

## WHAT'S NEW?

# MCMAHON (CARL'S) LAKE'S WATER QUALITY IMPROVES

**Thank you McMahon Lake neighbors for being role models of good environmental stewardship!**

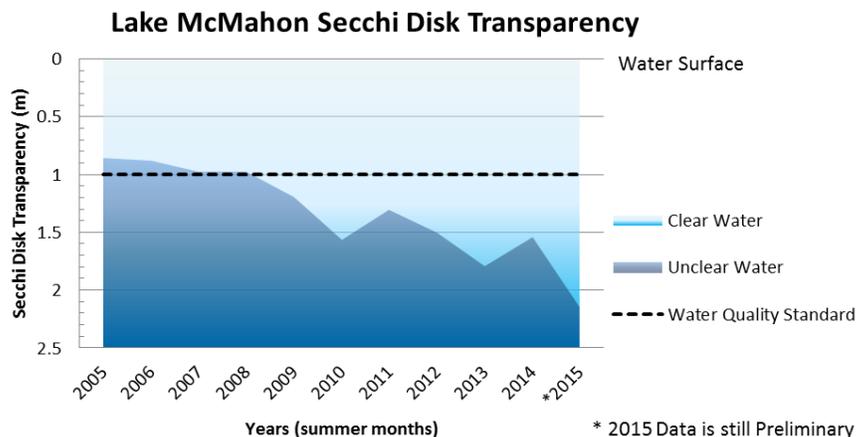
**The Issue:** McMahon Lake failed three water quality parameters: phosphorus, chlorophyll-a, and transparency in 2008. These parameters allow us to quantify when water is not clean or safe. Without clean water, lake and river plant and animal communities cannot thrive.

### Common Pollution Sources:

- Turf grass management: the roots of turf grass are only about as deep as the grass is high. Because of the shallow root system, shorelines with turf grass often erode. Erosion contributes both sediment and nutrients, like phosphorus, into the lake. Additionally, turf grass fertilizer can easily run-off into the lake.
- Runoff from farm fields: when fields are bare of crops, soil and fertilizer runoff is inevitable. The soils in this area are also very likely to erode, which adds both sediment and nutrients into the lake.
- Curlyleaf pondweed: an invasive plant that overgrows and adds phosphorus into the lake when it dies.
- Mixing in the lake: McMahon is shallow and mixes more often than deeper lakes. Because of this, pollutants are mixed into the water repeatedly rather than settling into the bottom sediment.

**The Story:** Scott WMO partnered with landowners around McMahon Lake to implement practices that improve water quality. Three landowners neighboring McMahon Lake agreed to install several hundred feet of native shoreline to buffer the lake from pollutants and stabilize soils. Another landowner converted over 20 acres of cropland north of the lake to native grasses. SWMO treated part of the lake for Curlyleaf pondweed. Lastly, SWMO has planned an alum application to further reduce phosphorus levels.

**Funding:** Funding for the various projects came from a variety of sources including: the USEPA Section 319 Program, the State of Minnesota Clean Water Land and Legacy Amendment, the Scott WMO, and landowners.



***The Result of Everyone's Hard Work:***  
***McMahon Lake now meets MPCA water quality standards. The lake is visually clearer, and will likely be removed from the impaired waters list.***

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Graph 1 shows how much clearer the water is now compared to ten years ago.