

# L.I.F.E. in our Natural Environment Appendix

## Air Quality

Air Quality EPA ratings	2001	2004
Fox Cities Metro area	80% in good range 18% in moderate 2% in unhealthy	90% days in good range 10% moderate 0% in unhealthy
Environmental Protection Agency, <a href="http://www.epa.gov/enviro/">http://www.epa.gov/enviro/</a> quick start		

Main pollutants in Fox Cities	2001	2004
Ozone	68% of days	70% days
Particulate matter smaller than 2.5 micrometers	32% days	30% days
Environmental Protection Agency		

### Number of Facilities that release air pollutants (2005):

Calumet Co	19
Outagamie Co	74
Winnebago Co	106
Environmental Protection Agency	

## Water Quality

### Drinking water quality

Citizen Survey results	2001	2005
Quality of drinking water	38% excels (answered 4-5) 42% average (3) 18% poor (1-2)	51% excels (4-5) 30% average (3) 15% poor (1-2)

(using total sample percentages, counts people who didn't answer question)

Appleton, Neenah, Menasha and Oshkosh draw drinking water from Lake Winnebago, the largest lake in Wisconsin. Calumet County municipalities pump groundwater from wells.

### Water quality of largest municipal water utilities in the Fox Cities

Water system	Population served	Source	Number of contaminant level violations, 2004
Appleton Water Treatment	70,001	Surface water	0
Menasha Electric	14,728	Surface water	0
Neenah Waterworks	24,500	Surface water	0
Little Chute Waterworks	10,583	Groundwater	
Grand Chute	19,723	Surface water	0
Kaukauna	13,430	Groundwater	0
Kimberly Waterworks	6,000	Groundwater	0

Consumer Confidence Reports, 2004 <http://www.epa.gov/enviro/>

(Nationally, about 5% municipal water utilities have contaminant level violations.)

### Surface water quality (Lakes and Streams)

Citizen Survey results	2001	2005
Quality of rivers and lakes	19% excels (answered 4-5) 43% average (3) 36% poor (1-2)	29% excels (answered 4-5) 40% average (3) 24% poor (1-2)

- “Water clarity in Lake Winnebago has not changed significantly over the last 12 years.”
- “An analysis of dissolved oxygen data collected by the DNR does not show any statistically significant trends with respect to long term changes in dissolved oxygen levels.”

Source: Water Quality in the Lake Winnebago Pool, UW Extension report 2004

The Winnebago Pool lies in the Fox Valley and is heavily developed along its west side, where over 2 million people reside. The Department of Natural Resources monitors the water quality of this important watershed area by tracking its temperature, dissolved oxygen, clarity, nitrogen, phosphorus, chlorophyll, and pH.

Fox Cities Area contains a portion of 4 watersheds, comprised of many smaller watersheds. Lake Winnebago watershed. 30 tributaries assessed by State in 2002; all reported in impaired condition<sup>1</sup>. Lower Fox River watershed. 25 tributaries assessed by State in 2002; 3 reported in good condition and 22 as impaired, none threatened. There were 64 specific impairments reported, mainly dissolved oxygen (10), phosphorus (10), sediment (8), degraded habitat (7), and nutrients (6). Probable causes non-point source runoff, livestock and farming, runoff from urban areas.

The Upper Fox River runs from the west into Lake Winnebago near the Oshkosh/Neenah/Menasha region. Comprised of 15 smaller watersheds, the State assessed 8 listed waters in 2002. Of these, all were classified as impaired. The majority of impairments were habitat alterations (398.4 miles), inhibited fish migration (234.2 miles) and sediment (338.6 miles). 402 miles of rivers, streams and creeks were impaired by non-point source pollutants and 261 miles impaired due to hydro modification. Wolf River, 22 impairments reported, with 12 of those being due to mercury contamination.

#### 2002 data

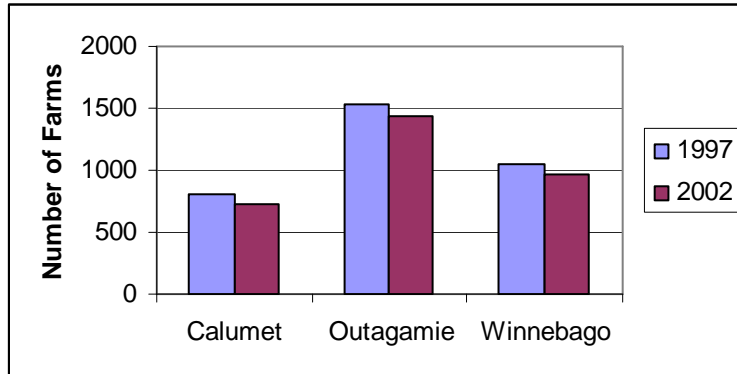
watershed	# waters in watershed	# impairments (one body of water might have several)	Major types of impairment	% Surface water with reported problems (EPA & DNR) Scorecard.org
Lake Winnebago	10	31 (all 10 waters impaired)	Sediment Degraded habitat Turbidity	8%
Wolf river	16	22	Mercury	2%
Upper Fox	8	16	Degraded habitat Sediment	4%
Lower fox	14	64	Dissolved oxygen Phosphorus Sediment Degraded Habitat Nutrients	9%

