Outcomes Estimation Tools Training Webinar Series

Featuring:

The Social Indicator Planning & Evaluation System (SIPES) Method

Social Indicators Data Management and Analysis (SIDMA) Tool

January 10, 2024

Noon to 1:30 pm eastern

Michelle Perez, PhD
Water Initiative Director

Aysha Tapp Ross
Water & Soil Health Scientist

American Farmland Trust

Michelle

Agenda

- Welcome, Poll (5 min)
- SIPES/SIDMA Presentation (35 min)
- SIDMA Demonstration (30 min)
- Q&A (20 min)

Michelle

Zoom Webinar Reminders

- Use Q&A Box - last 20 minutes (Vote up!)
- Use Zoom Direct Message feature to Aysha if having technical difficulties
- Email with resources to follow each webinar
- Recordings posted on the webinar series site the following Monday
- **Evaluation survey in the Chat Box**
  - **Complete to be entered to win a $25 gift card!!**

Aysha

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Time for 3 polls!

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Tools in 2023 Trainings*

May 3: Webinar Launch & PCOC (recording)

June 7: Model My Watershed (recording)

July 12: Nutrient Tracking Tool (NTT) (recording)

August 2: NRCS Cover Crop Economics Tool (economic) (recording)

September 6: FieldPrint Platform (recording)

October 4: EPA PLET (water quality) (recording)

November 1: PTMApp Web Tool (water quality) (recording)

December 6: AFT Retrospective-Soil Health Economic Calculator (R-SHEC) Tool (recording)

Tools in 2024 Trainings*

January 10: SIPES Method/SIDMA Tool (social)

February 7: Fast-GHG (climate)

March 6: Cool Farm Tool (climate)

April 3: **NEW!!** Critical Source Area Identification and Management

May 1: COMET-Farm & COMET-Planner (climate)

June 5: CAST Tool (water quality)

July 3: TBD

*Subject to change

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SIPES Method and SIDMA

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Outcomes Estimation Tools Training Webinar Series

January 10, 2024

Presenters

Ken Genskow, Ph.D.
Professor & Extension Specialist
Department of Planning and Landscape Architecture
University of Wisconsin-Madison

Glenn O'Neil, Ph.D.
Environmental Scientist and GIS Specialist
Institute of Water Research
Michigan State University

SIPES: Social Indicator Planning & Evaluation System
SIDMA: Social Indicator Data Management & Analysis [tool]

Agenda

- SIPES/SIDMA Introduction & Overview
  - definitions
  - snapshot
  - strengths/limitations
- SIPES method and background
- SIDMA components
- Project profiles
- Training resources
- SIDMA demo

What are Social Indicators?

Generally

- Measures that provide information about people tied to a specific policy goal or objective
- Examples
  - Education
  - Employment
  - Health

For Conservation Initiatives

- Measures that provide information about people tied to goals for improved environmental conditions
- Examples
  - Awareness
  - Attitudes
  - Constraints
  - Capacity
  - Behaviors

What are SIPES and SIDMA?

SIPES

Social Indicators Planning & Evaluation System

- A system for incorporating social indicators into planning and evaluation of conservation/ watershed management projects with goals of protecting or improving environmental conditions

SIDMA

Social Indicators Data Management & Analysis

- An online tool to aid in processing social data used in the SIPES approach
- Customizable questionnaires, data entry, analysis for social information

History

- SIPES/SIDMA designed together to help evaluate 'nonpoint' water quality management efforts in Great Lakes Region/EPA Region 5
- Partnership with USEPA, state water quality agencies, and land grant universities; included pilot projects with NRCS through GLRI (developed 2005-2011)
- Initial purpose: assistance & support to state programs and EPA-funded state '319' projects
- Complements existing evaluation data from “administrative” and “environmental” indicators
- Uses surveys, interviews, and additional planning data

Snapshot

Snap Shot of Features	SIPES/SIDMA
Scale & level of specificity	**Watersheds:** 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	**Measures of progress towards improving awareness attitudes, capacity, and behaviors regarding water quality improvement:** SIDMA helps users utilize the SIPES method to evaluate whether planning and outreach activities improve social indicators of water quality improvement.
Conservation practices	**Many:** 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	**All land uses**: SIDMA's questions database includes items tailored for both agricultural and urban settings.
States & territories	**Anywhere:** 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	**Variable:** 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	**SIDMA Upgrades**: By the end of 2024: modernizing the front end, survey import/export functions, backend updates.

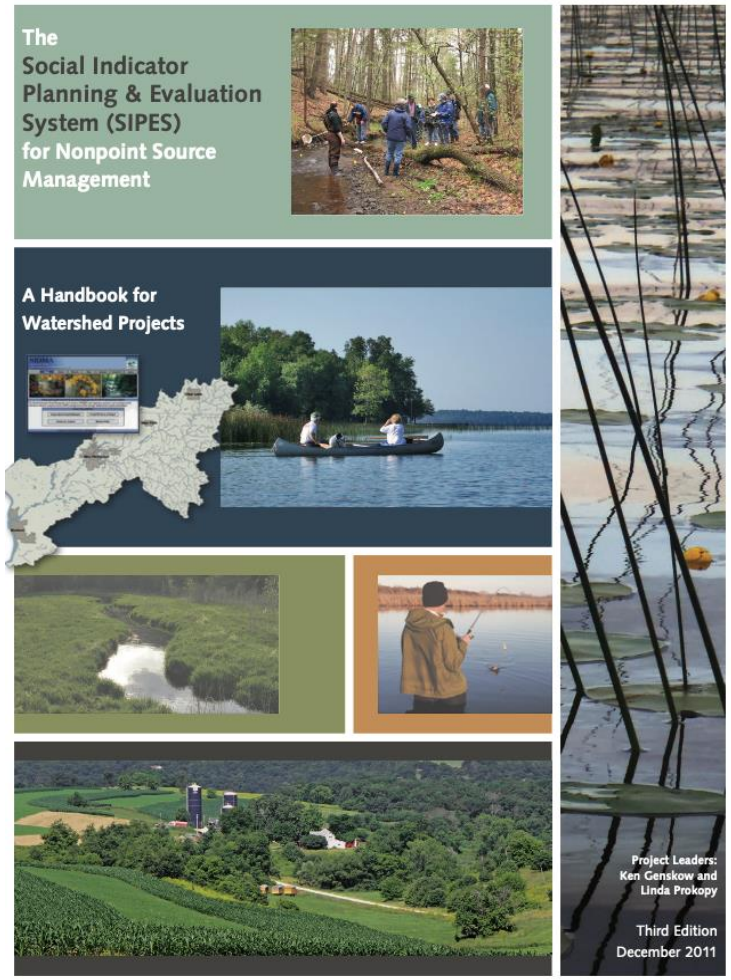
SIPES: Social Indicators Planning & Evaluation System Strengths and Limitations

Strengths

- Vetted process with guidance aimed at project managers
- Lays out steps and rationale
- Integrates with USEPA watershed planning & implementation process
- Examples and references

Limitations

- Guidance is from 2011
- Could improve online survey integration
- Lacking detail on working with watershed organizations to build capacity



SIDMA Strengths and Limitations

Strengths

- Free to use
- Not many conservation/water quality tools focus on social indicators – this does
- No geographic limitations
- Existing databank of questions, but also able to add your own

Limitations

- Customizable in some sections, fixed in others
- Unable to import survey data
- Looks 15 years old
- Limited spatial analysis

SIPES Method: Background & Underlying Concepts

The Need:

EPA and state agencies needed more information to focus **planning and evaluation** efforts of grant-funded projects aimed at reducing diffuse/nonpoint sources of water quality impairment

They were already collecting:

- Environmental Indicators
    - Nutrient loads, water quality measures, soil health
- Administrative Indicators
    - Numbers... plans, newsletters, participants

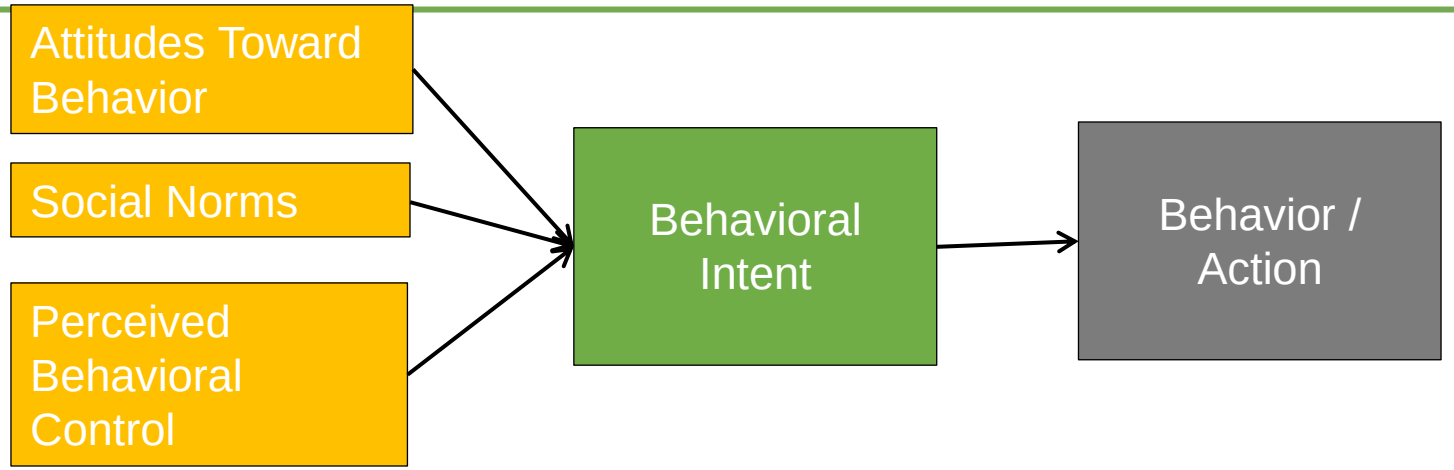
The Response:

- **Social Indicators**
    - **Measures that provide information about people tied to goals for behavior change and improved water quality**

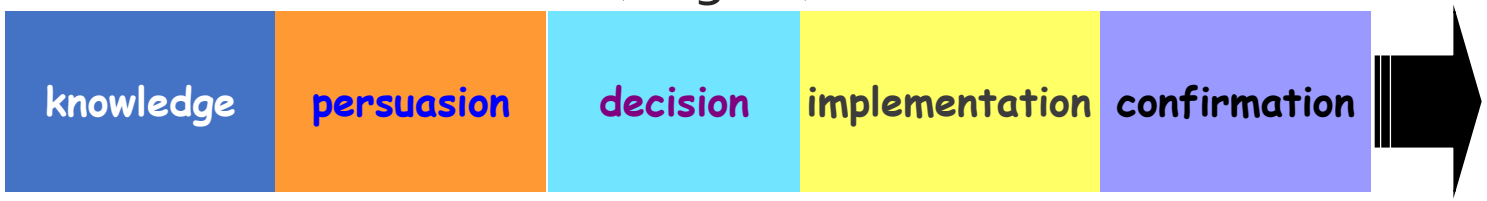
Behavior Change

There are many theories about people and their behavior to draw from, including these...

- Theory of Planned Behavior (Ajzen)



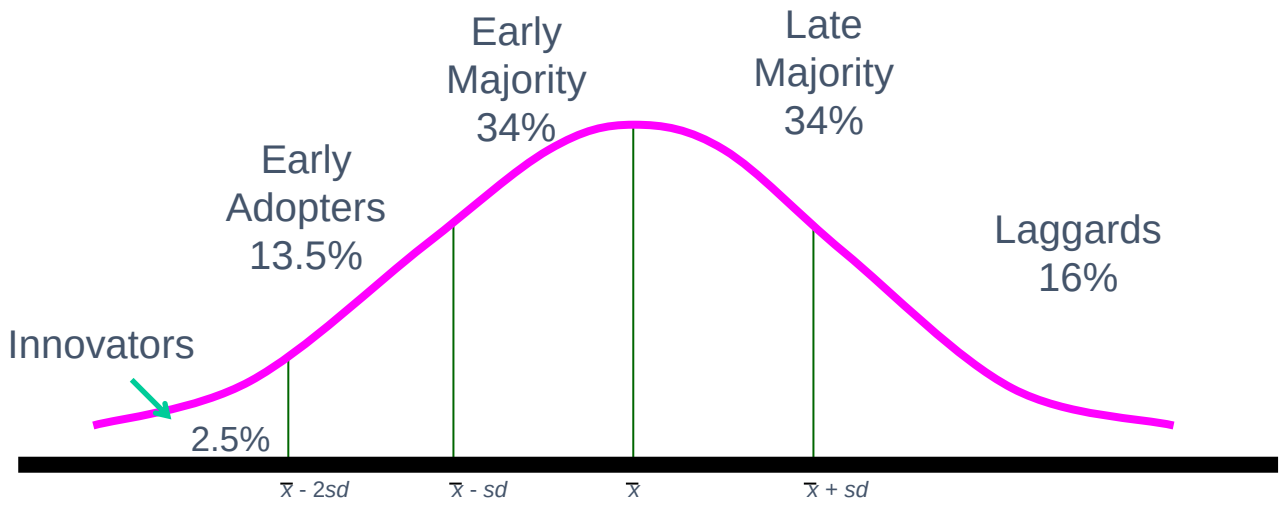
- Diffusion of Innovations (Rogers)



- Stages of Change (Prochaska)

Rate of change? Who leads? Who follows?

Diffusion curves show rates at which technologies are adopted across a population. Everett Rogers applied to agricultural conservation practices:



'Innovators' often experiment with new ideas, but ...
'early adopters' may be the influential leaders that trigger wider acceptance

Everett Rogers.1995. Diffusion of Innovations

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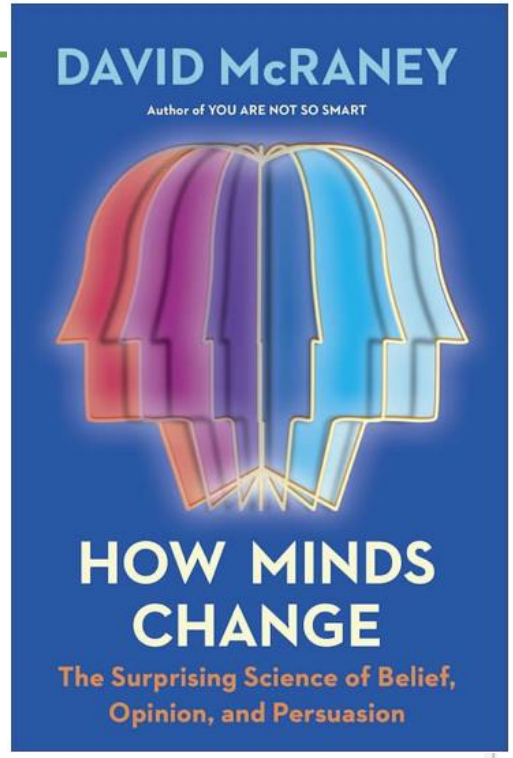
Why Change? What can help lead to a change?

Main questions for individuals considering a behavior change:

- Is action/behavior worth it? -- Motivation
- Can I do it? -- Ability

Tips for effective persuasion:

- Focus on limited set of behaviors that matter
- Must consider the message, the messenger, and the delivery
- Often must "See it to believe it"
  - More than just saying words
  - More than just sharing facts
  - Opportunity to try



Recommended Reading

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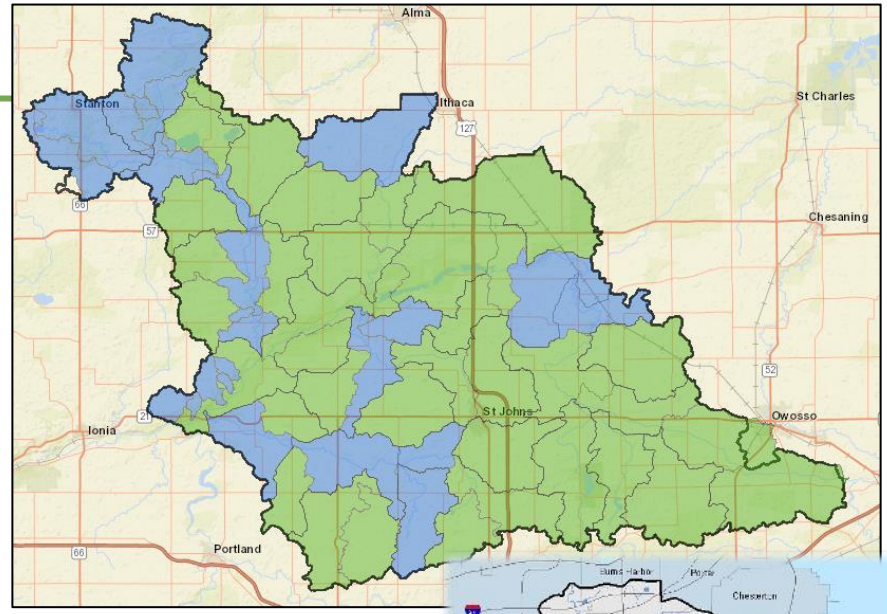
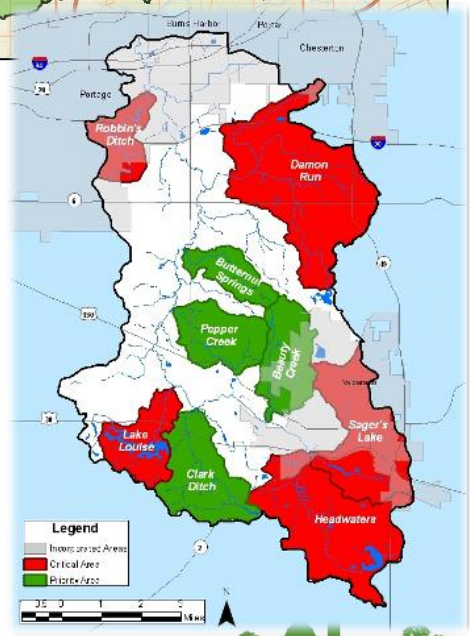
Targeting actions for behavior change

- The location of actions/practices matters
- High-impact behaviors on highly vulnerable landscapes can have a disproportionate impact
- Focus efforts on area of greatest impact
  - Specific audience
  - Specific geographic area(s)





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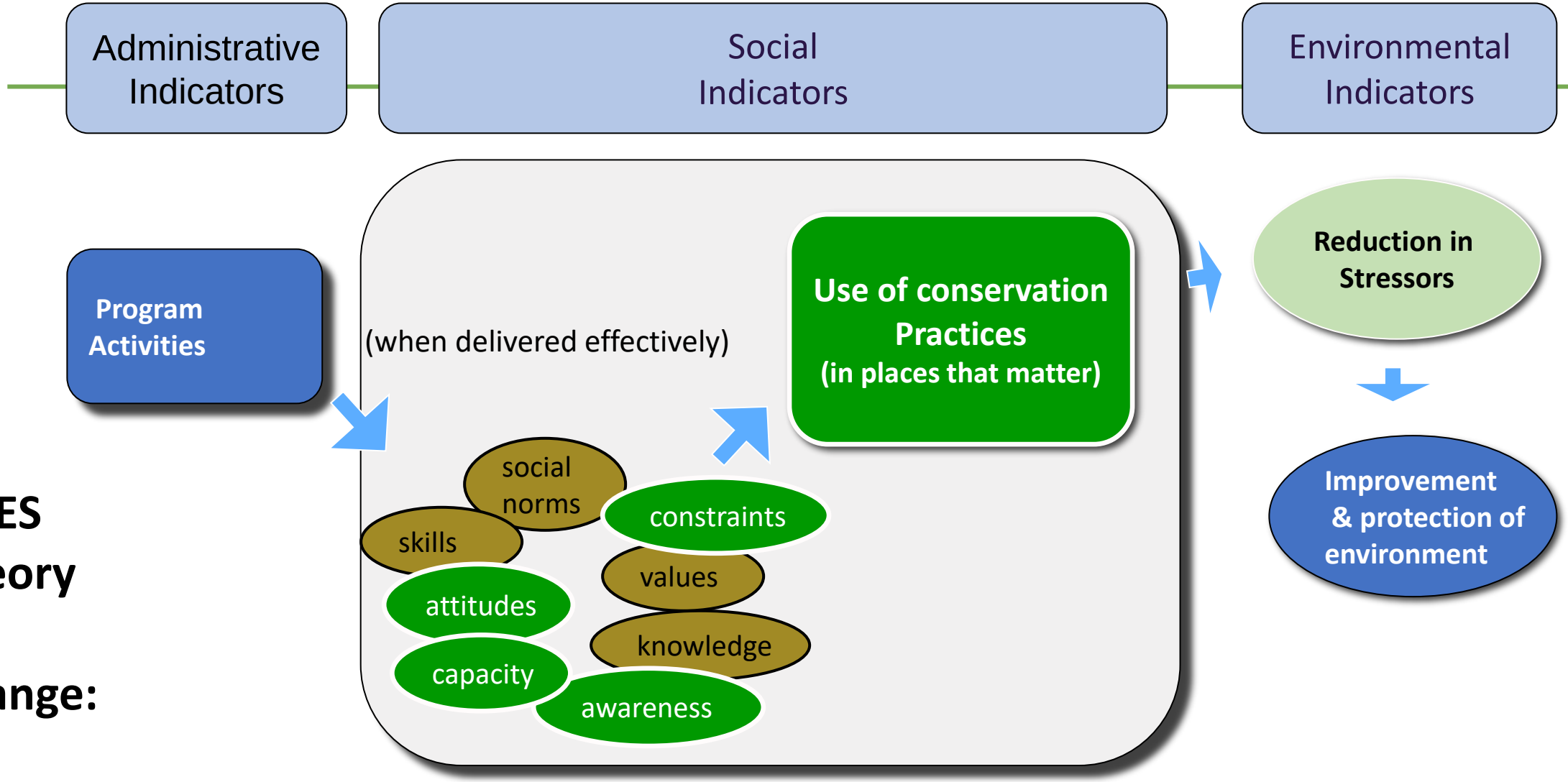
Targeting in SIPES

Four focusing questions must be answered before using social indicators in SIPES/SIDMA:

1. What are the **specific NPS problems** this project is trying to address?
2. What are the **critical areas** that contribute to the problem?
3. Who are the **target audience(s)** for the NPS problem(s) your project will address?
4. **What actions** do you want the target audience(s) to take regarding the NPS problems

SIPES Theory Of Change:



Green = social indicators in SIPES/SIDMA

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Social Goals, Outcomes, Indicators

For program activities to reduce environmental stressors

And improve/ protect environmental conditions

GOAL 1: INCREASE TARGET AUDIENCE AWARENESS

Awareness Outcome 1:	Increase awareness of relevant technical issues and/or recommended practices in critical areas
Awareness Indicator 1:	Awareness of consequences of pollutants to water quality
Awareness Indicator 2:	Awareness of pollutant types impairing water quality
Awareness Indicator 3:	Awareness of pollutant sources impairing water quality
Awareness Indicator 4:	Awareness of appropriate practices to improve water quality

