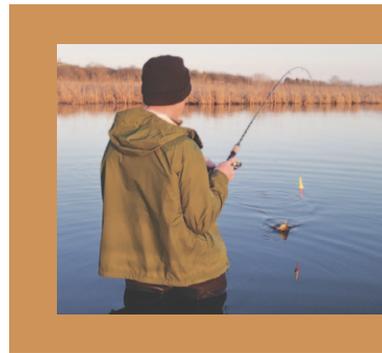


The Social Indicator Planning & Evaluation System (SIPES) for Nonpoint Source Management



A Handbook for Watershed Projects



Project Leaders:
Ken Genskow and
Linda Prokopy

Third Edition
December 2011

The Social Indicator Planning & Evaluation System (SIPES) for Nonpoint Source Management



ACKNOWLEDGMENTS

This Handbook was developed by the Great Lakes Regional Social Indicators Team with collaboration from US EPA Region 5, state water quality agencies, and numerous stakeholders in Region 5.

The six states in US EPA Region 5 are Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin. These states also constitute the Great Lakes Region for the USDA National Institute of Food and Agriculture (NIFA) National Water Program. This project has been supported by US EPA Region 5, the Great Lakes Regional Water Program, the state water quality agencies in Region 5, and the region's land grant universities.

The Handbook was edited by Ken Genskow and Linda Prokopy.

Participants in the Social Indicators team have included university faculty, staff, and graduate students at University of Illinois, Purdue University, Michigan State University, University of Minnesota, The Ohio State University, and University of Wisconsin. Participants are listed here with their current affiliations: Ken Genskow, Ph.D., Co-Leader, University of Wisconsin-Madison; Linda Prokopy, Ph.D., Co-Leader, Purdue University; Shorna B. Allred, Ph.D., Cornell University; Jeremiah Asher, Michigan State University; Adam Baumgart-Getz, Ph.D., USGS; Joe Bonnell, Ph.D., The Ohio State University; Karlyn Eckman, Ph.D., University of Minnesota; Kristin Floress Ph.D., University of Wisconsin-Stevens Point; Jerry Long, Ph.D., University of Idaho; Karyn McDermaid, formerly of University of Illinois-Urbana Champaign; Alicia Molloy, formerly of Purdue University; Glenn O'Neill, Michigan State University; Rebecca Power, University of Wisconsin-Extension; Cindy Salazar, Purdue University, Bob Smail, University of Wisconsin-Madison; Mark Stevens, Ph.D.; formerly of University of Wisconsin-Madison; Rachel Walker, Ph.D., Barr Engineering; David White, Ph.D. University of Illinois at Urbana-Champaign; and Danielle Wood, University of Wisconsin-Madison.

Alicia Molloy provided assistance editing the most recent version of the Handbook. Special thanks to Cynthia Curtis of US EPA Region 5 for her facilitation and assistance with the development of the Handbook and to all the participants in workshops and a Web survey that helped us develop and refine the indicators. We'd also like to thank our pilot projects that have helped to test and fine tune the tools, the handbook, and the social indicators process.

Additional information about the team and the social indicators project can be found online at:
<http://greatlakeswater.uwex.edu/social-indicators>

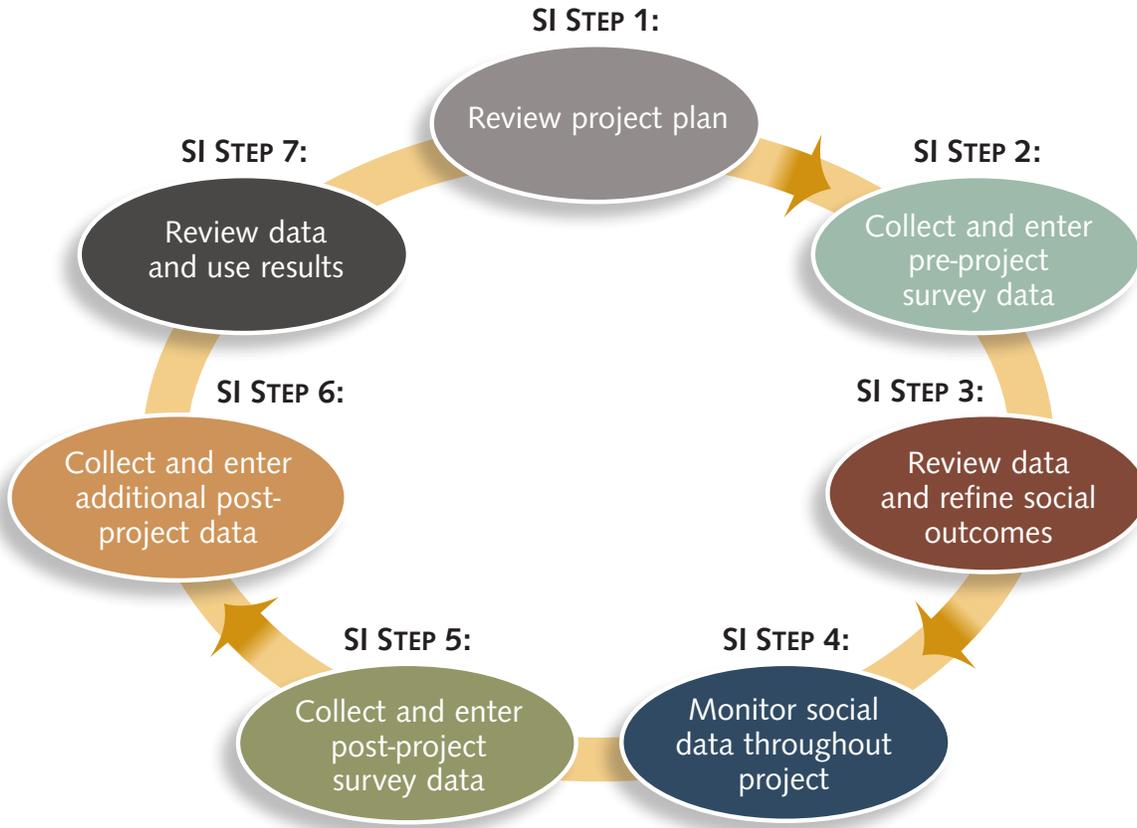
To cite this document, please use:

Genskow, Ken and Linda Prokopy (eds.). 2011. *The Social Indicator Planning and Evaluation System (SIPES) for Nonpoint Source Management: A Handbook for Watershed Projects*. 3rd Edition. Great Lakes Regional Water Program. (104 pages).



Handbook Overview

This Handbook describes a step-by-step system for using social indicators to help you plan, implement and evaluate Nonpoint Source (NPS) management projects. The Social Indicator Planning and Evaluation System (SIPES) is intended to be used by resource managers who want to learn more about their watersheds. The SIPES process and seven steps are illustrated below. These steps begin with a review of project plans and then guide projects through a process to collect, analyze and use social indicators data at the beginning and end of an NPS project.



Lettered handbook sections (A-K) describe the seven steps in greater detail.

Table of Contents

Introduction: The Social Indicators Planning and Evaluation System (SIPES)	1
Why Social Indicators?	1
What are Social Indicators?	1
Core Social Indicators	2
Using Social Indicators in NPS Projects	2
SIDMA: Social Indicator Data Management and Analysis	2
Section A: Steps for Using the Social Indicator Planning and Evaluation System.....	4
Step 1: Review Project Plan	5
Step 2: Collect and Enter Pre-Project Survey Data	6
Step 3: Review Data and Refine Social Outcomes	7
Step 4: Monitor Social Data Throughout Project	7
Step 5: Collect and Enter Post-Project Survey Data	8
Step 6: Collect and Enter Additional Post-Project Data	9
Step 7: Review Data and Use Results	10
Section B: NPS Project Planning: Setting the Stage for Working With Target Audiences	11
Introduction	11
Context for NPS Project Planning	11
Planning NPS Projects Using Social Indicators	14
Identifying NPS Problems	14
Selecting Critical Areas	14
Identifying Your Target Audiences	15
Selecting Potential Actions	16
Section C: Getting Started with SIDMA – the Online Social Indicators Data Management and Analysis Tool	17
Creating an Account	17
Creating a Project in SIDMA	18
Additional SIDMA Information.....	18
Section D: Choosing a Survey Method and Sample Size	19
Mail Surveys	19
Telephone Surveys	19
In-person Surveys	20
E-mail Surveys	20
Group Surveys	20
Hybrid Approaches	20
Determining Contact Information for Target Audience	22
Acquiring Addresses /Phone Numbers/Email addresses	22
Mail Surveys	22
Phone Surveys	23
E-mail Surveys	23
Census and Samples	23
Sample Size	24
Section E: Developing Your Social Indicators Questionnaire	25
Introduction	25
Selecting and Customizing Questions	25
Starting to Create Your Survey	25

Choosing SIDMA Questions	26
Creating/Editing Questions	30
Finalizing Your Questionnaire	31
Printing Your Questionnaire for Mailed, In-Person, and Group Surveys	32
Modifying and Printing Your Questionnaire for a Phone Survey	32
Writing the Script for Your Telephone Questionnaire	32
Printing your Phone Questionnaire	35
Modifications for E-mail Surveys and Hybrid Approaches	35
Section F: Administering the Social Indicators Questionnaire	36
Privacy Issues	36
Details of Conducting Your Survey	36
Details of Conducting a Mail Survey	36
Details of Conducting a Phone Survey	39
Details of Conducting an E-mail Survey	39
Details of Conducting an In-Person Survey	39
Details of Conducting Surveys in a Group Setting	40
What if people aren't responding to your survey?	41
Data Entry for Project Surveys	41
Calculating Response Rates	41
Data Cleaning	42
Section G: Features of SIDMA	43
Home	43
About	43
Projects	43
Survey Management Actions	45
Response Actions	47
Results and Analysis	47
Map	49
Account	50
Section H: Using Survey Results to Develop Education and Outreach Strategies	51
Frequencies and Averages Presented In Questionnaire Form	51
Relationships Among Responses	52
Focusing Your Outreach Strategy	54
Using Pre-Project Survey Results to Establish Social Outcomes	55
Designing Your Outreach Strategies	56
Appropriate Uses and Expectations for Different Outreach Activities	57
1. Workshops, field days, and informational meetings	57
2. Newsletters	58
3. Brochures and Fact Sheets	58
4. Websites	59
5. Informational Signage	59
6. Mass Media	60
7. Incentives	60
Section I: Evaluating Outreach Activities During Project Implementation	61
What to Evaluate and Which Tools to Use	61
Questionnaires	61

Group Discussion/Focus Group	62
Specialty Approaches	62
Applying the Tools: Workshops, Field Days, and Informational Meetings	63
Reaching Intended Audience	63
Impacts on Awareness, Attitudes, Constraints, Capacity, and Behavior	63
Cost and resource considerations	64
Applying the Tools: Newsletters	65
Reaching intended audience	65
Impacts on Awareness, Attitudes, Constraints, Capacity, and Behavior	65
Cost and Resource Considerations	65
Applying the Tools: Websites	66
Reaching Intended Audience	66
Impacts on Awareness, Attitudes, Constraints, Capacity, and Behavior	66
Cost and Resource Considerations	66
Applying the Tools: Brochures, Fact Sheets, Informational Signage, and Media Materials	66
Reaching Intended Audience	66
Impacts on Awareness, Attitudes, Constraints, Capacity, and Behavior	67
Cost and Resource Considerations	67
A Note About Incentives	67
Adapting Your Activities	67
Summarizing and Reporting on Your Activities	68
Section J: Collecting and Analyzing Data at the End of Your Project	70
Post Project Survey Data	70
Create Questionnaire	70
Update Address Lists, Review Sample Size, and Select New Sample	70
Create Advance Letters, Cover Letters and Postcards	70
Administer Questionnaire and Enter Responses in SIDMA	71
Pre-Post Survey Comparisons	71
Interpreting End of Project Data	71
Section K: Collecting Additional Post Project Data	72
Additional Post-Project Data	72
Focus Groups / Group Discussion	72
End-of-Project Questionnaire	73
Appendix A: Sample Formatted Survey	74
Appendix B: Supporting Documents	86
Sample Advance Letter	86
Sample Cover Letter to Include With the First Mailed Questionnaire	87
Sample of an Initial Reminder Letter and Postcard	88
Sample of a Cover Letter to Include With the Second Mailed Questionnaire	89
Sample Final Reminder Letter	90
Sample Letter for Telephone Survey	91
Sample Advance Letter for Hybrid Survey Approach (Mail and Online)	92
Sample Letter for Follow-Up Survey Advanced Letter	93
Appendix C: Additional Supporting Documents	94
Sample Letter for FOIA Request	94
Appendix D: Example Follow up Questions	95
Author Attributions	97



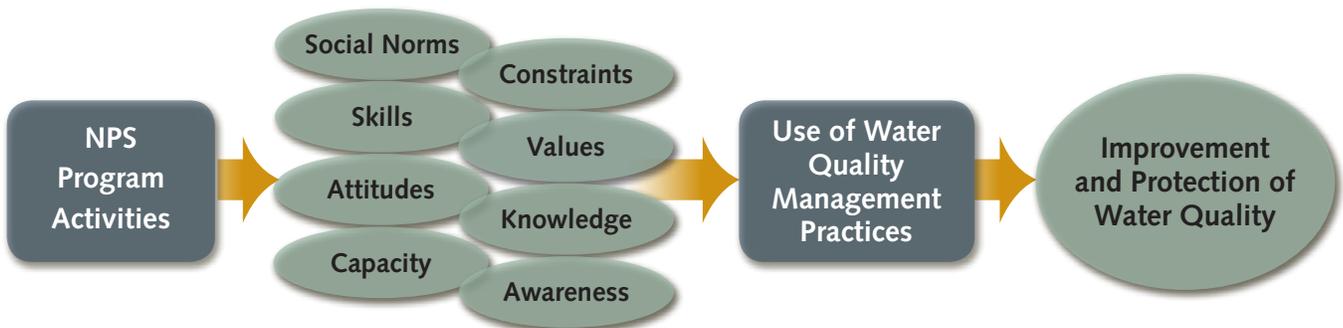
Introduction: The Social Indicators Planning and Evaluation System (SIPES)

WHY SOCIAL INDICATORS?

Effective management of Nonpoint Source (NPS) water pollution requires addressing both environmental conditions and the choices people make that impact the environment. If you have picked up this Handbook, your project is likely trying to improve water quality by changing people's behavior. To do this, your project may have to influence people's awareness, skills, attitudes, capacity, or constraints related to water quality improvement. Monitoring social indicators, like monitoring environmental indicators, gives us valuable information about how well our management strategies are working. Using the system outlined in this Handbook can help improve your project planning and evaluation.

Water quality problems have accumulated over many decades and may take decades to amend. Confirming that awareness and attitudes are changing and behaviors are being adopted in a watershed is one way that projects can demonstrate progress toward water quality goals. Social indicators provide consistent measures of social change within a watershed and can be used by managers at local, state, and federal levels to estimate the impacts of their efforts and resources. Figure 1 illustrates the link between social indicators and eventual improvement of water quality.

Figure 1: Conceptual model of social indicators and water quality



WHAT ARE SOCIAL INDICATORS?

Broadly, *social indicators* are measures that describe the capacity, skills, awareness, knowledge, values, beliefs, and behaviors of individuals, households, organizations, and communities. For the purposes of this Handbook, social indicators for NPS management provide information about awareness, attitudes, constraints, capacity, and behaviors that are expected to lead to water quality improvement and protection. By measuring these indicators over time, water quality managers can target their project activities and assess whether their projects are accomplishing changes expected to improve and protect water quality.

CORE SOCIAL INDICATORS

A list of core social indicators used in SIPES, along with specific project goals and intended outcomes for each type of indicator are included in Table 1. This core set was selected to provide a manageable number of indicators that address important components of the behavior change process. Social indicators will help project staff focus and evaluate their efforts toward the following intended outcomes:

- Increased awareness of relevant technical issues and/or recommended practices in critical areas;
- Changed attitudes to facilitate desired behavior change in critical areas;
- Reduced constraints to behavior change;
- Increased capacity to leverage resources in critical areas;
- Increased capacity to support appropriate practices in critical areas; and
- Increased adoption of practices to maintain or improve water quality in critical areas.

The set of core social indicators (Table 1) is not comprehensive. Other social indicators can also provide important information for planning, implementing, and evaluating NPS projects. The regional web site (<http://greatlakeswater.uwex.edu/social-indicators>) includes more information about how these core indicators were selected as well as information about supplemental indicators that may be used by NPS projects.

USING SOCIAL INDICATORS IN NPS PROJECTS

By focusing on social indicators, this Handbook complements existing planning and implementation processes supported by state and federal NPS programs (for example, US EPA's *Handbook for Developing Watershed Plans To Restore and Protect Our Waters*). Primary users may be NPS projects funded through grants from their state NPS programs. As part of the grant application and award process, state NPS programs will consult with individual projects to determine the expectations for each project regarding the use of social indicators. Projects mainly focused on developing a watershed plan or TMDL would have different expectations than projects focused on implementing practices to improve water quality. A project's target audience will also influence the social indicator collection process and methods. Specific information about the steps for using social indicators and information about determining target audiences are found in *Section A: Steps for Using the Social Indicator Planning and Evaluation System*, and *Section B: NPS Project Planning*.

SIDMA: SOCIAL INDICATOR DATA MANAGEMENT AND ANALYSIS

The Social Indicator Data Management and Analysis (SIDMA) tool is a web-based project management aid that supports SIPES watershed projects (the home page for SIDMA is www.iwr.msu.edu/sidma). SIDMA can be used by project coordinators to collect, organize, and use social indicators related to water quality improvements. Section C of this Handbook provides instructions for accessing and getting started with SIDMA. Other task-specific instructions are integrated throughout the Handbook.

Table 1: **Goals, intended outcomes, and core social indicators for NPS management**

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
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

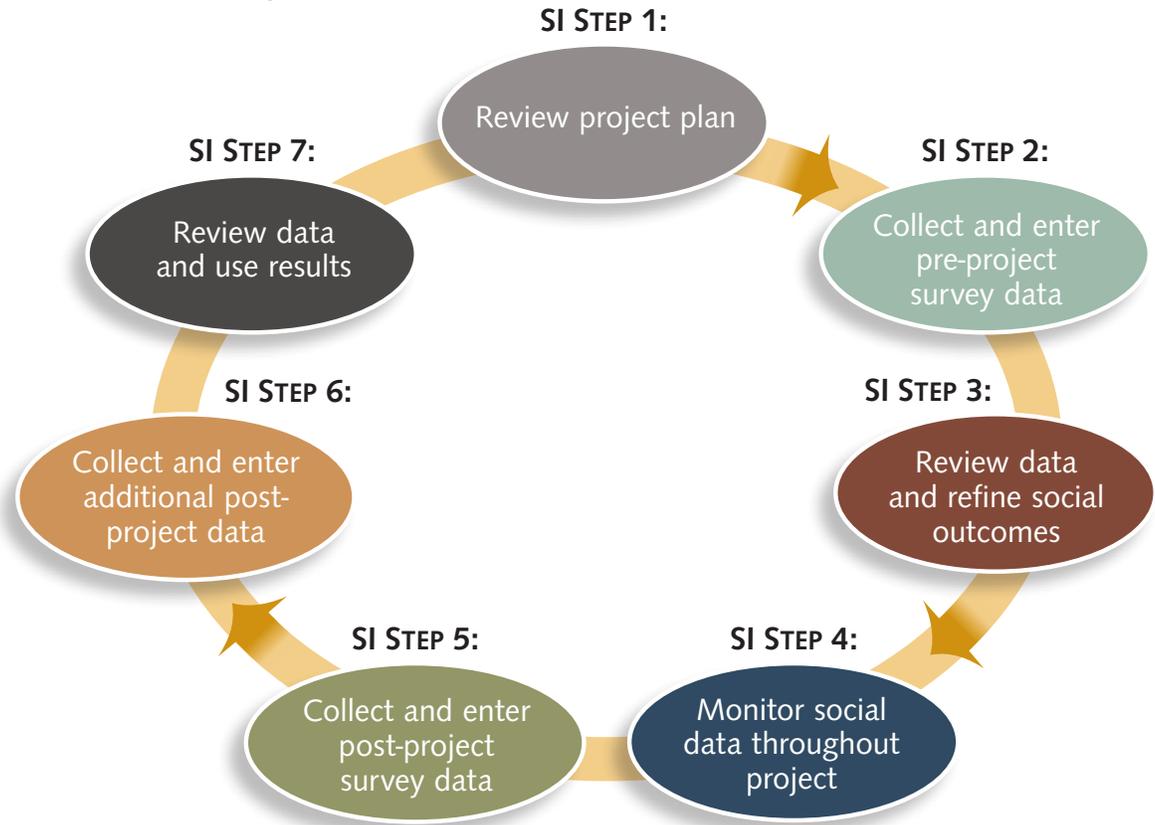
SIDMA includes the following features:

- **Survey builder:** Provides survey questions to be selected and adapted for use by a watershed project;
- **Data input screens and database:** Use to input and store responses from questionnaires and other social indicator data;
- **Online survey tool:** Allows potential respondents to complete your social indicators survey online;
- **Data analysis tools:** Use to generate statistics from survey data;
- **Report creating tools:** Provides assistance for communicating social indicator data including custom made graphs and charts; and
- **Geographic information and mapping tools:** Provides watershed boundaries and population data.

Section A: Steps for Using the Social Indicator Planning and Evaluation System

The Social Indicators Planning and Evaluation System (SIPES) consists of the seven steps illustrated in Figure A.1 below. This section explains each step and identifies which Handbook section contains detailed information to implement the step.

Figure A.1: The 7 steps in SIPES



Steps 1-3 relate mostly to project planning and steps 4-7 relate to project implementation and evaluation. Projects focused solely on developing a watershed plan (or a TMDL planning effort) would complete Steps 1-3 toward the end of their planning process. Most NPS projects focused on plan implementation or education and outreach efforts will complete all seven steps. As a general rule, you will work with your funders (e.g., state NPS program) to determine which of the steps above relate to your project.

These steps are part of an ongoing process of planning, implementing, evaluating, and adapting your management efforts. The information used in Step 1 emerges from previous work and the results generated in Step 7 can be used in future efforts.



STEP 1: REVIEW PROJECT PLAN

Before collecting social data, you need to review your planning materials to answer four questions about your project:

1. What are the specific NPS problem(s) your project is trying to address?
2. What are the critical area(s) that contribute to the problem(s)?
3. Who are the target audiences for the NPS problem(s) your project will address? (Target audiences are the people that influence management decisions for the critical area.)
4. What actions do you want the target audience(s) to take regarding the NPS problems?

The answers to these questions will help set the stage for focusing and evaluating your implementation efforts. Section B of this Handbook provides more information to help you with these questions.

After completing your review, you will need to register your project in SIDMA. Section C of the Handbook walks you through that process. Table A.1 summarizes these activities.

Table A.1: Step 1 checklist

<input checked="" type="checkbox"/> Activity	Handbook Section
<input type="checkbox"/> Identify NPS problem	Section B
<input type="checkbox"/> Identify critical area(s) for project focus	Section B
<input type="checkbox"/> Identify target audiences	Section B
<input type="checkbox"/> Identify the potential actions you want your target audience to take	Section B
<input type="checkbox"/> Register your project in SIDMA	Section C



STEP 2: COLLECT AND ENTER PRE-PROJECT SURVEY DATA

During this step, you will develop a questionnaire to collect data about the NPS awareness, attitudes, constraints, and behaviors of your target audience. SIPES supports using a set of core social indicators, but you can also use this step to collect additional supplemental social indicators to provide additional social data for your project. Section D helps you determine the appropriate survey method for your project.

