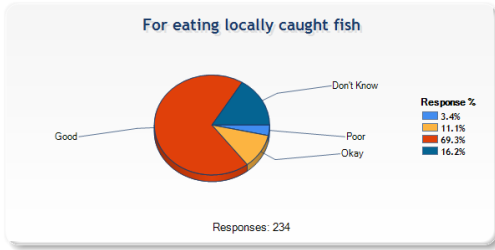


Social Indicators Data Management and Analysis (SIDMA, <https://iwr.msu.edu/sidma>) is an online tool to aid in processing social data used in the Social Indicators Planning and Evaluation System (SIPES). SIPES is a method for incorporating social indicators into planning and evaluation of conservation/ watershed management projects with goals of protecting or improving environmental conditions. SIDMA allows users to author, administer, and analyze surveys designed to measure those indicators. Authors can select from a vast database of vetted questions to include in the survey or add their own.



User can view response frequencies question by question in tabular or graphical formats, and sort results accordingly.

## Rating of Water Quality

Overall, how would you rate the quality of the water in your area?

Question #	Poor (1)	Okay (2)	Good (3)	Don't Know (9)	Mean (SD)	Valid Responses / Total Responses
1. For canoeing / kayaking / other boating	0	0.9	98.7	0.4	2.99 (0.09)	234 / 235
2. For eating locally caught fish	3.4	11.1	69.2	16.2	2.79 (0.5)	196 / 234
3. For swimming	0.4	13.6	86	0	2.86 (0.36)	235 / 235
4. For picnicking and family activities	0	2.1	97	0.9	2.98 (0.15)	233 / 235
5. For fish habitat	3	23.5	55.1	18.4	2.64 (0.55)	191 / 234
6. For scenic beauty	0	2.1	97	0.8	2.98 (0.14)	234 / 236

## Your Water Resources

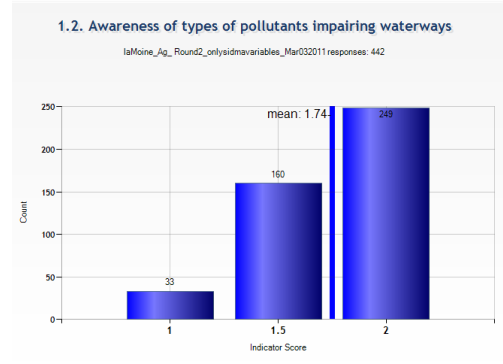
1. Do you know where the rain water goes when it runs off of your property? (Responses: 229)

8.3% No  
91.7% Yes

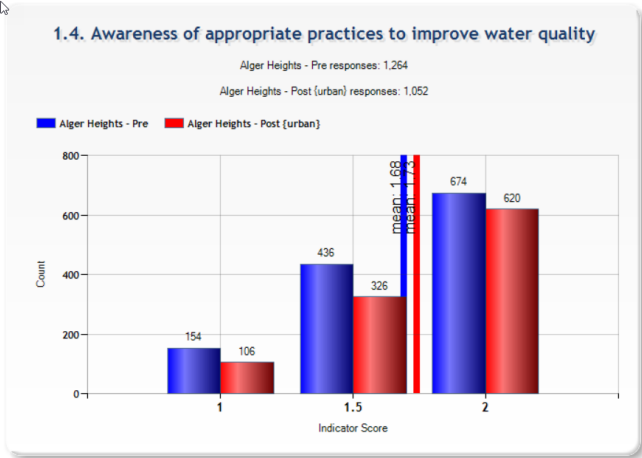
AWARENESS						
Ind. #	Indicator	Mean	SD	Valid Responses	Total Responses	View Graph
1.1	Awareness of consequences of pollutants to water quality (value range 1-2, less aware - more aware)	1.58	0.41	460	604	Bar graph
1.2	Awareness of types of pollutants impairing waterways (value range 1-2, less aware - more aware)	1.74	0.32	442	597	Bar graph
1.3	Awareness of sources of pollutants impairing waterways (value range 1-2, less aware - more aware)	1.44	0.42	455	605	Bar graph
1.4	Awareness of appropriate practices to improve water quality (value range 1-2, less aware - more aware)	1.75	0.32	1,646	1,646	Bar graph

Survey results are aggregated into social indicator scores on multiple categories, including awareness, attitudes, constraints, and behavior.

ATTITUDES						
Ind. #	Indicator	Mean	SD	Valid Responses	Total Responses	View Graph
2.1	General water-quality-related attitudes (value range 1-5, less positive - more positive)	3.27	1	2,247	2,247	Bar graph
2.2	Willingness to take action to improve water quality (value range 1-2, less positive - more positive)	1.72	0.38	1,788	1,788	Bar graph



Results from different surveys, such as from pre and post versions, can be compared against each other to evaluate whether an outreach effort or activity led to a statistically significant change in social indicator scores. Comparisons can also be made for individual questions on the survey. Survey data can be downloaded as a text file for offline analysis in other statistical programs.



Indicator scores on *Alger Heights - Post (urban)* were significantly higher ( $M = 1.73, SD = 0.33$ ) than scores on *Alger Heights - Pre* ( $M = 1.68, SD = 0.34$ ),  $t(2314) = 3.5695, p < 0.001$ .

This analysis assumes the two surveys were independent of one another.

Calculation of  $t$  used a two-tailed test and a pooled variance,  $F(1263, 1051) = 1.0615, p = 0.157$ .



Over 200 surveys have been created on SIDMA, covering many watersheds across the US, though mostly concentrated in the Midwest. Over 39,000 respondents have submitted answers to those surveys.

## Snapshot of Features

Scale & level of specificity	<b>Watersheds:</b> focused on measuring social indicators within watersheds, but it is not a requirement. The system can and has been used from city to statewide scales.
Outcomes	<b>Measures of progress towards improving awareness attitudes, capacity, and behaviors regarding water quality improvement:</b> SIDMA helps users utilize the SIPES method to evaluate whether planning and outreach activities improve social indicators of water quality improvement.
Conservation practices	<b>Many:</b> SIDMA surveys can include questions evaluating familiarity, willingness to adopt, and capacity to adopt a large range of agricultural and urban conservation practices. Users can also create their own questions to a survey, if a particular conservation practice isn't represented in SIDMA's databank of survey questions.
Land uses & production systems	<b>All land uses:</b> SIDMA's questions database includes items tailored for both agricultural and urban settings.
States & territories	<b>Anywhere:</b> Though many of the questions in SIDMA's databank are focused on the U.S. (e.g. Attitudes towards US EPA), there is no formal requirement that a survey be designed for a US location.
How much time, data, & skills needed to generate an outcome estimate	<b>Variable:</b> Time is needed to consider a set of project questions, develop a survey, administer the survey, and analyze/interpret. Project questions require knowledge of water quality challenges to be addressed, critical areas contributing to those problems, actors influencing those areas, and practices/actions being encouraged.
Special note	<b>SIDMA Upgrades:</b> By the end of 2024: modernizing the front end, survey import/export functions, backend updates.