GOAL 2: CHANGE TARGET AUDIENCE ATTITUDES

Attitudes Outcome 1:	Change attitudes to facilitate desired behavior change in critical area
Attitudes Indicator 1:	General water-quality-related attitudes
Attitudes Indicator 2:	Willingness to take action to improve water quality

GOAL 3: REDUCE TARGET AUDIENCE CONSTRAINTS

Constraints Outcome 1:	Reduce constraints to behavior change
Constraints Indicator 1:	Constraints to behavior change

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Social Goals, Outcomes, Indicators

For program activities to reduce environmental stressors

And improve/ protect environmental conditions

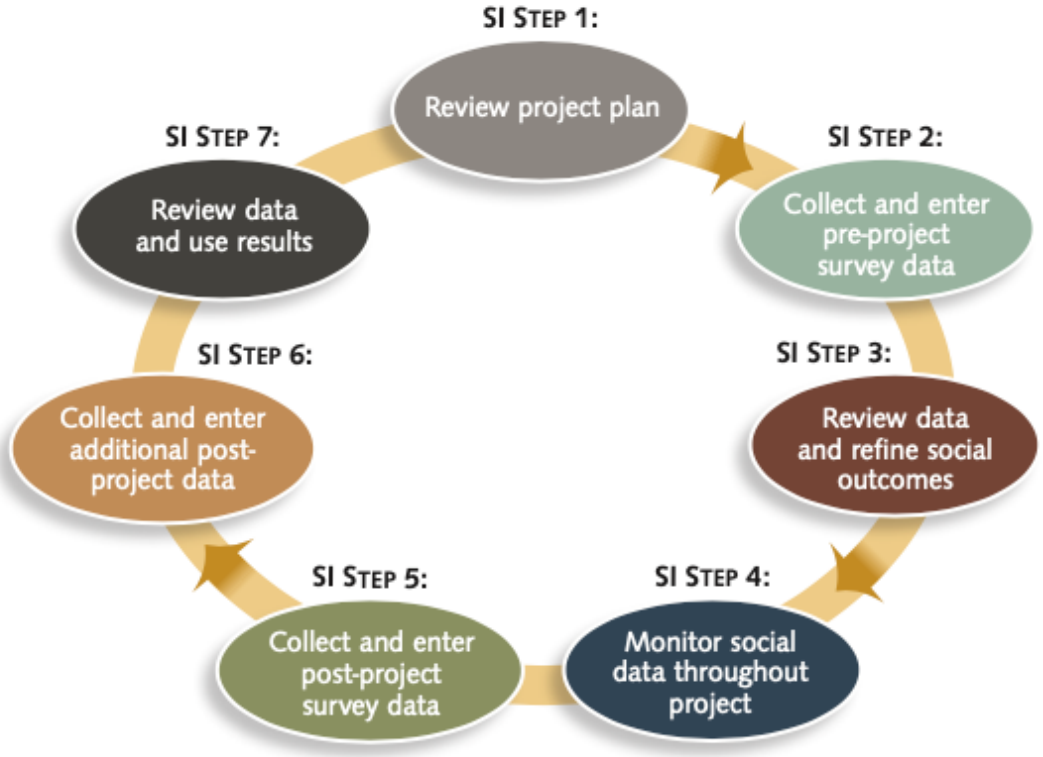
GOAL 4: INCREASE ORGANIZATIONAL CAPACITY

Capacity Outcome 1:	Increase capacity to leverage resources in critical areas
Capacity Indicator 1:	Resources leveraged by grant recipient in the watershed as a result of project funding (including cash and in-kind resources)
Capacity Outcome 2:	Increase capacity to support appropriate practices in critical areas
Capacity Indicator 2:	Funding available to support NPS practices in critical areas
Capacity Indicator 3:	Technical support available for NPS practices in critical areas
Capacity Indicator 4:	Ability to monitor practices in critical areas

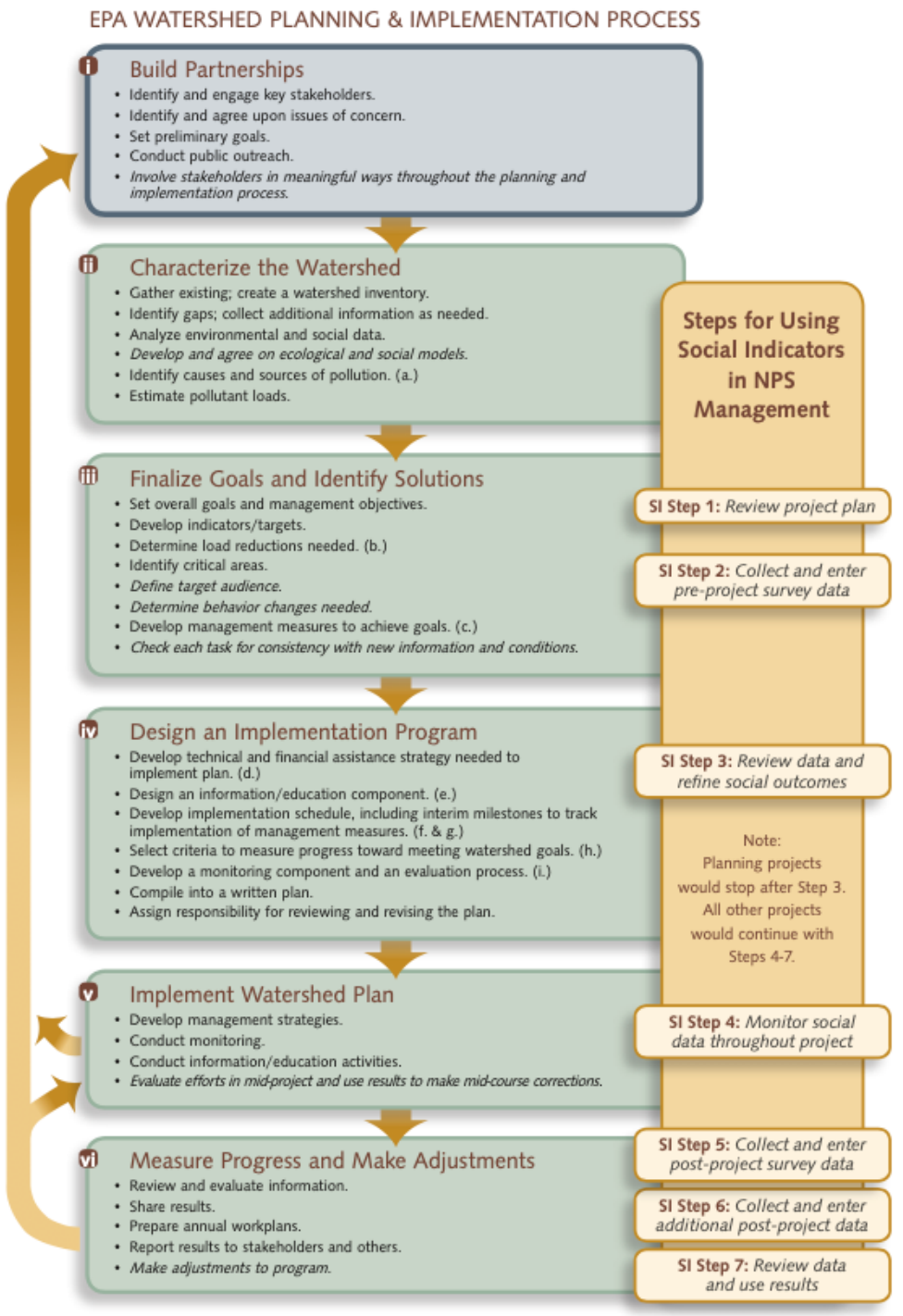
GOAL 5: INCREASE TARGET AUDIENCE ADOPTION OF NPS MANAGEMENT PRACTICES

Behavior Outcome 1:	Increase adoption of practices to maintain or improve water quality in critical areas.
Behavior Indicator 1:	Percentage of critical area receiving treatment
Behavior Indicator 2:	Percentage of target audience implementing practices in critical areas

SIPES planning and evaluation cycle



fits with EPA 9-key-element watershed planning and implementation process



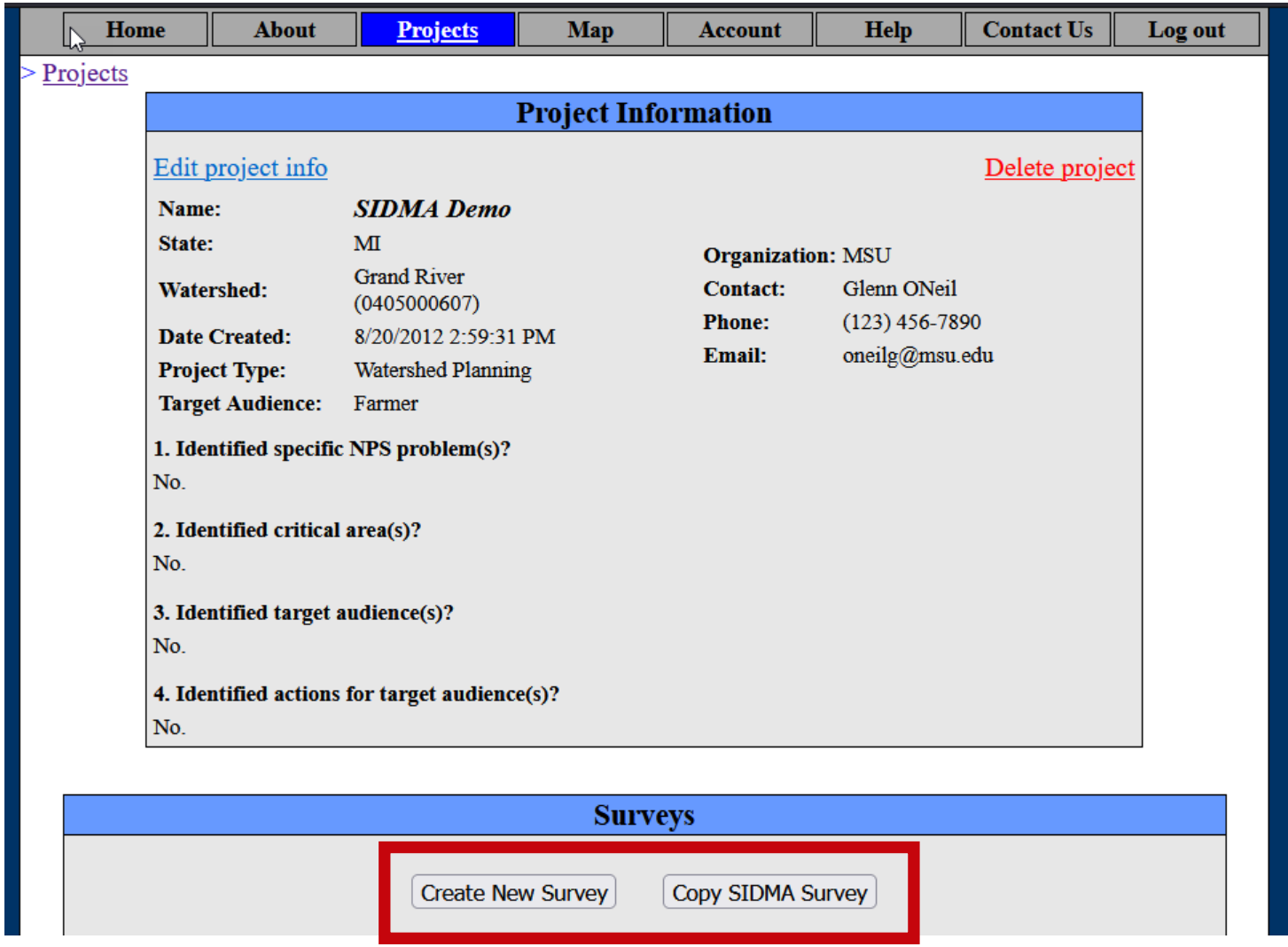
SIPES to SIDMA

SIDMA is an online tool that supports the SIPES process by helping users collect and analyze social data for their project areas and evaluate changes over time.

SIDMA tool components

Survey Building

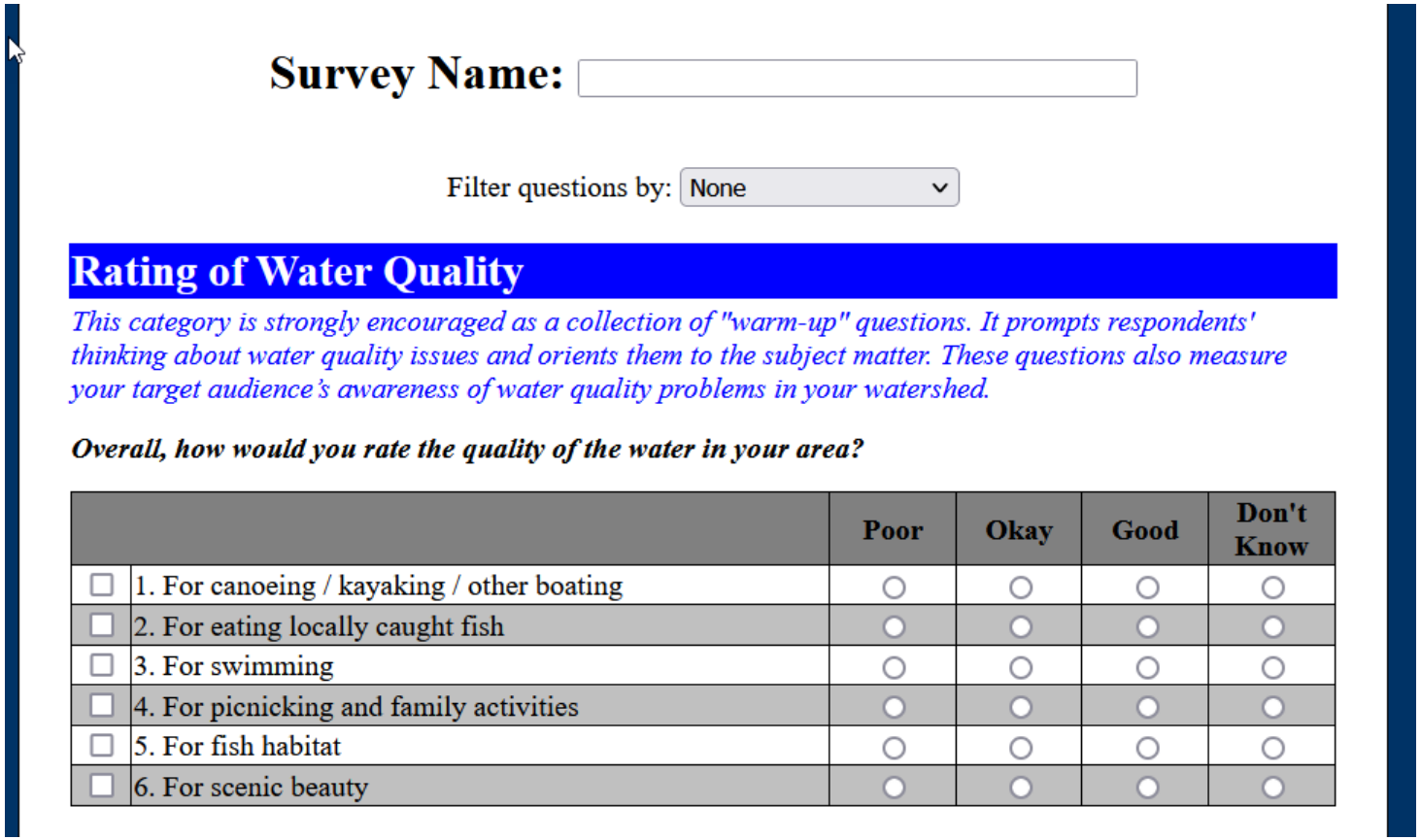
- Content is organized within a project
- Surveys can be created from scratch or copied from another survey on the system



SIDMA tool components

Survey Building

- Surveys are built by selecting from a database of questions, organized into various categories



Survey Name:

Filter questions by: None

Rating of Water Quality

This category is strongly encouraged as a collection of "warm-up" questions. It prompts respondents' thinking about water quality issues and orients them to the subject matter. These questions also measure your target audience's awareness of water quality problems in your watershed.

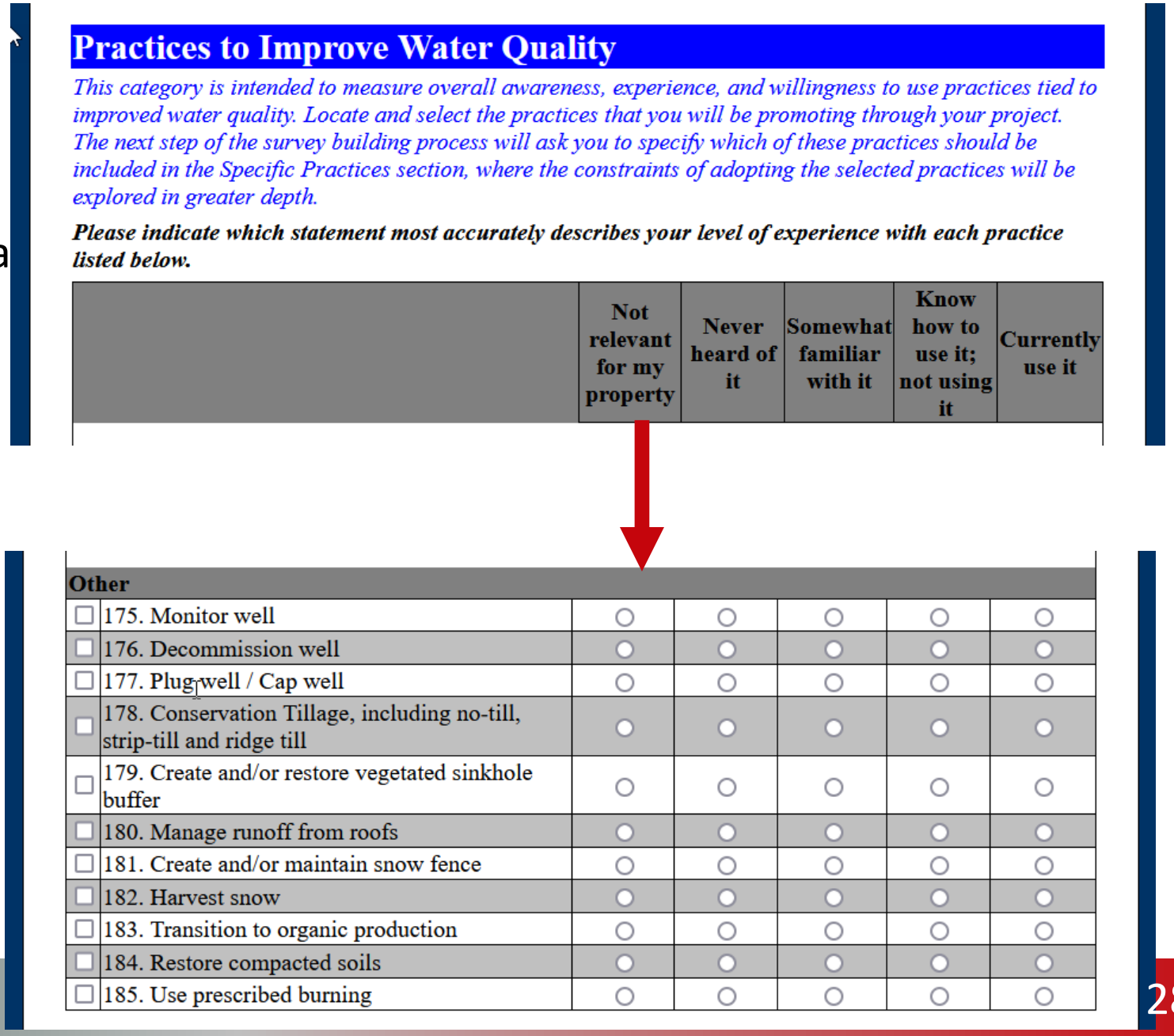
Overall, how would you rate the quality of the water in your area?

	Poor	Okay	Good	Don't Know
1. For canoeing / kayaking / other boating	○	○	○	○
2. For eating locally caught fish	○	○	○	○
3. For swimming	○	○	○	○
4. For picnicking and family activities	○	○	○	○
5. For fish habitat	○	○	○	○
6. For scenic beauty	○	○	○	○

SIDMA tool components

Survey Building

- Surveys are built by selecting from a database of questions, organized into various categories
- Some of the categories have more questions to choose from than others



Practices to Improve Water Quality

This category is intended to measure overall awareness, experience, and willingness to use practices tied to improved water quality. Locate and select the practices that you will be promoting through your project. The next step of the survey building process will ask you to specify which of these practices should be included in the Specific Practices section, where the constraints of adopting the selected practices will be explored in greater depth.

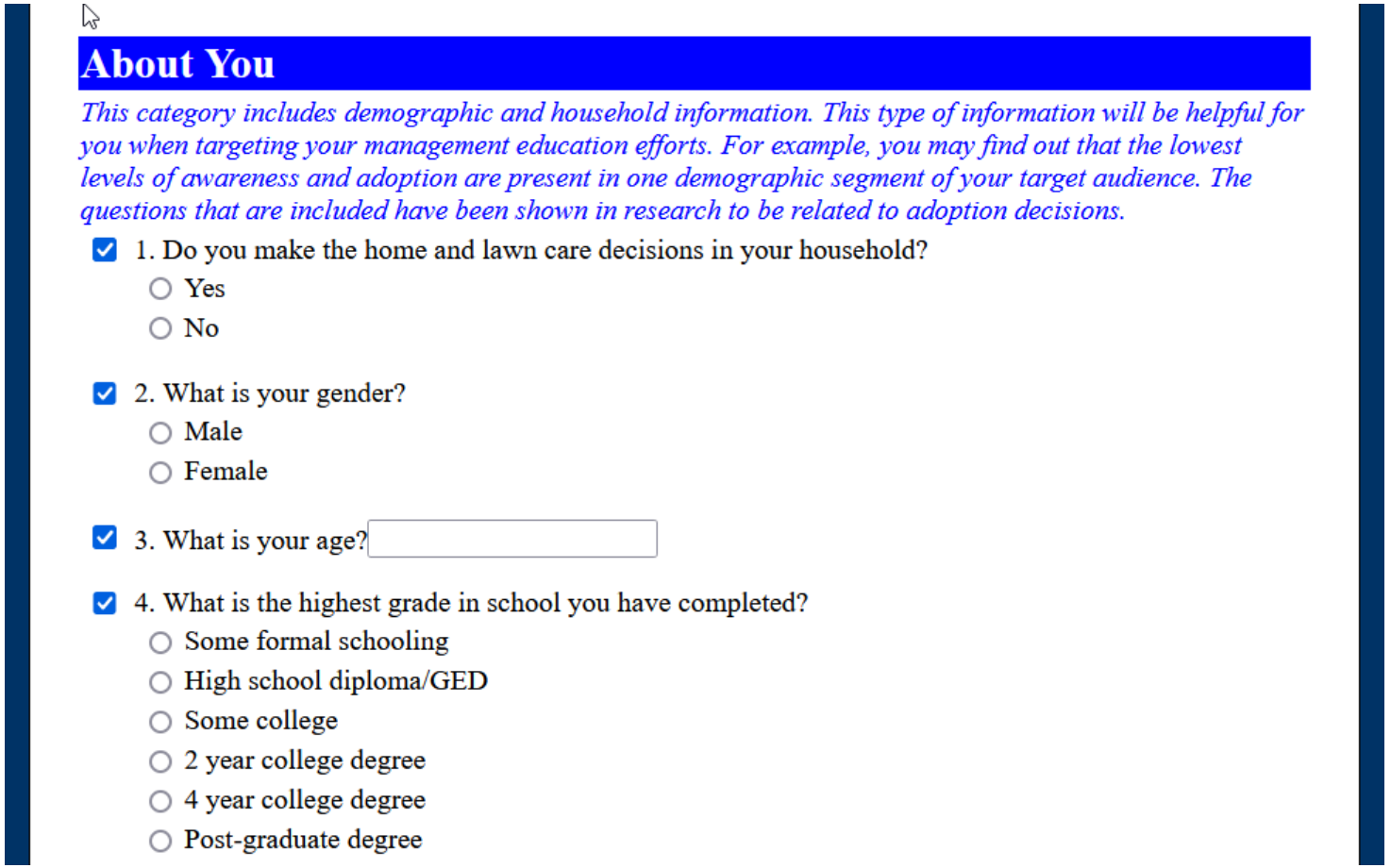
Please indicate which statement most accurately describes your level of experience with each practice listed below.