SIDMA helps you develop a formatted questionnaire by providing pre-developed survey questions for the core indicators and for other supplemental indicators and social data. Some questions can be customized to fit your project. Section E of this handbook provides more instruction on developing the questionnaire.

Section F describes how to administer your data collection method and enter your data. Table A.2 summarizes these activities.

Table A.2: Step 2 checklist

<input checked="" type="checkbox"/> Activity	Handbook Section
<input type="checkbox"/> Choose method	Section D
<input type="checkbox"/> Compile contact list(s) for your target audience(s)	Section D
<input type="checkbox"/> Determine sample size	Section D
<input type="checkbox"/> Select sample	Section D
<input type="checkbox"/> Create questionnaire	Section E
<input type="checkbox"/> Determine dates for administering various pieces of your survey	Section F
<input type="checkbox"/> Create advance letters, cover letters, and postcards	Section F
<input type="checkbox"/> Develop Quality Assurance Project Plan (QAPP) if required	Section F
<input type="checkbox"/> Administer questionnaire	Section F
<input type="checkbox"/> Enter responses	Section F & G

STEP 3: REVIEW DATA AND REFINE SOCIAL OUTCOMES



You will be provided a report of your data that will help you refine your social outcomes and your plan for outreach and education activities.

Section G and H of the Handbook describes how to analyze and interpret your results, establish social outcomes, and develop an outreach and education plan. Table A.3 summarizes these activities.

Table A.3: Step 3 checklist

<input checked="" type="checkbox"/> Activity	Handbook Section
<input type="checkbox"/> Analyze results	Section G & H
<input type="checkbox"/> Interpret results	Section H
<input type="checkbox"/> Establish social outcomes	Section H
<input type="checkbox"/> Develop an outreach and education plan	Section H

STEP 4: MONITOR SOCIAL DATA THROUGHOUT PROJECT



Most NPS projects using SIPES will continue for several years. Step 4 involves monitoring social data throughout your project to make sure your activities are leading toward the intended social outcomes you established in Step 3.

The general expectation is that you will evaluate your implementation activity at some point over the course of the funding cycle. If your project involves more than one implementation activity, you should evaluate the outcomes of as many of these as time and resources allow. This allows you to assess whether or not the changes you expect to see are actually happening and will provide information that will help you interpret post-project results. In addition, your project may be developing successful approaches that could be used by other projects. Section I provides more information about how to do this. Table A.4 summarizes these activities.

Table A.4: Step 4 checklist

<input checked="" type="checkbox"/> Activity	Handbook Section
<input type="checkbox"/> Develop your monitoring plan	Section I
<input type="checkbox"/> Collect data based on plan	Section I
<input type="checkbox"/> Review data based on plan	Section I
<input type="checkbox"/> Adapt project activities as necessary	Section I



STEP 5: COLLECT AND ENTER POST-PROJECT SURVEY DATA

After the completion of the implementation phases of your project, you will resurvey your target audience using the same awareness, attitudes, constraints, and practices questions used in Step 3. By comparing your post-project survey data with your pre-project data, the social impact of your project is measured.

SIDMA allows you to regenerate the same questionnaire that you created and used in Step 3 with additional questions to help evaluate your project activities. To ensure consistency, the questionnaire must be administered in the same way as the original. Please note that in some cases you will be resurveying the exact same people that you surveyed in Step 3, and in other cases you may survey a new random sample of your target audience. See Section J of the Handbook for more discussion. The data from your post-project survey is entered in the same manner as earlier for data analysis and reporting. Table A.5 summarizes these activities.

Table A.5: Step 5 checklist

<input checked="" type="checkbox"/> Activity	Handbook Section
<input type="checkbox"/> Create questionnaire (if necessary—may make minor adjustments to questionnaire used in Step 3.)	Section J
<input type="checkbox"/> Update contact list(s) for target audience(s)	Section J
<input type="checkbox"/> Review sample size; modify if necessary	Section J
<input type="checkbox"/> Select new sample if necessary	Section J
<input type="checkbox"/> Determine dates for administering various pieces	Section J
<input type="checkbox"/> Create advance letters, cover letters, and postcards	Section J
<input type="checkbox"/> Administer questionnaire	Section J
<input type="checkbox"/> Enter responses	Section J

STEP 6: COLLECT AND ENTER ADDITIONAL POST-PROJECT DATA



At the completion of your project, you will complete a post-project worksheet and enter the responses into SIDMA. The worksheet is found in Section J of this handbook and asks questions related to the capacity indicators, project outcomes, and lessons learned.

The first four questions address factors that have supported or hindered your project's accomplishments. In order to answer these questions, it is necessary to incorporate feedback from partners and cooperators. A focus group is the recommended method for gathering this feedback. Focus groups are described in section K of this Handbook. The other questions can be answered with information from project records and opinions of project staff. Table A.6 summarizes these activities.

Table A.6: Step 6 checklist

✓ Activity	Handbook Section
<input type="checkbox"/> Schedule input session for end-of-project questionnaire	Section K
<input type="checkbox"/> Invite participants to input session	Section K
<input type="checkbox"/> Develop questions for input session	Section K
<input type="checkbox"/> Conduct focus group or other method to gather information from stakeholders	Section K
<input type="checkbox"/> Complete post-project worksheet	Section K



STEP 7: REVIEW DATA AND USE RESULTS

SIDMA will also produce a statistical analysis of your survey data for your use in reporting your project's success and planning subsequent projects. To help you understand the analysis and data, please refer to Section J of this Handbook.

SIDMA's tools generate charts and graphs that can aid the report writing process and create more effective reports. You can download data and export the charts and/or graphs into an electronic document or print them to include as part of a progress or project report. Table A.7 summarizes these activities.

Table A.7: Step 7 checklist

<input checked="" type="checkbox"/> Activity	Handbook Section
<input type="checkbox"/> Review statistical analysis produced by SIDMA	Section J
<input type="checkbox"/> Interpret statistics	Section J
<input type="checkbox"/> Report data	Section J
<input type="checkbox"/> Use knowledge gained to adapt approaches for future projects	Section J



Section B: NPS Project Planning: Setting the Stage for Working With Target Audiences

INTRODUCTION

Section A led you through an overview of the steps required to use the tools and processes described in this Handbook. Section B will help you relate your project's environmental goals to the social outcomes that will help you achieve them. ***Note that you will need to complete each of the elements of this section before proceeding further with SIPES.***

NPS projects are typically part of a comprehensive watershed plan and are intended to help achieve the goals outlined in that plan. Because solving and preventing most NPS problems requires people to change behaviors and adopt practices that improve water quality, such projects usually benefit from an education or outreach component. For example, US EPA's Section 319 nine-element watershed management plans require such a component. Our focus in this section is on planning the education and outreach aspects of your project.

Not every NPS project using SIPES will begin at the same phase of the watershed management cycle; some will be in the early planning stages, while others will be nearing completion. Water quality projects also vary considerably in terms of scale and size of target audiences. You will need to determine the types of activities that are appropriate depending on where you are in the project cycle.

CONTEXT FOR NPS PROJECT PLANNING

Planning is an iterative and adaptive process that sets goals and organizes people and resources to achieve those goals. When an issue has many stakeholders, planning typically includes a process by which people form a consensus about the nature of a problem, agree about how it should be tackled, and assign responsibility to carry out various activities. In these situations, stakeholders are often involved or informed throughout the entire process. Other elements of a full project cycle include various pre-project assessments or surveys, budgeting, monitoring and evaluation, reporting to the public, and incorporating evaluation information into decisions about an ongoing or later project.

Watershed planning is a systematic effort to identify watershed-based issues, set goals and objectives, and prepare an implementation approach to address those issues. Watershed planning should occur within the context of other state, regional, or local plans or requirements. Local land use plans and zoning, regional transportation planning, and economic development planning are just a few examples of processes that can impact NPS efforts. The ability to achieve both environmental and social goals is affected by broader community planning and decision-making. Consequently, it is essential that NPS project planning be coordinated with these other efforts as much as possible. At a minimum, project managers should be aware of complementary efforts affecting their project area.

There is no shortage of guidance on effective watershed planning; however, most of this guidance overlooks the social component of planning. US EPA's *Handbook for Developing Watershed Plans to Restore and Protect Our Waters*¹ should be your main reference for planning NPS projects. US EPA identifies nine minimum elements for watershed plans:

- a) An identification of the sources that will need to be controlled to achieve load reductions established in the state's nonpoint source TMDL inventory or any other goals identified in the watershed-based plan.
- b) An estimate of the load reductions expected from the management measures prescribed.
- c) A description of the NPS management measures that will need to be implemented to achieve load reduction and identification of the critical areas in which the measures will need to be implemented to achieve the NPS pollution abatement goals.
- d) An estimate of the assistance (financial and technical) and authorities needed for implementation of the plan.
- e) An information and education component, which the state will use to enhance public understanding of the project and encourage public involvement in NPS efforts.
- f) An implementation schedule.
- g) A schedule of interim, measurable milestones for determining whether NPS measures or other control actions are being implemented.
- h) A set of criteria for measuring progress toward water quality standards.
- i) A monitoring component to evaluate how effective the implementation efforts are.

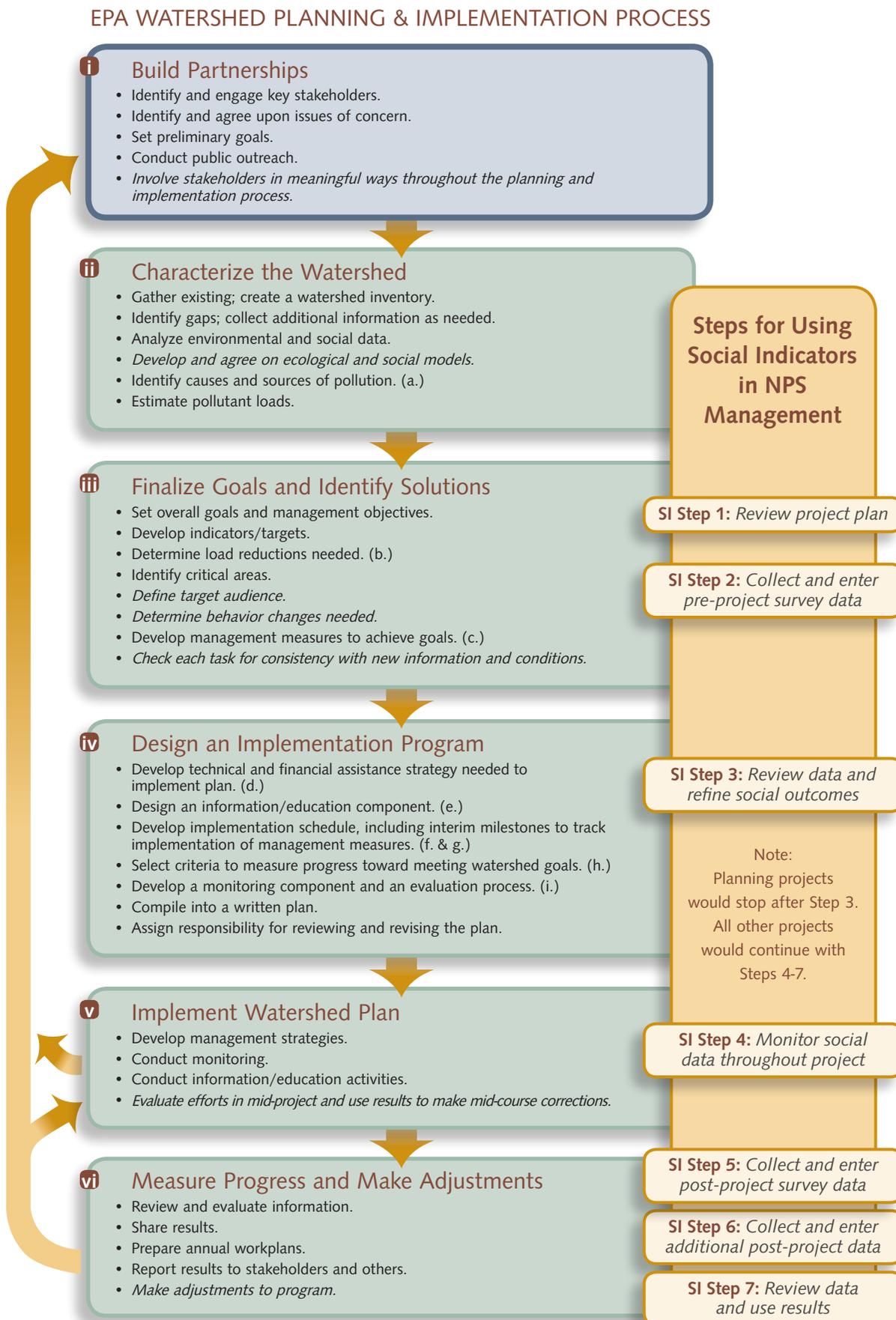
SIPES is designed to complement US EPA's Handbook, and is specifically focused on evaluating water quality projects. The social information you collect through the steps outlined in this Handbook contributes to elements d, e, f, g, h, and i of the above list. US EPA's Handbook provides an in-depth discussion of this planning process.

Figure B.1 shows how the collection of social indicator data corresponds with the watershed planning process as outlined in US EPA's Handbook. Steps 1-2 address the early stages of goal-setting and data collection that provide a foundation for NPS interventions. Step 3 uses social data to refine your project's social outcomes and design education and outreach interventions.

If your project is developing a watershed plan, Step 3 of the SIPES Handbook is as far as you need to go at this time. If your project is building on an existing plan, you'll implement planned activities and monitor the results of those activities in Step 4. In Steps 5-7, you'll collect additional information to determine the progress you made toward project goals and outcomes, and evaluate what worked well and what you might change in future projects.

¹*Handbook for Developing Watershed Plans to Restore and Protect Our Waters*. (2008) US EPA (EPA 841-B-08-002). This reference is available at: http://www.epa.gov/owow/nps/watershed_handbook/#contents

Figure B.1: Relating SIPES steps to the US EPA Handbook.



PLANNING NPS PROJECTS USING SOCIAL INDICATORS

SIPES was developed initially as an evaluation tool for NPS projects to assess changes in a target audience's awareness, attitudes, capacity, constraints, and behavior over time. SIPES can also aid in planning NPS projects by collecting valuable information about the target group that will help guide management activities that have an education or outreach component.

Your project's activities should be clearly linked to the specific goals identified in your watershed or other site-specific implementation plan. As with watershed planning itself, there are many different methods and approaches to planning education and outreach interventions. The system outlined in this handbook emphasizes the following four planning activities that will precede your pre-project survey:

- Identifying NPS problem;
- Identifying critical areas;
- Identifying target audiences; and
- Identifying potential actions that you want the target audience to take.

You will be asked to supply information about each of these issues as you register your project in SIDMA (see Figure C.5 on page 18).

IDENTIFYING NPS PROBLEMS

Your project was funded to address specific NPS problems affecting or threatening water quality. These problems are identified in your watershed plan or NPS project plan. Specifying the focus of your efforts and selecting critical areas are crucial for determining the target audiences who are expected to be engaged in your project activities, and the actions you want them to take.

SELECTING CRITICAL AREAS

NPS projects are most effective when environmental and social activities target the geographic areas that are expected to have the greatest impact on solving or preventing specific water quality problems.

For the purposes of this handbook, **critical areas** are defined both as *lands contributing disproportionately to water quality impairment because they are environmentally vulnerable, and/or inappropriately managed based on their environmental vulnerability and consistency with long-range goals of the watershed management plan*. Critical areas may be either highly localized patches or more diffuse areas. Critical areas may be defined for individual pollutants and habitat goals or for combinations of factors.

Developing criteria for identifying critical areas can be an element in your water quality work. The criteria will be based on expected environmental outcomes and the relative contribution specific land areas are expected to make to overall load reductions and water quality protection.

Examples of critical area criteria include:

- Potential contribution to pollutant loads (restoration);
- Contribution to ecosystem services, such as pollutant filtering (e.g. wetlands, existing riparian buffers) (prevention); and
- Contribution to fish or wildlife habitat goals, habitat-related criteria such as the composition and structure of riparian vegetation may also be appropriate (restoration or prevention).

Examples of critical areas frequently include:

- Highly erodible soils and steep slopes close to a lake or stream and actively managed or used (restoration);
- High concentrations of nutrient and pesticide loads on land surface, coupled with high rates of flow and a delivery mechanism (restoration);
- Overgrazed areas or areas where livestock have access to a waterbody (restoration);
- Areas where significant development is planned (prevention); and
- Headwater areas (prevention).

Engaging the public in this process can provide important local information, keep stakeholders informed, and build ownership of the plan. The US EPA publication, *Community Culture and the Environment: A Guide to Understanding a Sense of Place*² is a valuable resource for ideas on involving interested groups and citizens. Additional information about identifying critical areas is covered in Chapter 10 of US EPA's *Handbook*.

IDENTIFYING YOUR TARGET AUDIENCES

A **target audience** is a group of individuals whose awareness, attitudes, constraints, and behavior must support your project's environmental outcomes.

The environmental information you've collected as part of your watershed planning will indicate broadly defined groups of people within your project area that are influencing water quality and your ability to achieve environmental outcomes. These are the groups you will survey using the SIPES questionnaire. Examples are "all farmers in a priority subwatershed" or "all households in seven suburban neighborhoods in the project area" or both.

²*Community Culture and the Environment: A Guide to Understanding a Sense of Place*. (2002) US EPA (EPA 842-B-01-003). This reference is available at: http://www.epa.gov/air/care/library/community_culture.pdf

To begin identifying your target audiences, determine who owns or manages land in critical areas, or has an influence on land management. You may find the following resources helpful in completing this task:

- Census data;
- Plat books;
- Register of deeds;
- Homeowners associations;
- Mailing lists;
- Zoning classifications;
- Local knowledge (personal communication with other landowners, state agency staff, relevant county or municipal staff, other community members etc.); and
- Information gathered from a social profile or similar method.

In agricultural areas, local knowledge about who manages the land (owners vs. renters) is essential. In suburban and urban areas, mailing lists and zoning classifications can be more effective. Each project area is unique, so carefully think through this task to ensure that you will be reaching the people with the power to make or influence land management decisions.

SELECTING POTENTIAL ACTIONS

This task is closely related to target audience identification. In addition to identifying who needs to take action to improve water quality, you will need to determine what you want them to do to reduce or prevent water quality problems. For this Handbook, that “what” is the management practices you would like them to adopt. You will need to consider both the ability of a practice to reduce pollutant loading and its potential for adoption to determine which combination of practices is optimal for your situation. For a list of selection criteria for environmental management practices, see Chapter 10 in US EPA’s Handbook.

Section C: Getting Started with SIDMA – the Online Social Indicators Data Management and Analysis Tool



Figure C.1: SIDMA homepage with user logged off

CREATING AN ACCOUNT

The Social Indicators Data Management and Analysis (SIDMA) tool (the home page is www.iwr.msu.edu/sidma) helps organize, analyze, and visualize social indicators information. In order to use the website you will need to create a new account.

To create a new account:

- ▶ Find and click “Login”, located in the top menu bar (see Figure C.1).
- ▶ Select “Create New Account” (see Figure C.2).
- ▶ Complete the required information (see Figure C.3)
- ▶ It may take up to a week, but once you are approved for an account, try signing in.

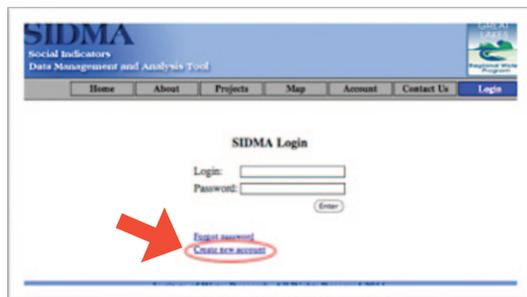


Figure C.2: Create a new user

To tell that you are logged in, in the upper-right-hand corner of your home page, you will see the option to log out. (see Figure C.4).



Figure C.3: Required information for new user



Figure C.4: Illustration of user logged on

CREATING A PROJECT IN SIDMA

Once you have successfully logged in, you can create your own project or review other projects' information in the system. To do this from the home page, select the “Projects” tab. This will take you to a page that will allow you to create your own or view/edit existing projects. To create a new project simply click “Create project” and fill in the relevant information.

You will be entering your project name, organization (which can be the same as your project name if you wish), state, watershed, and HUC. You do not need to know your HUC number. When you enter in your watershed name and press enter, a list of watersheds and HUC numbers will appear in the candidates box. You can then scroll through these and select the HUC that matches your watershed.

You will also be asked to answer the four questions about the focus of your project that were discussed in Section B.

1. Have you identified the specific NPS problem(s) your project is trying to address?
2. Have you identified the critical area(s) that contribute to the problem(s)?
3. Have you identified target audiences for the NPS problem(s) your project will address?
4. Have you identified the actions you want the target audience(s) to take to address the NPS problems?

SIDMA provides space for you to describe your NPS problems, critical areas, target audiences, and actions you would like the audiences to take. When you have entered all the required information, select “Submit” at the bottom of the page. A page will then pop up that says ‘Filter Options’. You can see a summary of the project you just created by clicking on the name of your project. Section E describes how to create your SIPES questionnaire using SIDMA.

Note: You will only be able to edit or create surveys for projects you create; however, you can browse and look at surveys from other projects. You can see all the editable projects you have created by clicking the “Show My Projects” button from the SIDMA Projects page.

ADDITIONAL SIDMA INFORMATION

Additional information about using SIDMA is provided throughout this Handbook, most notably in Section E, Developing Your Social Indicators Questionnaire and Section G, Features of SIDMA. Both contain valuable information about how to use SIDMA.

The image is a screenshot of a web form for creating a project in SIDMA. It contains four numbered questions, each with a 'No' radio button and a 'Yes' radio button followed by a text input field. Question 1 asks about identifying specific NPS problems. Question 2 asks about identifying critical areas. Question 3 asks about identifying target audiences. Question 4 asks about identifying actions for the target audience. The form is titled 'Create Project' and has a 'Submit' button at the bottom.

Figure C.5:
Screen shot of where to enter project information



Section D: Choosing a Survey Method and Sample Size

This section describes methods for choosing a survey method and the appropriate sample size for your survey. In the following section, Section E, you will learn how to create project-specific questionnaires in SIDMA. In Section F, you will learn how to administer the survey you have created. This section contains an overview of different types of surveys – mail, e-mail, in-person, group setting, and telephone. Each methodology has advantages and disadvantages and may only be appropriate in specific situations (see text below and Table D.1 on page 21). After you select the type of survey you will conduct, you will need to gather contact information for your target audience. Depending on your target audience size, you may need to select a random sample of people to survey.

MAIL SURVEYS

In most cases, projects will conduct a mail survey. The mail survey is relatively easy to administer by following a “five-wave design” which consists of five separate mailings to survey respondents. A mail survey is lower in cost than in-person or phone surveys when the sample size is large. Usually it is easier to obtain a representative sample for a mail survey than for e-mail or phone survey. The portion of your target audience that has a reliable e- address that you can obtain is likely to be low. Similarly, fewer households have landlines each year and so a phone survey may not be reflective of the larger target audience. There are several drawbacks associated with conducting a mail survey. One of the drawbacks is a potentially low response rate, but this can be mediated by using the methods detailed later in this section. Another disadvantage of the mail survey is bias created when illiterate or semi-literate respondents cannot complete the survey.

