

Silver Lake



12
2016



Imagery Date: 4/3/2012 44°53'41.36" N 93°32'01.16"

MPCA Criteria

Factor	Shallow lakes	Wetlands
Protected Waters Inventory Code	May be coded as either “L, LP or LW” in PWI	Typically coded as a “LW” in PWI
Depth, maximum	Typically < 15 feet	Typically < 7 feet
Littoral area	Typically >80%	Typically 100%
Area (minimum)	> 10 acres (Bulletin 25)	No minimum
Thermal stratification (summer)	Typically do not thermally stratify	Typically do not stratify.
Fetch	Fetch is variable depending on size & shape	Rarely has a significant fetch
Substrate	Consolidated to mucky	Mucky to unconsolidated
Shoreline features	Generally wave formed, often sand, gravel or rock	Generally dominated by emergents
Emergent vegetation & relative amount of open water	Emergents common, may cover much of fringe of lake; basin often has high percentage of open water.	Emergents often dominate much of basin; often minimal open water.
Submergent vegetation	Abundant in clear lakes; however may be lacking in algal-dominated turbid lakes.	Common unless dominated by an emergent like cattail.
Dissolved Oxygen	Aerobic epilimnion but wide diurnal flux possible	Diurnal flux & anaerobic conditions common
Fishery	May or may not be managed for a sport fishery. If so, fishery assessment should be available. Winter aeration often used to minimize winterkill potential.	Typically not managed for a sport fishery. Little or no MDNR fishery information. Seldom aerated May be managed to remove fish & promote waterfowl.
Uses	Boating, fishing, waterfowl production, hunting, aesthetics; limited swimming; may have boat ramp, beaches uncommon	Waterfowl & wildlife production, hunting, aesthetics. Unimproved boat ramp if any. No beaches.

1) Protected Waters Inventory Code

- Silver is 136P, so this criterion is **neutral**

2) Depth, maximum

- Maximum depth is 12 feet (according to WD)/20 feet (according to residents). Regardless, this criterion **strongly** implies **shallow lake**.

3) Littoral Area

- Only 43 of 70 acres have vegetation (emergent or submerged). Given oval dimensions of Silver, with deep parts, littoral area *cannot* be defined as 100%. This criterion implies **shallow lake**.

4) Area (minimum)

- Area of Silver Lake is 70 – 80 acres. This criterion **strongly** implies **shallow lake**.

5) Thermal Stratification

- This criterion is **neutral**.

6) Fetch

- This criterion **strongly** favors **shallow lake**. Silver Lake unequivocally has a significant fetch. Wetlands “rarely have a significant fetch.”

7) Substrate

- This criterion favors **wetland**. (However, the unconsolidated substrate may be a result of pollution. The paleo study suggests that prior to 1940, Silver Lake had less sediment and better water quality.)

8) Shoreline features

- This criterion implies **wetland**.

9) Emergent vegetation & relative amount of open water

- This criterion **strongly** favors **shallow lake**. Wetlands “have minimal open water”; Silver Lake has dozens of acres of open water.

10) Submergent vegetation

- This criterion is **neutral**.

11) Dissolved Oxygen

- This criterion implies **shallow lake** (according to WD analysis).

12) Fisheries

- Silver Lake was stocked by the DNR until the 1940's. This suggests the potential for fishing. This criterion **strongly** favors **shallow lake**.

13) Uses

- There are numerous docks. Residents kayak and canoe regularly. Residents also swim. This criterion **strongly** favors **shallow lake**.

Factor	Shallow lakes	Wetlands	Neutral
1) Protected Waters Inventory Code			X
2) Depth, maximum	X		
3) Littoral area	X		
4) Area (minimum)	X		
5) Thermal stratification (summer)			X
6) Fetch	X		
7) Substrate		X	
8) Shoreline features		X	
9) Emergent vegetation & relative amount of open water	X		
10) Submergent vegetation			X
11) Dissolved Oxygen	X		
12) Fishery	X		
13) Uses	X		