	Not relevant for my property	Never heard of it	Somewhat familiar with it	Know how to use it; not using it	Currently use it
Other					
☐ 175. Monitor well	○	○	○	○	○
☐ 176. Decommission well	○	○	○	○	○
☐ 177. Plug well / Cap well	○	○	○	○	○
☐ 178. Conservation Tillage, including no-till, strip-till and ridge till	○	○	○	○	○
☐ 179. Create and/or restore vegetated sinkhole buffer	○	○	○	○	○
☐ 180. Manage runoff from roofs	○	○	○	○	○
☐ 181. Create and/or maintain snow fence	○	○	○	○	○
☐ 182. Harvest snow	○	○	○	○	○
☐ 183. Transition to organic production	○	○	○	○	○
☐ 184. Restore compacted soils	○	○	○	○	○
☐ 185. Use prescribed burning	○	○	○	○	○

SIDMA tool components

Survey Building

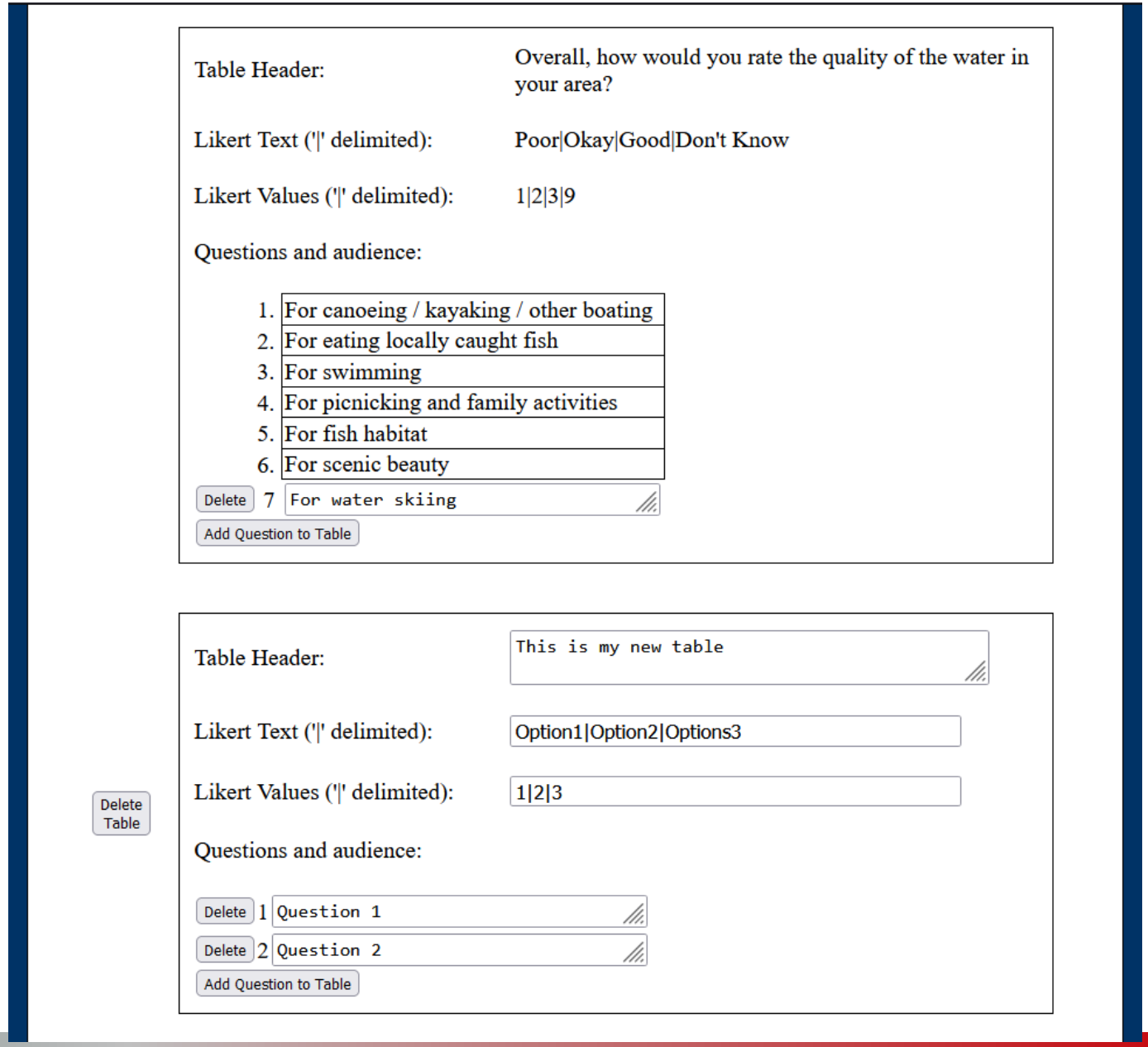
- Surveys are built by selecting from a database of questions, organized into various categories
- Some of the categories have more questions to choose from than others
- The type/structure of questions vary



SIDMA tool components

Survey Building

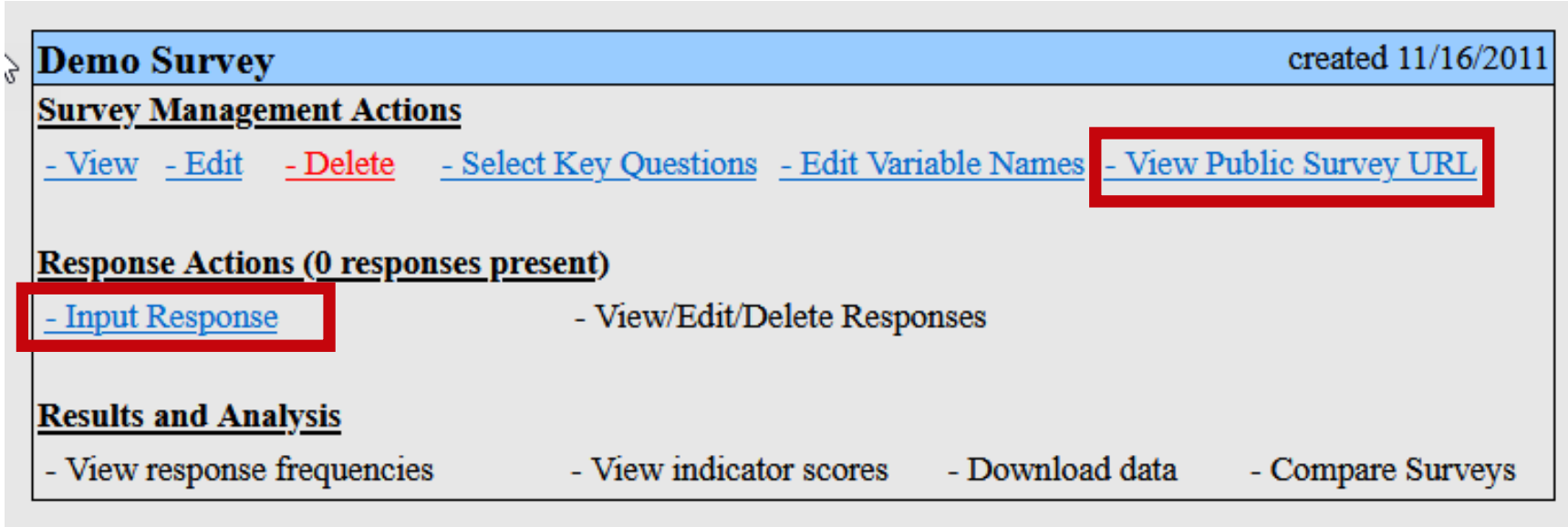
- Surveys are built by selecting from a database of questions, organized into various categories
- Some of the categories have more questions to choose from than others
- The type/structure of questions vary
- Custom questions can be added within categories



SIDMA tool components

Survey Administration

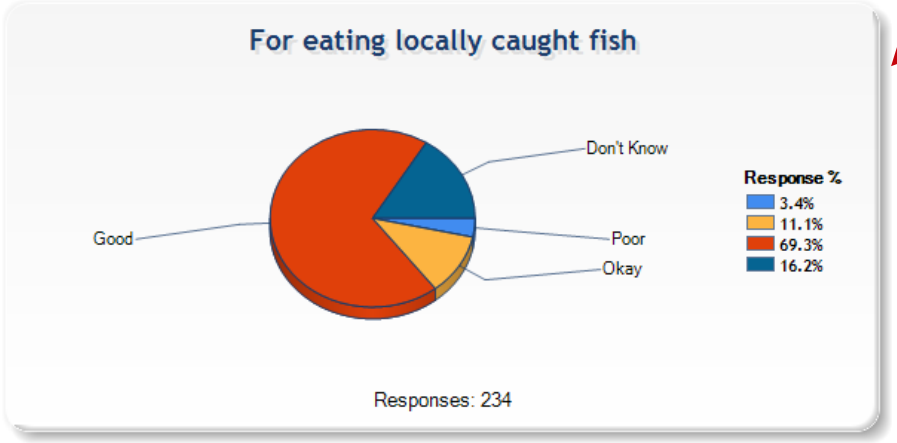
- Surveys can be input manually, or via a public URL



SIDMA components

Survey Analysis

- Authors can view response statistics for each question



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

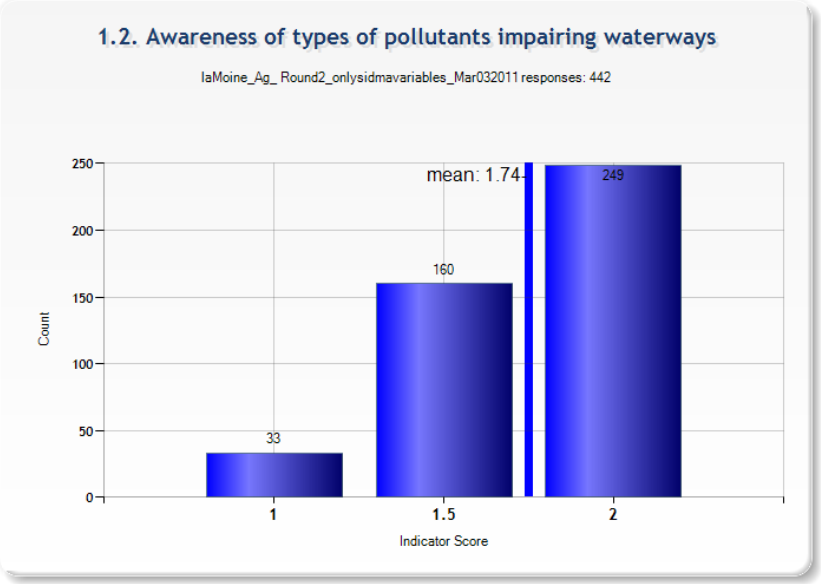
91.7% Yes

2. If you answered 'Yes' above, where does your rain water drain to?

SIDMA components

Survey Analysis

- Authors can view response statistics for each question
- Social indicator scores



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

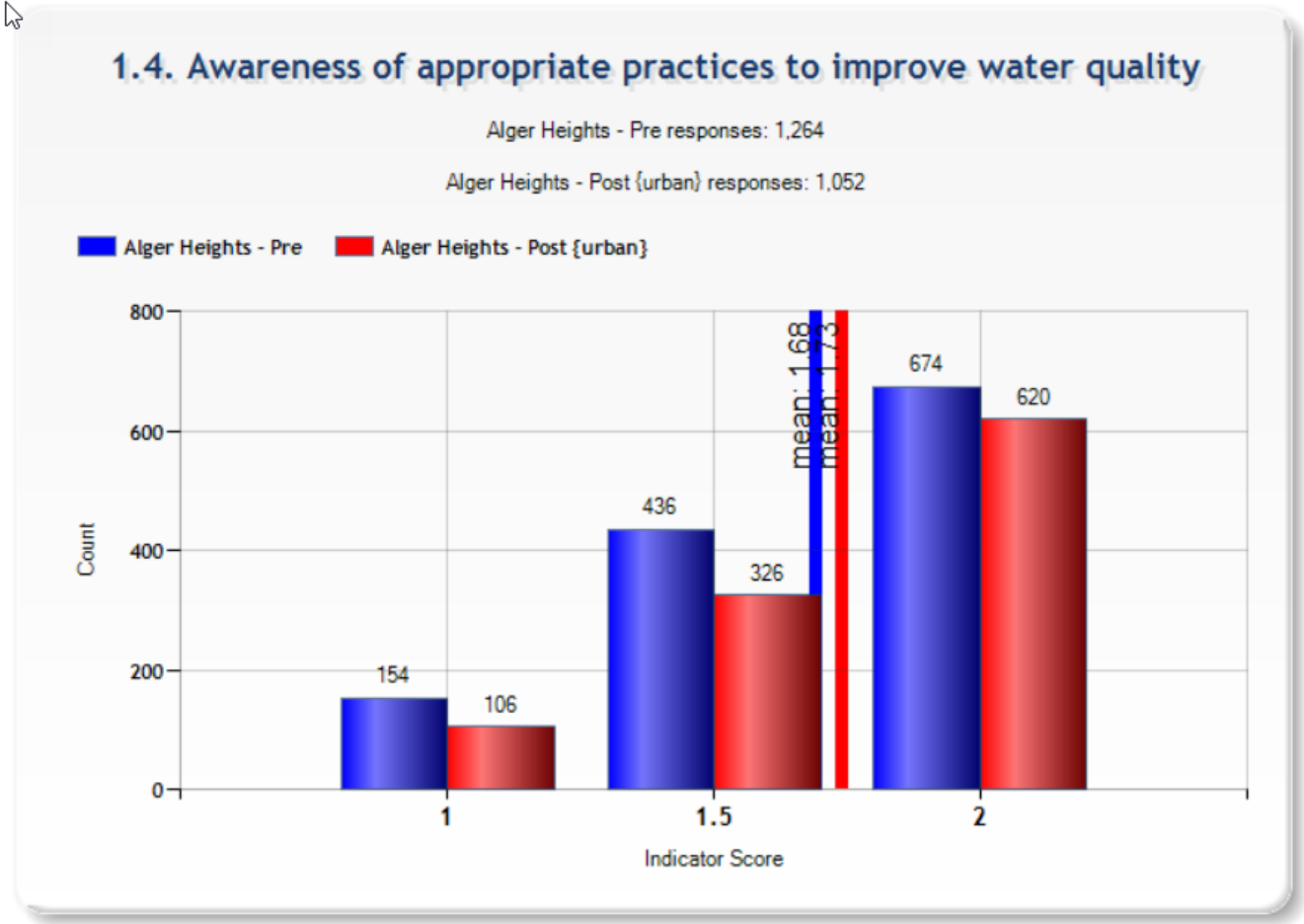
ATTITUDES

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

SIDMA components

Survey Analysis

- Authors can view response statistics for each question
- Social indicator scores
- Compare statistics and indicator scores across surveys
- Test indicator score differences for statistical significance



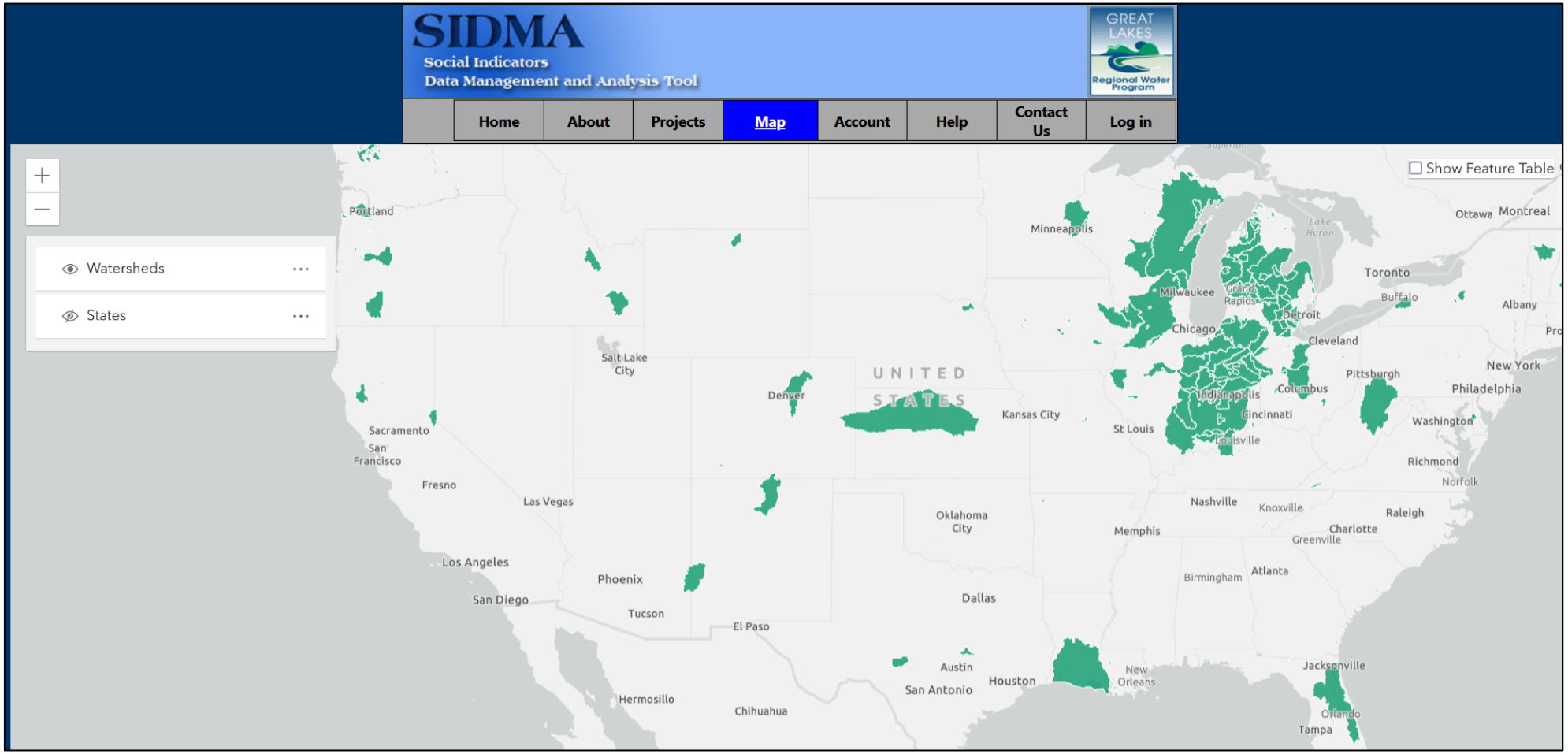
Indicator scores on *Alger Heights - Post {urban}* were significantly higher ($M = 1.73$, $SD = 0.33$) than scores on *Alger Heights - Pre* ($M = 1.68$, $SD = 0.34$), $t(2314) = 3.5695$, $p = <0.001$.

