

Toners Lake Shoreline Survey

Waseca County, Cannon River Watershed

October 2023



Background

Waseca Soil and Water Conservation District and Waseca County Planning and Zoning conducted a baseline lakeshore survey of Toners Lake as part of the Comprehensive Watershed Management Plan 2020-2030 being implemented by the Cannon River Watershed Joint Powers Board (CRWJPB). One activity identified in the Plan is to "establish a baseline of existing natural shoreline conditions and achieve no-net loss (from the baseline) of existing natural shoreline on 10 Natural Environment Lakes" (see page 155 of the Plan: <http://www.riceswcd.org/cannon-river-watershed-joint-powers-board/>). One of the lakes chosen for a baseline shoreline assessment was Toners Lake.

Toners Lake is approximately 130 acres and is located near Waseca, Minnesota. The general geology of the area is comprised of hillslopes, outwash plains, and terraces with loam, silt loam, and sandy loam soils occurring in the upper soil horizons. General topography includes rolling hills and depressions. Portions of the north and south shorelines are relatively steep. The south shore is bordered by a county road. The north shoreline and bay are part of a county park and are wooded. The remainder of the shoreline is privately owned. There are no residential lots immediately on the lake and three homes within 300' of the lake. Toners Lake has an approximately 300 acre watershed. It has an ordinary high water level of 1087.6 feet and a maximum depth of 6'. It has an aquatic recreation impairment for high nutrients and has recorded water clarity of 1 to 3 feet. Toners Lake outlets through a small culvert on the east side of the lake and eventually drains into Whitewater Creek.

Lake assessment methodology

The MNDNR has developed a lakeshore assessment tool called "Score Your Shore" designed to be used by lakeshore property owners to evaluate their shoreland habitat. The tool provides a standardized method to evaluate the type, quantity, and quality of lakeshore habitats including upland, shoreline, and aquatic zone areas. The upland zone is defined as the area from the house (if present) to the top of the lakeshore bank, the shoreline zone is defined as the area from the top of the lakeshore bank to the edge of water, and the aquatic zone is defined as the area from the edge of water to the deep end of the macrophyte bed. Scores are assigned for each of the three main habitat types assessed, with a combined maximum point value of 100 for upland and shoreline zone areas and a maximum point value of 100 for the aquatic zone (for a maximum total of 200 points). The overall combined score provides an indication of lakeshore quality over a point range from 0-200, with 0 points indicating a severely degraded shoreline that does not provide any functional habitat, to 200 points indicating a very healthy and functional shoreline with intact habitat in all three habitat zones. To support the Score Your Shore assessment, photographs were taken to document existing lakeshore conditions (Appendix A). Staff conducted the survey via kayak on October 11 and 13 2023.



Lily pads and log on west end of lake

Results

The following is a summary of the shoreline assessment and includes individual lakeshore scores derived from the Score Your Shore evaluation. Four parcels were assessed around Toners Lake, with all of the parcels split into multiple sections due to shoreline characteristics. The result was an assessment of 14 individual shorelines on four parcels (Appendix B & C). Shoreline scores ranged from 105-200 points, with an average score of 146 points. Most shorelines contained excellent shoreline tree and shrub cover, shoreline ground cover, aquatic macrophyte growth and overhanging woody cover. Active shoreline erosion was minimal and limited to likely wave erosion and some sheet and rill erosion on steep shoreline slopes. Small cutbanks less than 1 foot in height were observed along several of the northern and

southern shorelines but appeared to be the product of steep topography and an exposed lakebed from the low lake water level. Significant algal blooms were observed across much of the lake, with water clarity (secchi value) less than 6 inches. Both survey days were windy which may have contributed to poor water clarity. Despite such low water clarity, submerged aquatic plant growth occurred in areas where lake depths were low, with dense aquatic macrophyte beds occurring in areas. Wildlife observed included swans, ducks, Canada geese, clams, muskrat, and minnow fry.