TELEPHONE SURVEYS

Telephone survey software has the capacity to dial random phone numbers within specified parameters to conduct a random sample; however, this software is costly and it is often not possible to know if residents reside in your watershed. It is recommended that you only use phone surveys with small populations for which you have contact information and will not need to use telephone survey software. The exact size of population you can use for phone surveys will vary for different groups based on staff capacity to make the calls at various times of the day and evening.

Surveys requiring long phone conversations can also test the patience of your target audience and reduce completion rates. Phone surveys present challenges for accurately representing an entire community as increasing numbers of people switch from landlines to cell phones. There is not yet a reliable way to locate cell phone numbers for geographically targeted respondents, especially in areas with very transient populations. An additional disadvantage of the phone survey is determining the best time to contact people. You may need to call during times other than business hours, which might be difficult for staffing purposes. Unless your sample size is small, phone surveys can require a great deal of staff time.

IN-PERSON SURVEYS

In-person surveys can enable you to collect high quality data but are labor and time intensive. One of the advantages of in-person surveys is that response rates are generally higher than for other types. Individuals who are conducting the survey must be trained to ensure reliability and to avoid introducing biases in responses. If you have a small target population and a handful of well-trained interviewers, this could be a very useful methodology. Other times to consider using in-person surveys are when you have a target audience that is unlikely to respond to mail surveys or other non-personal forms of interaction. A final consideration that is unique to in-person surveys is the need to ensure interviewer safety.

E-MAIL SURVEYS

For the purposes of this Handbook, e-mail surveys are surveys that participants are invited to respond to via an e-mail that links to a website. E-mail surveys can be useful for specific purposes; however, challenges involved in obtaining reliable lists of e-mail address and limited access for some people make them problematic for general use. Even if a good list of e-mail addresses is obtained, spam filters often do not allow e-mails to be received from unknown senders or from bulk mailings. For the most part, e-mail surveys will not be appropriate for collecting social indicator data and there are criteria that need to be met for e-mail surveys to be effective. You need to have working e-mail addresses for your target audience and you must be confident that everyone has functional Internet access. Usually, you will only be able to conduct an e-mail survey when the population is small.

GROUP SURVEYS

A group survey is one that is administered to individuals in a group setting. This is appropriate only for very small groups that are likely to be gathered in one place at the same time. The exact group size will differ based upon context, but it needs to be small enough that you can ensure everyone will attend the meeting. Advantages include an assured response rate and the ability to work with the group on other issues related to your watershed project after they complete the survey. A caveat of administering a survey this way is that it is very important that people not influence each other's responses during the survey and that the people running the group not bias the answers in any way.

HYBRID APPROACHES

It is possible to combine different survey methodologies. For example, a mailed survey can also include an Internet address enabling respondents to reply either by mail or on the Internet. SIDMA will allow you to conduct your survey this way (see Section G). You will be able to produce a survey specific URL that you can include in your advanced letters and cover letters. In the advanced letter, you can give instructions to potential respondents that they can type into the address bar on their web browser to complete the survey online. You can provide instructions that if they have not completed the survey online within one week, they will receive a paper version of the survey. You can also provide the URL in the cover letters for each round of paper surveys, to give respondents the option at that point to respond to the questionnaire either by paper or online.

Table D.1: Advantages and disadvantages of different survey types

Survey Type	Advantages	Disadvantages	Other Considerations
MAIL	<ul style="list-style-type: none"> • Relatively easy to administer • Lower cost than phone/in-person except for small groups • Usually easier to obtain a representative sample 	<ul style="list-style-type: none"> • Gathering appropriate addresses • Data comes in over a period of time • Literacy levels • Response rates • Not certain who actually completes the questionnaire 	<ul style="list-style-type: none"> • Following the five-wave design • Costs about \$9 per address on mailing list (includes cost of all five waves). • Costs may increase if responses are low and have to do follow-up phone surveys
E-MAIL	<ul style="list-style-type: none"> • Inexpensive • Appropriate for a finite population for whom you have all e-mail addresses 	<ul style="list-style-type: none"> • Not representative • Gathering e-mail addresses • Respondents with slow Internet connections will have difficulties 	<ul style="list-style-type: none"> • Appropriate software • Costs negligible
IN-PERSON	<ul style="list-style-type: none"> • High response rates • Interviewer can explain questions 	<ul style="list-style-type: none"> • Higher cost due to labor and time • Need to train interviewer • Can be difficult to schedule • Interviewer bias • Potential concerns about interviewer safety 	<ul style="list-style-type: none"> • Presentation of interviewer • Establishing rapport • Gaining trust • Recording interview data • Useful to survey small target populations • Costs incurred are primarily to train or hire competent interviewers and for data entry of responses
GROUP	<ul style="list-style-type: none"> • Data is gathered all at once • Gathering people together allows for discussion of other topics 	<ul style="list-style-type: none"> • Can only be used with very small populations • Scheduling survey time may be difficult • Bias can be introduced by attendees and group leaders 	<ul style="list-style-type: none"> • Costs will include printing of questionnaires and data entry
TELEPHONE	<ul style="list-style-type: none"> • Relatively low cost for small samples • Quick data collection • Good response rates 	<ul style="list-style-type: none"> • Need to train interviewers • Miss people in population due to cell phones, not having phone service, and unlisted landline numbers • Determining optimum contact times • Generally more expensive than mail surveys 	<ul style="list-style-type: none"> • Usually need appropriate software • Cost averages about \$30 per completed questionnaire if use a non-profit firm; less if volunteers from the watershed group conduct the surveys.

DETERMINING CONTACT INFORMATION FOR TARGET AUDIENCE

After you select your method of survey delivery, you must identify every member of your target audience. This can be the most difficult part of conducting a survey. It is one thing to say that your target audience is everyone living in a certain geographical or political boundary, but it is much more difficult to personally identify each of these people. For the purposes of conducting a survey, it is recommended that you think in terms of households instead of individuals. In most cases, you will want one adult living in the household to respond (or the person making land management decisions). So, in essence, you are searching for addresses, phone numbers, or e-mail addresses within your target area. We provide information for each type of survey method about how to determine contact information.

ACQUIRING ADDRESSES /PHONE NUMBERS/EMAIL ADDRESSES

Mail Surveys

Techniques for gathering addresses for a mail survey differ according to your target audience. The general division is between urban and rural audiences. However, within the rural audience, there might be both agricultural producers and rural non-agricultural residents.

In **urban areas**, there are several options for gathering addresses. If you have a well-defined target audience it can be beneficial to work with local agencies, utilities, or businesses that can supply addresses. If the county you are working within has a public GIS function on their website, addresses can be obtained through this method. By referring to the map, you can create a watershed-specific list of addresses. You may need to type the addresses into a separate file, which can be time-consuming. Generally, these records will be for homeowners; if the owner has rented the property to someone else, then the respondent name won't match the address.

If you are unable to work with local entities to gather addresses, it is possible to purchase a mailing list from a survey sampling company. You can use an Internet search engine to find such a company. The advantage of this method is that it is very easy, though it may be somewhat expensive. The major disadvantage to consider is that survey-sampling companies cannot provide addresses based on watershed boundaries. Purchasing addresses can be a useful tool when you have a well-defined target area in the watershed. Most survey sampling companies use a variety of sources (such as phone listings, utility bills) for their addresses to provide the most complete list possible.

If you are working with a **rural agricultural population**, often the best method for gathering addresses is through the local Soil and Water Conservation District, the Natural Resources Conservation Service (NRCS), and/or the Farm Service Agency (FSA). These agencies often send mailed communication to area producers, and therefore may already have a mail list. A disadvantage with this method is that often times, the agricultural producers on these lists are limited to those that have received cost-share assistance (or provided their contact information for other purposes) through the particular agency in the past.

If your local FSA branch is unable to give you the addresses due to privacy protections under federal laws, you have the right to submit a FOIA (Freedom of Information Act) request. "If you choose to submit a FOIA request, you will need to do so through your state contact for FSA. You can

ask your local FSA to provide you with these contacts, or you can visit http://www.fsa.usda.gov/Internet/FSA_File/fsafoialisting.pdf for a list of all state FSA FOIA Service Centers. The process of gathering addresses through a FOIA request can take several months, so be sure to allow this time for a response. You will want to specify in your request that you want names and addresses in electronic format. It is advisable to let your local FSA know you are doing this and why to ensure you do not compromise your relationship with the local FSA. The process of filing a FOIA request is different within each agency but is mostly similar for both FSA and NRCS. Please note that state agencies may not need to conform to FOIA requests. See Appendix C for an example of a FOIA letter requesting agricultural producers' addresses.

You may also consult with the local county clerk's office. Their offices maintain landowner lists for property tax purposes. If you can find the range of property tax id numbers for your critical area, the county clerk's office should be able to match these numbers to landowners and provide you a mailing list. Please note that not all counties will have this information in digital form. This method works best when your critical area boundaries are closely related to county or township boundaries.

Rural non-farming residents may be one of the more difficult audiences for which you might need to develop an address list. Consulting the county GIS website, if one is available, or plat maps are two options. Plat maps are available for every county from the county land registration office or the county clerk. They contain information about who owns each piece of land. If plat maps are not digitized (and sometimes even if they are), it can take considerable time to gather names and addresses associated with parcels in your critical area. First, you would overlay your critical area boundaries with the plat map (making sure that your maps are of a similar scale). Plat maps typically show only landowner names, so after you have identified the names within your critical area, you would still have to search white page listings – which are now online – for their mailing addresses. Obtaining a mailing list from the county clerk's office, as described above, is another method to use for a rural non-farming target audience.

Phone Surveys

If you choose to do a phone survey with a large target audience, you can follow the steps above for mail surveys to gather names and then use the white pages (which are now available online) to find phone numbers.

E-mail Surveys

There are many issues associated with obtaining a list of e-mail addresses that accurately represents your target audience. Households may have several e-mail addresses, and they may change frequently. For the purposes of the SIPES survey, you should only consider conducting a survey via e-mail if you are confident that you have a complete and current list of e-mail addresses for your target audience and that all members of your target audience or sample have access to reliable Internet service.

CENSUS AND SAMPLES

If you are working with a relatively small target audience of roughly 535 or fewer, you should include the entire target-audience population in your survey. This is called taking a census of

the population versus a sample. In this case, it is important to try to get as many people to respond as possible since you will not be relying on statistics to generalize to a larger population. The methods for conducting a census are the same as for a sample, but you may consider using more personalized forms of surveys such as in-person or phone contact. When you cannot do a census because your target audience is too large, it is important to recognize that tools for statistical analysis rely on random samples, and without a random sample, results do not generalize to a larger population. While it is important to survey people who are most active in project-related activities, responses solely from these people are not likely to be representative of the larger population you are targeting.

SAMPLE SIZE

The sample size is the number of returned questionnaires needed to accurately represent your entire population. Since you can't expect all of the questionnaires to be returned, you will need to send more questionnaires than the sample size. It is standard to assume that 10 percent of the questionnaires will be undeliverable due to incomplete or inaccurate contact information, or for other reasons. It is also standard to assume that 10 percent of the returned questionnaires received will be incomplete or unusable. While formulas and tables exist to allow for the calculation of sample sizes, you will not need to do this work. Table D.2 provides guidelines for the number of surveys you need to mail to get the appropriate sample size to represent your population. This table provides the number of questionnaires to mail for a sampling error of +/- 5 percent.

Table D.2: Sample Size

Size of Target Audience	Target Number of Responses Needed	Number of Questionnaires to Mail*
<535	217	Use all names (conduct a census)
750	254	627
1,000	278	686
2,500	333	822
5,000	357	881
10,000	370	914
25,000	378	933
50,000	381	941
100,000	383	946
1,000,000	384	948
100,000,000	384	948

*Number of questionnaires to mail is based upon a 95% confidence level and a sampling error of +/- 5%. Table adapted from Dillman.³

Once you have determined your sample size, you will need to draw a random sample of addresses from your target audience mailing list. To do this using Microsoft Excel:

1. Insert two columns at the beginning of a spreadsheet containing the names and addresses of your target audience.
2. Fill the first column with randomly generated numbers using “=RAND()”. There should be nothing entered in the parentheses.

3. Copy the numbers from the column and paste them into the second column using “paste special” and “values.”
4. Sort in either ascending or descending order and select the number of addresses you need from the top of the table.

³Dillman, D.A. (2000) *Mail and Internet Surveys: The Tailored Design Method*. 2nd Ed. New York, NY: John Wiley and Sons.

Section E: Developing Your Social Indicators Questionnaire



INTRODUCTION

This section provides detailed instructions on how to create a questionnaire for collecting social indicator data.

In order to develop your questionnaire, you will first need to enter your login information and create your project in SIDMA. These instructions can be found in Section C of the Handbook.

SELECTING AND CUSTOMIZING QUESTIONS

STARTING TO CREATE YOUR SURVEY

When you are on the Project Information page for one of your projects, you can either select ‘Create New Survey’ or ‘Copy SIDMA Survey’. The latter is particularly helpful when you are sending out your post-project survey after you have gone through your implementation process. To start a survey from scratch, choose ‘Create New Survey’. You will be provided with a series of instructions while working through the process in SIDMA. An example of these instructions can be seen in figure E.1. The instructions for each set of questions are stated below.

Once you have clicked ‘Create New Survey’, you will start with entering a survey name. This can be something along the lines of ‘Your Views on Shadow River Water Resources’ or ‘Shadow River Water Quality Survey’. This *survey name* will appear on the top of the survey when you are ready to produce the final version. You can then *filter* your questions by your target audience, agricultural questions only, urban questions only, or choose none. If you choose ‘agricultural questions only’ you will only be able to select questions written for an agricultural audience. The same filtering will apply if you choose ‘urban questions’ only. If you choose the ‘none’ filtering option, all SIDMA questions will be available for you to choose from.

Helpful Tip: Print out all of the potential questions for your audience type and share them at a meeting where a survey planning committee can choose which questions to include in your survey. You can then enter your choices into SIDMA, and you will not have to make decisions while working in the SIDMA software.

	Not a Problem	High Problem	Moderate Problem	Severe Problem	Don't Know
1. Sedimentation (silt and silt) in the water	<input type="radio"/>				
2. Nitrogen	<input type="radio"/>				
3. Phosphorus	<input type="radio"/>				
4. Coliform	<input type="radio"/>				
5. Bacteria and viruses in the water (such as E. coli and salmonella)	<input type="radio"/>				
6. Trash or debris in the water	<input type="radio"/>				
7. Oil, PCBs, Chlorides	<input type="radio"/>				
8. Oil and grease	<input type="radio"/>				
9. Toxic materials in the water	<input type="radio"/>				
10. Chlorides in the water	<input type="radio"/>				
11. Ammonia	<input type="radio"/>				
12. Chlorine	<input type="radio"/>				
13. Arsenic	<input type="radio"/>				
14. Arsenic	<input type="radio"/>				
15. Heavy metals	<input type="radio"/>				
16. Mercury	<input type="radio"/>				

Figure E.1: Screen shot of SIDMA where you'll choose survey questions

CHOOSING SIDMA QUESTIONS

You will use the checkboxes to the left of the questions to select the items in your survey.
Read the instructions for each section carefully.

PLEASE NOTE: If you need to save your progress along the way, submit the survey and return later to finish it in the editing mode (more on this later). To submit, click 'Continue' at the bottom of the page (you may have to select some placeholder questions to meet the minimum selection requirements for particular categories).

Below are detailed instructions for each set of questions in the social indicator questionnaire.

■ Rating of Water Quality

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

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.

■ Your Water Resources

Questions:

1. *Of these activities, which is the most important to you?*
2. *Do you know where the rainwater goes when it runs off of your property?*
3. *If you answered ‘Yes’ above, where does your rainwater drain to?*

Like Rating of Water Quality, this category is ***strongly encouraged***. These questions also get respondents thinking about the issue. It will also give you some basic information regarding how familiar your target audience is with the basic concept of a watershed and how familiar they may be about your particular watershed.

■ Your Opinions

Question: *Please indicate your level of agreement or disagreement with the statements below.*

This question is ***required in its entirety***. It provides data regarding the attitudes of your target audience about general water quality issues. The responses from the questions in this table will be scored together as an index to create one overall attitudinal score.

■ Water Impairments

Question: *Below is a list of water pollutants and conditions that are generally present in water bodies to some extent. The pollutants 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?*

This category provides a measure of your target audience's awareness about water impairments. This question is **required**, but the options within it are *customizable* for your watershed. Select **no less than three (3)** and **no more than ten (10)** impairments that are applicable in your watershed. Please keep in mind that each should be an impairment that you are planning to address through your project.

In some cases, the impairment options may not be the terminology that you are using in your watershed. If this is the case, select the options that most closely match the impairments in your watershed, and after you create a MS Word version of the survey, you can then change the language to what you are using in your watershed.

Please Note: If you change any language while in MS Word, you cannot upload these changes into SIDMA. This means you will not be able to offer an online option to your survey, because the online questions will use the language from SIDMA. You cannot combine or compare questions unless you are the exact same question.

■ Sources of Water Pollution

Question: *The items listed below are sources of water quality pollution across the country. In your opinion, how much of a problem are the following sources in your area?*

This category provides information about your target audience's awareness about the causes of water quality impairments. This question is **required**, but the options should be customized for your watershed. Select **no less than three (3)** and **no more than eighteen (18)** sources that are applicable in your watershed.

■ Consequences of Poor Water Quality

Question: *Poor water quality can lead to a variety of consequences for communities. In your opinion, how much of a problem are the following issues in your area?*

This category is intended to measure your target audience's awareness of what happens as a result of poor water quality. This question is **required**, but the options should be *customized* for your watershed. Select **no less than three (3)** and **no more than twelve (12)** sources that are applicable in your watershed.

■ Practices to Improve Water Quality

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

This category is intended to measure overall awareness, experience, and willingness to use practices tied to improved water quality. Locate and select the practices, **no less than eight (8)** and **no more than sixteen (16)**, 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. An example of what the Specific Practices with Constraints section of the survey looks like is shown in Figure E.2 (page 28).

Figure E.2: **Sample of Format for Survey Questions about Specific Practices with Constraints**

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

How familiar are you with this practice? If the practice is not relevant, please explain why.

- Not relevant
- Never heard of it
- Somewhat familiar with it
- Know how to use it; not using it
- Currently use it

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
28. Don't know how to do it	<input type="checkbox"/>				
29. Time required	<input type="checkbox"/>				
30. Cost	<input type="checkbox"/>				
31. The features of my property make it difficult	<input type="checkbox"/>				
32. Insufficient proof of water quality benefit	<input type="checkbox"/>				
33. Desire to keep things the way they are	<input type="checkbox"/>				
34. Hard to use with my farming system	<input type="checkbox"/>				
35. Lack of equipment	<input type="checkbox"/>				

■ **Making Decisions for My Property**

Question: *In general, how much does each issue limit your ability to change your agricultural management practices?*

This category is **required** and is designed to collect information regarding the constraints individuals have for implementing practices to improve water quality.

■ About Your Farm Operation

This category includes information about farm characteristics. Some of the questions in this section are required if you are sending out a survey to an agricultural audience. You can also select additional questions beyond the required ones that are relevant to your watershed. You should select those questions that meet your needs. The questions that are included (both required and optional) have been shown in research to be related to adoption decisions. Both the questions in this category, and the questions in the About You section will be helpful for you when targeting your management education efforts. For example, you may find out that the lowest levels of awareness and adoption are present in one demographic segment of your target audience.

ABOUT YOU

This category includes demographic and household information. Like the About Your Farm Operation section, some questions are required. However, the questions that are required vary depending on if you are creating an agricultural or urban survey. You can also select additional questions beyond the required ones that are relevant to your watershed. Questions in this section will provide information to help you better understand the people you will be working with. The questions that are included (both required and optional) have been shown in research to be related to adoption decisions.

■ Information Sources

Question: *People get information about water quality from a number of different sources. To what extent do you trust those listed below as a source of information about soil and water?*

If you are interested in understanding where your audience gets information regarding water quality issues in order to better target your information and outreach activities, you may want to include this question. This category is strongly encouraged for your pre-survey, but not required. You most likely will not include this section in your post-survey. Select the information sources that are of interest to your project. If you would like to customize this list, you can do so in the survey-editing mode discussed later on in this section.

■ Septic Systems

The section pertaining to septic systems is optional. If on-site septic systems will be addressed by your project, or if you would like to quantify information about the potential extent of septic management issues in your watershed, you should consider using some or all of these questions in your questionnaire.

■ Comments Page

The comments page is required, and will automatically be included with your questionnaire. This section provides a space for respondents to leave open-ended comments.

You're almost there....

After you have chosen the questions to include in your survey, click the 'Continue' button at the bottom of the page. You will not be able to continue unless you have completed the instructions that are given for the required question categories. If you click continue, and you do not move on to the next page, scroll up through the survey to find where the red warning(s) appear, and correct those issues before moving on.

When all steps are complete, you will be moved to the next page. Select 2-4 specific practices to include in the final survey (or just select placeholders and revise your selections in editing mode) and click the 'Submit' button. To put finishing touches on your survey, access the project page for that survey and click on the survey's 'Edit' link.

CREATING/EDITING QUESTIONS

The survey questions provided have been extensively pre-tested and reviewed and will produce sufficient information for you to use social indicators in your project. If you would like to include additional questions, this should be done through consultation with experienced survey developers.

If you would like to add your own custom questions to the survey, you can do this on a category-by-category basis in the survey 'Edit' page. On each category's banner ("Rating of Water Quality" for example), you can click on 'Add/edit/remove custom questions,' which will take you to a separate page where you can add your own questions to that category. See figure E.3 to see where to make these edits

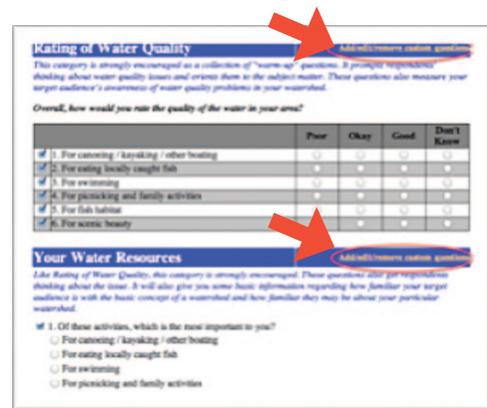


Figure E.3: Screenshot of where to edit your survey

PLEASE NOTE: It is important to add additional questions exactly where you want them to appear in the survey. You cannot move the question once it's created in a particular area. As mentioned above, each question category has it's own option to add, edit, or remove custom for that section.

You can also create your own tables, or append questions to existing tables. For example, if you wanted to add another option to the "Rating of Water Quality" table, you would select the 'Add Question to Table' button. A new box will pop up where you can enter an additional option. If you decide you do not want to add another option, simply hit the 'Delete' button next to that new box. Make sure to save all edits.

To add your own table, select the 'Add a Table' button. For the 'Table Header' box, enter your overarching question. For the 'Likert Text' box, enter your answer categories (i.e. poor, okay, good, don't know), with each option separated by pipes (|). It should look like this: Poor|Okay|Good|Don't Know. If you do not include the pipes, you will not have the correct number of answer categories. For the 'Likert Values' box, enter the numbers that you'd like to have associated with each answer category (i.e. poor=1, okay=2, good=3, don't know=9), once again separated by pipes. It should look like this: 1|2|3|9. You can then enter your

question. You can keep adding additional questions to this table by selecting the “Add Question to Table’ button. If you decide you no longer want this table in this location, click on the ‘Delete Table’ button on the outside of the box. Make sure to save all edits. Figure E.4 demonstrates many of the steps discussed.