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

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

Project Profiles

- 200+ surveys have been generated on SIDMA
- 39,000+ surveys have been submitted
- 20 states represented



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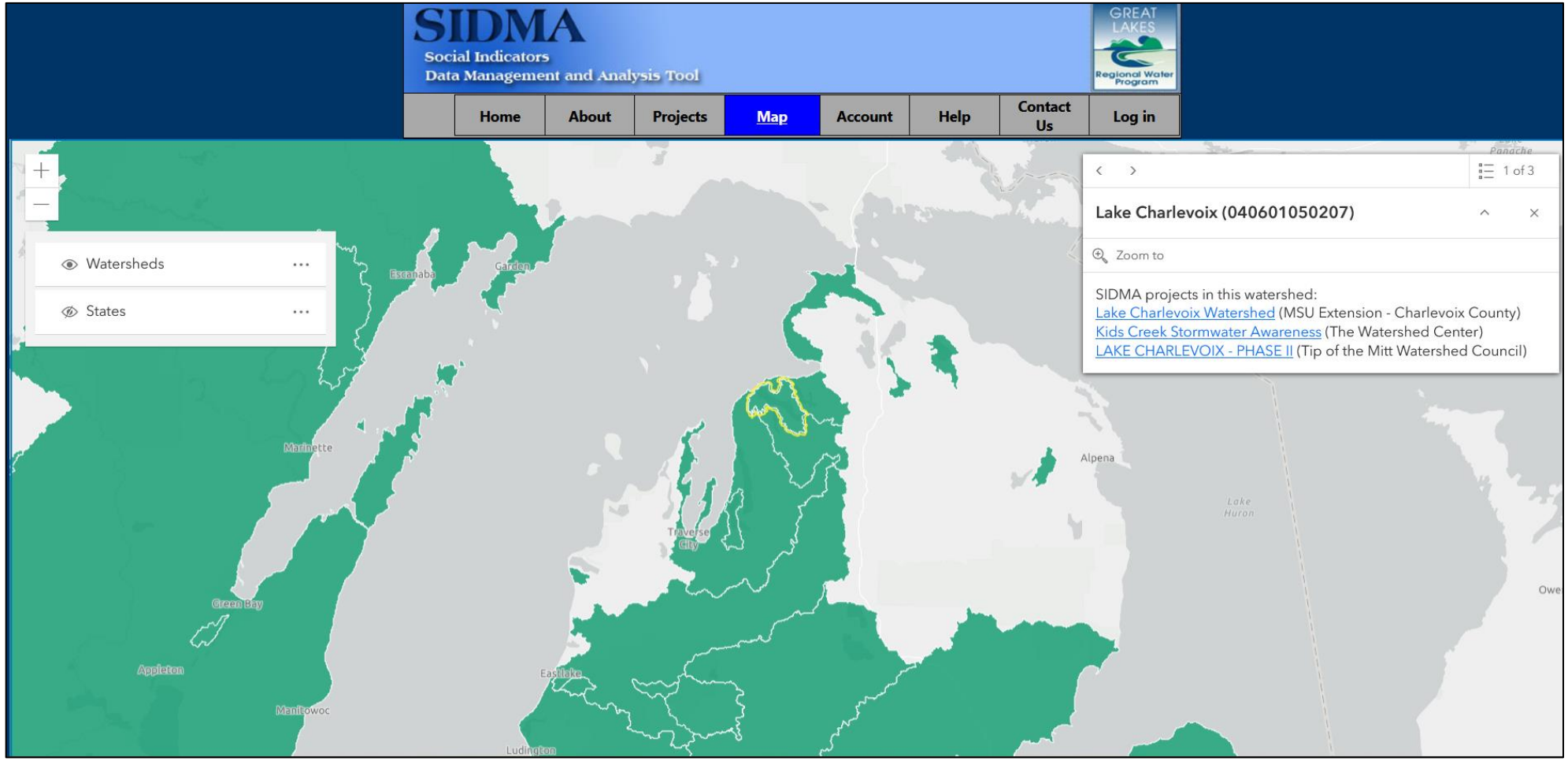


Project Profiles

Lake Charlevoix – Michigan's Tip of the Mitt

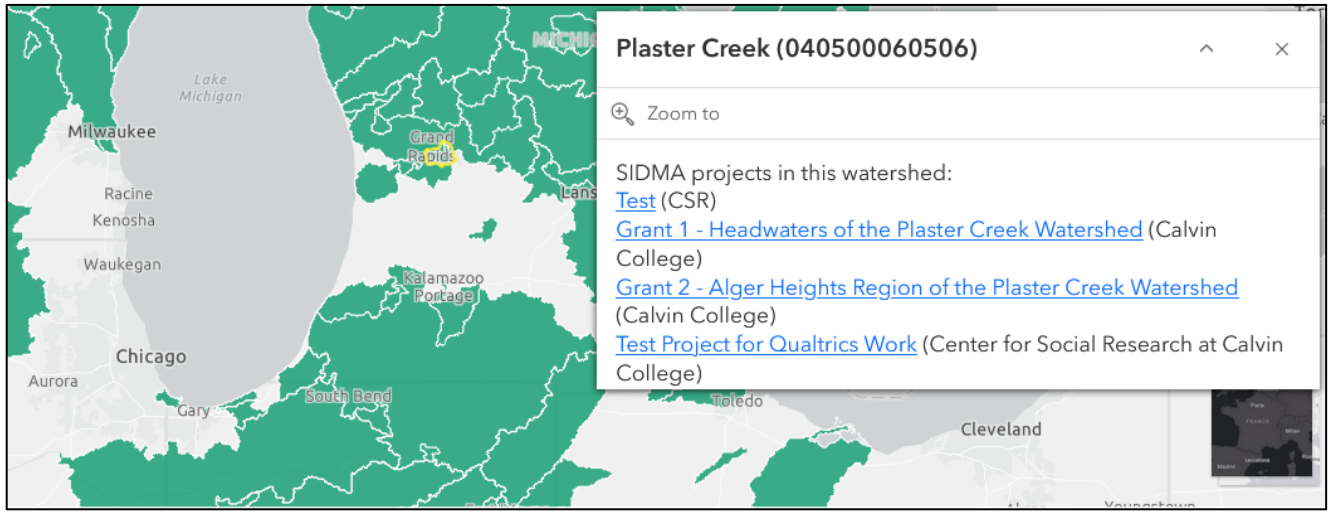
- 2010 –Management Plan for Lake Charlevoix developed by the Tip of the Mitt Watershed Council

- 3 different surveys:
  - Residents
  - Shoreline property owners
  - Local officials

- Re-administered 10 years later

- Managers able to document increased awareness of water quality threats and willingness to implement conservation

Project Profiles
Plaster Creek Stewards



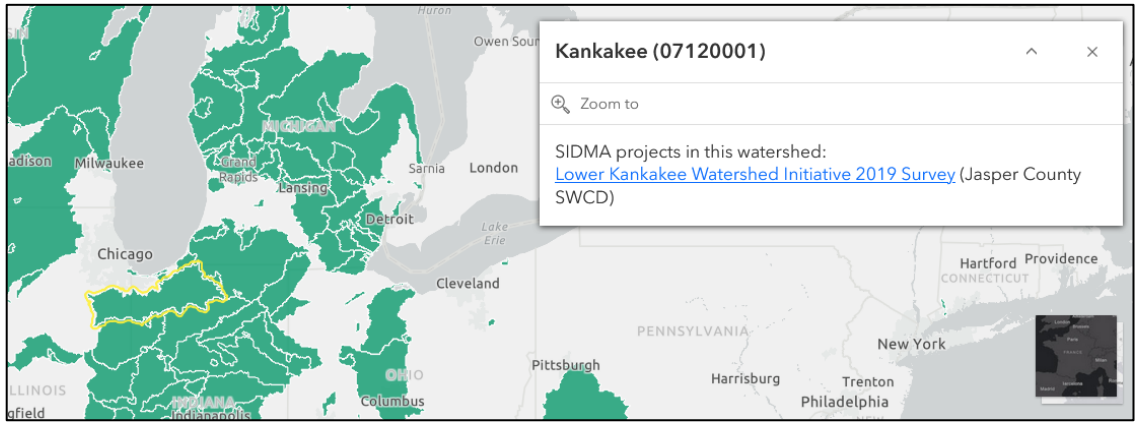
- Plaster Creek Stewards and DataWise used SIDMA to evaluate outreach efforts in the watershed

- 2014 - 2022: multiple surveys administered to two groups (outreach participants and general population)

- Outreach participants had higher levels of awareness of water quality impacts, greater familiarity with water quality improvement practices, and were more likely to have implemented those practices

Project Profiles

The Lower Kankakee Watershed Initiative



- 2022 – JCSWCD utilized SIDMA to support the development of the Lower Kankakee River watershed management plan
- 2 surveys (ag, urban/suburban)
- To better understand "how people feel about local water resources, how much they know about water quality concerns, the types of practices they adopt on the land they manage, and what factors affect their land management decisions"
- Results will serve as a baseline for progress tracking

LOWER KANKAKEE WATERSHED INITIATIVE

JASPER COUNTY SOIL AND WATER CONSERVATION DISTRICT

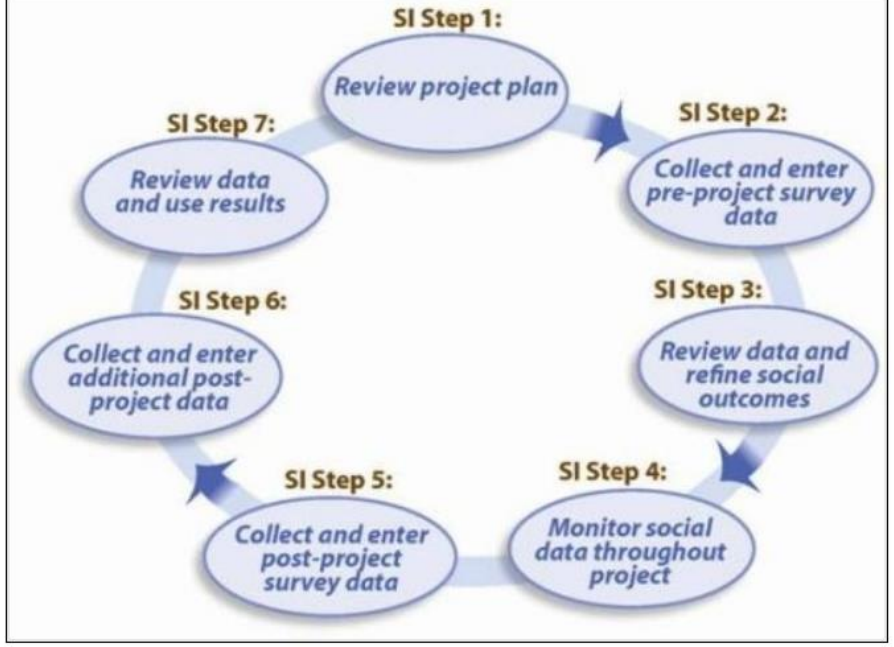
Training Resources

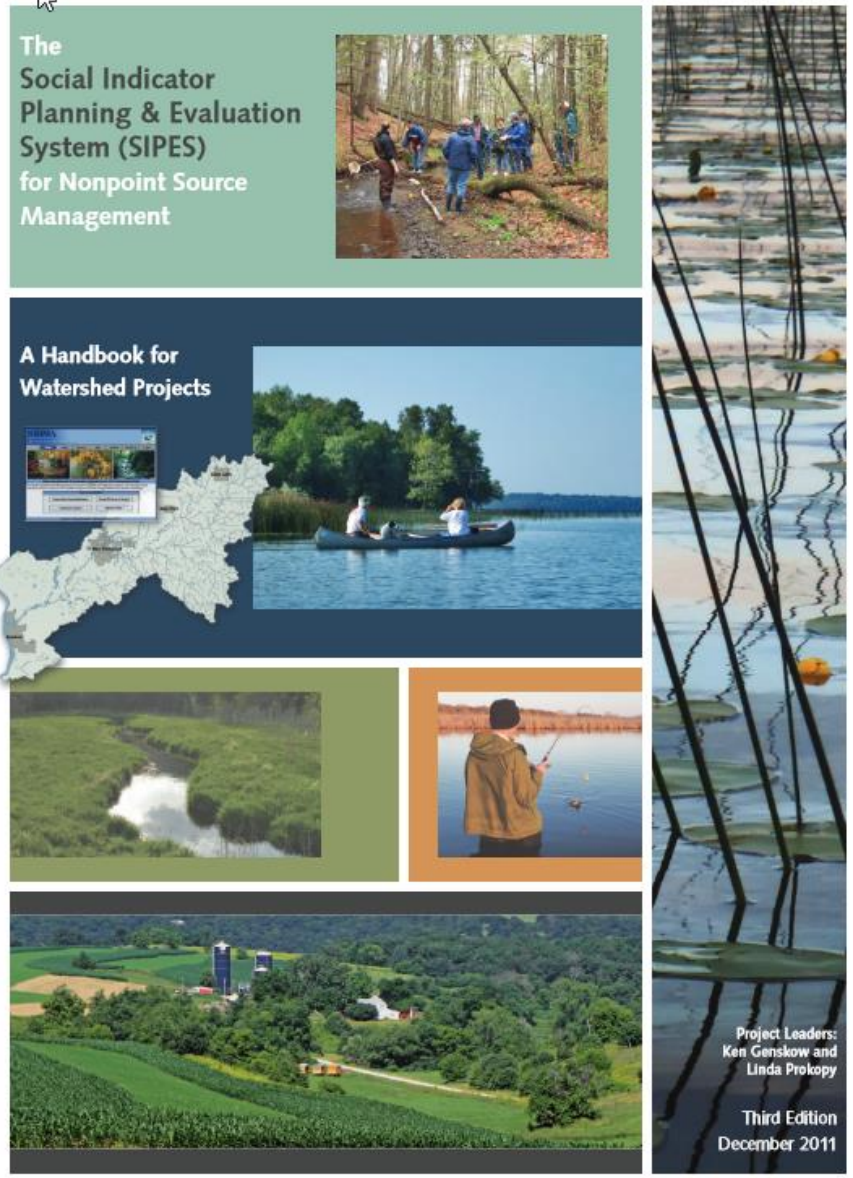
- The SIPES Handbook can be downloaded on SIDMA
- https://iwr.msu.edu/sidma/Info/About.aspx

For a more detailed description of the Social Indicators system, please download the Handbook.

Steps To Measure Social Indicators

Measuring the social indicators of your project can be done in these 7 steps.





Training Resources

- A 10-part video series on how to use SIDMA is accessible on the Help page
- https://iwr.msu.edu/sidma/Info/Help.aspx

- A link to a briefer overview from the Indiana Watersheds Webinar Series is also provided

The videos below are a 10-part tutorial series on SIDMA. Click on "Playlist" in the viewer below to access a listing of all of the tutorial chapters.

A briefer SIDMA tutorial is available through the Indiana Watersheds Webinar Series.

SIDMA Demo

Create a project

- Start on the *Home* tab

SIDMA Demo

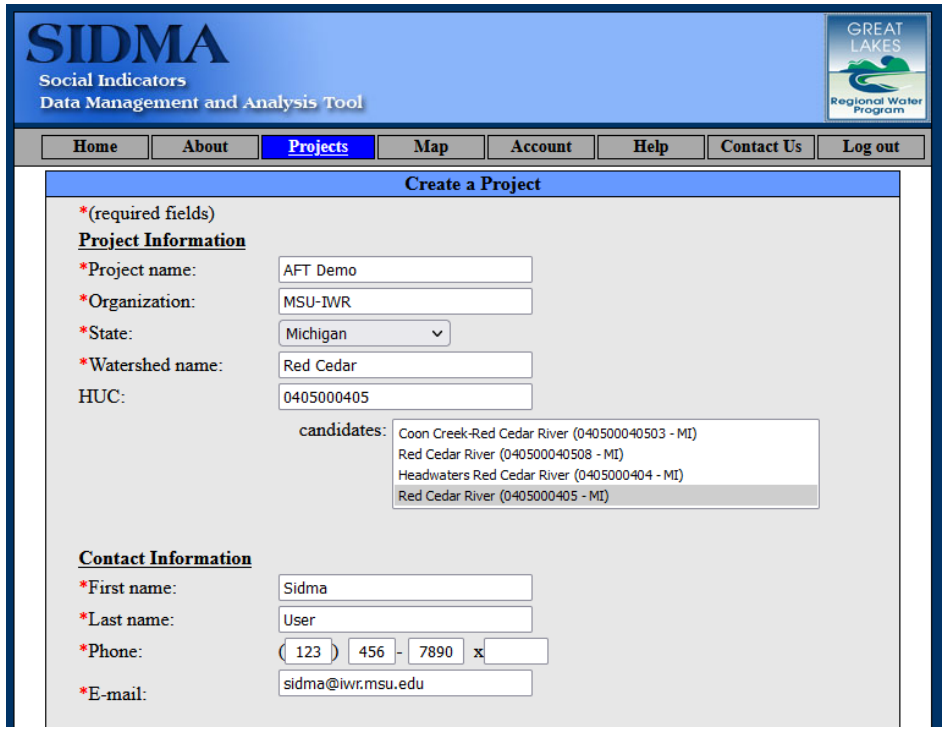
Create a project

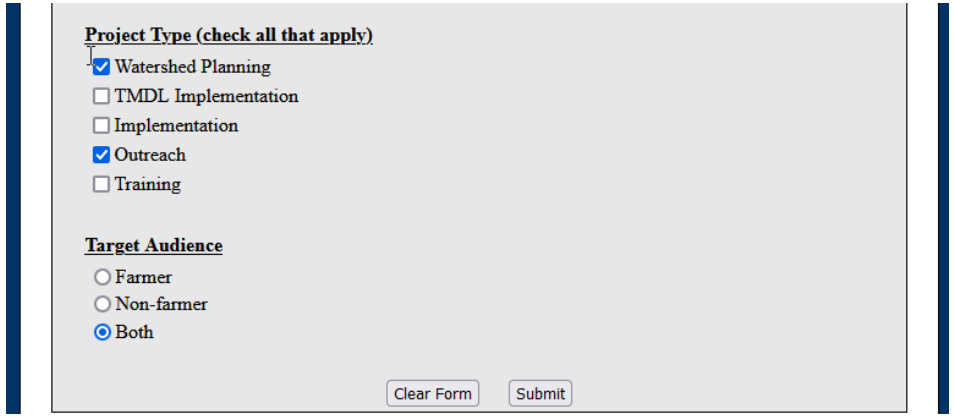
- Start on the *Home* tab
- Click *Create Project*

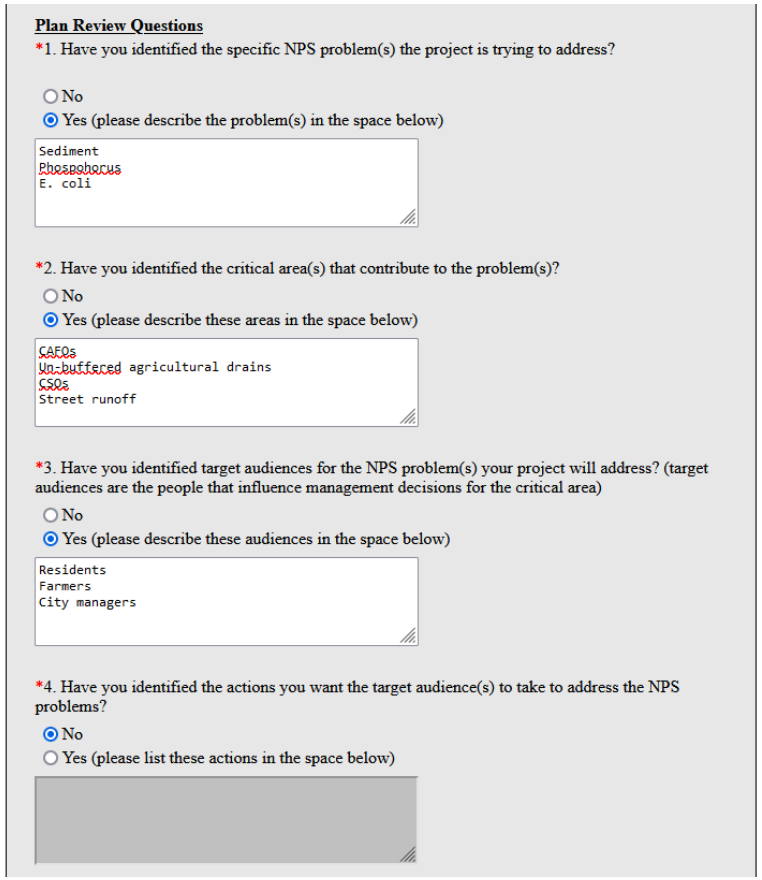
SIDMA Demo

Create a project

- Start on the *Home* tab
- Click *Create Project*
- Provide project details



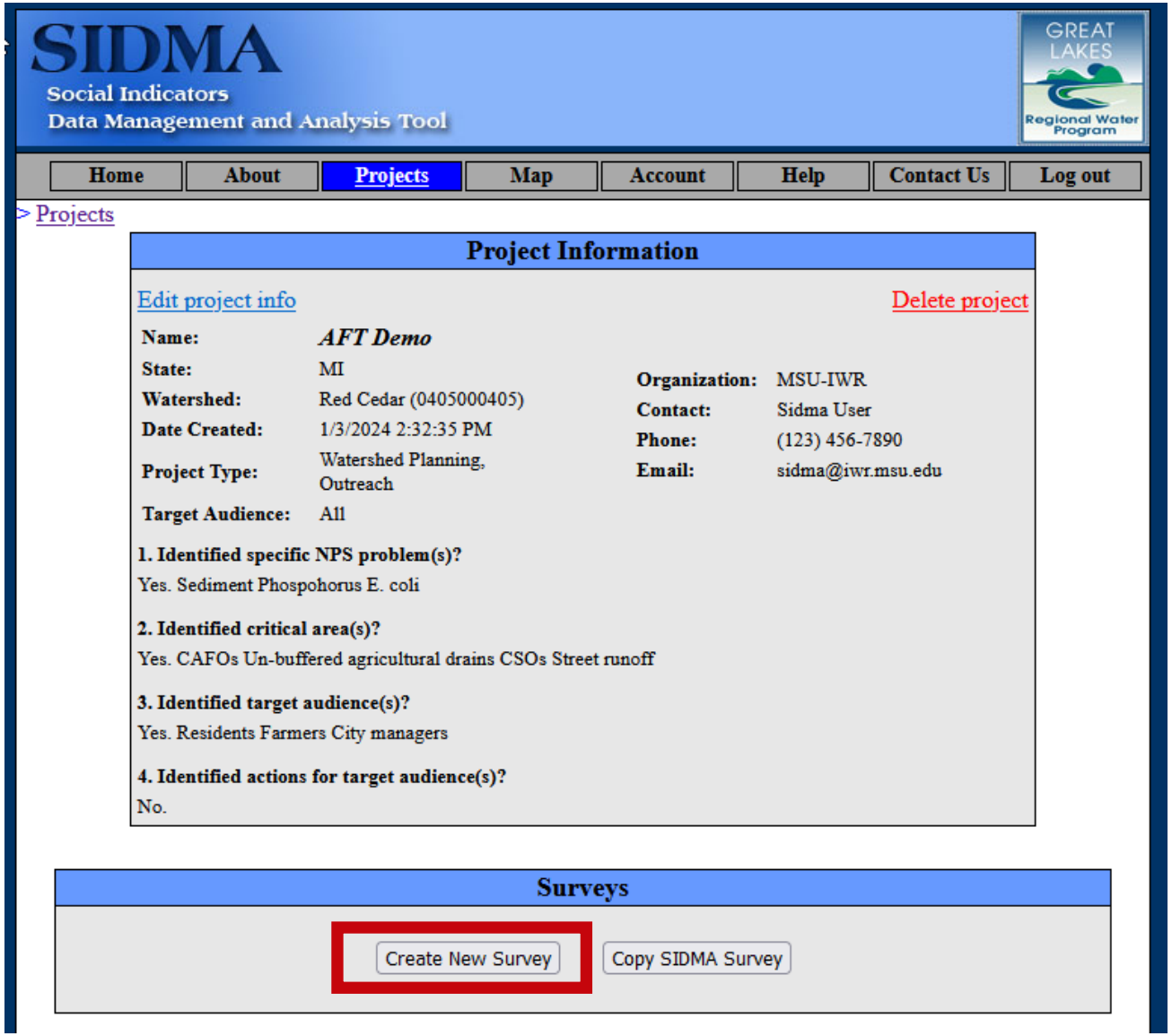




SIDMA Demo

Create a survey

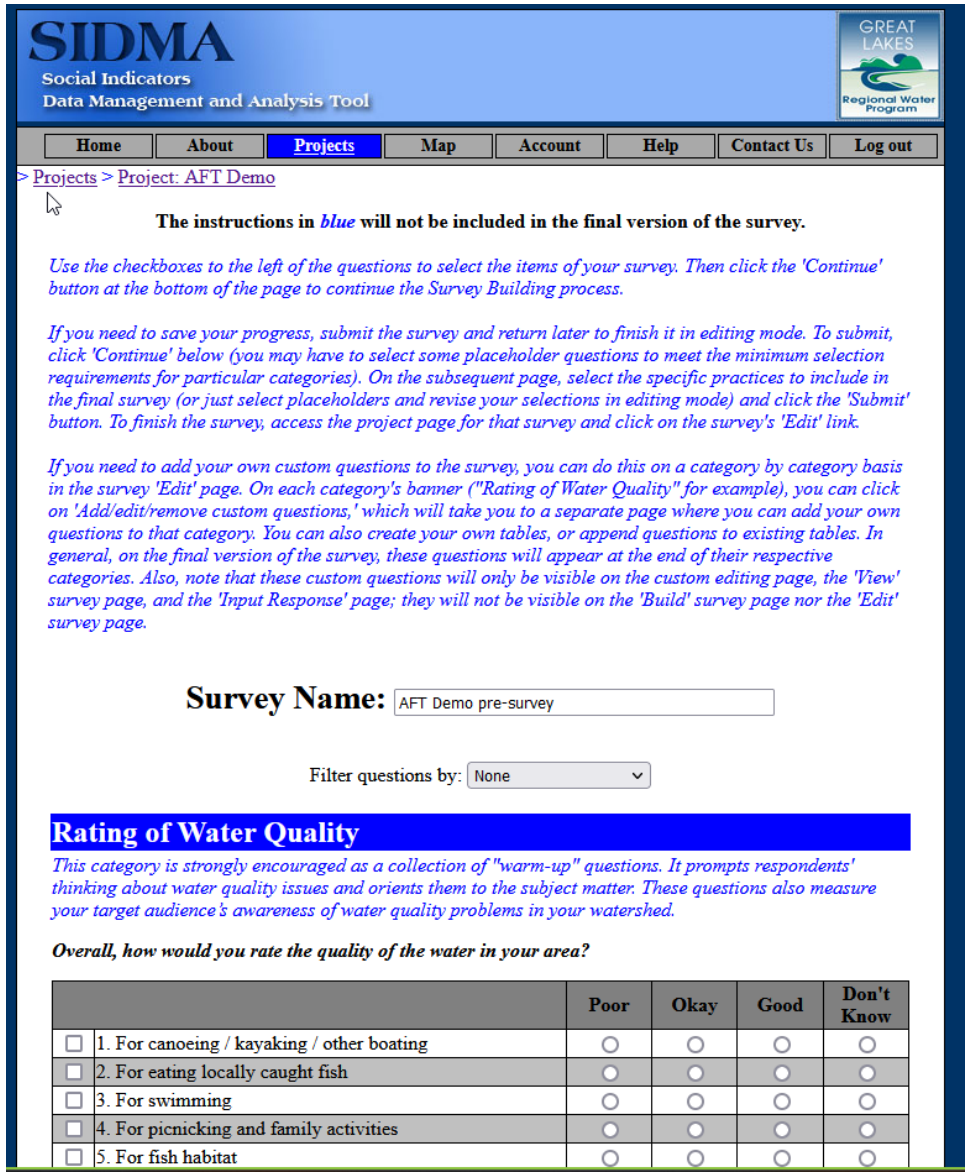
- Start on the new project's page
- Click *Create New Survey*



