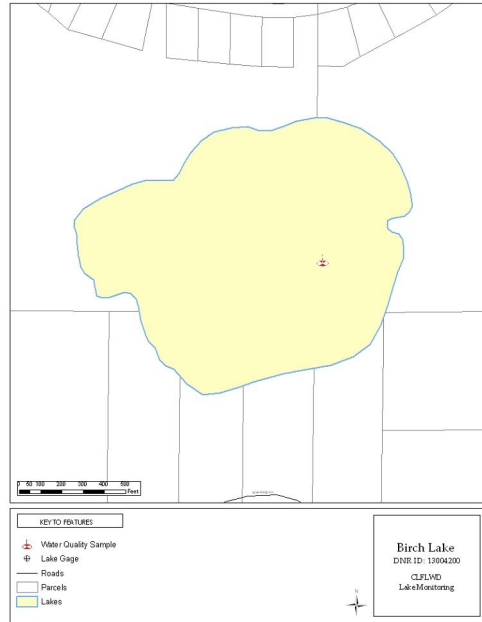


Birch Lake

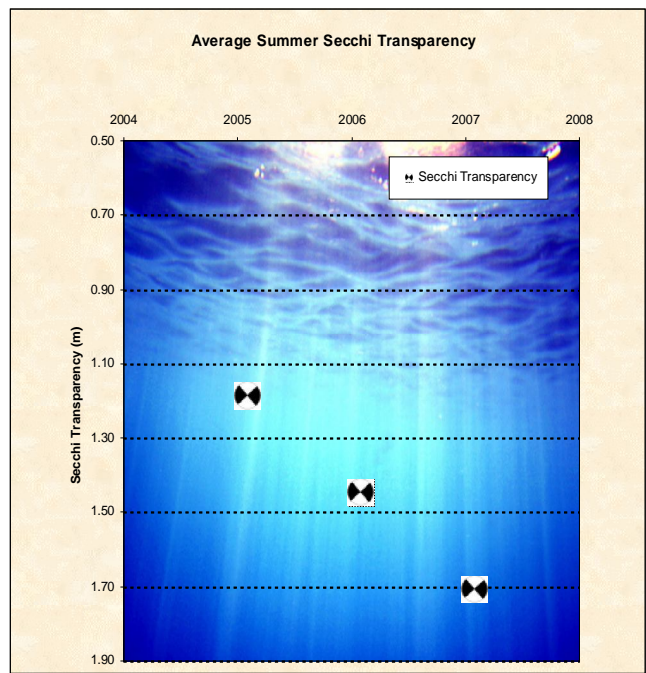
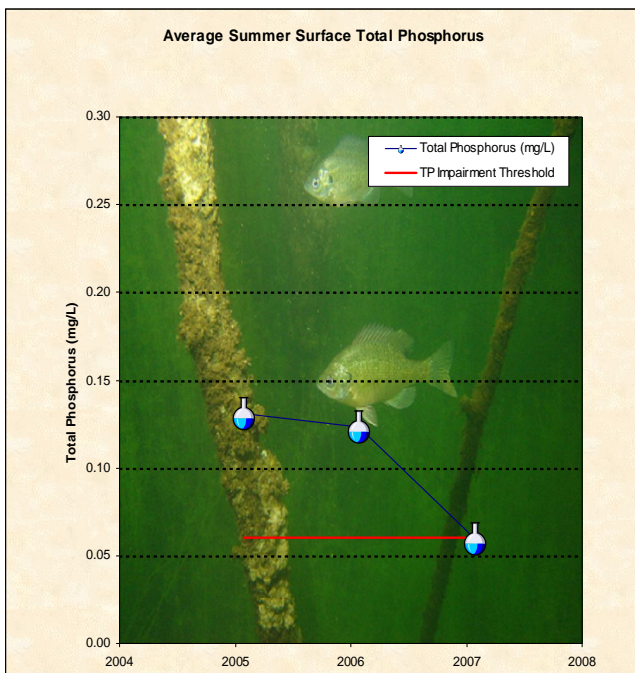
2007 Lake Grade: C

- DNR ID #: 130042
 - Municipality: Wyoming Township
 - Location: SE^{1/4} Section 36 T33N-R21W
 - Lake Size: 33 Acres
 - Maximum Depth: 11 ft
 - Ordinary High Water Mark: N/A
 - 100% Littoral
- Note: Littoral area is the portion of the lake <15 ft and dominated by aquatic vegetation.



Summary Points

- Birch Lake was considered a eutrophic lake in 2007, based on the Carlson Trophic State Index.
- **Limited amount of Curly Leaf Pondweed (An invasive aquatic plant) is present.**
- At this time, there are not enough years of data to determine a statistically significant trend in overall water quality but the water quality generally appears to be improving.
- The major land use is rural/agricultural.
- The lake did stratify and a thermocline was present for intermittent periods during the monitoring season.



Date	Total Phosphorus (mg/L)	Chlorophyll-a (ug/L)	Total Kjeldahl Nitrogen (mg/L)	Secchi Disk Depth (m)	Surface Dissolved Oxygen Levels (mg/L)	Surface Temperature Levels (Celcius)
4/13/2007	0.036	8	0.99	2.74	6.42	12.5
5/8/2007	0.035	6	1.10	3.20	4.86	27.0
6/4/2007	0.038	12	0.67	2.13	6.30	23.2
7/2/2007	0.070	16	1.10	1.83	4.56	25.9
7/30/2007	0.065	11	1.60	0.91	2.20	22.1
8/28/2007	0.083	41	1.80	1.37	10.51	13.4
9/24/2007	0.042	26	1.40	2.29	8.89	12.2
2007 Average	0.053	17	1.24	2.07	6.25	19.5
2007 Summer Average	0.060	21	1.31	1.71	6.49	19.4

Water Quality threshold is 0.04 mg/L TP or higher*

Shallow Lake water quality threshold is 0.06 mg/L or higher*

	High	High Date	Low	Low Date	Average
2007 Elevation (ft)	NA	NA	NA	NA	NA

*MPCA description of Impaired Lake's Listing criteria: "At a minimum, a decision that a given lake is impaired for the 303(d) list due to excessive nutrients will be supported by data for both causal and response factors. Data requirements for 303(d) listing consist of 12 or more TP measurements collected from June through September over the most recent 10-year period. Ideally this should represent 12 separate visits to the lake over the course of two summers; however it might also reflect four monthly samples over the course of three years (a typical sampling regimen for many lake monitoring programs). In addition to exceeding the TP guideline thresholds, lakes to be considered for 303(d) listing should have at least 12 Secchi measurements and 12 chlorophyll-a measurements. This amount of data will allow for at least one season (preferably more) of paired TP, chlorophyll-a, and Secchi disk data and provide a basis for evaluating their interrelationships and hence the trophic status of the lake."

Lake Water Quality Summary

Trophic Status

Lake Grades

	2007	2007	2006	2005	2004	2003	2002	2001	2000
Total Phosphorus (mg/l)	Eutrophic	C	D	D					
Chlorophyll-a (ug/l)	Eutrophic	C	B	D+					
Secchi depth (ft)	Eutrophic	C	C	C-					
Overall	Eutrophic	C	C	D+					