Representative photo of water clarity and submergent vegetation



Photo showing low water levels and shoreline erosion

Altered shoreline on Toners lake is limited to minimal disturbance for one dock and likely some historic alteration for the county road on the south side and the private driveway on the east side. Areas with steep shoreline should be monitored for erosion concerns. Aquatic vegetation along the shoreline and terrestrial vegetation on the bank should be protected from human disturbance. There was some minimal populations of buckthorn along the shore and within the county park that should be removed by cutting

and chemical stump treatment. Areas to prioritize for prairie and wetland restoration would be cropped areas closest to the lake and where overland runoff would occur into the lake. Permanent conservation easements or easements that limit development should be considered for shoreline protection.

Shoreland ordinance review

Shoreland ordinances are in place to guide development in Shoreland areas and critical waterbodies that lie in direct conflict with impending development. From review of the Waseca County Unified Development Code (UDC), it provides a balanced approach to protection and development on Toner's Lake, which is listed as a Natural Environment lake. Natural Environment lakes are generally small, often shallow lakes with limited capacities for assimilating the impacts of development and recreation use. These lakes often have adjacent lands with substantial constraints for development such as high water tables, exposed bedrock, and unsuitable soils. Natural environment lakes, particularly in Waseca County and most especially regarding Toner's lake do not have much existing development or recreation use. The Waseca County Shoreland Ordinance currently meets the Minnesota Department of Natural Resources (DNR) dimensional standards for Natural Environment lakes and are clearly defined in the UDC.

There are limited residential development along Toner's Lake. Only two residential developments can be found on parcels that intersect the boundaries of the Lake. One residential development can be found in the southwest with the other in the north eastern part of the lake. All six parcels are classified as agricultural lands. There does not appear to be any developmental pressure along the land or within its environs at this time. The parcels along Toner's Lake are located in the A-1 Agricultural Protection Zoning District and also in the Shoreland Overlay. These parcels are buildable but there is a base density requirement of one dwelling unit per quarter-quarter. In cases where there exist residential development in the quarter-quarter, the land owners have the option of increasing the density either with a Transfer of Development Right (TDR) or a Major Subdivision process.

Per the requirements of the UDC, new feedlots are prohibited within the Shoreland Overlay District, as such no feedlots will be permitted on parcels along Toner's Lake. There are no existing feedlots along the lake currently.

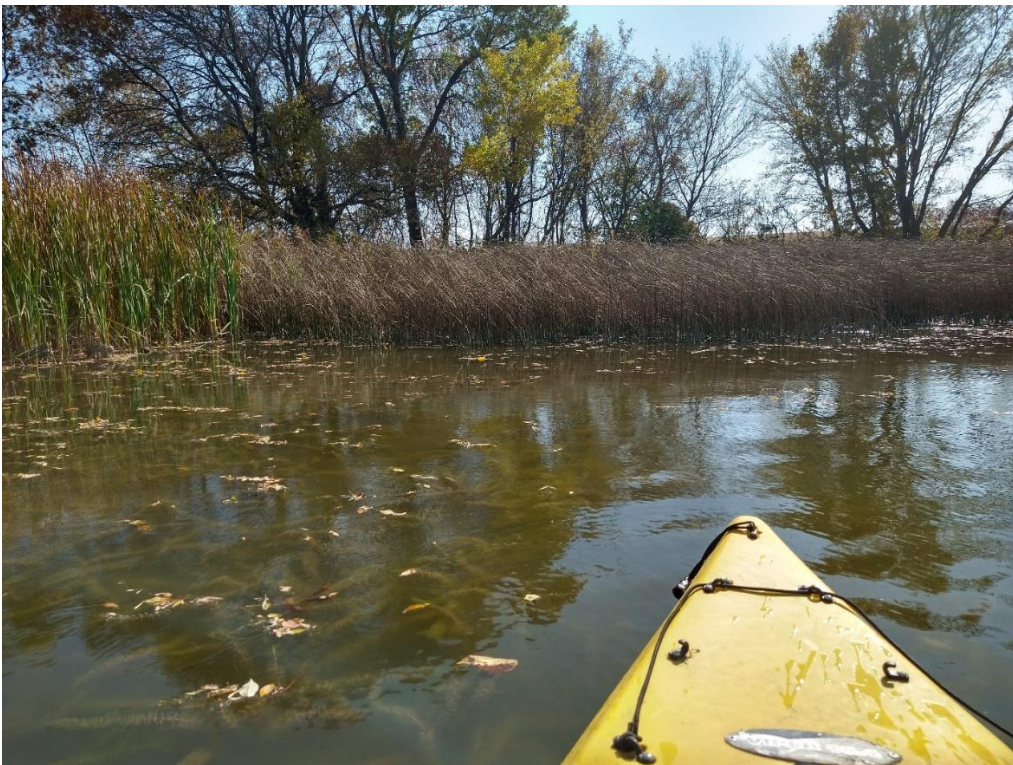
The Waseca County Shoreland Ordinance was last updated in 2017 and met the requirements of the DNR at the time. The DNR model ordinance was last revised in 2022. Given that the County's Shoreland Ordinance was updated prior to the model ordinance, there would be substantial amendments to the UDC even with regards to other sections of the UDC and not particularly Shoreland.