SIDMA Demo

Create a survey

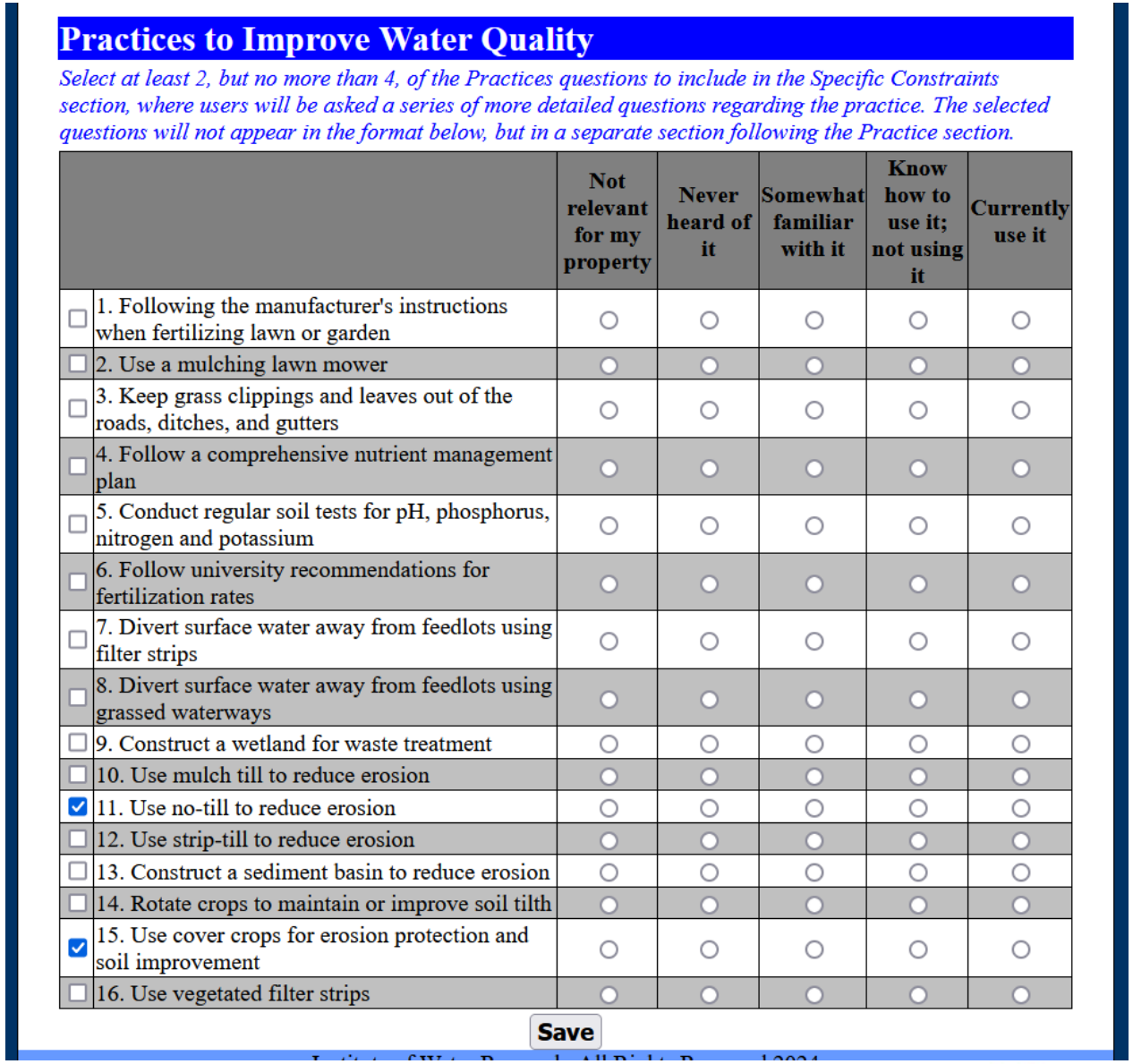
- Start on the new project's page
- Click *Create New Survey*
- Follow the blue italicized instructions and select the survey's questions (we'll add custom questions later)
- Click *Continue* at the bottom when done



SIDMA Demo

Create a survey

- Start on the new project's page
- Click *Create New Survey*
- Follow the blue italicized instructions and select the survey's questions (we'll add custom questions later)
- Click *Continue* at the bottom when done
- Select a subset of options from the *Practices to Improve Water Quality* section, which will get a more in-depth assessment in the final survey



Practices to Improve Water Quality

Select at least 2, but no more than 4, of the Practices questions to include in the Specific Constraints section, where users will be asked a series of more detailed questions regarding the practice. The selected questions will not appear in the format below, but in a separate section following the Practice section.

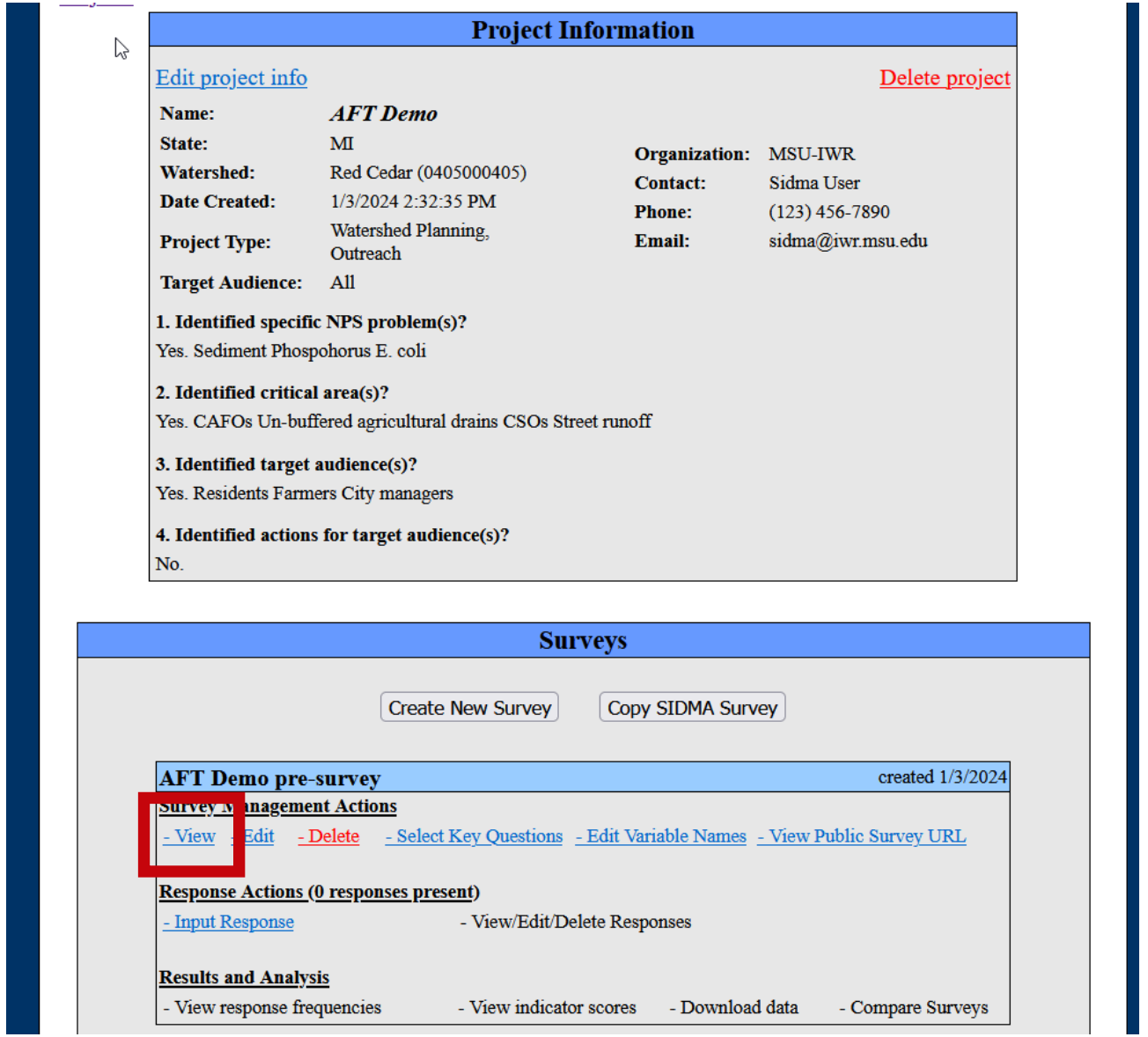
	Not relevant for my property	Never heard of it	Somewhat familiar with it	Know how to use it; not using it	Currently use it
☐ 1. Following the manufacturer's instructions when fertilizing lawn or garden	○	○	○	○	○
☐ 2. Use a mulching lawn mower	○	○	○	○	○
☐ 3. Keep grass clippings and leaves out of the roads, ditches, and gutters	○	○	○	○	○
☐ 4. Follow a comprehensive nutrient management plan	○	○	○	○	○
☐ 5. Conduct regular soil tests for pH, phosphorus, nitrogen and potassium	○	○	○	○	○
☐ 6. Follow university recommendations for fertilization rates	○	○	○	○	○
☐ 7. Divert surface water away from feedlots using filter strips	○	○	○	○	○
☐ 8. Divert surface water away from feedlots using grassed waterways	○	○	○	○	○
☐ 9. Construct a wetland for waste treatment	○	○	○	○	○
☐ 10. Use mulch till to reduce erosion	○	○	○	○	○
☑ 11. Use no-till to reduce erosion	○	○	○	○	○
☐ 12. Use strip-till to reduce erosion	○	○	○	○	○
☐ 13. Construct a sediment basin to reduce erosion	○	○	○	○	○
☐ 14. Rotate crops to maintain or improve soil tilth	○	○	○	○	○
☑ 15. Use cover crops for erosion protection and soil improvement	○	○	○	○	○
☐ 16. Use vegetated filter strips	○	○	○	○	○

Save

SIDMA Demo

View the survey

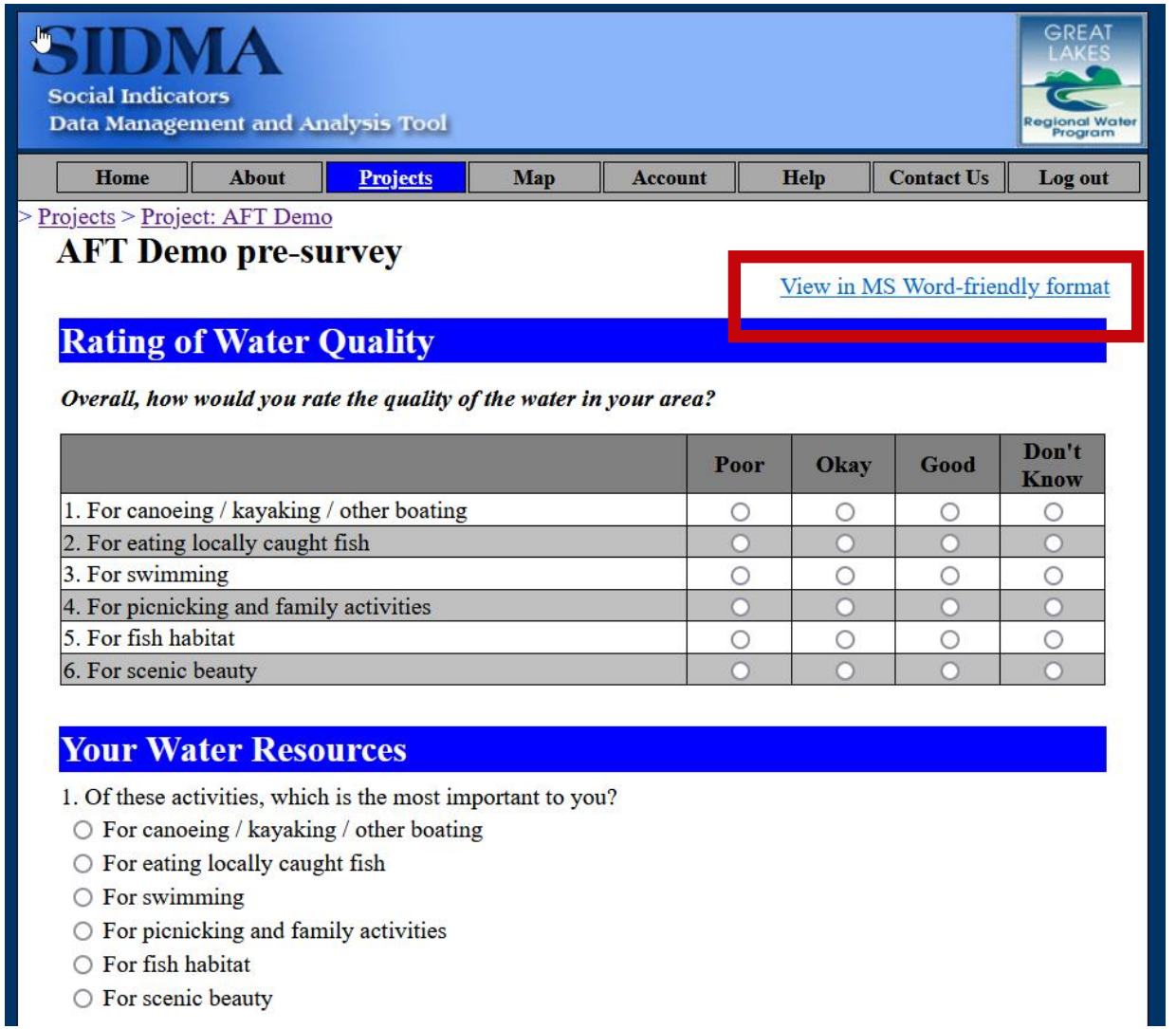
- Find the new survey on the project page
- Click *View*



SIDMA Demo

View the survey

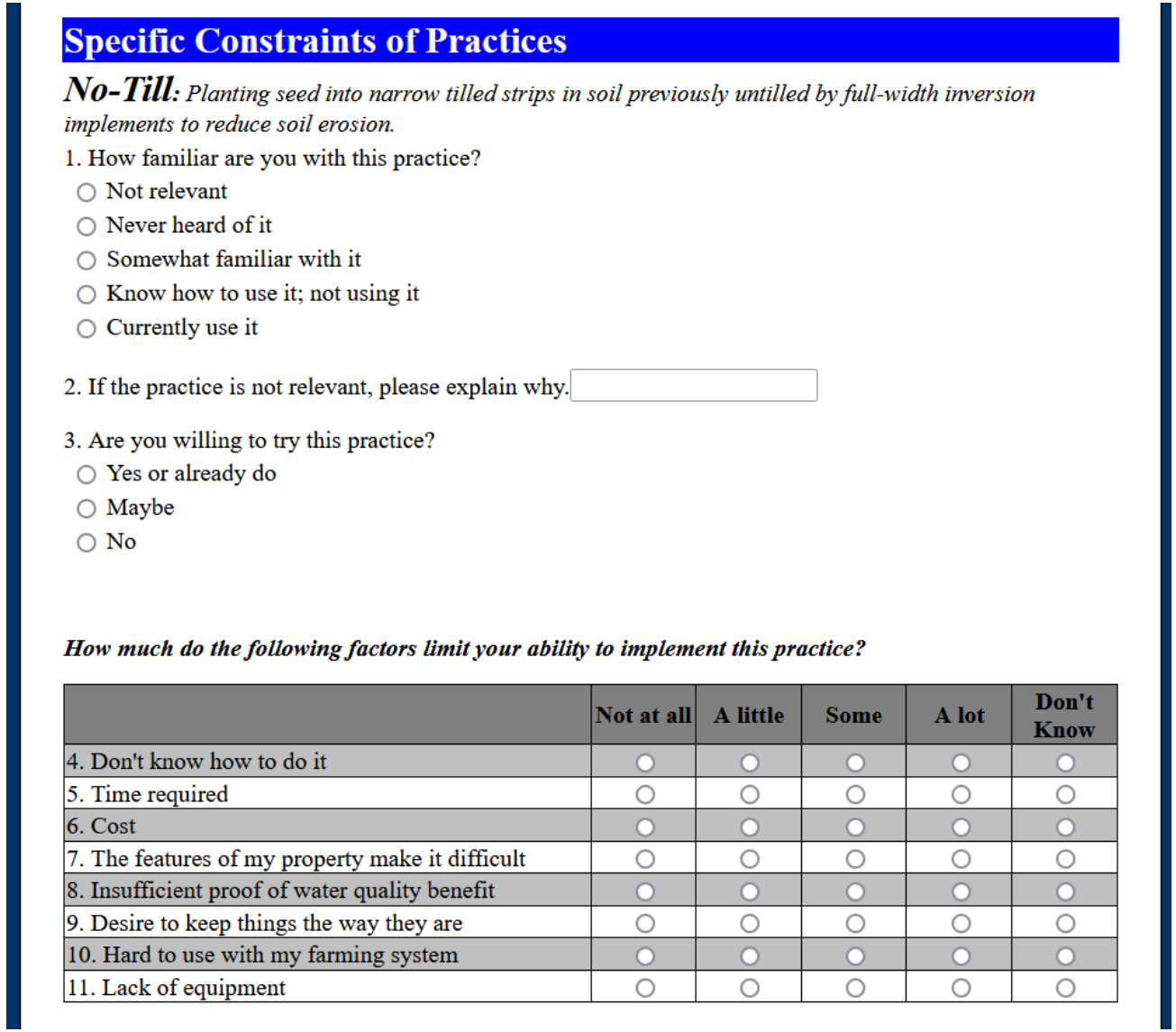
- Find the new survey on the project page
- Click *View*
- The selected questions are displayed
- If necessary, click the *View in MS Word Friendly* format link to access a page that can more easily be copied and pasted into a Word document



SIDMA Demo

View the survey

- Find the new survey on the project page
- Click *View*
- The selected questions are displayed
- If necessary, click the *View in MS Word friendly format* link to access a page that can more easily be copied and pasted into a Word document
- Note the *Specific Constraints of Practices* section
  - This is how the subset of options selected from *Practices to Improve Water Quality* are presented in more depth



Specific Constraints of Practices

No-Till: *Planting seed into narrow tilled strips in soil previously untilled by full-width inversion implements to reduce soil erosion.*

1. How familiar are you with this practice?
   - ○ Not relevant
   - ○ Never heard of it
   - ○ Somewhat familiar with it
   - ○ Know how to use it; not using it
   - ○ Currently use it

2. If the practice is not relevant, please explain why.

3. Are you willing to try this practice?
   - ○ Yes or already do
   - ○ Maybe
   - ○ No

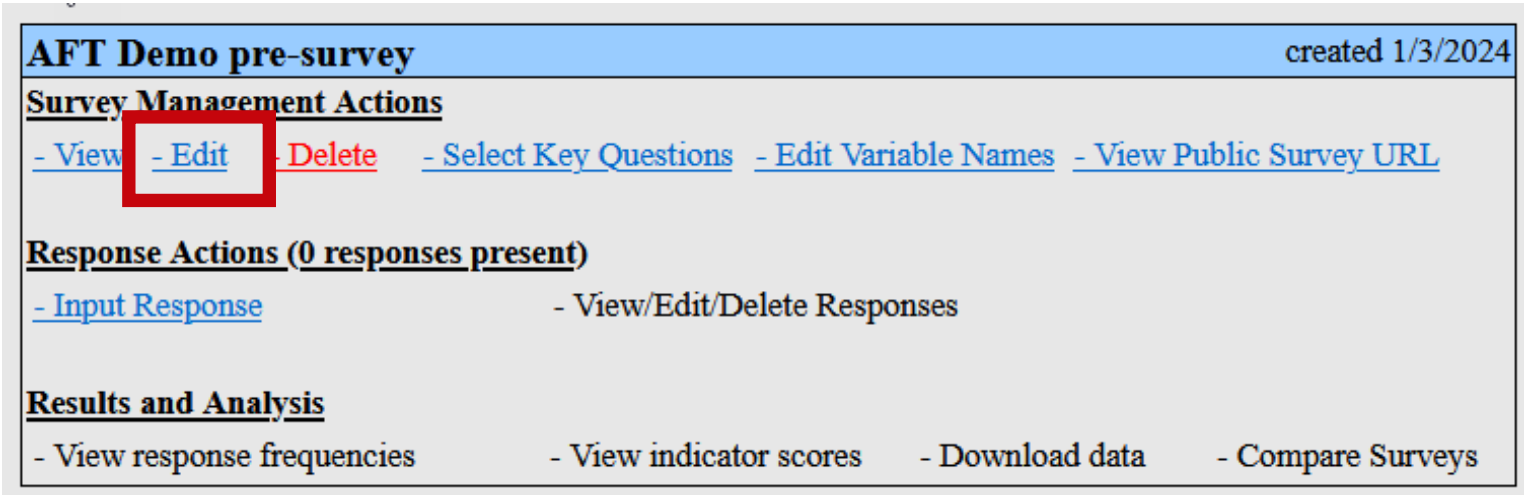
How much do the following factors limit your ability to implement this practice?

