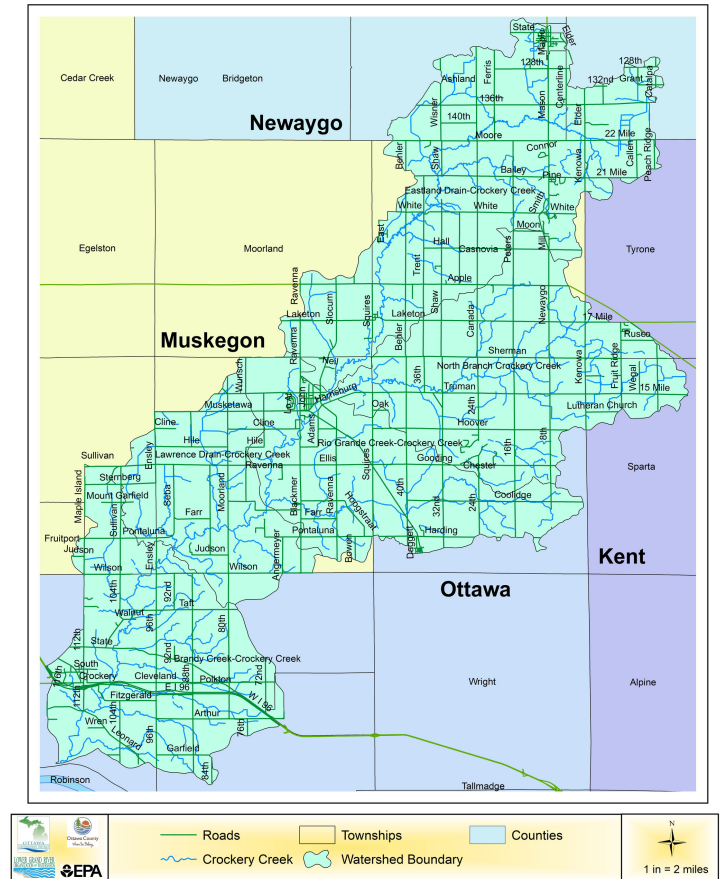


From June-August 2022, the GVSU Social Science Lab conducted the Crockery Creek Speaks survey, asking owners of rural residential and agricultural properties in the Crockery Creek watershed their thoughts about the status and management of water quality in the area. The survey was conducted to inform the Ottawa Conservation District's outreach activities as they administer a restoration grant in the watershed.

Crockery Creek is the largest tributary of the Lower Grand River watershed, serving as the drainage basin for over 100,000 acres of predominantly agricultural land in Muskegon, Ottawa, Newaygo, and Kent Counties.

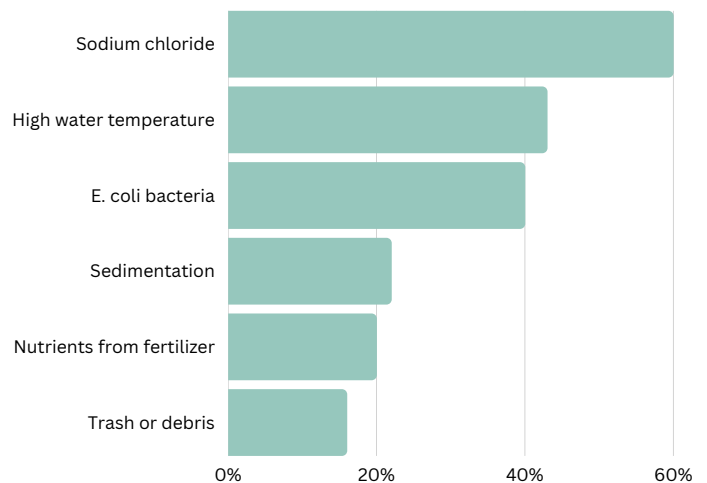
We heard from 323 landowners managing residential properties, forested recreational land, and diversified farmsteads ranging in scale from backyard gardens to commercial operations.

Crockery Creek Watershed

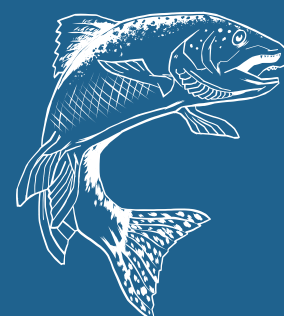


We asked respondents how concerned they were about a variety of pollutants in the watershed. Most were evaluated as slight-to-moderate problems. Interestingly, there were a large number of respondents who did not know about pollution from sodium chloride (caused by groundwater depletion), high water temperature (caused by removal of shady shoreline plants) and *E. coli* (caused by failing septic systems/manure runoff). These will be important areas for future communication and outreach.