<http://www.scorecard.org/env-releases/water/>

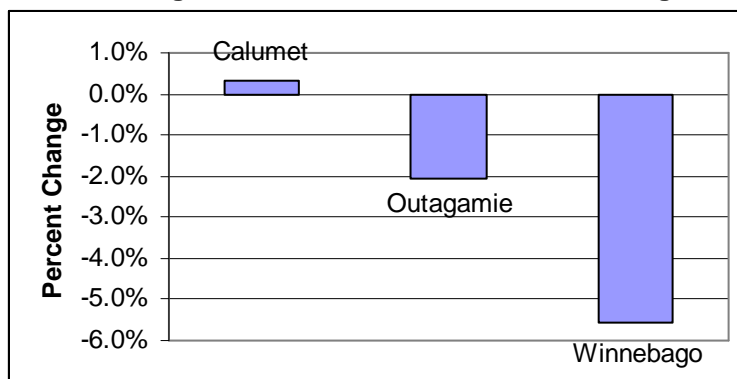
<sup>1</sup> Impaired defined as water quality conditions do not support at least one use (such as aquatic life harvesting) of the water (US. EPA, accessed 10/12/05, <http://www.epa.gov/surf/> )

## Land Use

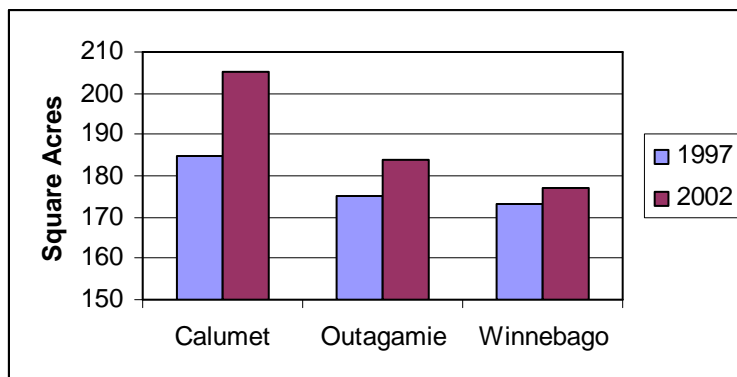
Number of Farms, 1997-2002, By County



Percent Change in Amount of Land Used for Farming, 1997-2002 by County



Average Size of Farms, 1997-2002 by County



### National Priority Superfund Sites in Fox Cities Area (same as in 2001)

Calumet County: Schmalz Dump in Harrison is on the National Priorities List. Cleanup completed in 1993, and two five year reviews completed since then (latest in 2003). Pollutants PCB could migrate into wells and municipal water supply. Under current conditions, possible or actual human exposures under control.

Outagamie County: N.W. Mauthe Company, Inc. in Appleton is on the National Priorities List, proposed as Wisconsin's top priority site. Chromium leaked into groundwater threatening drinking water over a 3 square mile area. Cleanup completed in 1997, reviewed in 2001. Under current conditions, possible or actual human exposures under control. Appleton contains one additional Superfund Site of lower priority that is being addressed at the state level.

Winnebago County: 3 sites, 2 in Oshkosh, one in Menasha that is of lower priority addressed at state level.

## Resources and Conservation

Waste and Recycling Per Capita	Pounds per capita recycled	
	2001	2005
Calumet County	Not tracked	Not tracked
Outagamie County	205	191
Winnebago County	161	155

L.I.F.E. 2001 report and Outagamie, Winnebago Counties

Commuting in the Fox Cities	Fox Cities Area		Wisconsin
	2002	2004	2004
Persons that worked outside the home	169,516	181,318	
Percent that drove alone to work	87.1%	91.1%	84.3%

American Community Survey, 2002 and 2004 results

### Total gallons water pumped in 3 county area

	2000	2004	%	pop 2004	Gal/person
Calumet	971,027	984,772	1%	43765	22.50136
Outagamie	5,874,344	5,642,656	-4%	169337	33.32205
Winnebago	6,526,539	6,313,602	-3%	159008	39.70619
Total	13,371,910	12,941,030	-3%	372110	34.77743

### Wisconsin per capita resource energy consumption as % of US Consumption

Year	Petroleum	Natural gas	Coal	Nuclear	Renewables	Total
2000	81	86	148	83	90	99
2001	82	83	159	82	101	102
2002	83	86	158	88	96	103
2003	83	92	158	87	94	105