	Not at all	A little	Some	A lot	Don't Know
4. Don't know how to do it	○	○	○	○	○
5. Time required	○	○	○	○	○
6. Cost	○	○	○	○	○
7. The features of my property make it difficult	○	○	○	○	○
8. Insufficient proof of water quality benefit	○	○	○	○	○
9. Desire to keep things the way they are	○	○	○	○	○
10. Hard to use with my farming system	○	○	○	○	○
11. Lack of equipment	○	○	○	○	○

SIDMA Demo

Edit the survey

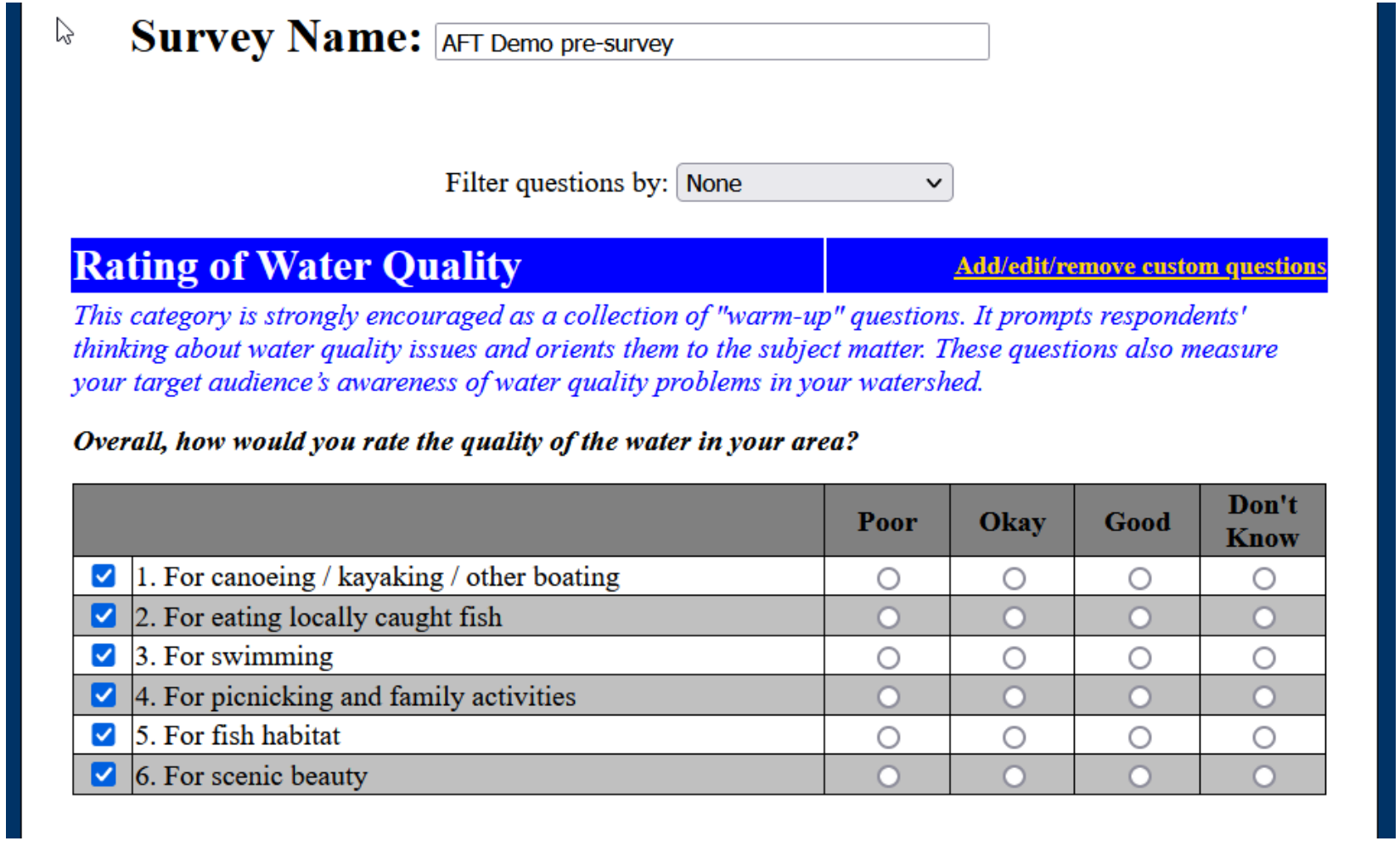
- Click *Edit* under the survey management actions



SIDMA Demo

Edit the survey

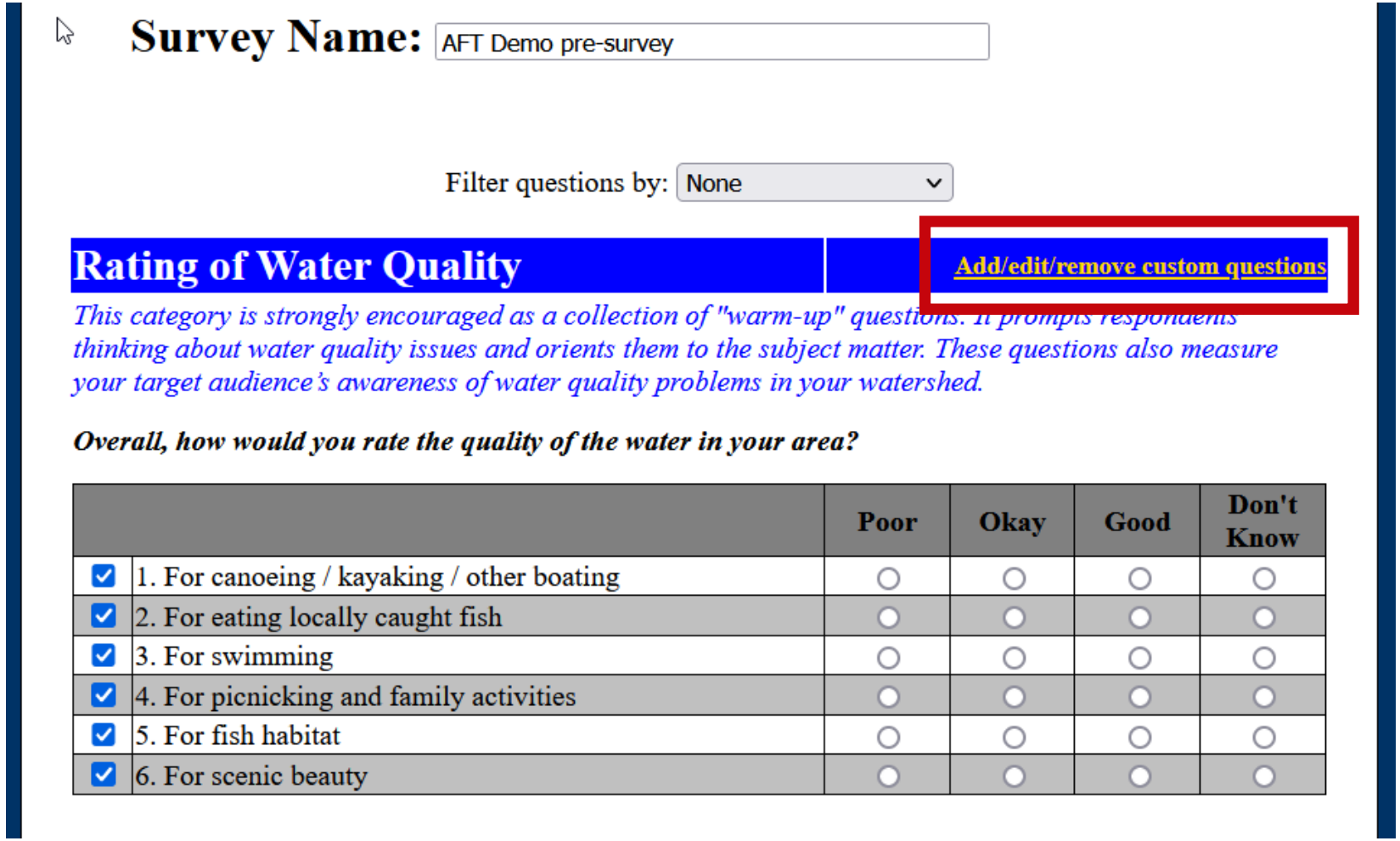
- Click *Edit* under the survey management actions
- As long no responses have been submitted, the survey can be edited



SIDMA Demo

Edit the survey

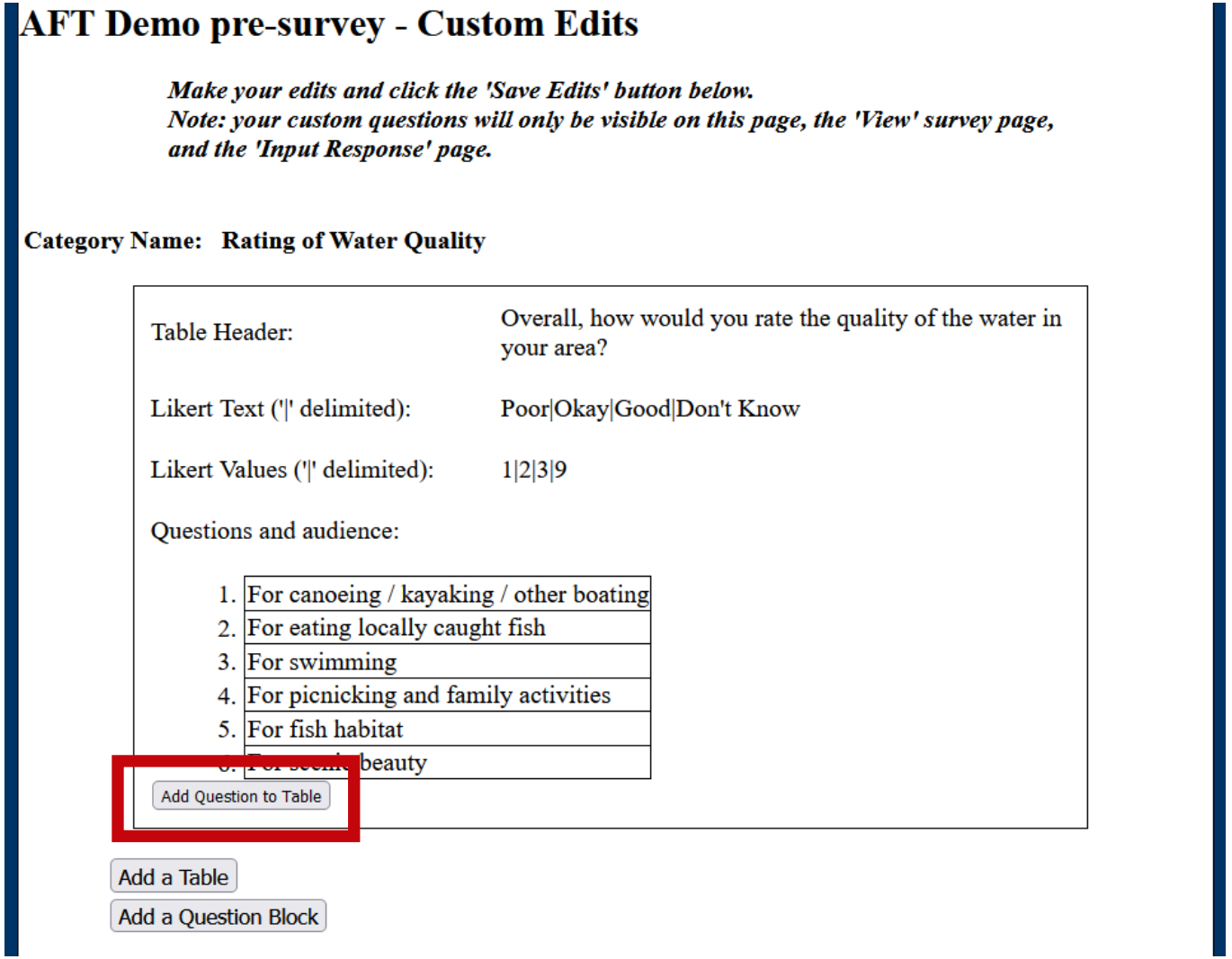
- Click *Edit* under the survey management actions
- As long no responses have been submitted, the survey can be edited
- Click the *Add/edit/remove custom questions* link to edit the questions in the relevant section further



SIDMA Demo

Custom questions

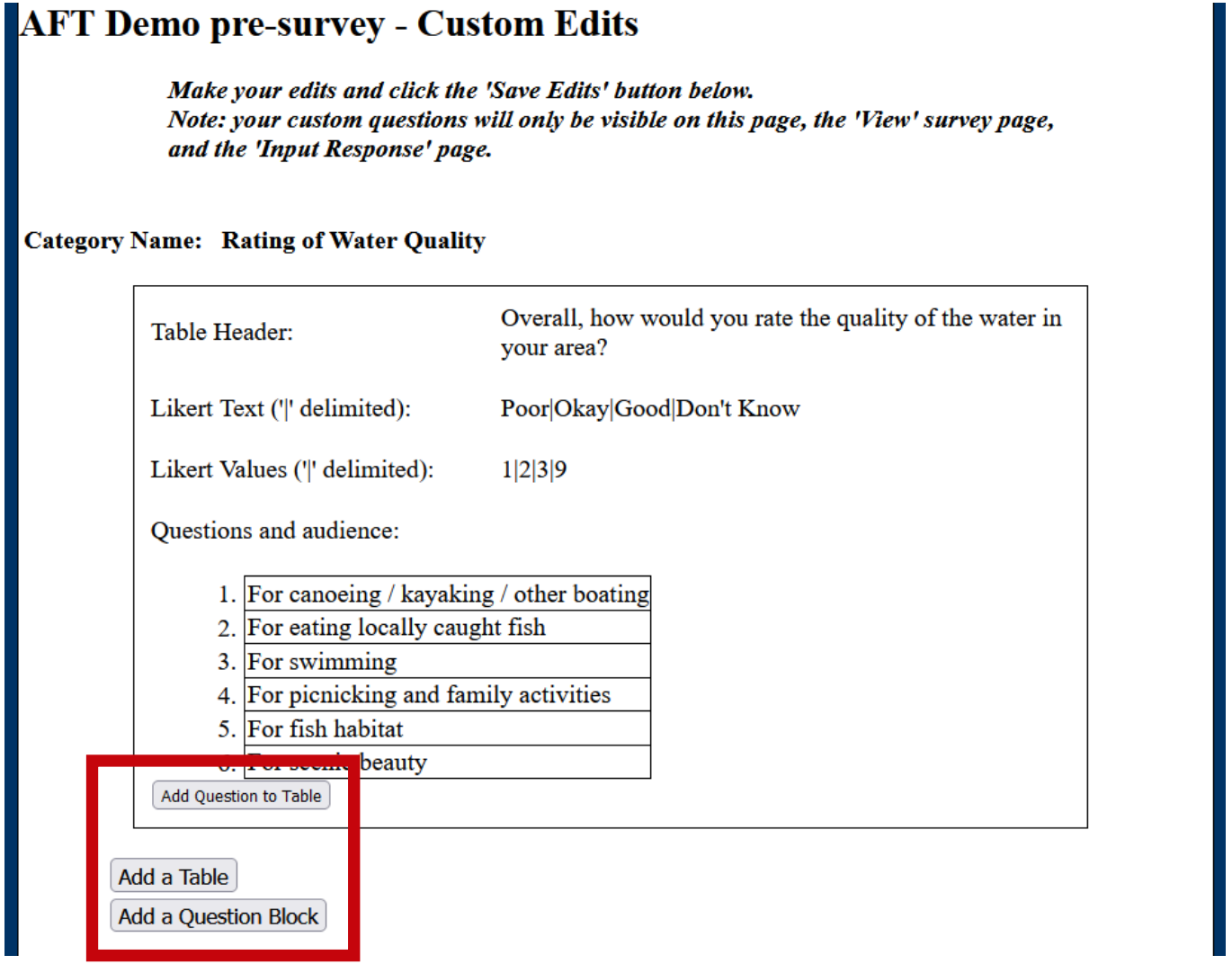
- Custom questions can be added one section (e.g. Rating of Water Quality) at a time
- Users can add a question to an existing table of questions



SIDMA Demo

Custom questions

- Custom questions can be added one section (e.g., Rating of Water Quality) at a time
- Users can add a question to an existing table of questions, add a new table, or a new block of direct questions (i.e., not organized into a table)



SIDMA Demo

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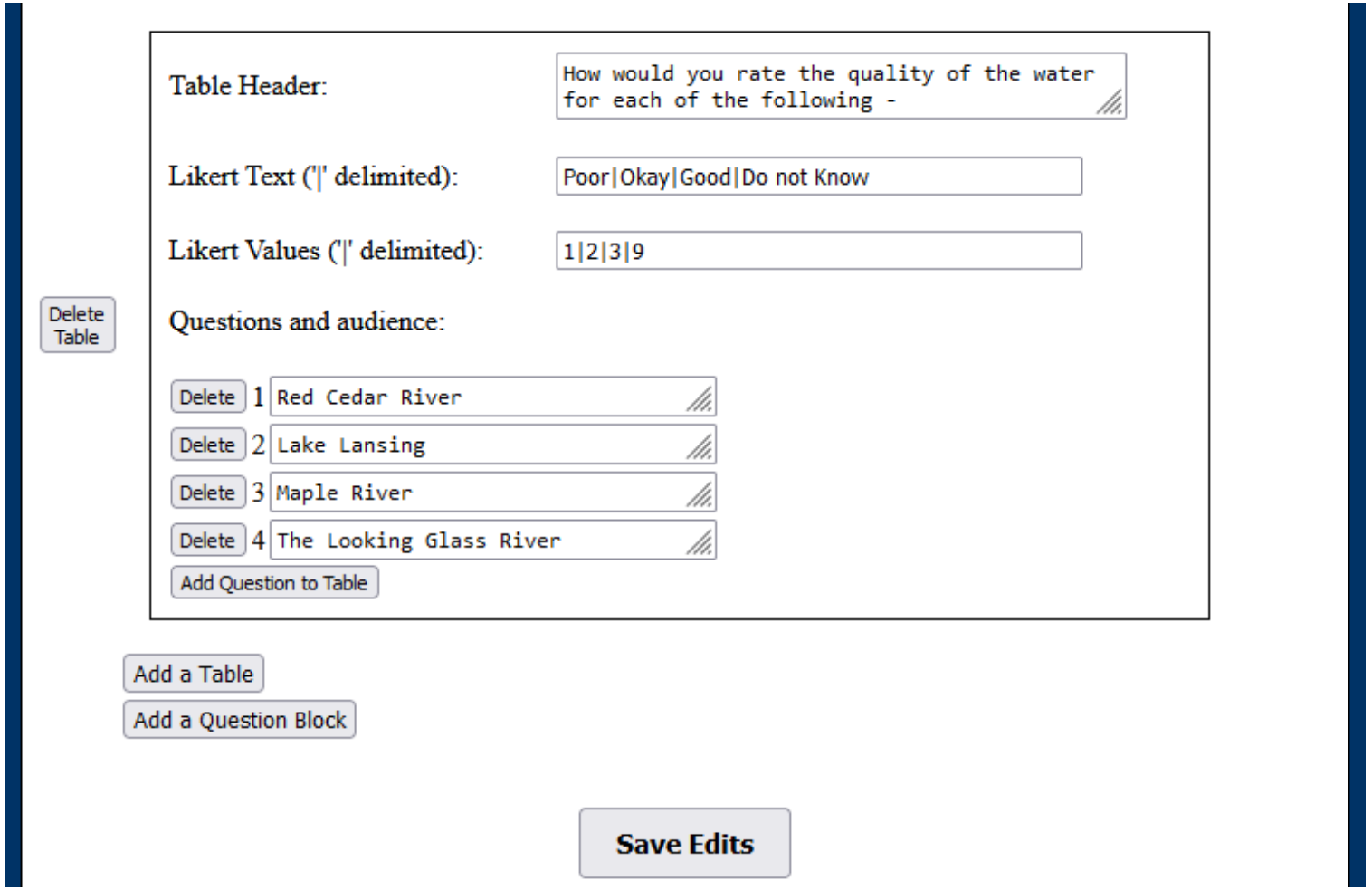
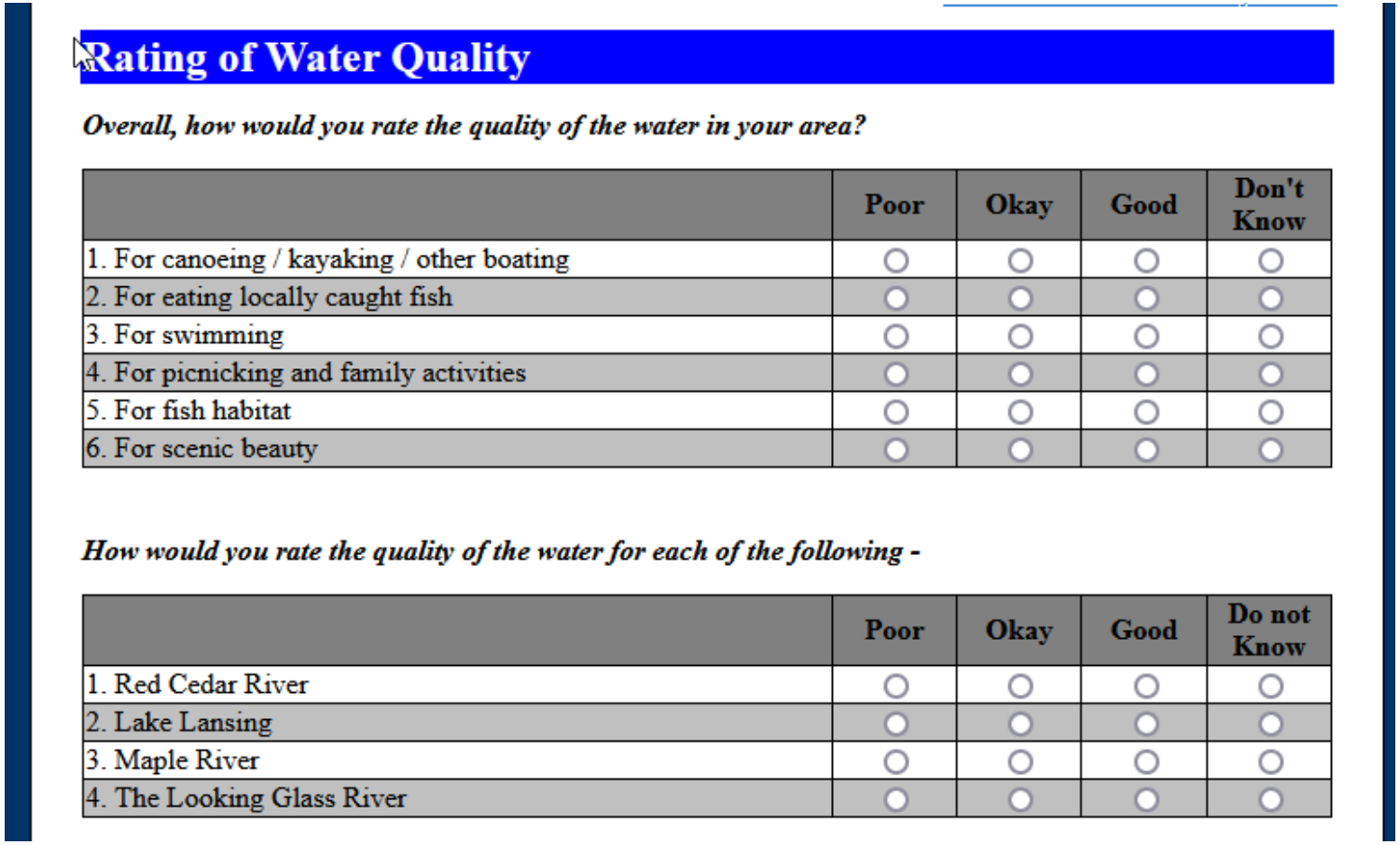