Percent of residents who "don't know" about each pollutant



Forty-two percent of respondents ranked fishing and hunting as their favorite water-based recreation activities. Enjoying scenic beauty followed closely, with 38% of respondents ranking enjoying the scenery at waterways as their favorite activity.

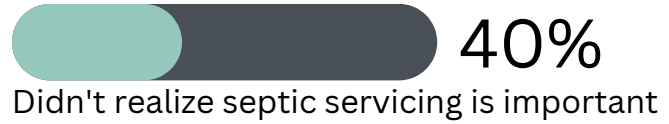
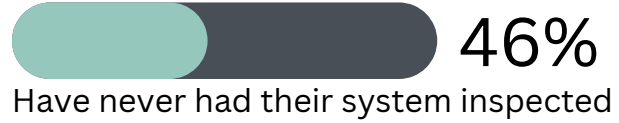


We asked survey respondents about practices used when managing septic systems, gardens, streambanks, cropping systems, and manure from farm animals. Here, we highlight responses to questions about residential septic systems and agricultural cropping systems.



One-in-four respondents did not know how old their septic system was. Another 25% of systems were older than 30 years, the industry-expected lifespan of a septic system.

Regarding septic maintenance...

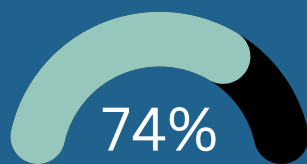
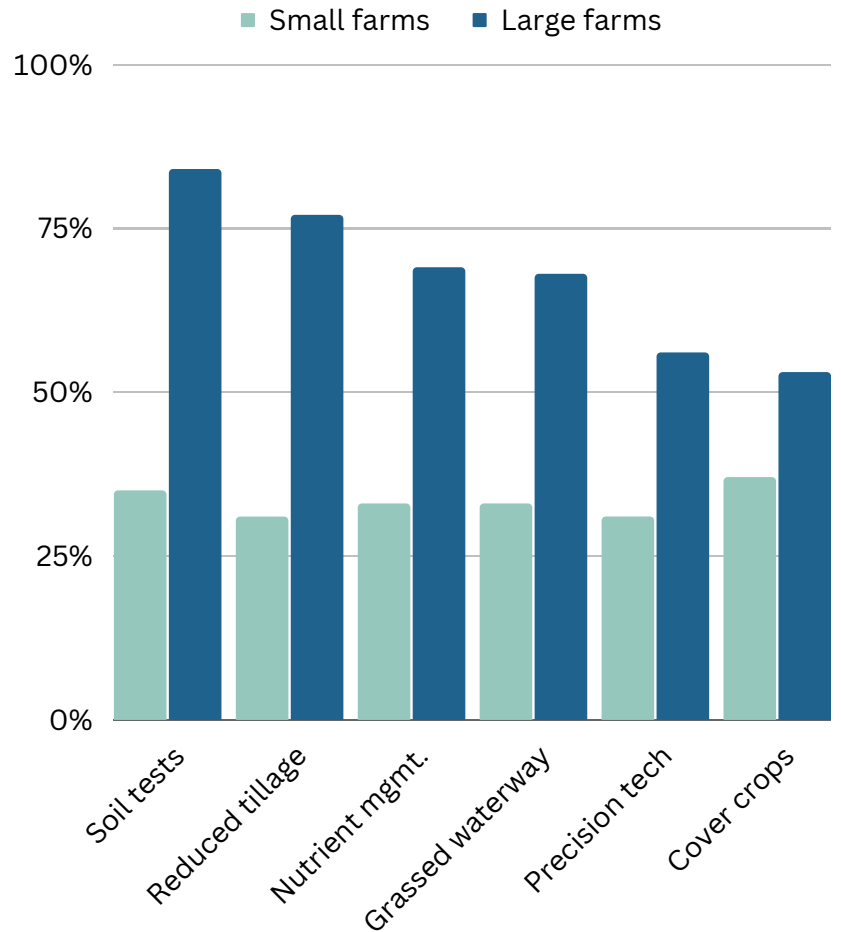


Thirty-two percent of respondents (n=99) owned small farms with farm animals or cropping systems on less than 80 acres. Fifteen percent of respondents (n=47) operated large farms with farm animals or cropping systems on 80 or more acres.

Large farmers reported using water quality best management practices (BMPs) at a higher rate than small farmers. These differences were statistically significant and robust. This suggests that, as farms scale-up, their professionalization increases the time and resources available for making investments in water quality BMPs.

Small farmers in the watershed operate on narrower profit margins, limiting the resources they can invest in BMPs. They reported not having equipment necessary for some BMPs, pointing to a need for rental programs and cost-sharing support.

Percent of respondents currently using each practice



Seventy-four percent of respondents thought that landowners did not have enough opportunities to provide meaningful input on county drain plans.