	4,592,064	3,026,724	66%
Nokomis	1,938,915	1,248,872	64%

Source: Tax revenue calculated from 2014 assessment values

Property Tax Revenue from Waterfront Properties by Town

Town	Total Tax Revenue, \$	Waterfront Tax Revenue, \$	% of Total
Pelican	2,736,936	1,324,828	48%
Piehl	321,221	55,791	17%
Pine Lake	2,818,195	1,592,919	57%
Schoepke	1,311,521	875,291	67%
Stella	832,316	347,326	42%
Sugar Camp	3,644,824	2,309,747	63%
Three Lakes	9,273,196	7,677,766	83%
Woodboro	1,587,678	1,100,944	69%
Woodruff	3,081,283	1,682,671	55%
Rhineland	5,062,511	520,009	10%
TOTAL	62,842,425	38,385,806	61%

Source: Tax revenue calculated from 2014 assessment values

Estimated 2014 Municipal Portion of Tax Revenue from Waterfront Properties

Town	Total Local Tax Revenue, \$	Waterfront Local Tax Rev, \$	% of Total
Cassian	466,093	279,672	60%
Crescent	442,033	279,679	63%
Enterprise	175,312	99,924	57%
Hazelhurst	594,548	441,835	74%
Lake Tomahawk	366,901	259,540	71%
Little Rice	151,343	75,102	50%
Lynne	66,264	28,503	43%
Minocqua	2,557,341	1,721,140	67%
Monico	116,857	14,940	13%
Newbold	884,089	582,722	66%
Nokomis	373,291	240,440	64%

Source: Tax revenue calculated from 2014 assessment values

Estimated 2014 Municipal Portion of Tax Revenue from Waterfront Properties

Town	Total Local Tax Revenue, \$	Waterfront Local Tax Rev, \$	% of Total
Pelican	526,930	255,063	48%
Piehl	61,843	10,741	17%
Pine Lake	542,574	306,677	57%
Schoepke	252,501	168,516	67%
Stella	160,242	66,869	42%
Sugar Camp	701,722	444,685	63%
Three Lakes	1,785,327	1,478,166	83%
Woodboro	305,669	211,960	69%
Woodruff	593,226	323,957	55%
Rhineland	974,662	100,115	10%
TOTAL	12,098,768	7,390,246	61%

Source: Tax revenue calculated from 2014 assessment values

Seasonal Owners of Waterfront Properties by Town

Town	Waterfront Valuation, \$	# of Homes	Seasonal Homes	% of Total
Cassian	164,512,800	700	548	78%
Crescent	164,517,000	586	337	58%
Enterprise	58,779,000	198	155	78%
Hazelhurst	259,902,800	709	531	75%
Lake Tomahawk	152,670,800	584	443	76%
Little Rice	44,177,600	192	141	73%
Lynne	16,766,200	88	73	83%
Minocqua	1,012,435,500	2947	2330	79%
Monico	8,788,400	59	40	68%
Newbold	342,777,400	1250	897	72%
Nokomis	141,435,100	598	427	71%

Seasonal Owners of Waterfront Properties by Town

Town	Waterfront Valuation, \$	# of Homes	Seasonal Homes	% of Total
Pelican	150,037,100	638	410	64%
Piehl	6,318,300	30	24	80%
Pine Lake	180,398,500	700	380	54%
Schoepke	99,127,000	377	307	81%
Stella	39,334,800	134	95	71%
Sugar Camp	261,579,500	893	659	74%
Three Lakes	869,509,200	2064	1,677	81%
Woodboro	124,682,200	473	359	76%
Woodruff	190,563,000	508	411	81%
Rhineland	58,891,200	122	72	59%
TOTAL	4,347,203,400	13,850	10,316	74%

References

- ▶ <http://dnr.wi.gov/topic/landscapes/documents/1805Ch14.pdf>
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- ▶ <https://doorcountypulse.com/broadband-study-released/>
- ▶ http://www.delavan-lake.org/lake_study.pdf

Further Details on Select Figures

- ▶ **Impact of poor water quality on seasonal resident spending. Conclusion: loss of \$4 million/yr.** Seasonal residents contribute \$52 million/yr. Surveys (Delavan Lake Study) indicated that a decline in water quality (increased algae & reduced water clarity) would reduce their total regional expenditures by about 8%/yr, worth approx. \$4 million.
- ▶ **Impact of poor water quality on property values. Conclusion: Potential loss of 50% of asset value, or \$2 billion over 8-10 years.** Tainter lake study indicated that property values at lakes with poor water quality were valued 2-3 times lower than lakes with good water quality. Delevan Lake study indicated improved water quality resulted in a 70% higher property value than nearby non-restored lakes. Conservative conclusion was that, faced with similar quality issues, OC waterfront properties would be reduced by at least 50% of asset value, or \$2 billion, *assuming no change in property tax rate.*
- ▶ **Full-time waterfront resident spending estimated to be \$141 million/yr.** Tainter Lake study estimated \$31K/yr. Average annual income for Oneida County resident is \$41K/yr. OC waterfront home prices have skyrocketed over the last 10 years, indicating that most waterfront residents have more than typical means. Conservative estimate of full-time waterfront resident was \$40K/yr. 3,534 full time residents X \$40K = \$141 million contribution to the local economy.
- ▶ **Conclusion: Annual loss due to poor water quality. Visitor & tourist spending: \$100 million**
 - ▶ NH study indicated a potential 50% loss in tourist revenue due to poor water quality \$197 million in revenue from tourism X 50% = approx. \$100 million

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