SIDMA Demo

Custom questions

- Custom questions can be added one section (e.g., Rating of Water Quality) at a time
- Users can add a question to an existing table of questions, add a new table, or a new block of direct questions (i.e., not organized into a table)
- Go back to the project page and click *View* under the survey management actions to see the newly added questions



Rating of Water Quality

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

	Poor	Okay	Good	Don't Know
1. For canoeing / kayaking / other boating	○	○	○	○
2. For eating locally caught fish	○	○	○	○
3. For swimming	○	○	○	○
4. For picnicking and family activities	○	○	○	○
5. For fish habitat	○	○	○	○
6. For scenic beauty	○	○	○	○

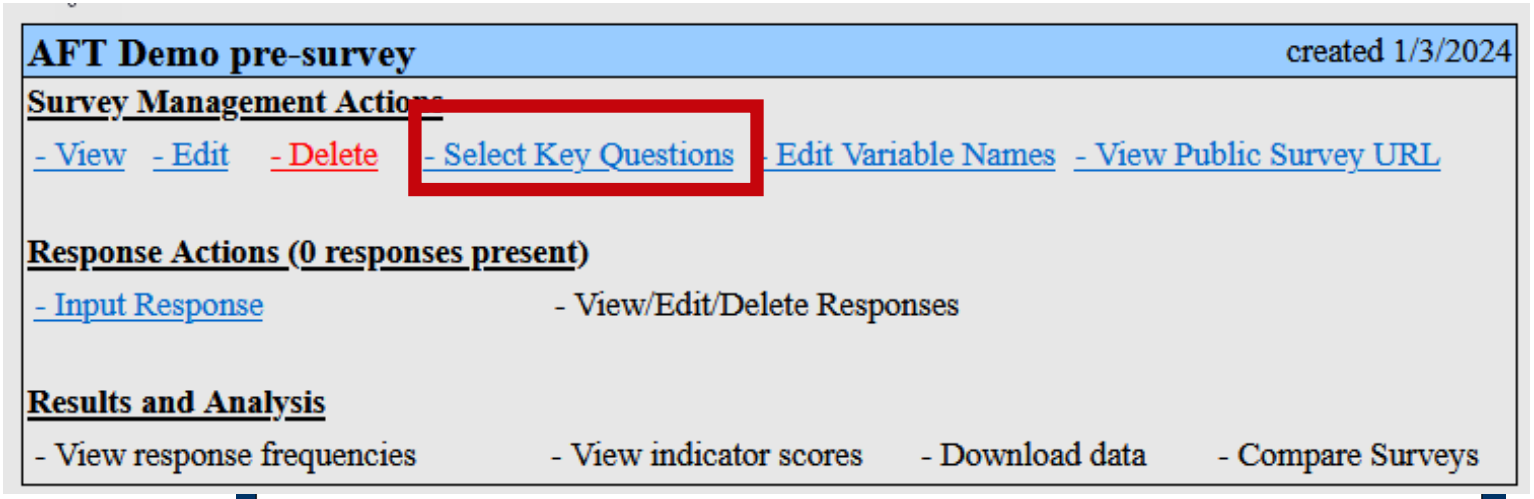
How would you rate the quality of the water for each of the following -

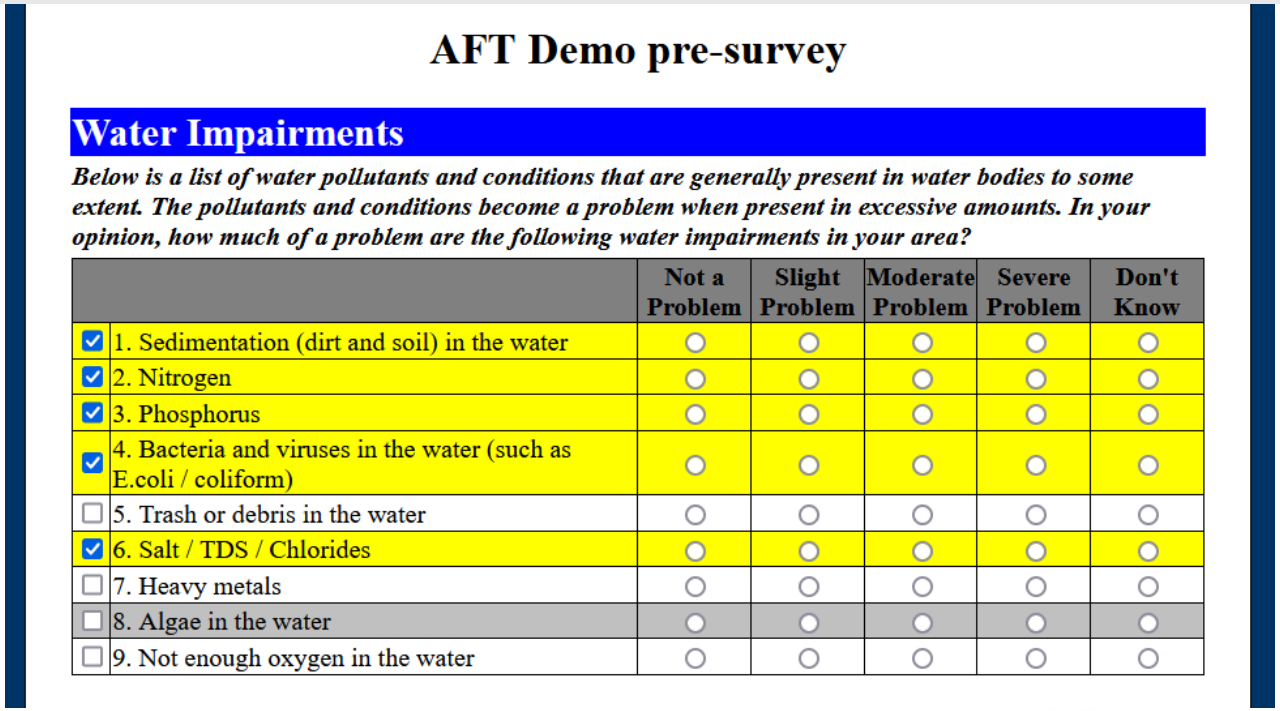
	Poor	Okay	Good	Do not Know
1. Red Cedar River	○	○	○	○
2. Lake Lansing	○	○	○	○
3. Maple River	○	○	○	○
4. The Looking Glass River	○	○	○	○

SIDMA Demo

Key questions

- Use the *Select Key Questions* option to define the most important questions in selected categories
- These selections are utilized in the indicator score calculations
- You can select all the applicable questions if desired

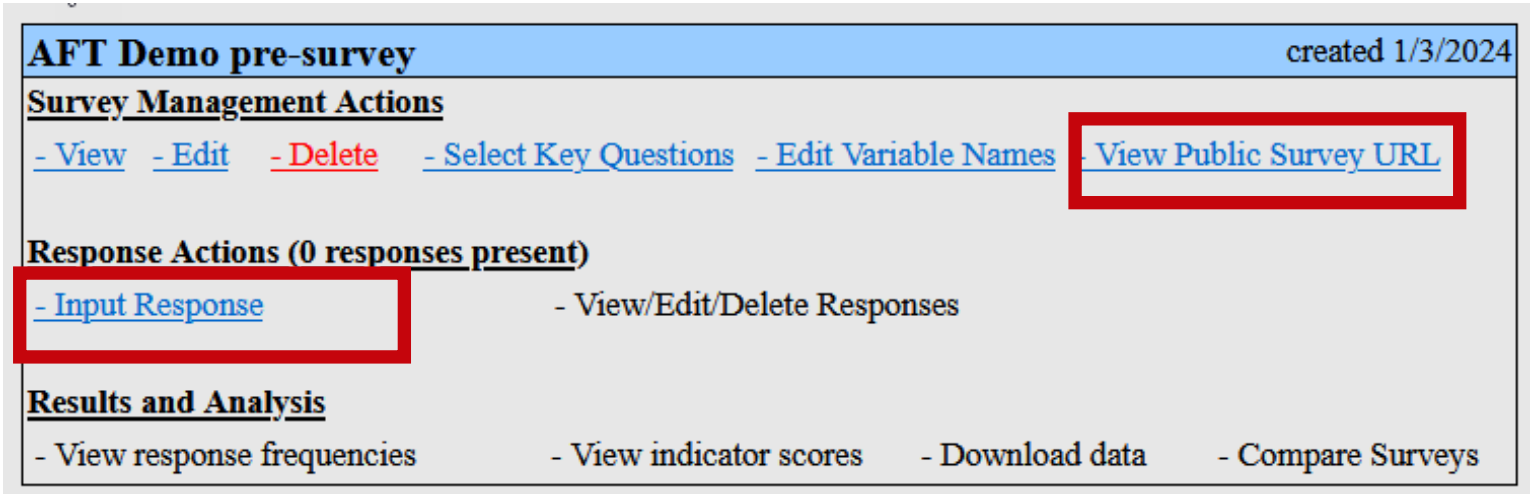


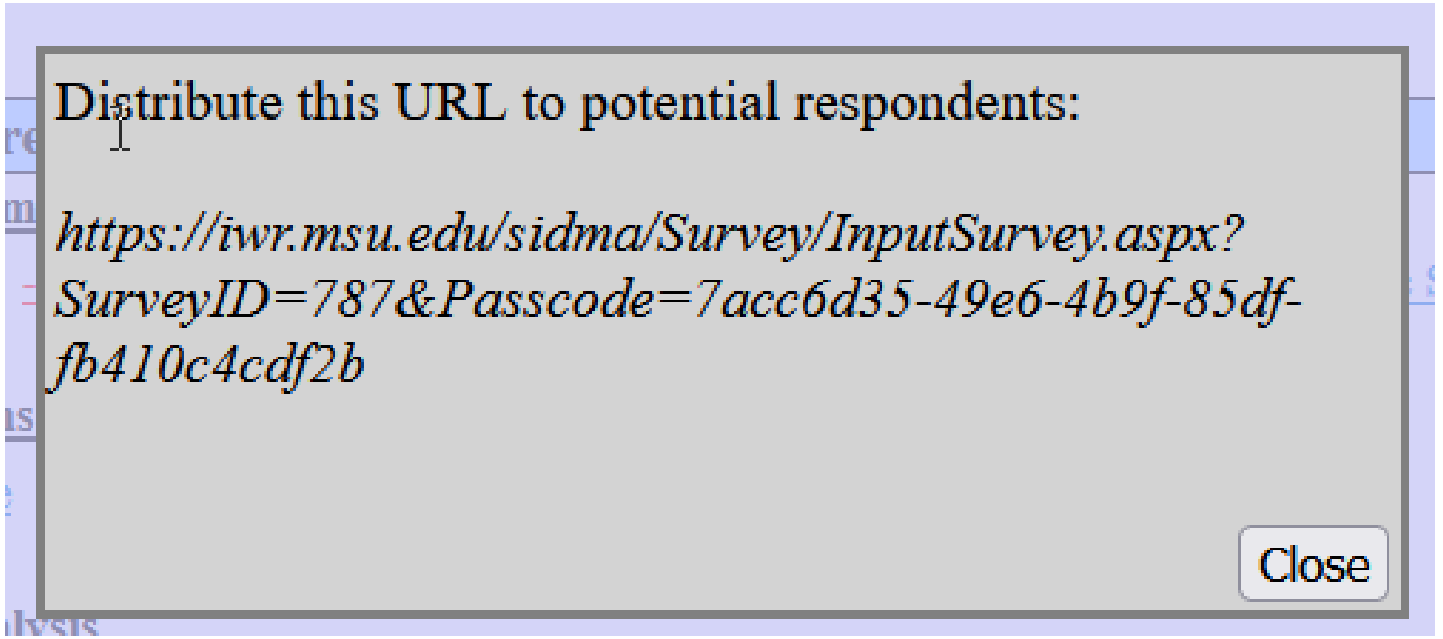


SIDMA Demo

Public survey URL

- If your survey will be distributed online, you can use the *View Public Survey URL* option to view a passcode protected option that limits spamming potential
- Alternatively, survey responses can be input manually with the *Input Response* option

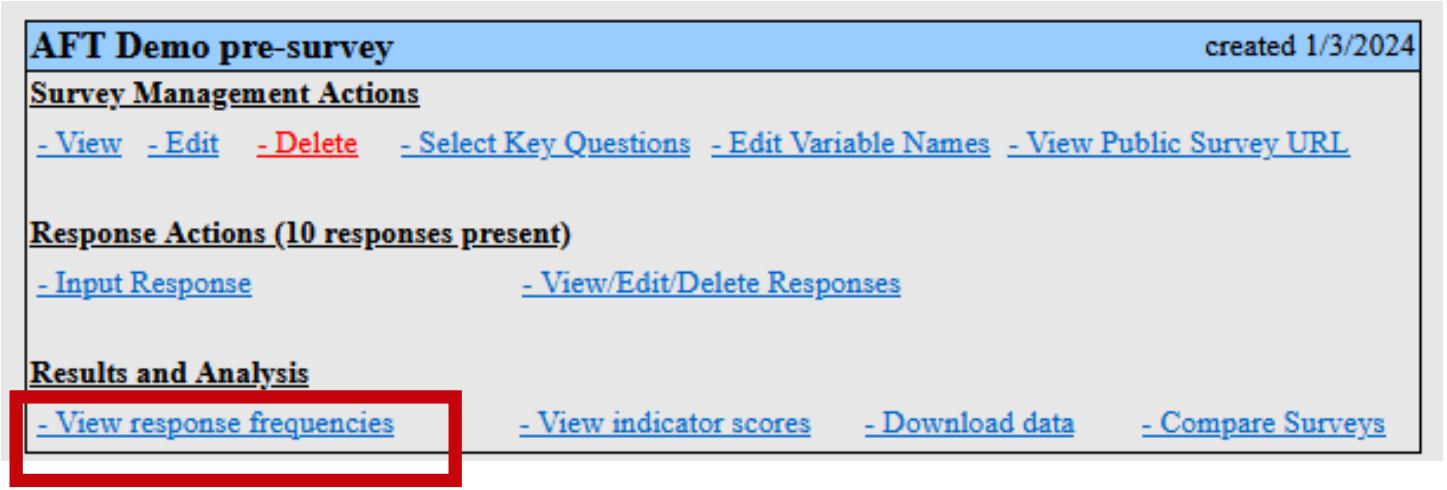




SIDMA Demo

View Response Data

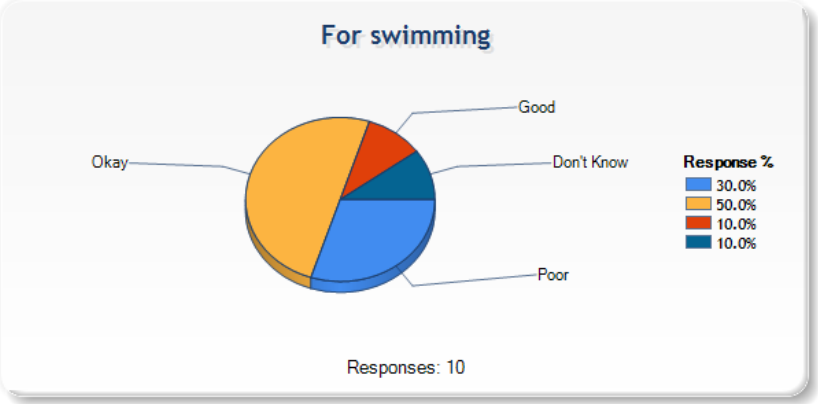
- When responses have been submitted, you can view frequency data



SIDMA Demo

View Response Data

- When responses have been submitted, you can view frequency data
- Tables can be sorted by clicking on arrows
- View graphs by clicking on question text



Survey Response Frequencies

Tabular results can be sorted by clicking on the appropriate arrow. Chart results can be viewed for each question by clicking on its text. The numeric values used in calculating mean and stadard deviations are presented in parentheses. 'Total Responses' refers to the number of users that provided an answer to a particular question. 'Valid Responses' refers to the number of users that provided a answer that was not "Don't Know" or "Not Relevant."

AFT Demo pre-survey

Rating of Water Quality

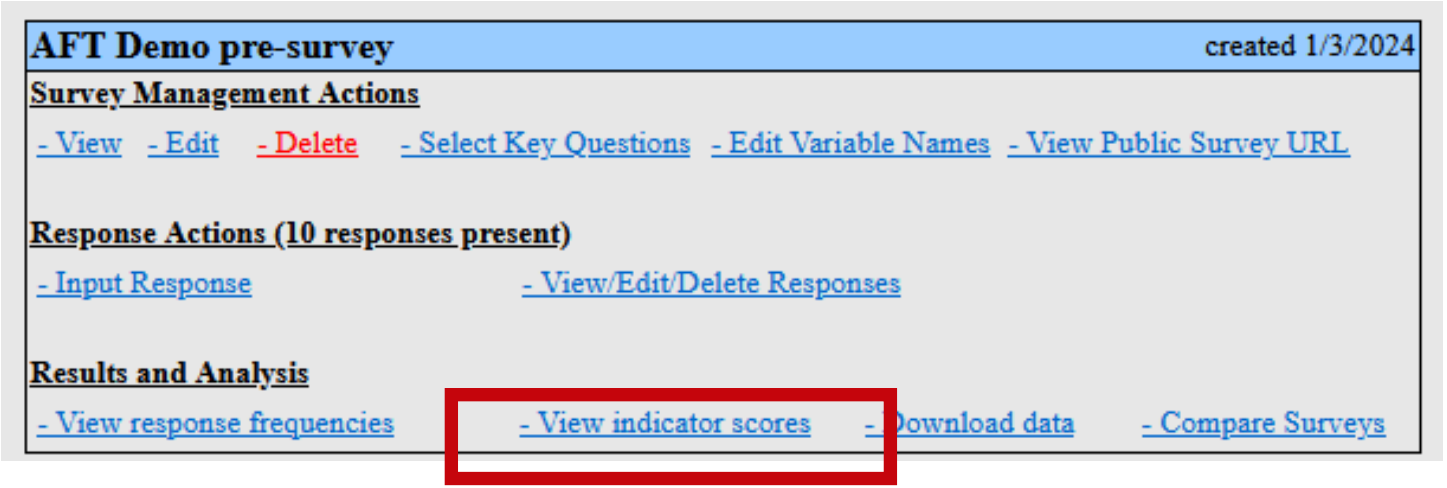
Overall, how would you rate the quality of the water in your area?

Question #	Poor (1)	Okay (2)	Good (3)	Don't Know (9)	Mean (SD)	Valid Responses / Total Responses
1. For canoeing / kayaking / other boating	20	40	40	0	2.2 (0.79)	10 / 10
2. For eating locally caught fish	30	50	20	0	1.9 (0.74)	10 / 10
3. For swimming	30	50	10	10	1.78 (0.67)	9 / 10
4. For picnicking and family activities	50	30	10	10	1.56 (0.73)	9 / 10
5. For fish habitat	50	20	20	10	1.67 (0.87)	9 / 10
6. For scenic beauty	50	20	30	0	1.8 (0.92)	10 / 10

SIDMA Demo

View Indicator Scores

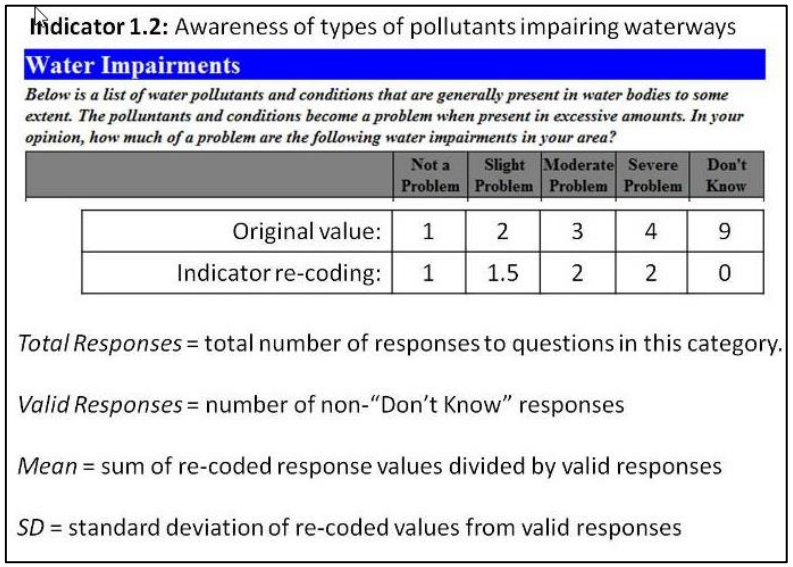
- When responses have been submitted and key questions identified, you can view indicator scores



SIDMA Demo

View Indicator Scores

- When responses have been submitted and key questions identified, you can view indicator scores
- Click on the indicator text to see how it was calculated



Indicator 1.2: Awareness of types of pollutants impairing waterways

Water Impairments

Below is a list of water pollutants and conditions that are generally present in water bodies to some extent. The polluntants and conditions become a problem when present in excessive amounts. In your opinion, how much of a problem are the following water impairments in your area?

	Not a Problem	Slight Problem	Moderate Problem	Severe Problem	Don't Know
Original value:	1	2	3	4	9
Indicator re-coding:	1	1.5	2	2	0

Total Responses = total number of responses to questions in this category.