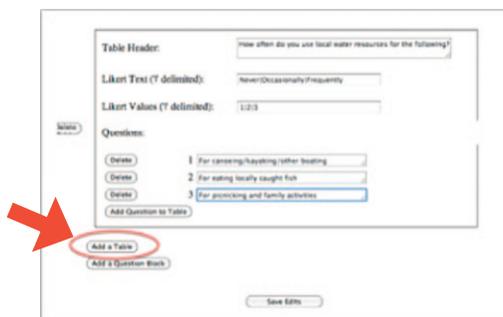


Figure E.4:
Screenshot of “Adding a Table” in SIDMA

You also have the ability to ‘Add a Question Block’. You can give this question block a sub-category header if you wish. You can type your question in the box next to the number 1. You then have the ability to choose the response type; radio, checkbox, or text. Choose radio if you only want the respondent to check one option. Choose checkbox if the question is a check all that apply. Text is for open-ended questions. If you choose either radio or checkbox, you must put your response elements into the box next to that category, but make sure each option is on a new line. You will also need to give each option a value. A pipe must separate each value. If you choose radio question, each option will receive a different value. If you choose a checkbox question, each option should be given the value ‘1’. See Figure E.5 for an example of what adding a question block would look like. If you decide you no longer want the question block in this location, click on the ‘Delete Question Block’ button on the outside of the box. Make sure to save all edits.

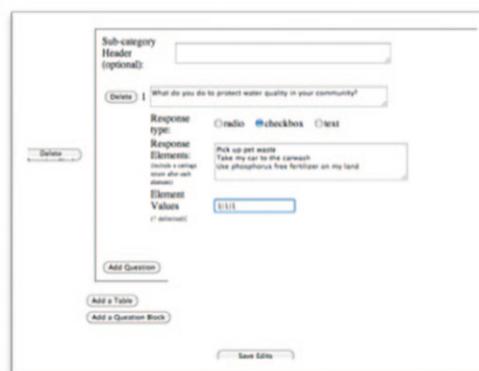


Figure E.5:
Screenshot of “Adding a Question Box”

In general, on the final version of the survey, these questions will appear at the end of their respective categories. Also, note that these custom questions will only be visible on the custom editing page, the ‘View’ survey page, and the ‘Input Response’ page; they will not be visible on the ‘Build’ survey page or the ‘Edit’ survey page.

If you wish to change the language of an original social indicators question, this can be done when you convert the survey into a word-processing format such as MS Word. Sections for which you may want to change the language are the Water Impairments and Practices to Improve Water Quality sections. See the ‘Finalizing Your Questionnaire’ section below for instructions on how to create an MS Word version of your survey. However, it must be noted, you will not be able to distribute a URL to potential respondents if you change terminology because the version created in MS Word will differ from what is produced in SIDMA.

FINALIZING YOUR QUESTIONNAIRE

The first step in finalizing your questionnaire is to create a word-processing version of your survey. To do this, you will want to click on ‘View’ under the Survey Management Actions section of your project (see Figure E.6 on page 32). In the upper right-hand corner, there is a

hyperlink that says ‘View in MS Word-friendly format’. If you click this, SIDMA will give you a version of your survey that you can then select all the text (Ctl + A or drag the cursor), copy (Ctl + C), and then paste (Ctl + V) into Word.

You can now adjust the language and formatting. As mentioned before, in some cases the options given in the original social indicators’ question may not be the terminology that you are using in your watershed. Feel free to fix it here. You may have to play around with the formatting to get the survey to look the way you want it, and to fit it to your desired survey length. Once you have adjusted the language and formatting, print a test copy. Check carefully to be sure all questions are readable and that no part of the questionnaire has been cut off. You also want to make sure that all questions are contained on one page.

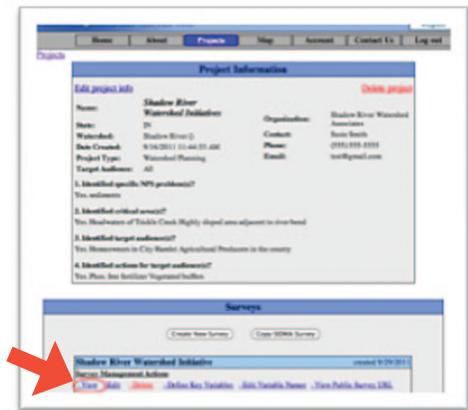


Figure E.6: Viewing survey after created

To produce your survey cover, insert the appropriate title (e.g. Your Views on Shadow River Water Resources), map (or other suitable image), and instructional language (see Appendix B for examples of this language). The back page of your survey should include a space for survey respondents to add comments. Sample cover pages can be seen in Figure E.7.

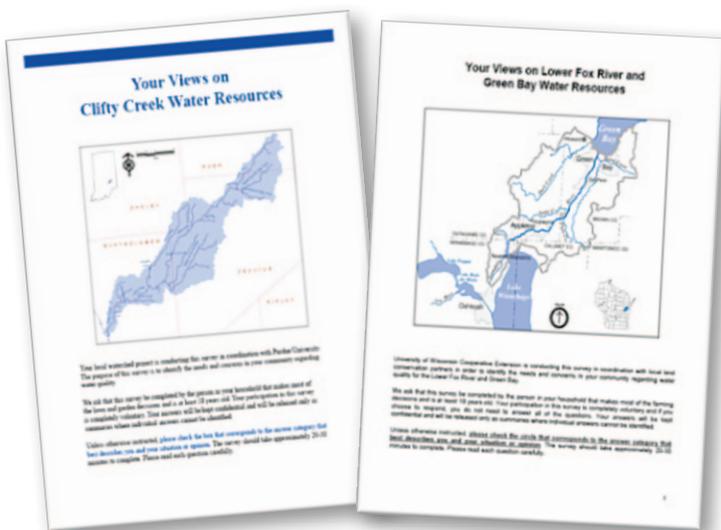


Figure E.7: Images of covers for questionnaires

PRINTING YOUR QUESTIONNAIRE FOR MAILED, IN-PERSON, AND GROUP SURVEYS

You should expect your questionnaire to be approximately 8-12 pages long, including a cover page. Twelve pages is an O.K. length, as long as you leave some ‘white space’ throughout the survey. Try not to exceed this number; more than 12 pages will likely lower your response rate. If you do not select any optional questions, you may be able to get your questionnaire to fit on 8 pages. If you

are printing your questionnaire as an 8.5-inch by 11-inch booklet, we recommend using folded sheets of 17-inch by 11-inch paper. By printing on front and back, each folded sheet of paper will provide 4 pages for your survey. The booklet would then be saddle stitched or stapled in the center of the sheets. You can find an example of this type of questionnaire in Figure E.8. (For booklet printing, the pages must be arranged in booklet order. SIDMA does not do this, but some printers and software may be able to.) For mailing purposes and presentation, it is best not to fold the questionnaire to fit in a smaller envelope. See the sidebar on page 38 for helpful suggestions on printing and mailing.

Even if there are only a few dozen individuals on your mailing list, you should consider having the questionnaire printed by a professional print shop for a polished look. If your local project sponsor has printing capability in-house, this can also be a viable option. The final survey does

not need to be in color but should be very readable and appealing to the respondents. Remember, the design and look of your questionnaire will impact your response rate.

MODIFYING AND PRINTING YOUR QUESTIONNAIRE FOR A PHONE SURVEY

At this point, if you are planning to conduct a phone survey, you will need to produce paper questionnaires that phone interviewers will complete by hand based on responses of the person they have called. Questions read to respondents over the phone will follow a slightly different script than those sent in the mail. Also, phone surveys do not need the same type of formatting or a cover with a map image.

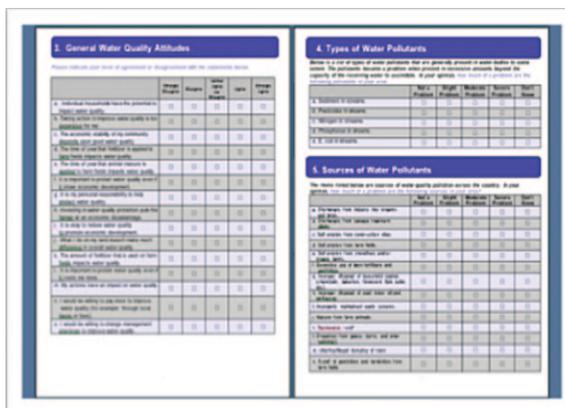


Figure E.8: Image of booklet survey

WRITING THE SCRIPT FOR YOUR TELEPHONE QUESTIONNAIRE

PHONE INTRODUCTION

Hello, my name is _____ and I am calling on behalf of the <insert name> watershed group. A while ago we sent you a letter briefly explaining our project. I am happy to read you the letter if you didn't receive it or don't remember the details. (Re-read letter if they wish)

I am calling you to ask you some questions about your views on water resources in the <insert name> watershed. Your answers will be strictly confidential. If now is not convenient, I am happy to re-schedule at your convenience.

Do you have 20-30 minutes right now?

(If yes, proceed with interview)

(If no): When would be a convenient time to call back?

(If they refuse to participate):

Thank you for your time, and have a nice (evening, afternoon).

YOUR WATERSHED

(Rating of Water Quality):

First, how would you rate the water quality in your area for the following issues. Please respond with Good, Okay, Poor, or You Don't Know.

(Your Water Resources)

I am going to list several activities. Please tell me which is the most important to you (read activities). Do you know where the rainwater goes when it runs off of your property. (If they answer, yes, where does it go?).

YOUR OPINIONS

I am going to read several statements. Please tell me your level of agreement with each by responding: Strongly Agree, Agree, Neither Agree nor Disagree, Disagree, or Strongly Disagree. (Read items and record answers. Repeat response categories if necessary.)

Water Impairments

I am going to read a list of water pollutants that are present in water bodies to some extent. The pollutants become a problem when present in excessive amounts. In your opinion, how much of a threat to water quality are the following pollutants in your area, from: Not a Problem, Slight Problem, Moderate Problem, Severe Problem, or you Don't Know.

Sources of Water Pollutants

I am going to read a list of sources of water quality pollution across the country. Please tell me how much each pollution source is a problem in your area. Please respond: Not a Problem, Slight Problem, Moderate Problem, Severe Problem, or you Don't Know.

Consequences of Poor Water Quality

Poor water quality can lead to a variety of consequences for communities. In your opinion, how much of a problem are the following issues in your area? Please tell me whether it is: Not a Problem, a Slight Problem, a Moderate Problem, a Severe Problem, or you Don't Know.

Practices to Improve Water Quality

Now we will discuss (HOUSEHOLD or FARM) practices that have the potential to improve water quality.

(Interviewer: Preface each practice with, "Have you heard of (practice)?"

If yes: Do you currently use this practice?

If no: Would you say you are somewhat familiar with this practice or you know how to use it but are not using it?

Making Decisions for My Property

I will read a list of issues believed to limit people's ability to change their household and lawn care [or agricultural] practices. Please tell me whether each issue is not at all limiting for you, a little limiting, somewhat limiting or a lot limiting. If you don't know you can say "Don't Know".

Constraints for Specific Practices

Read the name of the first practice and the definition. Do you have or have you ever had this practice? How familiar are you with this practice? Are you willing to try to use this practice? How much do the following factors limit your ability to build this practice (or limited, if you already have one)? Answer options are Not at All, a Little, Some, a Lot, or Don't Know.

ABOUT YOU

Now, I am going to ask you a series of questions about your household. Please remember that all responses are confidential.

(Interviewer: Read each question followed by response options.)

ABOUT YOUR FARM OPERATION (FOR PRODUCER SURVEYS)

Now, I am going to ask you a series of questions about your farm operation. Please remember that all responses are confidential.

(Interviewer: Read each question followed by response options.)

Septic Systems

Do you have a septic system?

If yes: Continue through the septic questions by reading the question.

If no: Skip septic questions.

Information Sources

People get information about water quality issues from a variety of sources. I am going to read a list of several organizations. For each organization, please tell me how important they are to you as a source of information: Not at All Important, Somewhat Important, you are Undecided, Important, or Very Important.

Comments Page

Thank you so much for your time. Would you like me to record any comments you have about this survey or the issues in the survey? Interviewer: legibly handwrite comments; if they do not have comments, finish with: Again, thank you. If you have any questions about this project, you can contact (Name) at (phone number).

PRINTING YOUR PHONE QUESTIONNAIRE

Once you have finalized the language for introducing each question, print off copies for the interviewers conducting the phone survey on a regular office printer.

MODIFICATIONS FOR E-MAIL SURVEYS AND HYBRID APPROACHES

SIDMA gives you abilities to send a public URL to potential respondents so they can complete the survey online. This will be discussed later in Section G.



Section F: Administering the Social Indicators Questionnaire

By this point of the Handbook, you should have chosen the type of survey you will conduct, and you should have created your survey. In this section, we provide detailed instructions for administering or conducting your questionnaire. We start out with a discussion of privacy issues to be aware of with conducting a survey. We also provide general information that pertains to all types of survey methods and then focus in on specifics related to different survey methods. You only need to read the instructions for the type of survey you have chosen to conduct. After you have developed all the components for your selected data collection method, you may need to file a Quality Assurance Project Plan (QAPP) with your state NPS program. To find out if you need to file a QAPP, please consult your state NPS program. This section will provide you with the how-tos of distributing your survey.

PRIVACY ISSUES

Regardless of the type of survey that you conduct, you need to consider how you will protect the privacy of your survey respondents. **It is essential that the collected data are never associated with any individual respondent.**

Once you have created your sample list, you should assign an identification number to each participant. Each questionnaire should include an identification number on the front or back cover. If you are doing a mail survey, be sure to match the questionnaire's identification number to the identification number of the participant on the mailing label. To track who has responded to the survey and to record survey responses, you will use the identification number and not the individual's name. This ensures confidentiality for your respondent and limits bias as respondents are more comfortable providing truthful answers. As questionnaires are returned, you will record that they have been received so you will not mail those respondents a second and/or third questionnaire.

You will want to keep the spreadsheet with names and identification numbers for the duration of your project as you will need to use it again to conduct your post-project survey. This spreadsheet should be kept in a secure location – preferably only accessible to people with a password. You should never try to link the data back to the individual. Similarly, you should never report who has and has not responded to the survey – even this is a violation of someone's privacy.

If you are using a form of data collection that involves staff talking to respondents, such as phone surveys or in-person surveys, it is essential that the staff be trained to not disclose anything they learned during the interview to anyone other than the interviewee.

DETAILS OF CONDUCTING YOUR SURVEY

DETAILS OF CONDUCTING A MAIL SURVEY

One of the drawbacks of mail surveys is the potential for low response rates. High response rates are important for quality social data because they ensure that the responses will reflect more than a small minority of the group. For these types of surveys, your goal should be a 40–60 percent

response rate. Although higher response rates are even better, response rates that drop below this range may not accurately characterize the target audience.

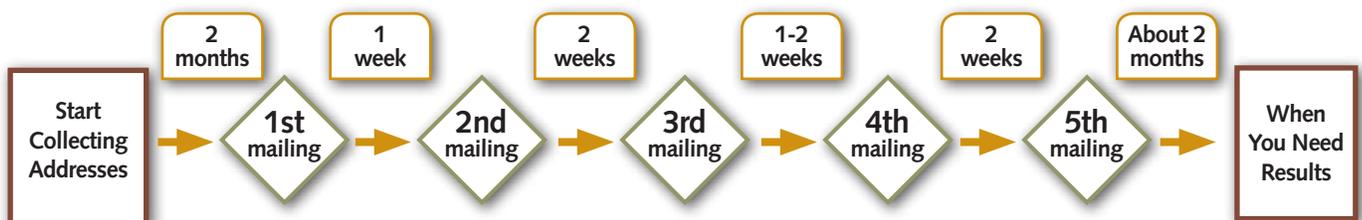
The “five-wave design” that we suggest using for mail surveys in the handbook consists of the following five mailings:

1. Pre-notice about the survey; this is a letter sent in advance of the survey informing the respondent about the purpose of the survey. This letter is sent about one week before the survey.
2. A cover letter included with the actual survey. This cover letter contains similar information to the advance letter.
3. A letter or postcard thanking/reminding the respondent is sent about two weeks after the first survey mailing.
4. A second survey with a cover letter is sent to non-respondents about 1-2 weeks after the postcard reminder.
5. A third survey with cover letter or a reminder letter or postcard is sent to non-respondents about 1-2 weeks after the second survey.

(modified from Dillman 2000)

As the above schedule indicates, it takes about two months from the time the advance letter is mailed until the final survey is mailed. As you plan your mailing schedule, you will want to carefully consider major events that will occur during these two months. You want to avoid holidays as much as possible; November and December are generally bad times to do survey mailings as people are often over-extended with activities at this time of year. You also need to be sensitive to your target audience’s busy-times. For example, it is never a good idea to survey row crop agricultural producers during either planting or harvest season. See Figure F.1 for a sample timeline to follow for your mailings.

Figure F.1: Timeline for SI mailing results



Appendix B contains samples of letters and postcards that can be used in the five-wave design. These should be modified to fit the needs of a particular project.

An additional consideration related to the five-wave design is the printing of surveys. Once you determine your sample size, you will need to determine how many questionnaires to print. After your first mailing, it is common to expect that 20 percent of the questionnaires will be returned to you within three weeks. After that, you will begin subsequent mailings of additional copies of the questionnaires to non-respondents. Since half or more of the people on your mailing list will receive a second copy of the questionnaire, you should print roughly twice the

Helpful Tips for Creating or Mailing Surveys

- Surveys that are 8 or 12 pages work best because you can print on 11 x 17 paper and staple in the middle
- Follow the Dillman method for mailing, which means 5 total mailings
- Use first-class stamps
- If your budget allows, consider using colored envelopes to stand out in the mail.
- Make sure to provide each potential respondent with a unique identifier. Put this somewhere on the survey so you can track if they have returned the survey.
- Use volunteers to help with survey preparation!

1st Mailing

What to include – letter introducing project

Size Envelope – 4 $\frac{1}{8}$ x 9 $\frac{1}{2}$

Postage – Regular priced letter stamp

2nd Mailing

What to include – cover letter, survey, stamped return envelope

Size Envelope – 9 x 12 for outer envelope, 6 x 9 $\frac{1}{2}$ for return envelope

Postage – Take all materials to post office and they will give you cost details

3rd Mailing

What to include – postcard

Postage – Regular priced postcard stamp

4th Mailing

Same as 2nd mailing

5th Mailing

Same as 2nd and 4th mailing, but change language to emphasize you need their help filling out the survey and this will be the last time you will be sending them something regarding this survey.

number of questionnaires that the sample size formula tells you that you need. You should print even more than this if you plan to mail the survey three times.

Additional considerations for achieving an acceptable response rate by mail, include:

(1) *Respondent-friendly questionnaire*

There are techniques such as color, font style and size, pictures, well-designed questions (which we have provided), and white space that can all help improve response rate. When reviewing a draft questionnaire, be sure that it is of appropriate length (takes less than 20 minutes to complete), is visually appealing, and interesting to the respondent.

(2) *Return envelopes with real first-class stamps instead of machine-generated postage or bulk-mail stamps*

It has been found that people are more likely to respond to surveys that are personally addressed (instead of “To the Household”) and have first-class stamps. This reinforces to respondent that they are not part of a bulk mailing and that the survey is not junk mail. You should always include a pre-addressed postage-paid envelope for the respondent to use when mailing the questionnaire back to you.

(3) *Personalization of correspondence*

The initial contact letter is extremely important. It should be personalized and avoid the look of a form letter. If possible, it should contain an original ink signature. The wording of the cover letter should describe:

- a) why you are contacting them,
- b) how you obtained their contact information,
- c) an explanation about the project/study,
- d) why the project/study is important,
- e) why it is important for them to respond,
- f) how you will use the data,
- g) your confidentiality policy,
- h) your contact information in case they have questions, and
- i) a thank-you.

That's a lot of information for a one-letter. Again, you can find sample letters in Appendix B.

If after using the “five-wave design,” your mail survey has not produced **at least a 40 percent response rate**, you will need to randomly call non-respondents to complete the questionnaire over the telephone or arrange to complete in person. Once you have reached enough people to comprise a 40 percent response rate, you may stop calling.

DETAILS OF CONDUCTING A PHONE SURVEY

The language of the phone survey will need to be slightly different than that used in a mail survey. As respondents will not be reading the questions but will rather be answering a question that is read to them, directions will need to be embedded into the questions. We have included some example scripts in Section E.

The people conducting the phone survey need to be trained in how to talk to respondents in a way that treats them with respect and does not bias the answers. One of the main considerations with phone surveys is how to reach people who do not answer their telephone. The best approach for reaching a truly representative audience is to call each person at least three different times at different times of the day and on different days of the week. If you have addresses in addition to phone numbers, sending an advance letter will help increase the response rate.

Phone surveyors generally continue calling those on a list until the target number of responses is obtained.

DETAILS OF CONDUCTING AN E-MAIL SURVEY

Successful administration of an E-mail survey involves the following principles:

1. Use a multiple contact strategy much like that used for regular mail surveys; you can also consider sending a letter via U.S. mail before sending e-mail notices; and
2. Personalize E-mail contacts so that none are part of a mass mailing.

DETAILS OF CONDUCTING AN IN-PERSON SURVEY

Conducting an in-person survey requires some of the same considerations as conducting a phone survey. The interviewer needs to be trained and needs to be personable. It is very important that questions are asked the same way every time and in the same order. To actually conduct the survey, you can print out the survey you created and interviewers will write the answers in as they ask the questions. If people are not home on the first visit, it will be necessary to revisit homes. The interviewer(s) needs to be someone the respondents will identify with or feel comfortable with, e.g. Amish agricultural producers are unlikely to agree to be interviewed by a female interviewer. It is advisable to send an advance letter similar to one that could be sent for a mail survey informing the respondent about the purpose of the interviews and when an interviewer is expected to stop by.

DETAILS OF CONDUCTING SURVEYS IN A GROUP SETTING

It is important to collect this information in as consistent a manner as possible. It is fine for participants to introduce themselves to each other at the beginning of the meeting if they don't know each other already. The following protocol for group administration of a questionnaire can be used:

Introduction: a nearly identical introduction is provided to all groups consisting of these elements:

- Expression of appreciation
- Brief description of the task
- Provide summary of the steps:
 - Read the cover letter;
 - Take the questionnaire out of the envelope;
 - Complete the questionnaire; and
 - Immediately put the questionnaire in the envelope and seal it for data entry.

Special instructions: These special instructions are typically offered:

- This is not a test with right or wrong answers. Please think of it as being a questionnaire sent to your apartment or home and fill it out just like you would if we sent it there.
- As soon as you have answered the last question, please be sure that you put the questionnaire immediately into the envelope, seal it, and wait for additional instructions.

Distribution: Each respondent is given a packet consisting of the questionnaire inside an unsealed envelope, which will double as a return envelope, and a cover letter clipped to the front of the envelope. They are told they can start when they receive it.

Retrieval: Questionnaires are passed in when everyone is done or picked up from where each respondent is sitting.

Debriefing: More information about the questionnaire and its purpose may be provided. Appreciation is expressed once again to respondents.

(From Dillman 2000)

WHAT IF PEOPLE AREN'T RESPONDING TO YOUR SURVEY?

Low response rates raise concerns about how much your results reflect the actual situation in your project area. By the end of your process, your response rate should be higher than 40 percent.

Monitoring your response rates throughout the survey delivery process allows you make adjustments if necessary. Following the process described in this section, you should expect to see a 20-percent or higher response after your first reminder. If you don't you should review your process:

- Is the cover letter clear?
- Was your cover letter printed on recognizable local letterhead and signed by someone from the area?
- Did you use real stamps on the survey packet and on the return envelope?
- Is the return address local?
- Is the questionnaire too cluttered?

Don't wait until the process is completed – make adjustments along the way to increase your response rate.

