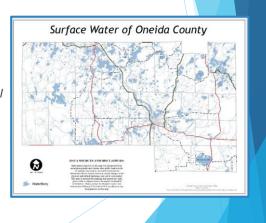


Water Facts – Oneida County

- ▶ 1,129 lakes, 428 named
- 78,509 acres of surface water
- 9.9% of County is surface water
- Major watersheds include:
 - Upper Wisconsin River
 - Flambeau River
 - Wolf River
- ➤ The Northern Highland Ecological Landscape, of which Oneida County is part, has one of the highest concentrations of freshwater lakes in the world.



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: \$4.2 billion
 - ▶ Waterfront properties are 73% of total assessed value
- Tax Revenues from residential waterfront properties:
 - Annual property tax revenue: \$47.3 million
 - ► Annual school tax revenue: \$22.6 million
 - ► Annual local tax revenue: \$15.6 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**

- Impact of Water Clarity on Home Prices in Vilas & Oneida Counties, WI (Kemp – UW Eau Claire 2018)
 - Study estimated the residential property value gains associated with improvements in water clarity on 60 northern Wisc Lakes.
 - Concluded that a 3 foot improvement in water clarity would produce an \$8,090 - \$32,171 improvement in the market value of an average residential property on a lake within the study area.
 - Conversely, a 3 foot loss in water clarity would decrease average home sales prices by up to \$45,000.
- 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.

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
 - ▶ Identified all waterfront households that applied for *resident lottery credit*, implying that they are residents
- The Results
 - ▶ 10,226 seasonal homeowners
 - > 75% of waterfront homeowners are seasonal
 - ▶ \$2.8 billion = total value of seasonal waterfront properties
 - ▶ 48% of OC total residential value is seasonal homes
 - ▶ 67% 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 of \$74.18 per 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 \$56.9 million/year (10,226 seasonal residents X 75 days X \$74.18 = \$51.6 million)
- Sales tax contribution: \$3.1 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: \$50,000 per year
 - ► Total spending: \$168 million

(3,358 full-time residents X \$50,000=\$168 million)

- Visitor & Tourist spending in the northwoods region
 - ► Oneida County: \$229 million (2017)
 - ▶ Vilas County: \$219 million (2017)

Source: http://industry.travelwisconsin.com/research/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 \$4.2 billion
- Property Tax Revenue \$47.3 million

Potential Property Value Loss Due to Decrease in Lake Clarity (2018 UW-Eau Claire study)

- \$4.5 million loss on a single lake with 3 ft loss in water clarity.
- \$225 million loss across the County if 50 lakes experience decrease in water clarity
- > \$2.5 million loss of property tax income

Recap. . .#2 Sources of Economic Value Seasonal Resident Spending

Contribution of Part Time Residents to the Local Economy

▶ \$56.9 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 waterfront property value: \$4.2 billion Annual revenue:

- ▶ Waterfront property tax revenue: \$47 million
- ▶ Seasonal resident spending: \$56.9 million
- ► Full-time waterfront resident spending: \$168 million
- Visitor & Tourist spending: \$229 million
- ► TOTAL: \$500.9 million

Annual loss due to poor water quality

- ▶ Waterfront property tax revenue: \$2.5 million
- Seasonal resident spending: \$4 million
- Full-time resident spending: not yet studied
- ▶ Visitor & Tourist Spending: \$100 million
- ► TOTAL: \$106.5 million

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)
- Impact of Water Clarity on Home Prices List of OC Lakes (6)
- References
- Authors & Acknowledgements

Oneida County Economy Big Picture Property Valuation by Sector (2018)

Sector	Property Valuation	% of OC Total
Agricultural	\$ 1,891,080	.03%
Forestry	\$ 233,373,200	3.45%
Mercantile	\$ 700,551,200	10%
Manufacturing	\$ 57,709,500	.85%
Gen Residential	\$ 5,733,333,400	85%
Total OC Property Value	\$ 7,116,922,400	
Waterfront Residential	\$ 4,175,139,500	59% 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 (2018)

	•	/	
Town	Total Valuation, \$	Waterfront Valuation, \$	% of Total
Cassian	220,628,900	168,319,000	76%
Crescent	230,730,800	163,805,400	71%
Enterprise	80,949,400	58,575,800	72%
Hazelhurst	306,800,200	250,045,400	82%
Lake Tomahawk	208,666,300	151,527,500	73%
Little Rice	62,138,800	40,263,600	65%
Lynne	26,765,000	15,468,000	58%
Minocqua	1,235,836,200	996,738,500	81%
Monico	19,854,600	8,670,400	44%
Newbold	485,267,000	333,319,000	69%
Nokomis	207,080,200	144,088,500	70%
Source: OC Land Inform	nation Office		

Assessed Value of Waterfront Properties by Town (2018)

