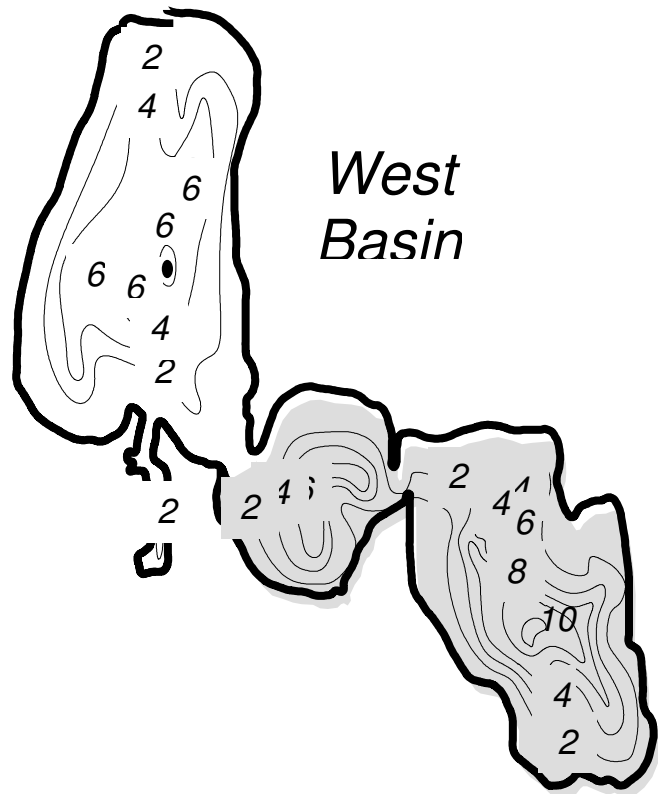


# Forest Lake- Western Basin

**2009 Lake Grade: B**

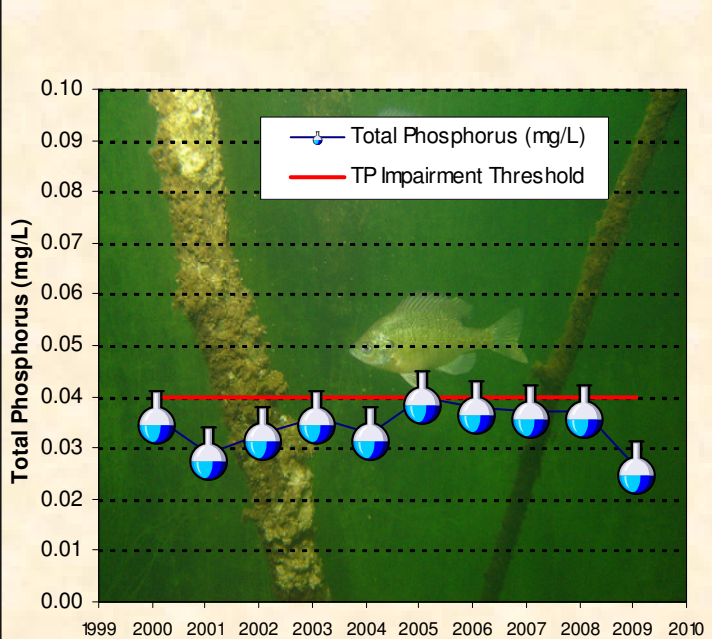
- DNR ID #: 820159
  - Municipality: City of Forest Lake
  - Location: Section 9 T32N-R21W
  - Lake Size: 2,251 Acres
  - Maximum Depth: 37 ft
  - Ordinary High Water Mark: 901.8 ft
  - 67% Littoral
- Note: Littoral area is the portion of the lake <15 ft and dominated by aquatic vegetation.



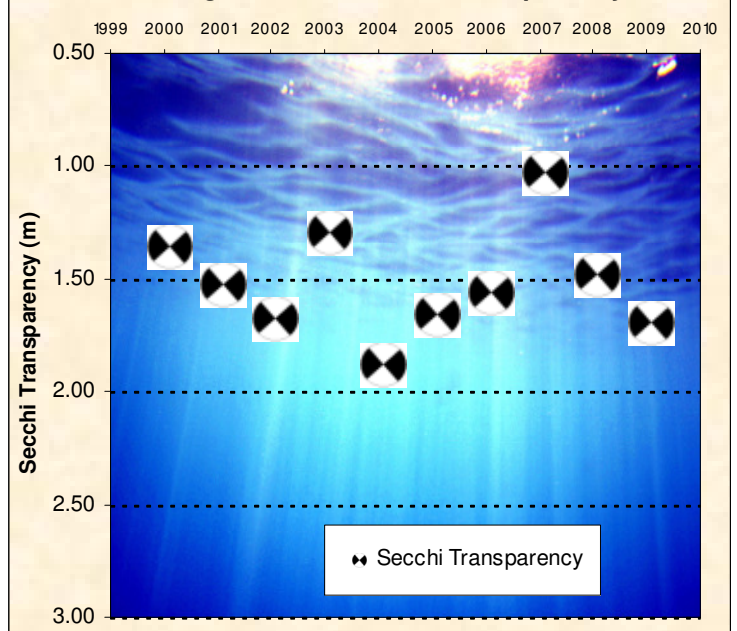
## Summary Points

- Forest Lake was considered a mesotrophic lake in 2009, based on the Carlson Trophic State Index.
- Forest Lake is not listed as impaired for excessive nutrients.
- **Curly leaf pondweed and Flowering rush (invasive aquatic plants) are present in this lake.**
- Forest Lake has a healthy diverse aquatic plant population.
- The major land use is semi-urban and rural/agricultural.
- The lake does stratify throughout the summer months.
- The 2009 Secchi transparency summer means for the middle and eastern basins of Forest Lake were 2.5 and 2.4 meters, respectively

**Average Summer Surface Total Phosphorus**



**Average Summer Secchi Transparency**



Date	Total Phosphorus (mg/L)	Chlorophyll-a (ug/L)	Total Kjeldahl Nitrogen (mg/L)	Secchi Disk Depth (m)
4/19/09	0.023	3	0.63	2.7
5/3/09	0.01	3.4	0.62	3
5/11/09	0.022	2.9	0.57	3
5/31/09	0.019	3.4	0.58	3
6/12/09	0.013	3.8	0.7	2.4
7/2/09	0.023	9.1	0.71	1.3
7/13/09	0.025	8.1	0.91	1.4
7/29/09	0.035	9.7	0.92	1.6
8/14/09	0.035	17	0.84	1.6
8/30/09	0.03	20	0.82	1.5
9/9/09	0.022	9.8	0.79	1.6
9/20/09	0.023	12	0.84	1.5
9/30/09	0.037	19	0.86	1
10/11/09	0.018	12	0.63	1.8
<b>2009 Summer Average</b>	0.026	11.190	0.797	1.690

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
<b>2009 Elevation (ft)</b>	901.68	4/23/2008	900.83	9/13/2008	901.3

\*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,

### Lake Water Quality Summary

	Trophic Status				Lake Grades						
	2009	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000
Total Phosphorus (mg/l)	Mesotrophic	B	C	C	C	C	C+	B	C	B	C
Chlorophyll-a (ug/l)	Mesotrophic	B+	B	C	B	C+	A-	B	B	B	B
Secchi depth (ft)	Eutrophic	C	C	C	C	C	B	C	C	C	C
Overall	Mesotrophic	B	C+	C	C+	C	B	B-	C+	B-	C+