If you followed all the correct procedures and you still have a low response rate, it will be important to compare those who responded and those who did not. Showing that a small group of respondents closely resembles the large group of non-respondents increases confidence that the responses reflect the larger group. In agricultural settings, you may have access to measures of farm and/or herd size. In other settings, you might look at Census information such education levels, length of time at current address, or other characteristics that describe your group. You can compare your respondents to the larger population using these measures.

Whatever your final response rate, make sure to disclose the response rate and any additional measures that compare respondents and non-respondents.

DATA ENTRY FOR PROJECT SURVEYS

As soon as the questionnaires are returned, the responses should be entered into SIDMA. More instructions on this process can be seen in Section G.

CALCULATING RESPONSE RATES

To calculate the response rate for mail and e-mail surveys, use the following formula:

$$\frac{\text{number returned completed}}{(\text{number delivered}) - (\text{number returned as undeliverable})} \times 100$$

The response rate should be reported on all documents that summarize survey results.

For other types of surveys, the response rate calculation is similar. For phone and in-person surveys, the response rate is based on the number of people willing to complete the survey divided by the number of people reached by phone or in-person. For group surveys, the response rate is based on the number of people who attended the meeting and completed the survey divided by the total number of people invited.

DATA CLEANING

The familiar adage “garbage in, garbage out” is an appropriate one when dealing with survey data. It is important that the numbers that are entered into SIDMA are correct. Humans ultimately will make mistakes while entering data. Our suggestion is to choose about 5% of your surveys to recheck for accuracy. In the ‘view/edit/delete responses’ function of SIDMA, go through your data entry to check for mistakes. If you notice there are mistakes, correct them, but also keep track of the number of mistakes that were made. If there were a large number of mistakes, you’ll want to check through other surveys to ensure accuracy. Make sure you know your data quite well. Look for systematic issues related to a particular question or a particular person doing data entry. If there are systematic issues you should fix throughout the entire dataset.

Please note: Conduct your data cleaning while in SIDMA, and not in an exported database. That way the correct dataset is included within SIDMA.

You should keep the paper copies of the survey until your project is complete, because you never know when you might need to go back to a survey to check on a response.

Section G: Features of SIDMA

At this point in the Handbook, we are moving away from the steps in the SIPES process to discuss the many features of SIDMA that can help you with your social indicators process. If you are following along with the Handbook, you have already signed up for a SIDMA account, created a new project, and developed and formatted your social indicators questionnaire. The last section gave some useful tips on how to distribute your survey and what to do once data has started coming in. SIDMA has many additional features including data entry, analysis, and reporting. This section will take you through each of the tabs on the top of the SIDMA home page, and discuss what each tab can do for you and your project.

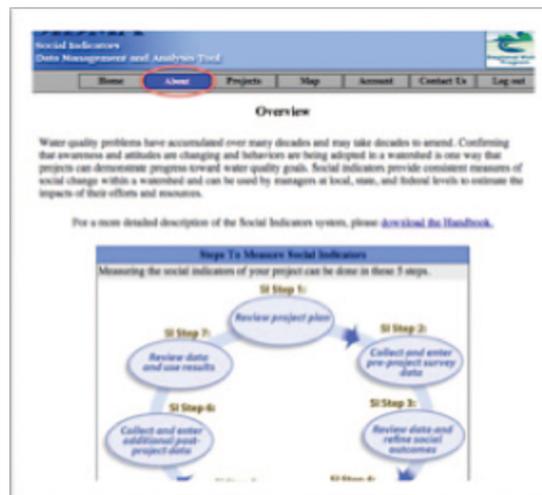
HOME

The 'Home' tab will always bring you back to your opening screen. From the 'Home' tab, you can: learn more about Social Indicators, create an account, create/work on a project, or browse maps. You are already familiar with a few of these options, and the others will be discussed as we move through this section.



ABOUT

The 'About' tab provides an overview of the social indicators process. This is the same information that was discussed in Section A of this Handbook. If you misplaced your version of the Handbook, you can download another copy in its entirety by clicking on the link on this page. Also, if you click on any of the steps in the figure, it will take you to the section of the Handbook that discusses that step.



PROJECTS

Most of the features of SIDMA can be found under the 'Projects' tab. You can create your project (discussed in Section C of this Handbook), or view/edit an existing project.



If you click on the 'View/Edit an Existing Project' button, it takes you to a page that looks like Figure G.1 to the left. From here you can search for a social indicators project by: project name, state, organization, project type, or target audience and applying the filter. You can show all projects by clicking on the appropriate button, or you can view only your project(s) by click on the 'Show My Projects' button.

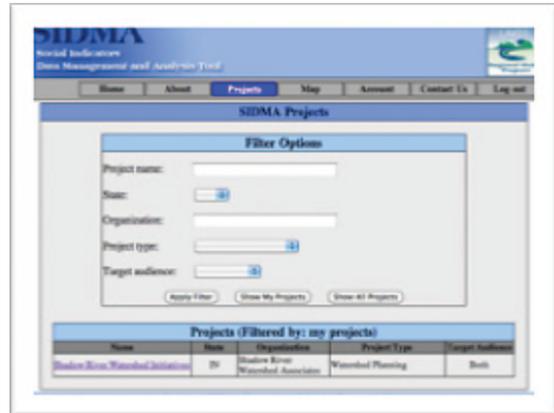


Figure G.1. View/Edit an Existing Project

We will continue on the tour of SIDMA features by selecting one of your projects. Here you will see a summary of your project information, and you can edit this information if anything changes throughout your social indicators process. On this page, you can also delete this project if you need to restart the process. See figure G.2 for an example of the summary information.



Figure G.2. Example of summary information

Below the project information, you will find a box named 'Surveys'. Here you will see all of your surveys, an option to create a new survey, or an option to copy another SIDMA survey. To copy another survey, you may choose to copy one of your own surveys (this works particularly well when creating a post-survey), or you can make a copy of another project's survey if they have particular features and questions that you liked. Once a copy of a survey is created, it will appear under in this section as well (see figure G.3).

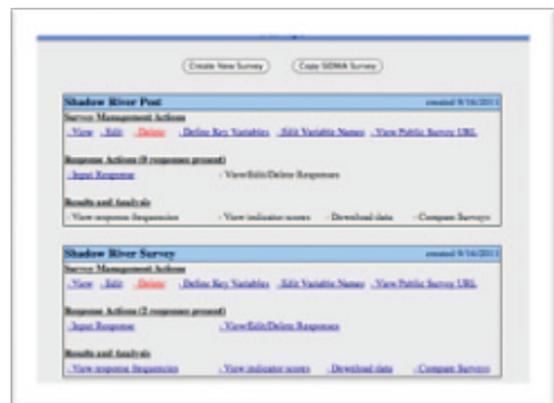


Figure G.3. Example of copied survey for post-project

Under every project you have created, you will find the following sections: Survey Management Actions, Response Actions, and Results and Analysis. Each of these sections will be discussed separately.

SURVEY MANAGEMENT ACTIONS

By clicking on **'View'** you can see the survey that you have just created. This will also take you the place where you can view your survey in an MS Word-friendly format. You can also 'Edit' your survey. You can choose to add or delete questions, by following the same process that you used to originally create your survey. If you did not have time to complete your survey when you were first creating it and you had to choose placeholders in order to save progress, this is the area where you can go back and make those changes.

Please Note: If you already have responses for your survey, you will not be able to edit your questionnaire unless you delete the responses first.

Under Survey Management Actions, you also have the ability to **'Delete'** the survey you have created, and will be able to start over. Remember what you named the survey that you are working on and the date you created this survey; we do not want you to delete the incorrect survey. Once it has been deleted, you will not be able to get this survey back.

You can also **'Define Key Variables'**. You will use the checkboxes to the left to select the key questions of this survey. For some of the sections of the survey, you may have chosen options that are directly relevant to your watershed, and you may have chosen some options just to see how your target population would respond. For the key variables, we'd like you to choose which ones are directly relevant and most important to your watershed and your project at the time that you are conducting the survey. You will need to define key variables in order to create indicator scores for social indicators such as attitudes, awareness, and behavior. The social indicator scores will be discussed when we get to the Results and Analysis part of this section.

The next thing you can do under the Survey Management Actions section is to **'Edit Variable Names'**. This page allows you to view the variable names associated with the questions on the survey, and edit the variable names of custom questions added to the survey. Variable names are utilized to organize survey responses when downloaded through the 'Download' action on the survey menu of the project page. All original social indicators questions already have a variable name assigned to them; **these cannot be changed**. However, you will want to create variable names for the questions/options that you added so that you know which responses are associated with each question if you will be using the data in a program outside of SIDMA.

RESPONSE ACTIONS

There are two things you can do in this section of SIDMA: 1) input responses and 2) view/edit/delete responses. To enter the responses from your paper surveys into SIDMA, click 'Input Response'. A version of your survey will appear. You can then input responses by clicking on the radio buttons that correspond to your respondents' answers. It is extremely important that you take your time with this step, to ensure the answers are entered correctly. Remember the old adage 'Garbage In, Garbage Out.'

In the 'View/Edit/Delete Responses' page, you will see a list of every response that you have with your survey. Under 'Response ID', you will find the unique identifier given to each respondent. If you did not assign a unique identifier or if your respondent did not enter their unique identifier, it will simply say 'Public Response'. For each response, it will tell you when the survey was submitted, and give you the option to either view, edit, or delete that particular response. If you choose 'View', you will see how that person answered the questions. You cannot make any changes while you are under the 'View' option. If you realize you entered something incorrectly, you can change it under the 'Edit' option. Be sure to save any changes you made. You also have the ability to 'Delete' a particular response if a situation arises that warrants you to do so.

RESULTS AND ANALYSIS

Under this section of the 'Projects' tab, there are four things you can do: view response frequencies, view indicator scores, download data, and compare surveys. If you click on the 'View Response Frequencies' link, a new page will open with your survey. For each question, you will see the percentage of respondents who chose each answer category associated with that question. You will also see the mean and the standard deviation of each question, and the number of valid and total responses. '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 an answer that was not "Don't Know" or "Not Relevant." The mean and standard deviation are calculated using only the valid responses.

You can sort any of the results in each table by clicking on the appropriate arrow. If you click on the text of any of the questions, a pie chart will open up in a new window. In this window, there is also the option to view your results as a bar chart. You can save these charts and use them in any summary reports you wish to create. For continuous data such as age or farm size, you can view your data in a histogram (see examples below), and can decide on the number of bins (groups) for dividing your data.

You can also see individual responses for this type of question. For open-ended questions such as the name of your watershed and the comments section, you will see all of your results in a list. Figure G.6 highlights ways SIDMA will help you visualize data in ways beyond frequency scores.



Figure G.6. Examples of ways SIDMA helps you visualize data

On the **‘View Indicator Scores’** page, you will see boxes with different indicator scores for awareness, attitudes, constraints, and behavior indicators. The results that are shown represent the scores (Mean) for your survey on these various social indicators. You can click on any indicator name to see a brief description on how that indicator score was calculated. If you get a warning such as *‘Must identify Key Questions for the Consequences of Poor Water Quality category before calculating for this indicator’* for some of the awareness indicators, this means that you did not define your key variables. You can find the **‘Define Key Variables’** link under Survey Management Actions. Another important thing to note is “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. The capacity indicators and some of the behavior indicators will have to be calculated off-line with information that you have collected and observed throughout your social indicators process.

You can **‘Download’** your data so that you can do additional analysis outside of SIDMA if you wish. Finally, under Results and Analysis, you can **‘Compare Surveys’**. You have the ability to compare either response frequencies or indicator scores of two different surveys.

PLEASE NOTE: you can compare your results against another projects’ if you wish to do so.

After you decide which two surveys you would like to compare, SIDMA provides you with a frequency table that looks quite similar to what you would have seen in the **‘View Response Frequencies’** page. However, this time results 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 ‘Survey 2’ from the corresponding value in ‘Survey 1’. For example, a negative frequency percentage means that more respondents selected the particular option on ‘Survey 2’ than on ‘Survey 1’ (e.g. for the ‘Okay’ option in Table G.1, -14.9 is determined by subtracting the ‘Survey 2’ response [34.1] from the ‘Survey 1’ [19.2] response). Conversely, a positive value for Total Response Count means that, for a particular question, more respondents provided an answer on ‘Survey 1’ than on ‘Survey 2’.

Table G.1: Example of how Pre-Post Comparison Output is determined

	Question#	Poor (1)	Okay (2)	Good (3)	Don't Know (9)	Mean (SD)	Valid Responses/ Total Responses
Comparison	For canoeing/ kayaking/ other boating	20.1	-14.9	0.6	-5.8	-0.2 (.23)	-82 / -106
Survey 1	For canoeing/ kayaking/ other boating	26.9	19.2	38.5	15.4	2.14 (0.89)	22 / 26
Survey 2	For canoeing/ kayaking/ other boating	6.8	34.1	37.9	21.2	2.34 (.64)	104 / 132

As with the regular response frequency report, tabular results can be sorted by clicking on the appropriate arrow and charts of difference can be viewed for select questions by clicking on its text. ‘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 an answer that was not “Don’t Know” or “Not Relevant.” The mean and standard deviation are calculated using only the valid responses.

One final thing for projects

The last thing we would like to mention under the 'Project' tab is that if you choose to 'Show all Projects' a list of all social indicators projects done to date will appear under the filter options box. You can click on any of the projects and view project details, view their surveys, view results, compare your results to theirs, etc., however, you will not have sufficient privileges to make changes to their project information or surveys or to download their data.

MAP

By clicking on the 'Map' tab, you will launch the SIDMA Mapping Interface. It contains the states located within EPA Region 5, and you will have the ability to create maps of your watershed. If you do not have previous Geographic Information Systems (GIS) experience, the mapping tool will allow you to spatially view your watershed and will provide you with quantitative data about your watershed. We'll provide helpful hints to get started using the SIDMA Mapping Interface.

To give you a brief lesson on how to use this Mapping Interface, we will discuss what each tool can do for you. Below is a screen capture of what the tool bar in the SIDMA Mapping Interface looks like. We will discuss each tool from top to bottom and refer to the tools on the top line as 1.1 (being the top left) and 1.2 (being the top right) and so on.

Tool 1.1 – allows you to switch between the layers and your legend

Tool 1.2 – removes or adds the viewshed map in the upper left-hand corner of the Mapping Interface window

Tool 2.1 – allows you to zoom in on a particular area

Tool 2.2 – allows you to zoom out of a particular area

Tool 3.1 – zooms to the full extent of the mapping area

Tool 3.2 – zooms to the full extent of the active map layer

Tool 4.1 – reverts you back to your previous view

Tool 4.2 – pans the map view

Tool 5.1 – pan up

Tool 5.2 – pan down

Tool 6.1 – pan left

Tool 6.2 – pan right

Tool 7.1 – if a particular map layer's attributes contain a hyperlink field, opens hyperlink

Tool 7.2 – identifies attributes for the selected geographic feature of the active layer

Tool 8.1 – allows you to perform queries to look for locations that fit certain criteria

Tool 8.2 – helps you to find certain features within your active layer

Tool 9.1 – helps you measure the distance between two points

Tool 9.2 – allows you to change the distance unit on your scale

Tool 10.1 – allows you to create buffers

Tool 10.2 – select geographic features on map

Tool 11.1 – select geographic features that interest a digitized line or polygon

Tool 11.2 – allows you to clear your selections

Tool 12.1 – allows you to print the map you have created

Tool 12.2 – single-click zoom on point



You can click the box on any of the layers on the right-hand side of your screen to view this data on the map. You can choose as many or as few layers as you would like. Try different combinations to determine which tells the story you are trying to tell. To change your active layer, you must click on the radio button next to the layer you'd like choose as the active layer.

Please note: you may have to zoom in before you can see some of the layers on your map.

ACCOUNT

The account tab allows you to view your account information including: first name, last name, E-mail address, and login name. If for any reason any of this information changes throughout your social indicators process, please go to this area to edit the information. You can also change your password here. Remember to save all changes.



Section H: Using Survey Results to Develop Education and Outreach Strategies

At this point you have gone through the process of identifying your target audiences and the management practices they might implement. You have also completed your pre-project social indicators survey. You should have used SIDMA to create generate a frequency report and some charts to better understand your data. This section outlines a process for understanding and using your results to develop your education and outreach strategy. Results will allow you to:

- Familiarize yourself with the frequencies and averages presented in “questionnaire” form.
- Use your analysis to refine your target audiences, finalize the management practices you will promote, and develop social outcomes. These are the last steps in identifying a combination of environmental and social conditions that will allow you to most effectively accomplish (or make progress toward) your environmental goals and social outcomes.
- Develop your outreach and implementation strategies based on your environmental goals and social outcomes.
- Identify the characteristics of your population that will either facilitate or impede practice adoption. Find out how much the population knows about the practices you hope to get installed, as well as identify the barriers to practice adoption.

If you have the capacity, you can also examine the following relationships:

- The number of people that have adopted or may be willing to adopt practices that would reduce priority pollutant loads as well as their awareness of those practices.
- The relationships between willingness to adopt practices and constraints to practice adoption.
- The relationships between willingness to adopt practices and awareness of practices.
- The demographic characteristics associated with willingness to adopt practices, constraints to practice adoption, and awareness of practices.

FREQUENCIES AND AVERAGES PRESENTED IN QUESTIONNAIRE FORM

The report function in SIDMA presents the frequency of results and the averages for each survey question. Average values for each question provide a quick and easy way to understand how respondents answered each question. For example in Table H.1 (page 52) for the question about canoeing/kayak/other boating, the average score is 2.14 which tells us that, on average, respondents think water quality for canoeing/kayaking/other boating is between okay and good. The report allows you to get an idea of the overall strengths and weaknesses of your watershed. Are people familiar with the practices you are hoping to have installed? Does the population as a whole understand the sources and consequences of the pollutants of concern? These are the sorts of questions answered by frequency and average data.

Table H.1: Example of initial frequency and averages for survey 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	26.9	19.2	38.5	15.4	2.14 (0.89)	22 / 26
2. For eating locally caught fish	15.4	38.5	34.6	11.5	2.22 (0.74)	23 / 26
3. For swimming	11.5	26.9	50	11.5	2.43 (0.73)	23 / 26
4. For picnicking and family activities	19.2	26.9	34.6	19.2	2.19 (0.81)	21 / 26
5. For fish habitat	16	20	44	20	2.35 (0.81)	20 / 25
6. For scenic beauty	20	24	44	12	2.27 (0.83)	22 / 25
7. For letting my dog swim	15.4	30.8	30.8	23.1	2.2 (0.77)	20 / 26

RELATIONSHIPS AMONG RESPONSES

While the averages can help you identify characteristics that can facilitate or impede practice adoption for your watershed, it may miss important trends that can help you focus your efforts.

If you have the capacity, and an interest in diving into the data further, you can think about examining the results for those who have already adopted a given practice. This analysis helps you identify the key traits of respondents who overcame barriers to practice adoption. You can also compare those who have adopted a practice to those who are willing to adopt (wta) a practice, those who will consider adoption (maybe) and respondents not willing to adopt a practice (nwta).

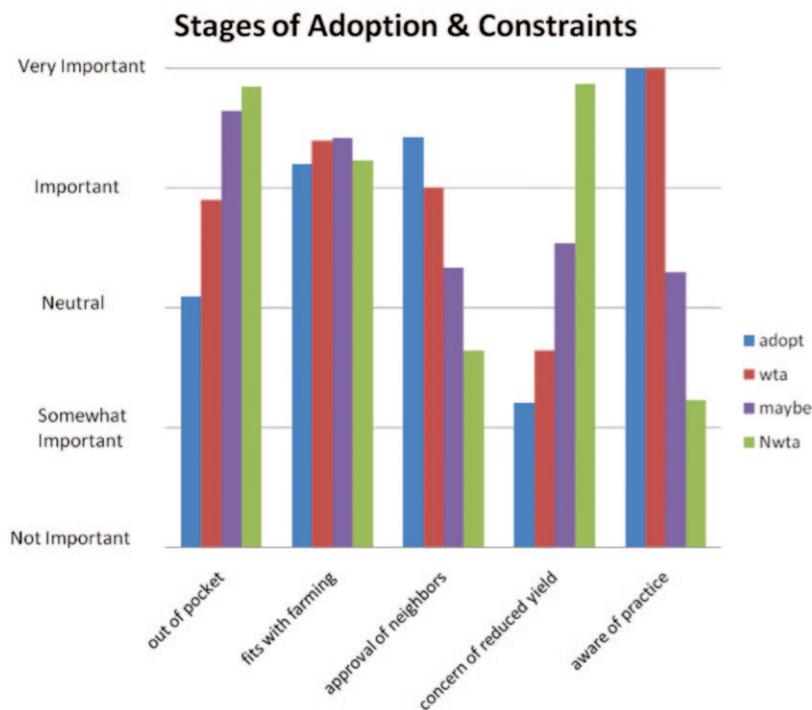
Since this part compares different stages of adoption (adopted, wta, maybe, & nwta) it answers different questions. Is there an identifiable group that is more likely to adopt a given practice (such as farmers with more acreage)? Do those who have already adopted a riparian buffer believe financial assistance is more or less important than those who have not adopted one already? By comparing these different groups we get a picture of which factors are most likely to lead to adoption. The results could be presented in both table form (Table H.2) as well as a graph (Figure H.1). Both the table and graph present the averages for each variable.

PLEASE NOTE: the rest of the tables and figures in this section were created outside of SIDMA as examples of how you can show aspects of your data. SIDMA can produce charts and tables for simple frequencies, but you'll need to create tables and figures on your own to show more sophisticated results (see previous section on how to download data).

Table H.2: Constraints for riparian buffers

Variable		Average
Out of pocket	Overall	3.125
	adopt	2.1
	wta	2.9
	maybe	3.65
	nwta	3.85
Fits with farming	Overall	3.3125
	adopt	3.2
	wta	3.4
	maybe	3.42
	nwta	3.23
Approval of neighbors	Overall	2.6075
	adopt	3.43
	wta	3.01
	maybe	2.34
	nwta	1.65
Concern of reduced yield	Overall	2.3175
	adopt	1.21
	wta	1.65
	maybe	2.54
	nwta	3.87
Aware of practice	Overall	2.8825
	adopt	4
	wta	4
	maybe	2.3
	nwta	1.23

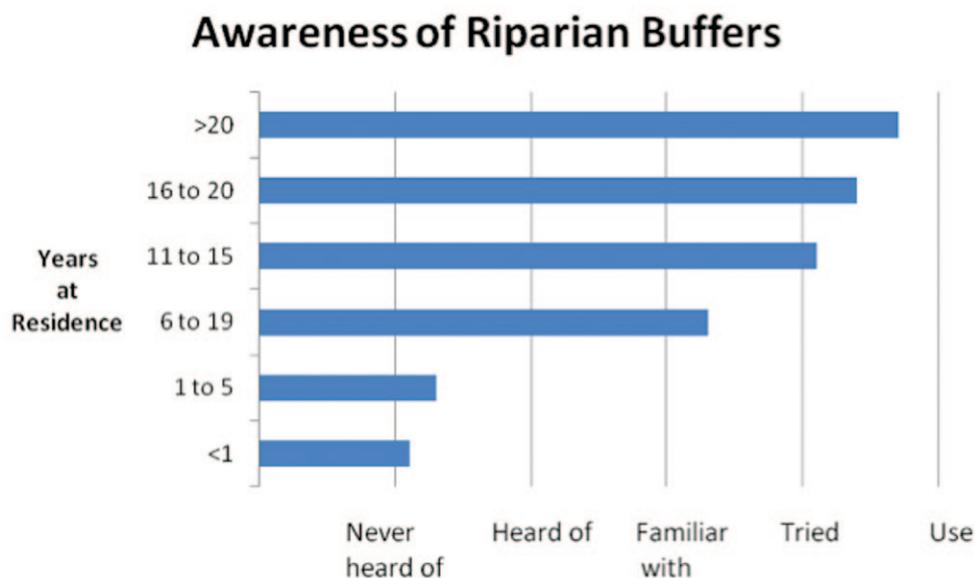
Figure H.1: Relative importance of constraints for riparian buffers



You could also use the Pearson's Chi-square test to look at the relationship between two different variables. Briefly, this test examines if one variable exerts an influence on another variable. For example, are larger farms more or less concerned about practice cost than smaller farms? Are longer-term residents more or less knowledgeable about a practice of interest? Pearson's chi-square test can help us answer these types of questions. If you want to know more about this test, any good introductory level statistics book can provide information about it.