Town	Total Valuation, \$	Waterfront Valuation, \$	% of Total
Pelican	261,433,300	145,626,600	56%
Piehl	10,217,100	6,059,000	59%
Pine Lake	274,287,100	178,647,100	65%
Schoepke	106,523,900	98,408,400	92%
Stella	58,923,900	37,247,200	63%
Sugar Camp	351,587,600	261,013,800	74%
Three Lakes	896,637,500	759,000,500	85%
Woodboro	159,670,500	119,388,700	75%
Woodruff	296,162,700	189,093,400	64%
Rhinelander	233,172,400	49,833,700	21%
TOTAL	5,733,333,400	4,175,139,500	73%
Source: OC Land Information Office			

Property Tax Revenue from Waterfront Properties by Town (2018)

Town	Total Tax Revenue, \$	Waterfront Tax Revenue, \$	% of Total
Cassian	3,742,132	2,191,162	59%
Crescent	4,041,287	2,213,359	55%
Enterprise	1,091,537	597,678	55%
Hazelhurst	3,211,195	2,060,974	64%
Lake Tomahawk	2,655,233	1,678,339	63%
Little Rice	1,052,430	515,944	49%
Lynne	597,213	232,446	39%
Minocqua	16,140,200	9,652,972	60%
Monico	322,321	88,715	28%
Newbold	7,603,805	4,184,527	55%
Nokomis	3,452,335	2,030,690	59%
Source: Tax revenue cal	culated from 2014 assessr	ment values	

Property Tax Revenue from Waterfront Properties by Town (2018)

Town	Total Tax Revenue, \$	Waterfront Tax Revenue, \$	% of Total
Pelican	4,654,907	1,906,050	41%
Piehl	161,729	46,722	29%
Pine Lake	5,179,836	2,674,547	52%
Schoepke	1,437,168	1,011,562	70%
Stella	1,200,059	463,460	39%
Sugar Camp	4,024,460	2,305,537	57%
Three Lakes	11,242,038	8,042,719	72%
Woodboro	2,391,209	1,395,491	58%
Woodruff	5,564,335	2,776,042	50%
Rhinelander	13,627,943	1,221,791	9%
TOTAL	93,393,372	47,290,726	51%
Source: OC Land Inform	ation Office		

Town Portion of Tax Revenue from Waterfront Properties (2018)

Town	Total Local Tax Revenue, \$	Waterfront Local Tax Rev, \$	% of Total
Cassian	611,390	357,992	59%
Crescent	970,875	531,735	55%
Enterprise	221,560	121,317	55%
Hazelhurst	386,763	248,228	64%
Lake Tomahawk	865,948	547,355	63%
Little Rice	262,232	128,557	49%
Lynne	259,203	100,886	39%
Minocqua	4,179,505	2,499,637	60%
Monico	80,408	22,131	28%
Newbold	1,615,018	888,777	55%
Nokomis	871,601	512,682	59%

Source: OC Land Information Office

Town Portion of Tax Revenue from Waterfront Properties (2018)

Town	Total Town Tax Revenue, \$	Waterfront Town Tax Rev, \$	% of Total
Pelican	929,180	380,472	41%
Piehl	17,602	5,085	29%
Pine Lake	1,752,520	904,893	52%
Schoepke	267,841	188,522	70%
Stella	243,934	94,207	39%
Sugar Camp	679,759	389,421	57%
Three Lakes	6,779,252	4,849,976	72%
Woodboro	259,967	151,715	58%
Woodruff	2,729,590	1,361,790	50%
Rhinelander	14,408,633	1,291,783	9%
TOTAL	38,392,781	15,577,162	41%
Source: OC Land Informa	ation Office		

Seasonal Owners of Waterfront Properties by Town

Town	Waterfront Valuation, \$	# of Homes	Seasonal Homes	% of Total
Cassian	112,865,000	714	569	80%
Crescent	80,658,900	581	345	59%
Enterprise	36,873,700	193	149	77%
Hazelhurst	162,543,000	690	526	76%
LakeTomahawk	101,720,900	574	452	79%
Little Rice	22,019,700	188	138	73%
Lynne	10,871,000	85	76	89%
Minocqua	711,527,000	2,873	2,304	80%
Monico	4,961,200	58	44	76%
Newbold	209,515,200	1,213	870	72%
Nokomis	85,874,100	603	423	70%

Seasonal Owners of Waterfront Properties by Town

	Town	Waterfront Valuation, \$	# of Homes	Seasonal Homes	% of Total
	Pelican	76,903,400	616	397	64%
	Piehl	3,030,000	26	23	88%
	Pine Lake	74,131,900	687	356	52%
	Schoepke	74,736,600	370	313	85%
	Stella	20,566,900	128	92	72%
	Sugar Camp	170,421,300	883	657	74%
	Three Lakes	564,325,600	2,008	1,653	82%
١	Woodboro	75,350,900	458	346	76%
	Woodruff	140,159,800	511	419	82%
	Rhinelander	40,011,100	125	74	59%
	TOTAL	\$2,779,067,200	13,584	10,226	75%