Valid Responses = number of non-"Don't Know" responses

Mean = sum of re-coded response values divided by valid responses

SD = standard deviation of re-coded values from valid responses

Indicator Score Differences

The results below represent the scores (Mean) for the particular survey on various social indicators.

Click on the indicator name to see how that particular indicator is calculated.

"N/A" values are displayed when an indicator could not be calculated, either due to the survey lacking the questions that contribute to that indicator or because no responses are present for those questions.

Note: the Awareness indicators are only calculated only calculated on questions that have been identified as "Key Questions" by the user here.

AFT Demo pre-survey

AWARENESS

Ind. #	Indicator	Mean	SD	Valid Responses	Total Responses	View Graph
1.1	Awareness of consequences of pollutants to water quality	1.39	0.39	76	80	Bar graph
1.2	Awareness of types of pollutants impairing waterways (value range 1-2, less aware - more aware)	1.38	0.43	49	50	Bar graph
1.3	Awareness of sources of pollutants impairing waterways (value range 1-2, less aware - more aware)	1.4	0.41	101	109	Bar graph
1.4	Awareness of appropriate practices to improve water quality (value range 1-2, less aware - more aware)	1.39	0.41	147	159	Bar graph

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)	2.07	1.23	90	90	Bar graph
2.2	Willingness to take action to improve water quality (value range 1-2, less positive - more positive)	1.25	0.41	20	20	Bar graph

SIDMA Demo

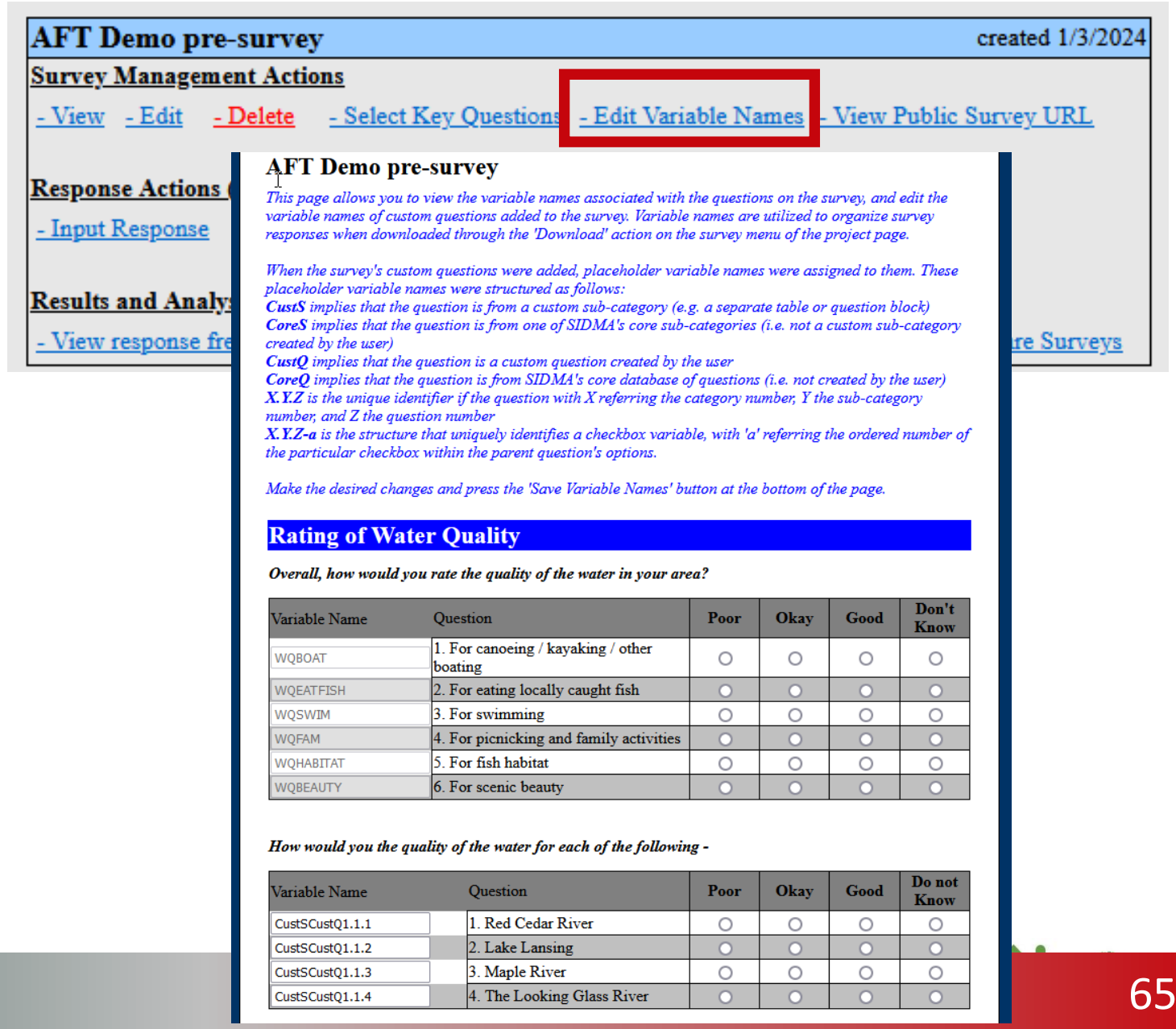
Download Data

- When responses have been submitted, you can download the data for offline analysis

SIDMA Demo

Download Data

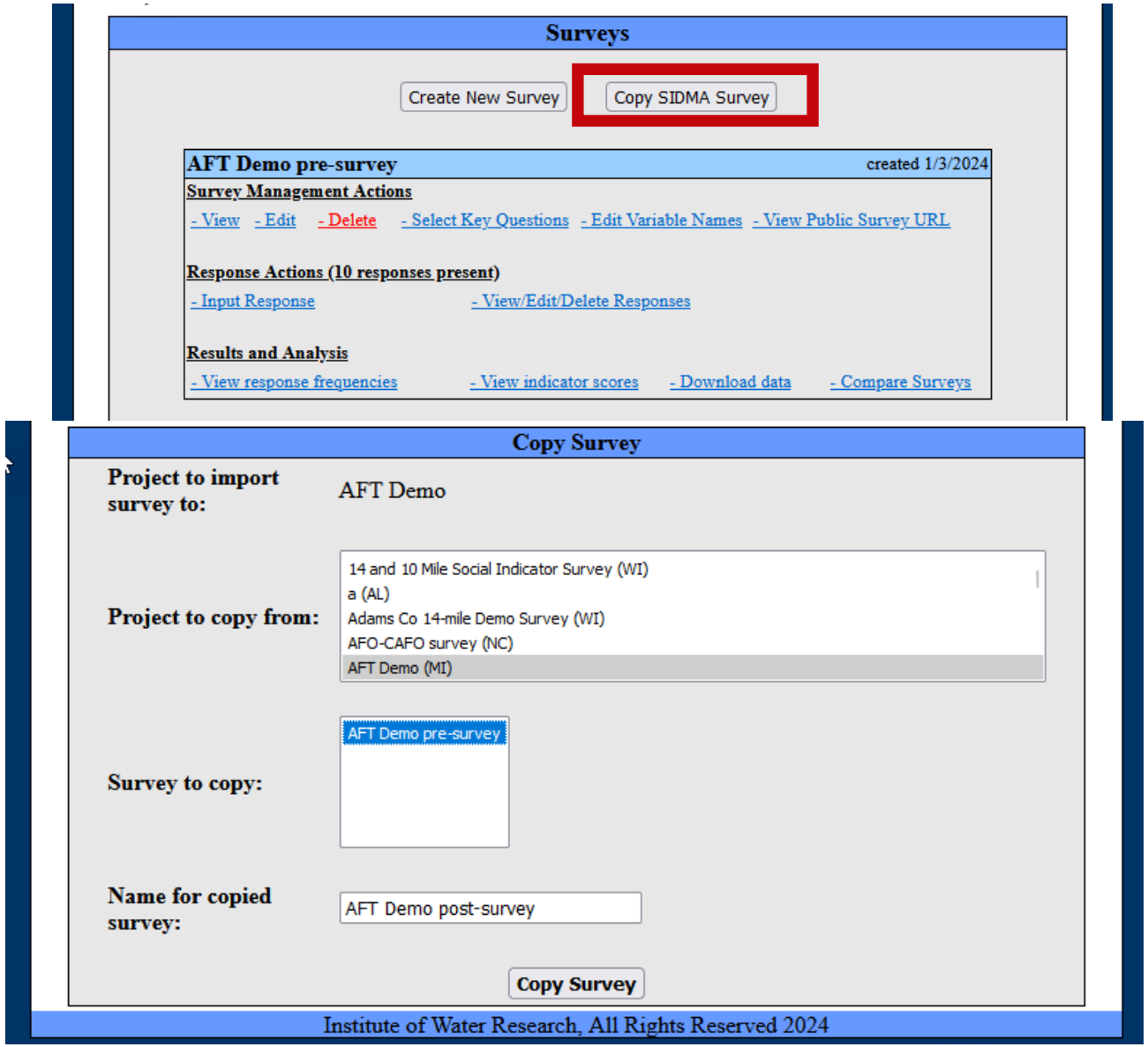
- When responses have been submitted, you can download the data for offline analysis
- The variable names can be viewed and edited by clicking on the *Edit Variable Names* option



SIDMA Demo

Set up a post survey

- After an outreach/implementation project is complete, use the *Copy SIDMA Survey* button to create a post survey
- You can copy a survey from any SIDMA project
- Useful approach for creating template survey utilized in multiple projects



SIDMA Demo

Set up a post survey

- After an outreach/implementation project is complete, use the *Copy SIDMA Survey* button to create a post survey
- You can copy a survey from any SIDMA project
- Useful approach for creating a template survey utilized in multiple projects
- Copies selected questions, custom questions, key question selections, and variable names, but not responses

SIDMA Demo

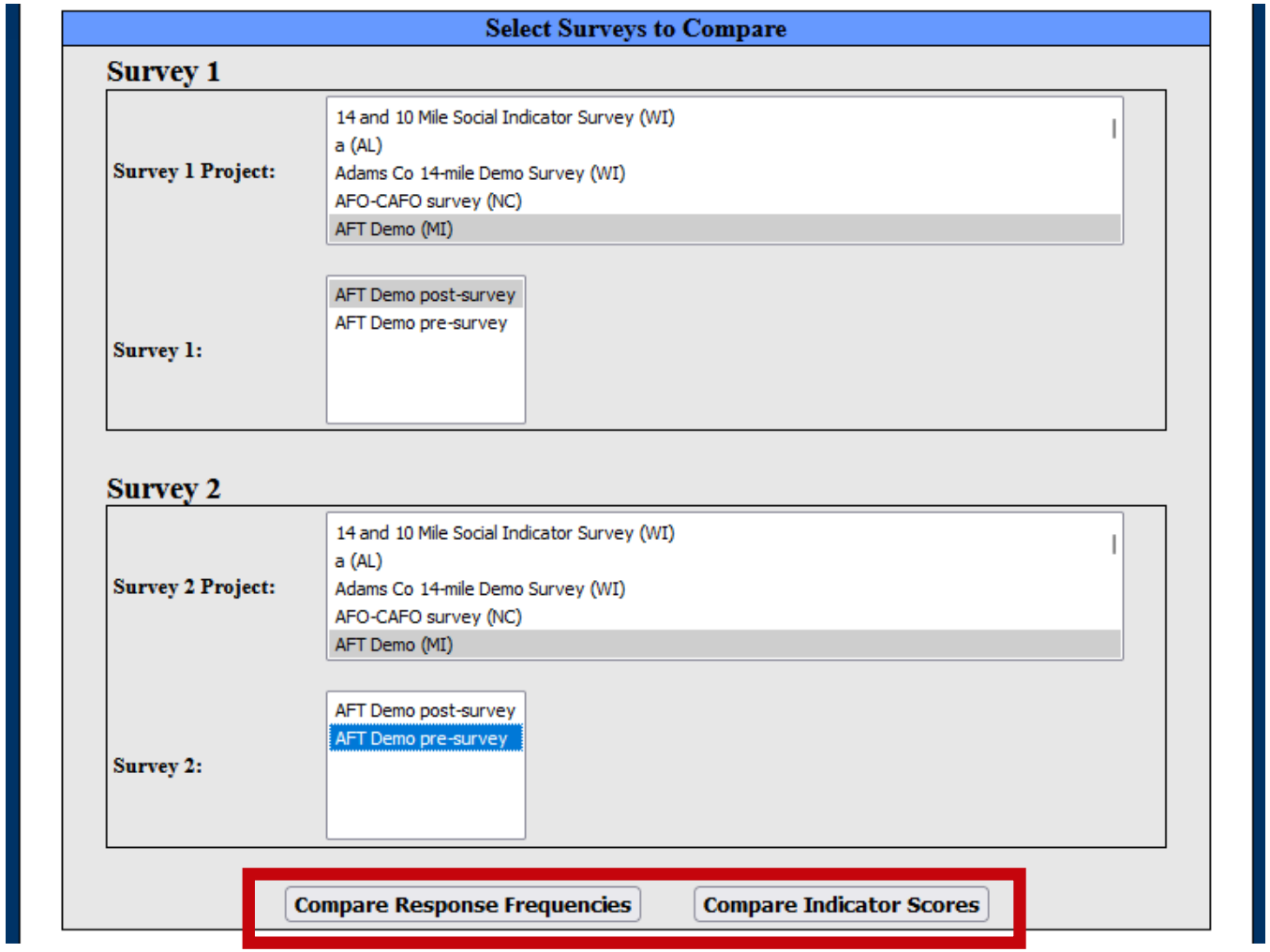
Compare surveys

- After post survey responses are recorded, response frequencies and indicator scores can be compared

SIDMA Demo

Compare surveys

- After post survey responses are recorded, response frequencies and indicator scores can be compared



SIDMA Demo

Compare surveys

- After post survey responses are recorded, response frequencies and indicator scores can be compared
- In this example, positive values reflect higher scores on the post survey

Survey Response Differences

The results below represent the differences in response frequencies and statistics on questions common to the two surveys. They were calculated by subtracting the frequency percentage or statistic from AFT Demo pre-survey from the corresponding value in AFT Demo post-survey. For example, a negative frequency percentage means that more respondents selected the particular option on AFT Demo pre-survey than on AFT Demo post-survey. Conversely, a positive value for Total Response Count means that, for a particular question, more respondents provided an answer on AFT Demo post-survey than on AFT Demo pre-survey.

Tabular results can be sorted by clicking on the appropriate arrow. Charts of difference can be viewed for select questions by clicking on its text. The numeric values used in calculating mean and stadard deviations are presented in parentheses. 'Total Responses' refers to the number of users that provided an answer to a particular question. 'Valid Responses' refers to the number of users that provided a answer that was not "Don't Know" or "Not Relevant."

(AFT Demo post-survey) - (AFT Demo pre-survey)

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	-20	-20	30	10	0.6 (-0.34)	-2 / 0
2. For eating locally caught fish	-30	-10	40	N/A	0.7 (-0.22)	0 / 0
3. For swimming	-20	-20	50	-10	0.7 (0.04)	2 / 0
4. For picnicking and family activities	-40	-20	60	0	1.1 (-0.01)	0 / 0
5. For fish habitat	-50	10	50	-10	1 (-0.37)	2 / 0
6. For scenic beauty	-40	-10	30	20	0.8 (-0.17)	-4 / 0

SIDMA Demo

Compare surveys

- After post survey responses are recorded, response frequencies and indicator scores can be compared
- In this example, positive values reflect higher scores on the post survey
- Statistical significance is calculated for indicator scores

Indicator Score Differences

The results below represent the differences in indicator scores and other statistics between the two surveys. They were calculated by subtracting the indicator score or statistic from AFT Demo pre-survey from the corresponding value in AFT Demo post-survey. For example, a negative Mean value for an Awareness indicator means that respondents to AFT Demo pre-survey exhibited more awareness (as measured by SIDMA) on the particular indicator than on AFT Demo post-survey. Conversely, a positive value for Total Response Count means that, for a particular indicator, more respondents of AFT Demo post-survey provided an answer to the questions that contribute to that indicator than on AFT Demo pre-survey.

The reporting of statistical significance is only applicable if the two surveys are independent of one another (i.e. randomly sampled).

Click on the indicator name to see how that particular indicator is calculated.

(AFT Demo post-survey) - (AFT Demo pre-survey)

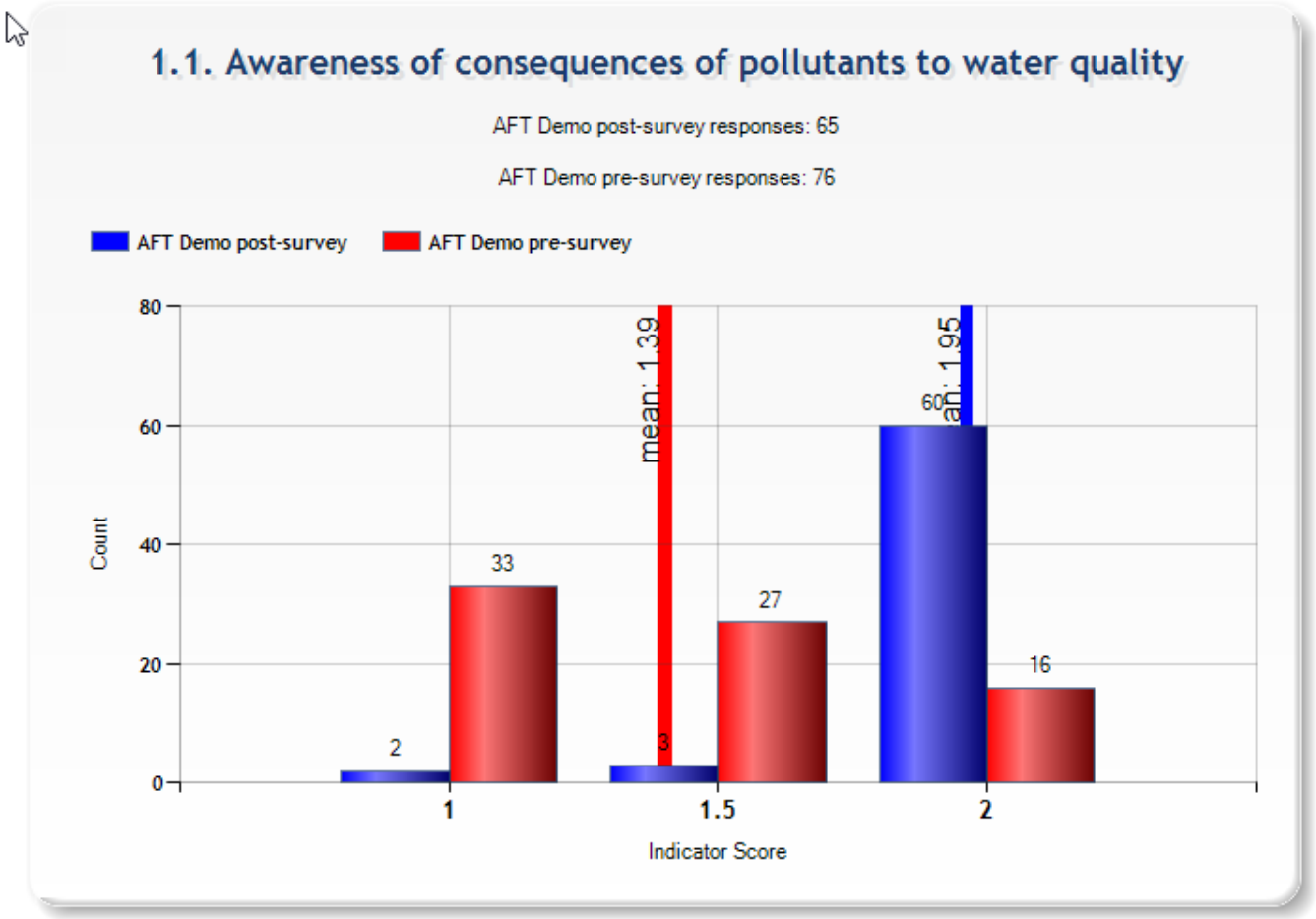
AWARENESS

Ind. #	Indicator	Mean	SD	Valid Responses	Total Responses	Statistically Significant
1.1	Awareness of consequences of pollutants to water quality (value range -1 to 1: more awareness on AFT Demo pre-survey to more awareness on AFT Demo post-survey)	0.56	-0.19	-11	-8	Yes view results
1.2	Awareness of types of pollutants impairing waterways (value range -1 to 1: more awareness on AFT Demo pre-survey to more awareness on AFT Demo post-survey)	0.51	-0.15	-7		Yes view results
1.3	Awareness of sources of pollutants impairing waterways (value range -1 to 1: more awareness on AFT Demo pre-survey to more awareness on AFT Demo post-survey)	0.53	-0.18	-6	1	Yes view results
1.4	Awareness of appropriate practices to improve water quality (value range -1 to 1: more awareness on AFT Demo pre-survey to more awareness on AFT Demo post-survey)	0.50	-0.13	10	1	Yes view results

SIDMA Demo

Compare surveys

- After post survey responses are recorded, response frequencies and indicator scores can be compared
- In this example, positive values reflect higher scores on the post survey
- Statistical significance is calculated for indicator scores



Indicator scores on *AFT Demo post-survey* were significantly higher ($M = 1.95$, $SD = 0.2$) than scores on *AFT Demo pre-survey* ($M = 1.39$, $SD = 0.39$), $t(113) = 10.8722$, $p = <0.001$.

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

Calculation of t used a two-tailed test and an un-pooled variance, $F(75, 64) = 3.8025$, $p = <0.001$.

Contact Us

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For questions about **SIDMA**

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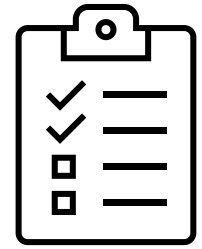
Thank you to AFT for the opportunity to share SIPES and SIDMA through their Outcomes Estimation Tools Training Webinar Series

Snapshot

Snap Shot of Features	SIPES/SIDMA
Scale & level of specificity	**Watersheds:** 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	**Measures of progress towards improving awareness attitudes, capacity, and behaviors regarding water quality improvement:** SIDMA helps users utilize the SIPES method to evaluate whether planning and outreach activities improve social indicators of water quality improvement.
Conservation practices	**Many:** 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	**All land uses**: SIDMA's questions database includes items tailored for both agricultural and urban settings.
States & territories	**Anywhere:** 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	**Variable:** 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	**SIDMA Upgrades**: By the end of 2024: modernizing the front end, survey import/export functions, backend updates.

Next steps in our outcomes estimation journey

- ❑ Join February 7 for the FAST-GHG webinar
- ❑ Fill out the 8-question (2-min) online evaluation survey
- ❑ Schedule a free “coaching” session with us
  - ❑ **Email atappross@farmland.org, RE: Coaching Request**
- ❑ Order a free print copy of the OET Guide
  - ❑ Keyword: “AFT outcomes tools”



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Aysha

American Farmland Trust