If there is a specific relationship you wish to see, you can work with the data to see additional tables and figures. Figure H.2 is an example of how familiarity of riparian buffers can vary based on years at residence.

Figure H.2: Years of residency vs. familiarity with riparian buffers

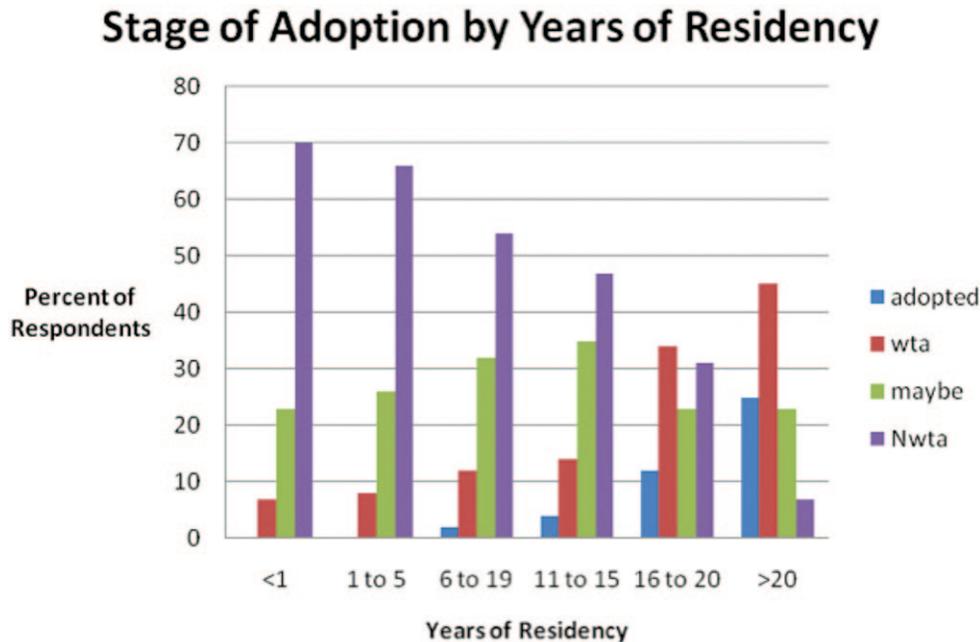


FOCUSING YOUR OUTREACH STRATEGY

Section B defined a **target audience** as a group of individuals whose awareness, attitudes, capacity, constraints, and behavior change are required to achieve your project's environmental goals and desired outcomes. Focusing on subgroups within your target audience can lead to outreach strategies that meet specific needs.

For example, Snow White River watershed has seven neighborhoods with associations that manage lakeshore property. Phosphorus runoff is the primary pollutant of concern, and you've designated the entire lakeshore as a critical area because your environmental data is not detailed enough to distinguish differences among neighborhoods. Therefore, you have selected all of the households in all seven neighborhoods around the lake as your target audience and collected SIPES pre-project survey data from them. The results of your survey indicate longer-term residents have much more interest in installing native plant (riparian) buffers than the other residents (Figure H.3). These residents, a subset of your target audience, might become the focus of one component of your outreach strategy.

Figure H.3: Time of Residency vs. Stage of Adoption



USING PRE-PROJECT SURVEY RESULTS TO ESTABLISH SOCIAL OUTCOMES

After looking at pre-project survey results in a number of ways, you can then use this information to establish social outcomes. Social outcomes are broadly defined as the social changes needed to bring about and sustain the environmental conditions you are trying to achieve in your project area. These outcomes will address the changes in awareness, attitudes, capacity, constraints, and behaviors that will help achieve your project's environmental goals and management objectives.

These social changes are outcomes that project activities are expected to achieve. Social outcomes that provide the foundation for the social indicators in this Handbook are listed in the Handbook Introduction. Social outcomes include:

- Increased awareness of relevant technical issues and/or recommended practices in critical areas;
- Changed attitudes to facilitate desired behavior change in critical areas;
- Reduced constraints to behavior change;
- Increased capacity to leverage resources in critical areas;
- Increased capacity to support appropriate practices in critical areas; and
- Increased adoption of practices to maintain or improve water quality in critical areas.

To develop social outcomes for your project, first determine the types of social changes your project would like to achieve. Based on your project goals, do you expect that you will need to increase awareness of the type of pollutants impacting your watershed, the impacts of those pollutants or both? Are your target audiences ready to adopt practices? Are you trying to

change a behavior? You can tailor the outcomes above to fit the specifics of your project and develop others as needed. While there is no hard and fast formula for developing social outcomes for your project, social outcomes should typically address who, what, where, and when components of what you are trying to achieve. The “who” will often correspond to your target audience. The “what” will often be the necessary management practices or knowledge gaps you’ve identified through your pre-project survey. A social outcome for the Snow White River example could be: 75% of Snow White River riparian property owners use phosphorus-free lawn fertilizer (up from 25% baseline).

DESIGNING YOUR OUTREACH STRATEGIES

Now that you’ve analyzed your SIPES pre-project survey data and developed social outcomes, the next step is to design your outreach strategies. The National Extension Water Outreach and Education website houses extensive information on outreach approaches organized by project goal and target audience. A Best Education Practices (BEP) decision tree (<http://wateroutreach.uwex.edu/use/DecisionTreestart.cfm>) can help you think through your approach. *Getting Your Feet Wet With Social Marketing* (<http://ag.utah.gov/conservation/GettingYourFeetWet1.pdf>), US EPA’s *Getting In Step* (<http://www.epa.gov/nps/toolbox/print/getnstepguide.pdf>) and NPS Outreach Toolbox (<http://www.epa.gov/nps/toolbox>) also offer valuable guidance on using marketing approaches to achieving behavior change.

A good first step is to determine which types of outreach strategies are best suited to accomplishing your social outcomes. Table H.3 compares the SIPES social outcome categories to the types of outreach activities that are most appropriate for addressing them. Note that this is not an exhaustive list. Your options are only limited by your own creativity. However, it should orient you to a way of thinking about selecting activities that will have the best chance of success.

Table H.3: The relationship between social outcomes and types of outreach activities

	Workshop	Field Day	Informational Meetings	Websites	Brochures Fact Sheets	Newsletters	Informational Signage	Media	Incentives
Outcome: Increase Awareness	✓	✓	✓	✓	✓	✓	✓	✓	
Outcome: Increase Technical Knowledge	✓	✓	✓	✓	✓				
Outcome: Increase Skills	✓	✓							
Outcome: Reduce Constraints	✓	✓							✓
Outcome: Change Attitudes	✓	✓	✓					✓	✓

Table H.4 below provides an example of how a variety of activities might be applied toward the social outcome, “Residents of Oak Creek watershed will increase rain barrel use by 30%.”

Table H.4: Application of selected types of outreach activities to a rain barrel adoption project

Activity	Example Application
Workshop	Provide information regarding how to install rain barrel.
Field Day	Show a rain barrel in place.
Informational Meetings	Announce that organization is installing rain barrels in this area and how to get cost-share.
Newsletters	Communicate what a rain barrel is, how one is used, or announce new rain barrel installation.
Brochures and Fact Sheets	Provide information regarding how to install rain barrel – essentially an overview of a workshop experience.
Websites	Provide details regarding rain barrel installation to a group of organization members.
Informational Signage	Identify a rain barrel and project in a particularly or highly trafficked area with signage.
Mass Media	Announce a rain barrel workshop or place an article in the paper regarding the value of rain barrel.
Incentives	Provide some resource in exchange for rain barrel installation. The resource could be a price break on the barrel, free tickets to a local community event, etc.

APPROPRIATE USES AND EXPECTATIONS FOR DIFFERENT OUTREACH ACTIVITIES

1. WORKSHOPS, FIELD DAYS, AND INFORMATIONAL MEETINGS

Workshops, field days, and informational meetings are all opportunities to interact with groups of stakeholders, members of your target audience and your community. Your communication or educational objective will help you to determine which will be appropriate to use and when. For NPS projects, these activities are typically used in the following ways:

- Workshops are useful for presenting information and teaching skills that can help people improve water quality. They provide opportunities to interact on a personal level and can vary in length and duration – as single events, components of multiple-day conferences, or parts of long-term training programs. Workshops can potentially raise awareness, increase skills, and support an ultimate change in behavior.
- Field days typically involve demonstrations of specific practices at an accessible location, and they may last all or part of a day. Generally, they are

used to demonstrate or create awareness of a new technology, address questions and concerns about management practices, and build relationships with the target audience.

- Informational meetings are generally intended to provide details about a local water quality project and to receive input and feedback from participants. They may include presentations, public discussion, open-house viewing of posters and displays, individual questions and answers, or a combination of those. They may be expected to raise awareness of relevant issues or identify potential barriers or concerns related to management options.

2. NEWSLETTERS

Newsletters provide a means for basic communication with stakeholders. They are most useful for sharing general information about a project and related issues, announcing events, making people aware of resources, and reinforcing messages provided through other communication activities. Detailed or technical information, however, is best communicated in a different medium.

Newsletters on their own would not be expected to bring about adoption of new practices. They can, however, provide information that could assist someone with an interest. For example, a project that has the objective of increasing inspection and maintenance of on-site septic tanks could use a newsletter to provide a few key pieces of information. This might include watching for potential problems, planting grass cover, and keeping trees from growing over the tank, as well as provide contact information for local septic services.

Before using a newsletter, ask yourself the following questions:

- Are the objectives you have reasonable? For example, if you are trying to change behavior with unmotivated audiences, you will most likely not reach that goal. Your objectives should be modified and either a different outreach and education tool should be used or the content should be modified to reflect realistic objectives.
- Will the appropriate target audience receive the newsletter? If your objective is to inform a new audience of your project, make sure you are distributing the newsletters beyond your existing network
- Will the newsletter be a part of a larger education program to change water quality behaviors?

3. BROCHURES AND FACT SHEETS

Outreach materials such as brochures or fact sheets are often used to provide an accessible source of information about issues (or practices). These materials can be used to increase awareness and to provide information that may encourage behavior change. As part of a larger strategy, brochures, fact sheets, and other printed outreach materials can help the target audience understand an issue of interest (e.g., degraded water quality), which actions will help to alleviate the problem, and how to conduct those actions.

As with newsletters, you can self-assess basic issues regarding whether the materials are meeting their intended purpose. What are you expecting the materials to do? Simply providing

people with information is not likely to change behaviors, though it may create awareness. Will your materials be distributed and placed correctly to reach your target audience? You may have created an appealing brochure that contains exactly the right information, but if it doesn't reach the right audience it will not have the expected impact.

4. WEBSITES

As a form of media that the user must actively seek out, websites are generally for engaged audiences. A website is not an effective outreach tool for an audience that would not seek this information on their own. Websites are, however, good at providing general to detailed information to an audience that is actively seeking or involved with the information provided on the site. For example, if an organization hosts a workshop on a specific practice and people attend based on their interest in that practice, those participants are an engaged audience that might actively seek additional information on the website.

There are some exceptions to the need for an already engaged audience. For example, an organization that already has a website used by an engaged general audience for some other purpose unrelated to water quality, such as a zoo or school, may use their website and educate their users about watershed issues. Also, there are a few examples of websites that are used to attract the attention of unengaged persons through the media. Generally, such sites tend to be technologically interesting and interactive, not information repositories.

When is the investment greater than the gain? This should be a key question in website planning. Other considerations regarding expectations and whether a website would be useful include:

- target audience access to the Internet;
- speed of access in the audience/target region;
- type/amount of information to be conveyed;
- your organization can afford to maintain and update its site;
- level of audience engagement with the Internet; and
- complexity and consistency of information that needs to be communicated to your audience

While the Internet is increasingly an important source of information for many, developing a website should not be considered a foregone conclusion. Many organizations do not have staff with website development skills internally and must contract out for the work, leading to considerable costs. Further, even if the funds or a volunteer for website development are available, there are still ongoing costs. Annual fees for hosting a website, registering a website with search engines, and the cost of updating and maintaining a site are often overlooked by organizations in the eagerness to develop a web presence.

5. INFORMATIONAL SIGNAGE

Informational signage is used to convey a simple message to your target audience. You might use signs to raise awareness about a place (a road sign), highlight a management practice (e.g., a stream restoration), or provide basic information about an issue (e.g., an educational sign about watersheds at a park or zoo).

Signs can be used for simple educational messages and/or to encourage a particular behavior, and are more interpretive in nature. If you have a demonstration site, such as a restored wetland, you may want to install signs that detail the benefits of wetlands for habitat and for humans. You can expect signs to increase awareness of an issue and to encourage easy behaviors.

6. MASS MEDIA

Does your message need to reach the general public or a very large target group? Mass media options such as newspaper, television, and radio are important tools for raising awareness of your issue. For communication, they have some specific strengths and weaknesses. An important strength, however, is that mass media can target an unengaged or passive audience.

In determining an appropriate mass media strategy, it is important to know how people obtain their information. For environmental news, people tend to get their information from mass media sources. Generally, television is by far the most common source – comprising almost half of the environmental news. Just over a quarter of the environmental news people consume comes from local newspapers, and radio comprises just under twenty percent. This is typical and may vary regionally.

The strength of mass media is in its ability to reach an audience that may or may not be interested in your issues. It also can provide a public forum for debate on controversial issues, such as the removal of a dam. If your organization has a small target audience or has primarily detailed technical information to convey, mass media may not be the right choice.

While an audience can increase their knowledge of an issue through the media, expectations regarding the audience's retention of the message should correspond to the frequency of that message. Mass media strategies usually work best for increasing public awareness or for special announcements.

7. INCENTIVES

Incentives are most often used to reduce constraints and to change behavior in relatively short periods of time. They are used to level the perceived costs and benefits of adopting a practice or changing a behavior. In terms of social outcomes, they are used to reduce or overcome constraints and change attitudes. Do not assume that your target audience automatically needs an incentive to change their behavior. Perhaps they are unaware of the economic benefits of a practice or need more skills to feel comfortable engaging in a practice.

Incentives are most effective when coupled with other forms of outreach. For example, brochures or fact sheets are effective tools for increasing awareness about an incentive. Use your SIPES pre-project data on practices and constraints to determine which constraints might be overcome with incentives. You can explore attitude data on your own, but SIDMA does automatically analyze attitude responses at this time.

Section I will describe how to evaluate the effectiveness of these activities as they are implemented during the course of your project.

Section I: Evaluating Outreach Activities During Project Implementation



This section describes methods for evaluating outreach and education activities used during the implementation of your project. The purpose of evaluating your activities during project implementation is to understand whether or not they are helping you reach the goals and intended social outcomes established in Step 3 (Section H). Evaluation results can help you consider how to adapt your activities during your project.

The purpose of this section is to help you:

- Evaluate how your activities are helping reach your social outcomes
- Consider how to adapt your activities during your project

The first part describes what to evaluate and provides an overview of relevant evaluation tools. The second part describes how to apply the tools to evaluating the activities listed in Tables H.3 (page 56) and I.1 (page 63). The third part discusses what to do if your evaluations suggest you need to adapt your approach. The final part describes options for documenting and reporting your mid-project evaluation results.

WHAT TO EVALUATE AND WHICH TOOLS TO USE

Your outreach and education plan outlines the mix of activities your project will use to accomplish your goals. There are three important elements to consider when evaluating those activities:

1. whether or not the activity reached the intended audience;
2. the activity's impact on awareness, attitudes, constraints, and/or capacity; and
3. the activity's impact on behavior.

You can use a relatively small set of evaluation tools to help answer those questions, often asking about several activities at the same time. Table I.1 (page 62) summarizes the application of these tools to activities commonly used in NPS projects in US EPA Region 5. Tools that provide direct feedback about an activity are shaded; tools that can be used indirectly, to include questions about related project activities are not shaded.

QUESTIONNAIRES

Three types of questionnaires are most useful for evaluating your project activities.

- *End-of-session questionnaires* are administered as part of an event, such as a workshop, field day, or informational meeting. End-of-session questionnaires are generally brief and can include questions about the event, the person attending the event, and their use and awareness of other related project activities and materials.
- *Follow-up questionnaires* are used to contact event participants after some specified period of time (3 months, 6 months, etc.) to ask them about the event and what they are doing differently. These questionnaires can also include additional questions about related project activities and materials.

- *SIPES post-project questionnaires* are used with your target audiences at the end of your NPS project. Your SIPES post-project questionnaire can include questions about use and awareness of your project activities and materials.

GROUP DISCUSSION/FOCUS GROUP

Small groups of your target audience and project stakeholders can provide very helpful feedback on the design and implementation of your project activities. Feedback of this nature can come through formal “focus group” processes related to specific conservation practices or incentive options, or through informal discussions among participants at a project event.

SPECIALTY APPROACHES

Some of your activities can be evaluated with special tools and approaches. For example, you can use free specialized software programs to track and analyze usage statistics related to a project website or you can use tear-off surveys to evaluate newsletters.

Table 1.1 Tools for evaluating impacts

	Workshop	Field Day	Informational Meetings	Websites	Brochures Fact Sheets	Newsletters	Informational Signage	Media	Incentives
Specialty approaches				Usage statistics		Tear-off surveys; utility bill inserts			
End-of-session questionnaire	Direct feedback about activity			Indirect: questions included about these activities					
Follow-up questionnaire	Direct feedback about activity			Indirect: questions included about these activities					
Group discussion during events	Direct feedback about activity			Indirect: questions included about these activities					
General focus group discussion	Direct feedback about activity								
SIPES post-project questionnaire	Direct feedback about activity								

End-of-session tips and techniques: <http://www.uwex.edu/ces/pdande/resources/quicktipsnumerical.html>
<http://www.uwex.edu/ces/pdande/evaluation/evaldocs.html>

APPLYING THE TOOLS: WORKSHOPS, FIELD DAYS, AND INFORMATIONAL MEETINGS

REACHING INTENDED AUDIENCE

Understanding who attends your workshop, field day, or informational events can be as simple as asking attendees to sign-in on a pad of paper with address and contact information. More detailed analysis could include other questions to help determine if your target audience is attending, for example, questions about use and willingness to use various conservation practices.

IMPACTS ON AWARENESS, ATTITUDES, CONSTRAINTS, CAPACITY, AND BEHAVIOR

End-of-session questionnaire. One effective and time-efficient method for collecting information at events is using a single questionnaire administered at the end of the workshop that incorporates a “retrospective pre-test.” Using this approach, participants are asked to rate their knowledge, skill, attitude, or behavior from two perspectives: after the educational event and before the event (see Example I.1 below). This approach has the advantage of providing a single form that allows participants to provide a response based on the information presented at the event. As a general guide, keep this to about two pages in length. Include questions to determine if participants are part of your target audience. When analyzing, look for increases in knowledge and skills, reductions in barriers and constraints, etc.

In a workshop setting, make sure to provide an appropriate amount of time for participants to complete an end-of-session questionnaire. In demonstrations or open informational events where people are coming and going at different times, develop a short questionnaire that can be completed quickly and left with an interviewer or deposited as people leave.

Example I.1: A format for an end-of-session questionnaire

Please take a few minutes to provide feedback on this workshop. Your feedback helps us improve future workshops. Please fill in a circle and provide requested information.				
For each question below, use the following scale:	Not at all	Minimally	Generally	Very Much
1. Before today to what extent were you able to understand a nutrient management plan?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Now to what extent are you able to understand a nutrient management plan?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Before today how knowledgeable were you about nitrogen impacts on water quality?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Now how knowledgeable are you about nitrogen impacts on water quality?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Group discussion and interviews. Instead of a paper questionnaire, a facilitator could lead participants through a similar list of questions in a group setting or through individual interviews. This approach may prompt additional feedback and generate more information about your target audience. The analysis of these data would be similar to end-of-session questionnaires.

Follow-up questionnaire. Some workshops may warrant a follow-up questionnaire. If you wish to capture mid-range outcomes of a specific activity before your formal post-project questionnaire (e.g., six months after a workshop), you could conduct a separate post-activity assessment with participants. Depending on the type of participants and their use of the Internet, post-workshop surveys can be conducted via mail, e-mail, or a web-based survey. For some groups, phone interviews or on-site face-to-face interviews with participants are preferred options. Participants could specify their preferred method for a follow-up contact during the outreach event.

Depending on the goals of your event, you would analyze your responses for the percent of participants taking action or implementing practices as a result of attending. You could also ask about any barriers or constraints encountered in taking action.

SIPES Post-project questionnaire. Your post-project questionnaire is a convenient opportunity to collect information from your target audience about their participation in project events and any resulting actions.

COST AND RESOURCE CONSIDERATIONS

In general, costs of collecting information at events will involve staff time in preparing, administering and processing the assessment. There will also be minimal costs for materials (see example below).

Adding one or two questions to the post-project questionnaire developed through SIDMA will involve only the time involved in refining that questionnaire. If you choose to conduct a separate follow-up assessment before the end of the project, you will encounter costs for staff time in designing the assessment, administering the assessment, and processing the data (see Example I.2). For a small group of participants (for example, 15 riparian property owners), providing information by phone or via e-mail, the actual material costs will be negligible. The costs could be relatively high if you are mailing follow-up questionnaires to a large group of participants, and continue with repeated mailing to gain high response rates.

Example I.2: Cost estimate for follow-up

<u>Example:</u>	A project conducts a one-day workshop on nutrient management planning with 15 farmers
<u>Strategy:</u>	The project uses an end-of-session questionnaire and a follow-up interview one year later
<u>Costs:</u>	<ul style="list-style-type: none">- Time for designing end-of-session questionnaire and follow-up interview questions: 3 hours- Time for summarizing and reporting data from end-of-session questionnaire: 4 hours- Time for conducting on-farm follow-up interviews one year later (including travel time): 1.5 hours per farmer: 12 hours- Time for summarizing and reporting data from 15 follow-up interviews: 30 minutes per farmer x 15 farmers: 7.5 hours- Cost of materials: minimal (in-house printing for questionnaires, interview protocols, and reports)- Cost of travel: variable
<u>Total Costs:</u>	Approximately 25.5 hours of staff time plus cost of office materials and travel.

APPLYING THE TOOLS: NEWSLETTERS

REACHING INTENDED AUDIENCE

If you deliver newsletters by mail, e-mail, or in person, you already know whether they are reaching your intended audience. To determine whether they are actually reading and using the information, you can include a tear-off questionnaire (see Table I.2), ask about the newsletters at event evaluations, or convene a focus or discussion group specifically to discuss your newsletter. You can also ask people who contact you how they heard about your project and where they found your contact information.

IMPACTS ON AWARENESS, ATTITUDES, CONSTRAINTS, CAPACITY, AND BEHAVIOR

Determining the impacts on awareness, attitudes, constraints, and behaviors attributed to newsletters is difficult.⁴ As noted, some newsletters include a tear-off, stamped postcard in the newsletter that asks evaluation questions. Most readers do not respond to those requests, resulting in low response rates that may not be worth the expense of the effort. If you choose to use a tear-off, postcard evaluation, your questions should encompass the entire series of newsletters received, not just the newsletter that contains the postcard.