Appendix A

Representative shoreline photos. Section 1 starts on the east end of the lake and go clockwise around the lake.



Section 1



Section 2



Section 3



Section 4



Section 5



Section 6



Section 7



Section 8



Section 9



Section 10



Section 11



Section 12



Section 13

Appendix B 2022 Toner's Lake Score Your Shore Data Summary






Parcel Identification #	survey section #	shoreline length (ft)	score your shore score (200 point maximum)	notes	Upland trees	Upland shrubs	upland ground cover	shoreline trees & shrubs	shoreline ground cover	Aquatic emergent and floating	Aquatic submerged plants	Aquatic openings in plant beds	Aquatic overhead woody habitat	Aquatic Downed woody habitat	Total score
50160610	1	740	120	coontail, bulrush, and cattail present.	0	0	5	15	15	40	35	0	10	0	120
50160610	2	600	145	coontail, bulrush, softstem bulrush, and cattail present.	0	5	5	20	15	40	35	5	10	10	145
50160400	3	2050	139	coontail, bulrush, and cattail present. Areas without emergent vegetation due to overhanging trees.	9	5	5	15	15	30	35	5	10	10	139
50160400	4	650	160	cattails on point. Coontails and lily pads.	0	5	20	20	15	40	35	5	10	10	160
50160400	5	600	135	dark green bulrush, coontail, lily pads. Shallow water full of fry.	0	0	0	20	15	40	35	5	10	10	135
50160400	6	660	125	Cattail, dark green bulrush, coontail, and lily pads present.	0	5	0	15	15	40	35	5	10	0	125
50160400	7	800	105	lily pads 150' from shore.	0	0	0	20	15	10	35	5	10	10	105
50090800	8	320	105	lily pads 150' from shore.	0	0	0	20	15	10	35	5	10	10	105
50090800	9	460	183	cattails, coontail, and end of lily pads.	18	15	15	20	15	40	35	5	10	10	183
50090800	10	1000	105	lack of emergent vegetation due to overhanging trees.	0	0	0	20	15	10	35	5	10	10	105
50090200	11	500	200	cattails - adjacent to county park	25	20	20	20	15	40	35	5	10	10	200
50090200	12	1500	200	cattails, bulrush, coontails, and lily pads present. Clear water 6" deep in bay. Water level low enough that bay is connected to main lake by 1 inch of water.	25	20	20	20	15	40	35	5	10	10	200
50160610	13	1800	144	lack of emergent vegetation due to overhanging trees. Cattails, bulrush, softstem bulrush, and coontail present.	9	5	5	20	15	30	35	5	10	10	144
50090200	14	1500	183	county park on three sides. Lake is low enough that this bay is not connected to main lake by water.	18	15	15	20	15	40	35	5	10	10	183

Toners Lake Map

Assisted by: Mark Schaezke
Waseca SWCD



2021 imagery

-  Shoreline Survey segments
-  Parcels
-  Civil Townships
-  Sections
-  Contour2ft

Reference Scale: 1:6000

1 inch = 500 feet