Impact of Water Clarity on Home Prices in Oneida County

OC Lake	Size, acres	Avg Water Clarity, ft	\$ Value Increase +3.2 ft clarity	\$ Value Increase + 6 ft clarity
Big Lake	845	3	\$26,648	\$45,601
Big Stone	607	3	\$28,140	\$47,831
Blue	441	19	\$9,283	\$17,423
Boom	365	3	\$26,326	\$45,117
Buckskin	642	9	\$15,852	\$28,634
Cranberry	924	4	\$23,922	\$41,461
Crescent	616	11	\$13,351	\$24,457
Deer	188	4	\$24,828	\$42,847
Fifth Lake	238	2	\$30,228	\$50,909
George	443	3	\$26,221	\$44,958
Hancock	259	5	\$21,215	\$37,260

Impact of Water Clarity on Home Prices in Oneida County (continued)

OC Lake	Area, acres	Avg Water Clarity, ft	\$ Value Increase +3.2 ft Clarity	\$ Value Increase +6 ft Clarity
Indian	354	9	\$15,701	\$28,385
Kawaguesaga	700	11	\$13,351	\$24,457
Killarney	293	2	\$30,655	\$51,533
Minocqua	1,339	16	\$10,278	\$19,174
Laurel	249	2	\$29,950	\$50,502
Little Fork	336	5	\$21,850	\$38,255
Long Lake	604	4	\$23,493	\$40,802
Lost	544	5	\$22,296	\$38,948
Maple	131	14	\$11,453	\$21,215
McCormick	113	2	\$32,171	\$53,735
Oscar-Jenny	101	5	\$21,215	\$37,260

Impact of Water Clarity on Home Prices in Oneida County (continued)

OC Lake	Area, acres	Avg Water Clarity, ft	\$ Value Increase +3.2 ft Clarity	\$ Value Increase +6 ft Clarity
Pelican	3,545	5	\$23,080	\$40,164
Pickerel	581	5	\$21,423	\$37,586
Planting Grd	1,010	4	\$23,922	\$41,461
Spirit	348	11	\$13,711	\$25,066
Squash	398	16	\$10,457	\$19,486
Sugar Camp	519	12	\$12,782	\$23,493
Tom Doyle	108	5	\$22,448	\$39,185
Tomahawk	3,462	18	\$9,648	\$18,069
Two Sisters	719	15	\$11,210	\$20,796
Virgin Lake	261	4	\$24,734	\$42,704
Average			\$20,370	\$35,587

Impact of Water Clarity Decrease on Home Prices in Oneida County

OC Lake	Size, acres	Avg Water Clarity, ft	\$ Value Decrease -3.2 ft clarity	\$ Value Decrease - 6 ft clarity
Big Lake	845	3	-\$45,277	-\$46,589
Big Stone	607	3	-\$42,181	-\$42,181
Blue	441	19	-\$10,798	-\$23,706
Boom	365	3	-\$44,333	-\$47,566
Buckskin	642	9	-\$20,878	-\$51,533
Cranberry	924	4	-\$37,806	-\$55,191
Crescent	616	11	-\$16,737	-\$39,185
Deer	188	4	-\$40,164	-\$52,245
Fifth Lake	238	2	-\$36,320	-\$57,174
George	443	3	-\$44,027	-\$47,889
Hancock	259	5	-\$31,394	-\$64,577

Impact of Water Clarity Decrease on Home Prices in Oneida County (continued)

OC Lake	Area, acres	Avg Water Clarity, ft	\$ Value Decrease -3.2 ft Clarity	\$ Value Decrease -6 ft Clarity
Indian	354	9	-\$20,616	-\$50,704
Kawaguesaga	700	11	-\$16,737	-\$39,185
Killarney	293	2	-\$35,161	-\$35,161
Minocqua	1,339	16	-\$12,170	-\$27,090
Laurel	249	2	-\$37,082	-\$37,082
Little Fork	336	5	-\$32,821	-\$62,288
Long Lake	604	4	-\$36,730	-\$56,616
Lost	544	5	-\$33,849	-\$60,716
Maple	131	14	-\$13,855	-\$31,394
McCormick	113	2	-\$31,144	-\$31,144
Oscar-Jenny	101	5	-\$31,394	-\$64,577

Impact of Water Clarity Decrease on Home Prices in Oneida County (continued)

OC Lake	Area, acres	Avg Water Clarity, ft	\$ Value Decrease -3.2 ft Clarity	\$ Value Decrease -6 ft Clarity
Pelican	3,545	5	-\$35,715	-\$58,011
Pickerel	581	5	-\$31,856	-\$63,823
Planting Grd	1,010	4	-\$37,806	-\$55,191
Spirit	348	11	-\$17,309	-\$40,802
Squash	398	16	-\$12,422	-\$27,722
Sugar Camp	519	12	-\$15,852	-\$36,730
Tom Doyle	108	5	-\$34,206	-\$60,184
Tomahawk	3,462	18	-\$11,296	-\$24,923
Two Sisters	719	15	-\$13,501	-\$30,475
Virgin Lake	261	4	-\$39,915	-\$52,546
Average			-\$28,792	-\$46,069

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 \$4.5 million in home values on a single lake with reduced water clarity. Recent OC/VC study of 60 lakes indicated loss of 3 feet of water clarity could decrease average home sale values by as much as \$45K. Assume that an average lake has 100 homes, then the total home value of a single lake could decrease as much as \$4.5 million due to reduced water clarity of 3 feet.
- 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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