As with other activities, you can include questions about newsletters in evaluation efforts for other activities (questionnaires, group discussions, etc.) and in the SIPES post-project questionnaire. SIDMA will include model questions for this purpose. Your SIPES questions can ask whether respondents found the newsletter to be useful and also assess specific knowledge that newsletters were meant to convey. For example, if you included information about servicing septic systems in your newsletter, you can include a question about that in your final questionnaire.

Table I.2: Example questions related to newsletters

Evaluation Method	Example Impact Questions
Tear-off Postcard or inserts in utility bills	Did you find the information in this newsletter/series helpful? Prior to this newsletter, were you aware that you shouldn't plant trees over your septic system?
Post-project questionnaire	Did you receive the newsletter? Was information in the newsletter useful? Prior to the newsletter, were you aware that you shouldn't plant trees over your septic system?

COST AND RESOURCE CONSIDERATIONS

If you choose to use a stamped, tear-off postcard in your newsletter for evaluation, the cost will include postcard postage, postcard printing, and staff time for data entry and analysis. Including questions about newsletters in other evaluation settings and in the SIPES post-project questionnaire will be negligible.

⁴Broussard, S.R., & Floress, K. (2006). Are newsletters effective? Assessing their role as a communication tool. Purdue Extension Publication FNR-269-W. Available online at: <http://www.ces.purdue.edu/extmedia/FNR/FNR-269-W.pdf>

APPLYING THE TOOLS: WEBSITES

REACHING INTENDED AUDIENCE

In addition to asking about your website during other evaluation effort, there are several specialty tools available for determining who uses your website and what they do when they visit. Free services such as Google Analytics (<http://www.google.com/analytics>) allow you to track data, calculate goal metrics, and provide usage reports. This information can help you understand more about where your website visitors come from and their use of the site, for example, if they “hit” the parts of your website you want people to visit or download files you have posted.

IMPACTS ON AWARENESS, ATTITUDES, CONSTRAINTS, CAPACITY, AND BEHAVIOR

Evaluating whether your website has raised awareness, reduced constraints, or helped with other intended social outcomes is best measured using the tools described in Table I.1 (page 62) – asking about the website during other events and in other questionnaires, or organizing a discussion group to provide feedback on the website.

Another external measure related to community capacity and networks is whether important other websites include a hyperlink to your site. For a rural area, this might be the farmers’ cooperative, and for an urban area this might be the municipal website.

COST AND RESOURCE CONSIDERATIONS

Depending on the approach taken to assessing your website, the primary cost is staff time. Discussion groups or user testing may require special incentives for participants, but generally costs for such testing relate to the time investment. Adding survey questions for the target audience to the SIPES post-project questionnaire involves negligible additional cost.

APPLYING THE TOOLS: BROCHURES, FACT SHEETS, INFORMATIONAL SIGNAGE, AND MEDIA MATERIALS

REACHING INTENDED AUDIENCE

Approaches for determining whether you are reaching your target audiences will vary depending on the activity. As you distribute them, you can record who receives brochures and fact sheets. Including questions in your SIPES post-project questionnaire can also help you determine whether your target audience is aware of these materials and how they used them.

For some purposes, assessing who is reached by a mass media strategy can be quite straightforward. For example, if you are using media to announce an event – such as hosting ‘clean-up days’ for a local water body, then you can ask people attending how they heard about the event.

IMPACTS ON AWARENESS, ATTITUDES, CONSTRAINTS, CAPACITY, AND BEHAVIOR

The options for assessing impacts for these activities are summarized in Table I.1. For the most part, it makes sense to include questions about use and awareness of these materials as part of other related evaluation efforts, such as follow-up questionnaires for workshops, or to wait to assess as part of the SIPES post-project questionnaire. As noted in Section H, these outreach materials are intended to serve specific purposes related to raising awareness, illustrating how to do something, or generally sharing information.

If you are interested in specific feedback on a particular outreach activity, a focus group or informal discussion group addressing the specific activity can be an economical solution. Evaluation questions would relate whether your target audience was aware of the materials, whether they found them to be useful, and whether they acquired the specific knowledge of interest.

COST AND RESOURCE CONSIDERATIONS

Costs will vary depending on your evaluation choices for these materials. Including questions in other evaluation settings and in the SIPES post-project questionnaire will be negligible. Informal discussion groups may also involve minimal costs, whereas a formal focus group process can include costs for incentives, a facilitator, and summary report. In general, informative information about these activities can be collected for little costs by adding questions about usage and awareness to related evaluations at project events.

A NOTE ABOUT INCENTIVES

Although primarily provided to reduce specific constraints to adoption, you can also evaluate your use of incentives using the approaches in this section. Discussion and focus groups, in particular, can yield insights on why the incentives are attracting landowners or not. You can also ask people about their awareness of incentive programs at project events.

ADAPTING YOUR ACTIVITIES

What happens if you determine from your evaluations that your activities are not helping you achieve your project goals and intended social outcomes? You should begin by revisiting the outreach plan you developed in Step 3. Are you using the appropriate activities for your purposes? Are you doing them well? Have your evaluations produced any specific suggestions for how to improve the way you are implementing your project?

For example, your project may have offered a workshop on the benefits of conservation buffers, which drew 20 people. Your actual target audience for this project is riparian landowners within a specific sub-watershed, but in reviewing your participation data, you realize that none of the participants are actually part of your target audience. You can use that information to review how people were notified of the workshops and consider changes in contacting those you hope will attend.

SUMMARIZING AND REPORTING ON YOUR ACTIVITIES

In addition to using your evaluation information for improving your project implementation, you can summarize and report your results to your state NPS program and your local partners. The most straightforward way to report your results is to relate them to the goals of your broader outreach and education effort and overall water quality goals.

The following information about your evaluation results will be helpful. Depending on your project, not all of these categories would need to be included in a report.

1. A brief description of the activity and what you did to evaluate it.
2. Information about any general measures you wish to report (for example, quality and extent you reached your target audience).
3. Information about outcomes related to awareness, attitudes, constraints, and capacity (how has the activity influenced these among intended audience?).
4. Information about outcomes related to how the activity led to actions by the target audience (where relevant).
5. Comments and insights on factors that helped or hindered activities.

Example I.3 on the next page illustrates sample answers to these questions, in which project staff realized they needed to expand their outreach programs to train people interested in installing rain barrels for others in their community. You can enter your answers into SIDMA.

A series of helpful questions for meeting your goals is available through the USDA water outreach assessment worksheet (<http://wateroutreach.uwex.edu/use/assessworksheet.cfm>). You can also review resources on conducting outreach activities, such as US EPA's *Getting in Step* (2003).

Example I.3: A sample periodic report using social indicators

Example: A watershed group wants to increase adoption of rain barrels by 30% over the course of a two-year implementation grant. They use a Public Service Announcement (PSA) on local radio stations to inform people that pollution is a problem in the watershed and ask people to prevent urban runoff. They also use a demonstration of a rain barrel at a local hardware store. The group expects the demonstration to have a more direct impact on adoption rates of rain barrels than the PSA. The group includes questions about the demonstration and PSA on their post-project survey to help assess impact. Following their use of the PSA and the demonstration workshop for rain barrels, the watershed group decides that it wants to assess effectiveness of their demonstration only. They provide this narrative:

1. Provide a brief description of the activity and what you did to evaluate it:

Our group hosted a demonstration "How to" project for installing rain barrels on residential downspouts. Following the demonstration, 90% of the participants volunteered to fill out a questionnaire. Our organization followed this with a mailing six months later to determine if barrels had been installed.

2. Provide information about any general measures you wish to report (for example, quality and extent you reached your target audience):

The questionnaire was developed using guidelines from UW-Extension's Program Development and Evaluation Unit. We collected information on the demographics of the participants. While our target audience was broad, we were interested in homeowners in the denser neighborhoods within a half-mile of the lake. 21 of the 22 participants lived in the target area.

3. Provide information about outcomes related to awareness, attitudes, constraints, capacity:

This was a capacity building exercise. All 22 participants indicated they had increased their understanding of the purpose and function of rain barrels; 22 indicated that they understood how to install a rain barrel; and 20 indicated that they felt that they could install a rain barrel. For the two participants that did not indicate that they felt capable of installing a rain barrel, there may have been an age or gender relationship (both were women in their late 60s to early 70s).

4. Provide information about outcomes related to how the activity led to actions by target audience:

The follow-up survey was mailed; there was a 77% response rate from the participants (17 of 22). Of those, 10 (58.8%) installed rain barrels at their home. 4 of those participants helped to install rain barrels for 2 to 5 other households in their neighborhood, and 1 helped to install 5 or more rain barrels in their neighborhood. In total, 30 rain barrels installed.

5. Comments and insights on factors that helped or hindered activities.

We did not take into account the fact that some participants might come because they were interested in rain barrels, but potentially not physically capable of installing their own. Also, we didn't expect that there would be nearly as large a percentage of the participants helping others to do rain barrels, as there were installing barrels at their own homes. I think we may want to think about the idea of a structure that trains a team of volunteers to install them for others (especially the elderly or infirm).



Section J: Collecting and Analyzing Data at the End of Your Project



Congratulations!! Unless you're reading ahead in the Handbook, you are nearing the end of your project and you're ready to collect post-project data and see how well your project performed in terms of social indicators. You will be happy to know that collecting your end of project survey data is very similar to collecting survey data at the beginning of your project. There are a few differences that you need to be aware of and we point these out in this section, but other than these differences, you should refer to sections D-F for information on creating and conducting your questionnaire.

You also need to collect non-survey data at the end of your project. You will collect some of this data through focus groups and the rest will come from your project records. This section explains the type of data you need to collect and how you should collect and report it.

POST-PROJECT SURVEY DATA

CREATE QUESTIONNAIRE

The questionnaire you used at the beginning of your project is still stored in SIDMA. You may make minor adjustments to this questionnaire if you need to. For example, if you had some questions about possible outreach activities in your questionnaire at the beginning of the project, you may want to remove them now. You may also want to add some specific questions about elements of your project, e.g. you may want to know how many of your survey respondents attended a field day or other outreach event that you planned (See Appendix D for examples of these questions). The majority of your survey, in particular the questions related to social indicators, **should remain unchanged**.

UPDATE ADDRESS LISTS, REVIEW SAMPLE SIZE, AND SELECT NEW SAMPLE

If you used a census to collect data at the beginning of your project, you will want to send your survey to the same list that you sent to the for the first round. Make sure you assign the same unique identifier to the same person to do comparisons.

If you used a random sample of your population to collect data at the beginning of your project, you will need to resample the target audience. Prior to doing this, you will need to ensure that your address list is current. Unless you've been keeping up with the addresses all the way along, you will need to re-assemble a complete list of your target audience using the method you used in section F. After you have done this you should select a new sample based on Table D.2 (page 24).

CREATE ADVANCE LETTERS, COVER LETTERS AND POSTCARDS

The letters and postcards you mail out at the end of your project can be very similar to the ones you send at the beginning. You can consider including extra statements about the status of the project and the fact that this is an end-of-project questionnaire. You can state that this survey is similar to one that was mailed out before the project and survey responses will be compared over time. Examples of the post-project advance letter can be found in Appendix B.

ADMINISTER QUESTIONNAIRE AND ENTER RESPONSES IN SIDMA

Refer to sections F and G for information on administering the questionnaire and entering responses.

PRE / POST SURVEY COMPARISONS

After collecting your second round of SIPES survey data, you can now examine the data to see if there have been any notable changes over the course of your project. SIDMA will generate a comparison of pre and post scores for all of the survey questions and all of the indicators. To compare pre and post data, click on 'compare surveys' under the Results and Analysis section of your survey information. When prompted to choose survey 1 to compare, choose your pre-survey; for survey 2 choose your post-survey. SIDMA will explore whether the differences between pre and post scores is statistically significant. For readers with an interest in statistics, this will be done using a difference of means t-test. SIDMA will report all the differences but will note which ones are statistically significant. You can also download the data from SIDMA and complete additional analysis.

INTERPRETING END-OF-PROJECT DATA

There are several caveats to bear in mind when interpreting end-of-project data:

1. A positive change in any variable or indicator over the course of your project is a great sign that you did something right. However, changes could be due to factors outside the scope of your project. For example, maybe people stopped using as much fertilizer because the cost skyrocketed, rather than due to the social marketing campaign that you used.
2. A negative change in any variable or indicator over the course of your project may mean that your project was unsuccessful. It may also mean that other forces were at work within your watershed. For example, you may have been trying to get farmers to install riparian buffers and instead you find that over the course of your project, the number of riparian buffers has decreased, not increased, despite all your efforts. A finding like this could be attributable to increasing commodity prices changing farmers' motivations in ways your project could not expect to alleviate.
3. **No change may not mean that your project was not effective.** It may be that without your project, there would have been a negative change in the variables and indicators, and your project overcame these forces and maintained the status quo.

All these caveats reinforce the need to fully understand and document everything that has occurred within your project area over the course of your project. The end-of-project questionnaire discussed in Section K will help you do this. As you interpret your pre and post data, please refer to the end-of-project questionnaire to help you contextualize them.

Understanding why or why not changes in intended outcomes have occurred over the course of your project will help you improve future projects in your watershed.



Section K: Collecting Additional Post-Project Data

ADDITIONAL POST-PROJECT DATA

At the end of the project, you will collect additional data to understand what worked and did not work about your project. You will report this data in SIDMA using the end-of-project questionnaire. You will gather this information in two primary ways: a group discussion and a review of your records.

FOCUS GROUPS / GROUP DISCUSSION

Focus groups are a common method of gathering opinions on a topic of interest. They are frequently used by businesses but are also used in social science research. Focus groups are used to gather qualitative data – rich, contextual data about topics of interest. You should consider holding one focus group for each of your target audiences. For more projects, these focus groups could look like informal discussions and be conducted by project staff.

Generally, each focus group (or group discussion) should consist of 4 to 10 people in a comfortable room seated in a circle with refreshments. Invitations should be sent well ahead of time, with reminders closer to the date of the meeting. Five to six questions without a “correct” answer should be prepared in advance. These questions should cover the topics identified in the end-of-project questionnaire and any other issues you want to discuss with your stakeholders. The facilitator will then guide people in discussing these questions. The advantage of a focus group over individual interviews is that as one person shares his or her answer, others modify theirs, think about new things, and more dimensions and opinions on the answer emerge.

END-OF-PROJECT QUESTIONNAIRE

Project coordinators will submit answers to the following questions using SIDMA:

For the first four questions, please gather input from project partners.

1. Please list up to three factors related to your group that most contributed to the success of your project. *For example: great volunteers, coordinator who knew how to mediate conflict, steering committee member with background in publicity.*
2. Please list up to three factors related to your group that most hindered the success of your project. *For example: low attendance at meetings, high turnover rate of staff, not enough money.*
3. Please list up to three factors external to your group that most contributed to the success of your project. *For example: newspaper reporter that covered all of our major events, farmers who were willing to come to our workshops even though they were not initially supportive of our objectives, conservation group in the area that supported us with resources.*
4. Please list up to three factors external to your group that most hindered the success of your project. *For example: county government was very resistant to idea of changing ordinances, small segment of homeowners wrote repeated letters to the editor against our project, dropping corn prices made farmers unwilling to adopt riparian buffers.*

For the remaining questions, please refer to project records:

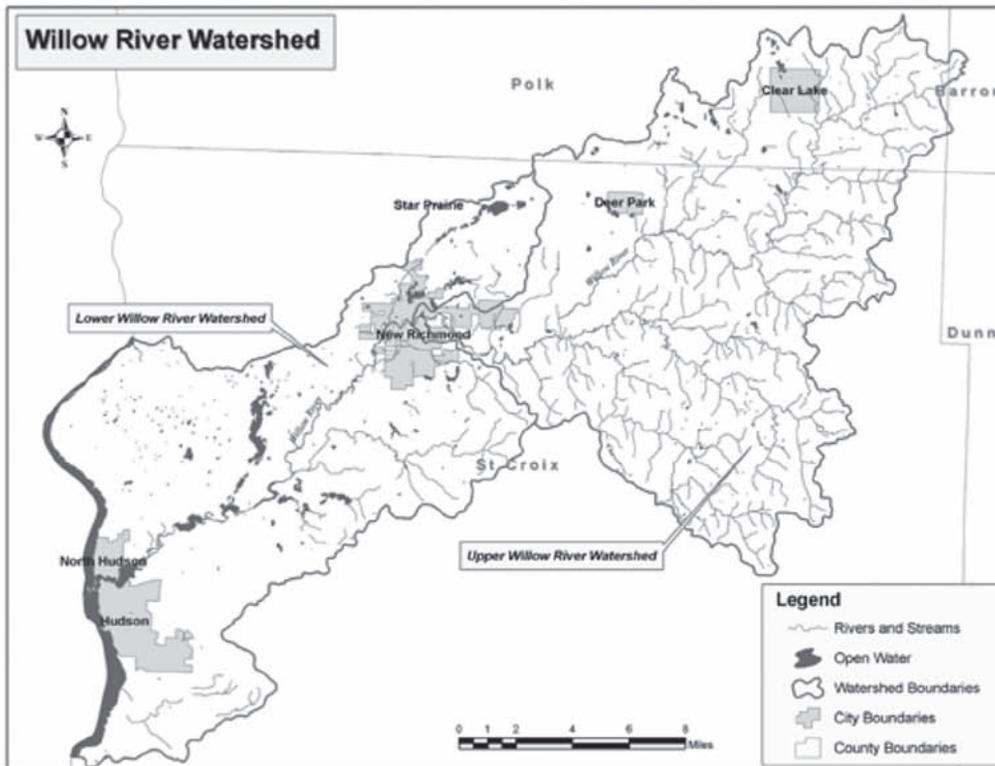
5. What percentage of adopters is in the target audience?
6. What percentage of treated acres is in the critical area?
7. What percentage of installed practices is in the critical area?
8. Based on project records, what is the percentage of critical area receiving treatment?
9. Based on project records, what is the percentage of target audience implementing practices in critical areas?
10. What ordinances are in place related to NPS practices?
11. What additional cash and in-kind resources were leveraged as a result of project funding?
12. What other funding is available to support NPS practices in the critical areas?
13. What other technical support is available for NPS practices in the critical areas?
14. What provisions are in place to monitor NPS practices in the critical areas? What other information would you like to report about the implementation of your project?

Appendix A: Sample Formatted Survey

This appendix includes a formatted agricultural survey to show what the finished product could look like.

Willow River Watershed

Your Views on Local Water Resources



University of Wisconsin Cooperative Extension is conducting this survey in coordination with the St. Croix County Land and Water Conservation Department in order to identify the needs and interests of agricultural producers regarding conservation practices and water quality for portions of the Willow River Watershed.

We ask that this survey be completed by the person in your household that makes most of the farming decisions and is at least 18 years old. Your participation in this survey is completely voluntary. Your answers will be kept confidential and will be released only as summaries where individual answers cannot be identified.

Unless otherwise instructed, **please check the circle associated with the answer you are providing.** The survey should take approximately 20-25 minutes to complete. Please read each question carefully.

[include your contact information here]

Willow River Watershed

About Your Farm Operation

1. Please select the option that best describes who generally makes management decisions for your operation.

- Me alone or with my spouse
- Me with my family partners (siblings, parents, children)
- Me with the landowner
- Me with my tenant
- Me and my business partners
- Someone else makes the decisions for the operation
- Other

2. Please estimate the total tillable acreage (owned and/or rented) of your farming operation this year.

_____ acres

3. This year, how many acres of the following do you manage? If none, please enter a zero.

- | | |
|--------------------------|---------------|
| Corn | _____ (acres) |
| Soybeans | _____ (acres) |
| Small Grains | _____ (acres) |
| Canning Crops | _____ (acres) |
| Clover / Alfalfa | _____ (acres) |
| Pasture | _____ (acres) |
| Conservation /CRP | _____ (acres) |
| Forest / woodland | _____ (acres) |
| Non-row crops for energy | _____ (acres) |

4. How many of the following animals are part of your farming operation? If none, please enter a zero.

- _____ Dairy cattle, including heifers and young stock
- _____ Beef cattle, including young stock
- _____ Hogs
- _____ Poultry
- _____ Other (specify here): _____

5. How likely is it that any family member will continue farm operation when you retire or quit farming?

- Definitely will not happen
- Probably will not happen
- Probably will happen
- Definitely will happen

6. Does the property you manage touch a stream, river, lake, or wetland?

- Yes
- No

About You

1. What is your gender?

- Male
- Female

2. How long have you lived at your current residence?

_____ years

3. Which of the following best describes where you live?

- In a town, village, or city
- In an isolated, rural, non-farm residence
- Rural subdivision or development
- On a farm

4. What is the highest grade in school you have completed?

- Some formal schooling
- High school diploma / GED
- Some college
- 2 year college degree
- 4 year college degree
- Graduate degree

5. In what year were you born? _____

Willow River Watershed

Your Opinions

Please indicate your level of agreement or disagreement with the statements below.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
a. The economic stability of my community depends upon good water quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Using recommended management practices on farms improves water quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. It is my personal responsibility to help protect water quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. It is important to protect water quality even if it slows economic development.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. What I do on my land doesn't make much difference in overall water quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Investing in water quality protection puts the farmer at an economic disadvantage.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Farm management practices do not have an impact on water quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. My actions can have an impact on water quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. Taking action to improve water quality is too expensive for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. It is okay to reduce water quality to promote economic development.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. It is important to protect water quality even if it costs me more.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. I would be willing to pay more to improve water quality (for example: through local taxes or fees).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. I would be willing to change management practices to improve water quality.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
n. The quality of life in my community depends on good water quality in local streams, rivers and lakes.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Willow River Watershed

Consequences of Poor Water Quality

Poor water quality can lead to a variety of consequences for communities. In your opinion, how much of a problem are the following issues in your area?

	Not a Problem	Slight Problem	Moderate Problem	Severe Problem	Don't Know
a. Contaminated drinking water for livestock	<input type="radio"/>				
b. Polluted swimming areas	<input type="radio"/>				
c. Loss of desirable fish species	<input type="radio"/>				
d. Reduced beauty of lakes or streams	<input type="radio"/>				
e. Reduced quality of water recreation activities	<input type="radio"/>				
f. Excessive aquatic plants or algae	<input type="radio"/>				
g. Decrease in property values	<input type="radio"/>				

Water Impairments

Below is a list of water pollutants and conditions that are generally present in water bodies to some extent. The pollutants 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
a. Sedimentation (dirt and soil) in the water	<input type="radio"/>				
b. Nitrogen	<input type="radio"/>				
c. Phosphorus	<input type="radio"/>				
d. Cloudiness of the water	<input type="radio"/>				
e. Algae in the water	<input type="radio"/>				

Willow River Watershed

Sources of Water Pollution

The items listed below are sources of water quality pollution across the country. In your opinion, how much of a problem are the following sources in your area?

	Not a Problem	Slight Problem	Moderate Problem	Severe Problem	Don't Know
a. Discharges from industry into streams and lakes	<input type="radio"/>				
b. Discharges from sewage treatment plants	<input type="radio"/>				
c. Soil erosion from construction sites	<input type="radio"/>				
d. Soil erosion from farm fields	<input type="radio"/>				
e. Soil erosion from shorelines and / or streambanks	<input type="radio"/>				
f. Excessive use of lawn fertilizers and / or pesticides	<input type="radio"/>				
g. Improperly maintained septic systems	<input type="radio"/>				
h. Manure from farm animals	<input type="radio"/>				
i. Excessive use of fertilizers for crop production	<input type="radio"/>				
j. Channelization of streams	<input type="radio"/>				
k. Dam construction	<input type="radio"/>				
l. Streambank or shoreline modification / destabilization	<input type="radio"/>				
m. Natural sources	<input type="radio"/>				

Willow River Watershed

Practices to Improve Water Quality

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

	Never Heard Of It	Somewhat familiar with it	Know how to use it; not using it	Currently Use It
a. Conduct regular soil tests for pH, phosphorus, nitrogen and potassium	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Use manure in accordance with its nutrient content <input type="checkbox"/> manure is not used in my farm (check box and skip to next row)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Follow university recommendations for fertilization rates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Divert surface water away from feedlots <input type="checkbox"/> there are no feedlots on my farm (check box and skip to next row)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Cover livestock waste facility <input type="checkbox"/> there are no livestock on my farm (check box and skip to next row)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Use a grassed waterway to reduce erosion and soil loss	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Use a field border to trap sediment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Willow River Watershed

Constraints for Specific Practices

Cover crops.

Cover crops include grasses, legumes and forbs for seasonal cover and other conservation purposes.

1. How familiar are you with cover crops?

- Never heard of this practice
- Somewhat familiar with it
- Know how to use them but not using
- Currently use cover crops

2. Are you willing to try to use cover crops (or to continue your current use)?

- Yes
- Maybe
- No

<i>How much do the following factors limit your ability to use cover crops?</i>	Not at All	A little	Some	A lot	Don't Know
a. Don't know how to do it	<input type="radio"/>				
b. Time required	<input type="radio"/>				
c. Cost	<input type="radio"/>				
d. The features of my property make it difficult.	<input type="radio"/>				
e. Insufficient proof of water quality benefit	<input type="radio"/>				
f. Desire to keep things the way they are	<input type="radio"/>				
g. Hard to use with my farming system	<input type="radio"/>				

Buffer strips.

Vegetated areas that are situated between surface water bodies and cropland or grazing land, with the intention that sediment, organic material, nutrients and chemicals can be filtered from runoff water

1. How familiar are you with buffer strips?

- Never heard of this practice
- Somewhat familiar with it
- Know how to use them but not using
- Currently use buffer strips

2. Are you willing to try to use buffer strips (or to continue your current use)?

- Yes
- Maybe
- No

<i>How much do the following factors limit your ability to use buffer strips?</i>	Not at All	A little	Some	A lot	Don't Know
a. Don't know how to do it	<input type="radio"/>				
b. Time required	<input type="radio"/>				
c. Cost	<input type="radio"/>				
d. The features of my property make it difficult.	<input type="radio"/>				
e. Insufficient proof of water quality benefit	<input type="radio"/>				
f. Desire to keep things the way they are	<input type="radio"/>				
g. Hard to use with my farming system	<input type="radio"/>				

Willow River Watershed

No-till management (includes strip till and ridge till).

Managing the amount, orientation and distribution of crop and other plant residue on the soil surface year round while limiting soil-disturbing activities to only those necessary to place nutrients, condition residue and plant crops

1. How familiar are you with no-till management?

- Never heard of this practice
- Somewhat familiar with it
- Know how to use them but not using
- Currently use no-till management

2. Are you willing to try to use no-till management (or to continue your current use)?

- Yes
- Maybe
- No

How much do the following factors limit your ability to use no-till management?	Not at All	A little	Some	A lot	Don't Know
a. Don't know how to do it	<input type="radio"/>				
b. Time required	<input type="radio"/>				
c. Cost	<input type="radio"/>				
d. The features of my property make it difficult.	<input type="radio"/>				
e. Insufficient proof of water quality benefit	<input type="radio"/>				
f. Desire to keep things the way they are	<input type="radio"/>				
g. Hard to use with my farming system	<input type="radio"/>				
h. Lack of equipment	<input type="radio"/>				

Willow River Watershed

Nutrient management planning.

Planning process used to balance on-farm nutrients sources with commercial fertilizers to meet crop needs

- | | |
|--|--|
| <p>1. How familiar are you with nutrient management planning?</p> <p><input type="checkbox"/> Never heard of this practice</p> <p><input type="checkbox"/> Somewhat familiar with it</p> <p><input type="checkbox"/> Know how to use them but not using</p> <p><input type="checkbox"/> Currently use nutrient management planning</p> | <p>2. Are you willing to try to use nutrient management planning (or to continue your current use)?</p> <p><input type="checkbox"/> Yes</p> <p><input type="checkbox"/> Maybe</p> <p><input type="checkbox"/> No</p> |
|--|--|

How much do the following factors limit your ability to use nutrient management planning?	Not at All	A little	Some	A lot	Don't Know
a. Don't know how to do it	<input type="radio"/>				
b. Time required	<input type="radio"/>				
c. Cost	<input type="radio"/>				
d. The features of my property make it difficult.	<input type="radio"/>				
e. Insufficient proof of water quality benefit	<input type="radio"/>				
f. Desire to keep things the way they are	<input type="radio"/>				
g. Hard to use with my farming system	<input type="radio"/>				
h. Lack of equipment	<input type="radio"/>				

- | | |
|--|--|
| <p>1. Do you have a nutrient management plan for your farm operation?</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p>2. If you do have a nutrient management plan, does your nutrient management plan meet NRCS technical standard 590?</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p><input type="radio"/> I don't know</p> <p>3. Who developed your current nutrient management plan?</p> <p><input type="radio"/> My land Conservation District / Department, University Extension, or NRCS office</p> <p><input type="radio"/> A private-sector agronomist or crop consultant</p> <p><input type="radio"/> I created my own plan</p> <p><input type="radio"/> I don't know</p> <p><input type="radio"/> Other</p> | <p>4. What is included in your nutrient management plans?</p> <p><input type="radio"/> Commercial nutrients</p> <p><input type="radio"/> Livestock manure</p> <p><input type="radio"/> Septic waste</p> <p><input type="radio"/> Municipal sludge</p> <p><input type="radio"/> Industrial sludge</p> <p><input type="radio"/> Other</p> <p>5. What percentage cost share rate would you consider acceptable for implementing conservation practices such as cover crops, nutrient management planning or grassed waterways (i.e. 70% rate means you pay the remaining 30% to implement the practice).</p> <p>_____</p> <p>6. Rather than a fixed percentage cost share rate, would you be interested in a bidding process for adoption of conservation practices in which you specify a dollar amount for a specific practice?</p> <p><input type="radio"/> Yes</p> <p><input type="radio"/> No</p> <p><input type="radio"/> Maybe</p> |
|--|--|

Willow River Watershed

Making Decisions for my Property

In general, how much does each issue limit your ability to change your agricultural management practices?

	Not at All	A little	Some	A lot	Don't Know
a. Personal out-of-pocket expense	<input type="radio"/>				
b. Lack of government funds for cost share	<input type="radio"/>				
c. Not having access to the equipment that I need	<input type="radio"/>				
d. Lack of available information about a practice	<input type="radio"/>				
e. Concerns about reduced yields	<input type="radio"/>				
f. Approval of my neighbors	<input type="radio"/>				
g. Don't want to participate in government programs	<input type="radio"/>				
h. Requirements or restrictions of government programs	<input type="radio"/>				
i. Possible interference with my flexibility to change land use practices as conditions warrant	<input type="radio"/>				
j. Environmental damage caused by practice	<input type="radio"/>				
k. I do not own the property	<input type="radio"/>				
l. Not being able to see a demonstration of the practice before I decide	<input type="radio"/>				
m. Other (please specify) _____	<input type="radio"/>				

Willow River Watershed

Information Sources

People get information about water quality from a number of different sources. To what extent do you trust those listed below as a source of information about soil and water?

	Not at All	Slightly	Moderately	Very much	Am not familiar
a. Natural Resources Conservation Service	<input type="radio"/>				
b. Farm Bureau	<input type="radio"/>				
c. Fertilizer representatives	<input type="radio"/>				
d. Crop consultants	<input type="radio"/>				
e. Other landowners / friends	<input type="radio"/>				
f. Department of Natural Resources	<input type="radio"/>				
g. County Land and Water Conservation Department	<input type="radio"/>				
h. UW specialists	<input type="radio"/>				
i. UW County Agents	<input type="radio"/>				
j. FSA Farm Services Agency	<input type="radio"/>				

Thank you for your time and assistance!

Please return your completed survey in the postage-paid envelope provided. Please use the space below for any additional comments about this survey or water resource issues in your community.



For more information about the Willow River Watershed Project, please contact

[include your contact information here]

Appendix B: Supporting Documents

This appendix includes the following: sample advance letters for mail, telephone, and hybrid surveys, sample cover letters for each round of mailing, and a sample cover letter for a post-survey mailing.

SAMPLE ADVANCE LETTER

Date

«First»«Last»
«Mailing_Address»
«City», «State» «Zip»

Dear «First»«Last»,

We need your help to better understand agricultural land management decisions in the [Project] watershed. The [Project name] is working to improve and protect the water quality in [river/stream name – use local name] by providing technical and financial assistance for land management activities. As someone involved with an agricultural operation in the [project] watershed area, your insights are particularly important, and we would greatly appreciate your participation in a survey to help us learn how we might best serve the needs of agricultural producers and rural residents in the watershed.

In the next week, you will be receiving a survey questionnaire from the [project name]. When it arrives, please complete the questionnaire and return it to us in the prepaid envelope. By participating in this survey, you will be helping to shape the kinds of technical assistance and outreach efforts provided by the [project name].

Let me assure you that your responses will remain confidential. Responses from all agricultural producers completing the survey will be analyzed together, and no individual responses will be identified in any way. Your name will not be used in any report.

Your participation in this survey is very important to ensure we understand the land management activities and the needs and interests of the agricultural community in the watershed. If you have any questions about the survey please contact me at xxx-xxx-xxxx. Thank you in advance for your help.

Sincerely,

[insert signature]

[Name of project leader or local official; note that this should be someone the local target audience will respond to such as SWCD director, head of Farm Bureau, etc.]

[local contact information]

SAMPLE COVER LETTER TO INCLUDE WITH THE FIRST MAILED QUESTIONNAIRE

[letterhead]

«First»«Last»
«Mailing_Address»
«City», «State» «Zip»

Date

Dear «First» «Last»,

About a week ago you received a letter regarding the enclosed survey questionnaire. [Project] is conducting the survey to learn about current land management practices and the needs of agricultural producers in the [project] watershed. The questionnaire will take about 20 minutes to complete, and we appreciate your time and the information you will provide. Please return the completed questionnaire in the enclosed, pre-stamped envelope as soon as possible.

By participating in this survey, you help shape outreach programs and technical assistance options provided through the [project]. Responses will be confidential. Your name will never be placed on the questionnaire itself, nor will it ever be used in any report. You will find a number on the back of your survey. This number is used for tracking purposes so that we can check your name off the mailing list when your questionnaire is returned.

Thank you in advance for providing this valuable information. I would be happy to answer any questions you have about this survey.

Sincerely,

[signature]

[name of project leader or local official]

[contact information]

SAMPLE OF AN INITIAL REMINDER LETTER AND POSTCARD

Date

«First»«Last»
«Mailing_Address»
«City», «State» «Zip»

Dear «First»«Last»,

About a week ago, you should have received a survey from [project]. We know that you are busy, and we hope that you will help us by completing and returning the survey. Your information is important because it will be used to serve the needs of agricultural producers in your area. By participating in this survey, you will help shape outreach programs and technical service options.

If you have not done so already, please complete the survey and return it in the pre-stamped / addressed envelope (enclosed with the survey you received last week). The survey will take about 20 minutes to complete. If you have already returned the survey, thank you, we appreciate your time in doing so.

Your responses will be confidential. Your answers will not be associated with your name in any way and your name will never be used in any report.

Feel free to contact me if you have any questions, concerns or if you have misplaced your survey. I will gladly provide another copy.

Sincerely,

[Signature]

[project leader or local official]

[contact information]

Note: this information could also be modified and sent in a postcard format, such as below:

Recently a questionnaire asking for your thoughts about land management issues was mailed to you. Your response is important to accurately represent the opinions about these issues in the [project].

If you have already completed the questionnaire, please accept my sincere thanks. If not, please take approximately 20 minutes to complete and mail it today. If you did not receive the questionnaire, if it was misplaced, or if you have any questions about the study, please call me at [phone number]. I am glad to answer your questions or to mail you another copy of the questionnaire. Thank you for your help!

[project leader or local official][contact information]

SAMPLE OF A COVER LETTER TO INCLUDE WITH THE SECOND MAILED QUESTIONNAIRE

Date

«First»«Last»
«Mailing_Address»
«City», «State» «Zip»

Dear «First»«Last»,

About three weeks ago I sent a questionnaire to you asking for your input about land and water issues in [project]. As of today, we have not yet received your completed questionnaire. I am sending a second copy of the questionnaire in case you have misplaced it.

I am writing again because your response is critical to the accuracy of the survey results. To be sure that the results are truly representative of interests and opinions in the area, we need to hear from you. Those who have already responded have shared their thoughts, but we also need to know yours!

By responding to the survey, you are assured of complete confidentiality. The questionnaire has an identification number for mailing purposes only. This is so we can check your name off the mailing list when your questionnaire is returned. Your name will never be placed on the questionnaire itself, nor will it ever be used in any written or oral discussion of survey results.

Your response will provide information to help the [local project] make decisions that reflect your opinions.

I would be happy to answer any questions that you may have about this study. Please call me at [phone number].

Sincerely,

[insert signature]

[Name of project leader or local official]

[local contact information]

SAMPLE FINAL REMINDER LETTER

Date

«First»«Last»
«Mailing_Address»
«City», «State» «Zip»

Dear «First»«Last»,

I am writing once again to encourage you to complete and return the [survey name]. If you have already returned the survey, thank you – our letters crossed in the mail. If not, please take a few moments to complete and return your questionnaire today.

I understand this survey may not be a top priority or that you may be hesitant to share information about your farming practices. This survey is important because information received will be used to serve the needs of agricultural producers in your area. By participating in this survey, you will help shape outreach programs and technical service provided by [project] as we work toward protecting and improving local water quality.

[number] of agricultural producers from your area are participating in this survey and many have already returned their completed survey to me. Your completed survey is needed to ensure that a variety of different types of farms, as well as your views and opinions, are represented.

Please be assured that your responses will be confidential. The number, on the back page of the survey, allows us to know who has returned their survey. Your name and answers will NOT be associated with that number in any way.

Feel free to contact me at xxx-xxx-xxxx if you have any questions, concerns or comments. I would appreciate hearing from you.

Sincerely,

Signature

[project leader or local official]

[contact information]

SAMPLE LETTER FOR TELEPHONE SURVEY

Date

«First»«Last»
«Mailing_Address»
«City», «State» «Zip»

Dear «First»«Last»,

We need your help to better understand home and lawn care activities in [Project area]. The [Project] is working to improve and protect the water quality in [river/stream name] by gathering information from both rural and urban residents to help direct technical and financial assistance for home and lawn care activities. As a resident in the [project] watershed area, your insights are particularly important, and we would greatly appreciate your participation in a survey to help us learn how we might best serve the needs of urban and rural residents in the watershed.

In the next week, you will be receiving a phone call from the [project name]. If you are willing to participate, we will set up a time that is convenient for you. The survey will take about 30 minutes depending on your answers. Your participation in this study is voluntary and your answers will be confidential. If you agree to participate, you are free to withdraw from the study at any time. By participating in this survey, you will be helping to shape the kinds of technical assistance and outreach efforts provided by the [project name].

Let me assure you that your responses will remain confidential. Responses from all agricultural producers completing the survey will be analyzed together and no individual responses will be identified in any way. Your name will not be used in any report.

Your participation in this survey is very important to ensure we understand the home and lawn care activities and the needs and interests of the community in the watershed. If you have any questions about the survey please contact me at xxx-xxx-xxxx. Thank you in advance for your help.

Sincerely,

Signature

[project leader or local official]

[contact information]

SAMPLE ADVANCE LETTER FOR HYBRID SURVEY APPROACH (MAIL AND ONLINE)

Date

«First»«Last»
«Mailing_Address»
«City», «State» «Zip»

Dear «First»«Last»,

We need your help to better understand agricultural land management decisions in the [Project] watershed. The [project name] is working to improve and protect the water quality in [river/stream name – use local name] by providing technical and financial assistance for land management activities. As someone involved with an agricultural operation in the [project] watershed area, your insights are particularly important, and we would greatly appreciate your participation in a survey to help us learn how we might best serve the needs of agricultural producers and rural residents in the watershed.

There are two ways in which you can complete our survey. The easiest, quickest and least expensive way is for you to enter the following website address into your web browser: [insert URL] and provide your responses securely online. If you choose to complete the survey online, you need to enter the following code: [insert unique identifier for each potential respondent].

This lets us know that you have completed the survey. The information is confidential and will never be linked to your name, only to this code, which is used only for the purpose of knowing who has responded to the survey.

If you have not completed the survey online within two weeks, we will send you a paper version along with a postage-paid return envelope for your convenience. All collected information will be kept protected and confidential.

We ask that this survey be completed by the person that makes most of the land management decisions in your household and is at least 18 years old. Your participation in this survey is completely voluntary. Your answers will be kept confidential and will be released only as summaries where individual answers cannot be identified. The survey should take approximately 20 minutes to complete. Please read each question carefully.

Your participation in this survey is very important to ensure we understand the home and lawn care activities and the needs and interests of the community in the watershed. If you have any questions about the survey please contact me at xxx-xxx-xxxx. Thank you in advance for your help.

Sincerely,

[insert signature]

[project leader or local official]

[contact information]

SAMPLE LETTER FOR FOLLOW-UP SURVEY ADVANCED LETTER

Date

«First»«Last»
«Mailing_Address»
«City», «State» «Zip»

Dear «First»«Last»,

In [year of original mailing], a survey was mailed to [target audience] in [project area] asking for insights and opinions on water quality in the watershed. The results of that survey helped [your project] direct technical, financial and educational assistance to water quality projects in your watershed. Even if you didn't receive or complete a survey in [year of original mailing], we would like to know your opinions and insights and ask for your help by completing this survey so that [your project] can continue their work to improve water quality in your area.

In the next week, you will be receiving a survey questionnaire from the [project name]. When it arrives, please complete the questionnaire and return it to us in the prepaid envelope. By participating in this survey, you will be helping to shape the kinds of technical assistance and outreach efforts provided by the [project name].

Let me assure you that your responses will remain confidential. Responses from all agricultural producers completing the survey will be analyzed together, and no individual responses will be identified in any way. Your name will not be used in any report.

Your participation in this survey is very important to ensure we understand the land management activities and the needs and interests of the agricultural community in the watershed. If you have any questions about the survey please contact me at xxx-xxx-xxxx. Thank you in advance for your help.

Sincerely,

[insert signature]

[Name of project leader or local official; note that this should be someone the local target audience will respond to such as SWCD director, head of Farm Bureau, etc.]

[local contact information]

Appendix C: Additional Supporting Documents

This appendix includes the following: a sample Freedom of Information Act (FOIA) request letter to request names and addresses of farmers in your watershed and the end-of-project questionnaire.

SAMPLE LETTER FOR FOIA REQUEST

Date

«First»«Last»
«Mailing_Address»
«City», «State» «Zip»

Dear «First»«Last»,

I'm writing on behalf of [name of organization]. We are conducting a study for which we need names and addresses in the [project watershed]. The data will be used to send surveys to land managers asking them about their awareness, attitudes and behaviors in relation to water quality.

I am attaching a copy of a similar survey for your reference. All survey data will be kept confidential and will only be available to individuals involved in this project.

We are working on this project in collaboration with [list any collaborations with SWCD, NRCS, etc.].

It would be very helpful if we could obtain an electronic version of your mailing list differentiated by owners (landowners) operators (farmers), and owner/operators for [county or counties] in [state].

Please let me know if I can provide you any further information to help you consider this request for information.

Thank you in advance for your help.

<signature>

<credentials>

Appendix D: Example Follow-Up Questions

This appendix includes a few example questions that you can use in your follow-up survey to gauge how effective education and outreach initiatives were.

As part of their education and outreach campaign, the Shadow River Watershed Initiative has sponsored and collaborated on multiple events throughout the watershed. Please check if you've attended any of these events, and rate how effective they were at raising your awareness of water quality issues in the Shadow River watershed.

	How effective were these events at raising your awareness of water quality issues in Shadow River watershed? (please check one box per row)				
	Did Not Attend	Not Effective	Somewhat Effective	Effective	Very Effective
Cover Crop Field Day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pasture Walk Field Day	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clean River Sweep	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shadow River Watershed Initiative Annual Meeting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you attended any of the above, did you seek additional information about any of these topics after attending one of these events?

Yes No

Did you change any conservation practices as a result of attending one of these events?

Yes No

If yes, what changes did you make? _____

The Shadow River Watershed Initiative has also distributed factsheets on managing tile drainage, cover crops, and improved livestock management.

	How effective were these factsheets at raising your awareness of these practices?				
	Did Not Receive/Do Not Recall Receiving	Not Effective	Somewhat Effective	Effective	Very Effective
Managing Tile Drainage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cover Crops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Improved Livestock Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you received any of the above factsheets, did you seek additional information about any of these practices after reading these materials?

Yes No

Did you change any conservation practices as a result of receiving these factsheets?

Yes No

If yes, what changes did you make? _____

Whether or not you attended an event or received a factsheet, did you seek out information about conservation practices in the last 18 months?

Yes No

Did you change any conservation practices as a result of this additional information?

Yes No

If yes, what changes did you make? _____

Author Attributions

While all members of the Social Indicators team contributed to this Handbook and towards every section, the primary authors of each section are noted below.

Introduction: Social Indicators for Planning and Evaluation System

Linda Prokopy and Ken Genskow

Section A: Steps for Using the Social Indicator Planning and Evaluation System

Karyn McDermaid and Rebecca Power

Section B: NPS Project Planning: Setting the Stage for Working With Target Audiences

Rebecca Power

Section C: Getting started with SIDMA – the On-line Social Indicators Data Management and Analysis Tool

Cynthia Curtis, Jeremiah Asher, and Alicia Molloy

Section D: Choosing a Survey Method and Sample Size

Linda Prokopy, Kristin Floress, Ken Genskow, and Karyn McDermaid

Section E: Developing a Social Indicators Questionnaire

Kristin Floress, Ken Genskow, Karyn McDermaid, and Alicia Molloy

Section F: Administering the Social Indicators Questionnaire

Karyn McDermaid, Kristin Floress, Ken Genskow, Linda Prokopy, and Alicia Molloy

Section H: Using Social Indicators Survey Results to Develop Education and Outreach Strategies

Adam Baumgart-Getz, Rebecca Power, and Linda Prokopy

Section G: Features of SIDMA

Alicia Molloy

Section I: Evaluating Outreach Activities During Project Implementation

Ken Genskow, Danielle Wood, and Kristin Floress

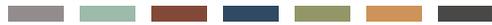
Section J: Collecting Data at the End of Your Project

Linda Prokopy

Section K: Analyzing and Using End-of-Project Data

Adam Baumgart-Getz and Linda Prokopy

The Social Indicator Planning & Evaluation System (SIPES) for Nonpoint Source Management



A Handbook for Watershed Projects

Third Edition
December 2011



This material is based upon work supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under Award No. 2008-51130-04751. Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the view of the U.S. Department of Agriculture.

If you require this information in an alternative format or wish to request a reasonable accommodation because of a disability contact Ken Genskow, 608-262-8756 kgenskow.wisc.edu