National Water Quality Initiative Watershed Forum Report

Lake Bloomington/Money Creek watershed – McLean County, IL

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The Natural Resources Social Science Lab studies how human interactions with the environment impact natural resources. Our research, teaching, and engagement activities focus on how to best motivate farmers, stakeholders, and citizens of all kinds to participate in more environmentally friendly behaviors and practices. For more information, please go to https://www.purdue.edu/fnr/prokopy

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Acronyms

BMP	Best Management Practice
CD	Conservation District
CP	Consensus priority
CTIC	Conservation Technology Information Center
DP	Distinguishing priority
EPA	United States Environmental Protection Agency
IEPA	Illinois Environmental Protection Agency
NRCS	Natural Resources Conservation Service
NRSS	Natural Resources Social Science
NWQI	National Water Quality Initiative
PN	Priority number
PV	Priority Value

Executive Summary

The Conservation Technology Information Center contracted the Natural Resources Social Science (NRSS) Lab at Purdue University to inform improvements to Natural Resources Conservation Service's (NRCS) ability to implement small watershed projects and effectively communicate watershed related information. The NRSS team hosted a forum with local stakeholders from the Lake Bloomington/Money Creek watershed in McLean County, Illinois to gather input on watershed project design, marketing, delivery, and implementation associated with the National Water Quality Initiative (NWQI), an NRCS supported small watershed initiative. Additionally, the NRSS team interviewed representatives from state and federal agency partners working with NRCS to improve watershed health. The following document provides recommendations based on data gathered from the watershed forum and interviews with agency partners.

Forum

The Lake Bloomington/Money Creek watershed forum included three activities that focused on 1) watershed priorities, 2) resource needs, and 3) elements of successful watershed outreach and education.

Watershed priorities

Participants ranked priorities related to successful watershed management and explained their rationale for priority decisions. Using factor analysis in PQMethod software (v. 2.35) and qualitative analysis in MS Excel, forum participants identified three distinct priority narratives, including 1) Outreach and Planning, 2) Stakeholder Knowledge and Biological Integrity, and 3) Stakeholder Outreach, Concerns and Collaboration.

Resource needs

Participants listed resources needed for successful watershed management, discussed their rationale for each need, and then assembled resources into broad categories of needs. Through analysis in NVivo (v. 12), the researchers identified four broad categories of resources needed for successful watershed management including 1) Leadership, 2) Outreach, 3) Effective implementation, and 4) Watershed results.

Successful watershed outreach and education campaign

Participants engaged in a facilitated discussion related to recipients, content, and delivery of watershed outreach and education. Through analysis in NVivo (v. 12), the researchers identified the need to promote success stories as well as on-farm and economic impacts of best management practice adoption, then emphasized the importance of personal interactions for a successful outreach and education campaign.

Interviews

An NRSS researcher conducted interviews with representatives from Illinois Environmental Protection Agency (IEPA) and the United States Environmental Protection Agency (EPA) Region 5 to gather information about the role of partnering agencies in the NWQI, strengths and challenges associated with the NWQI, and elements of successful watershed management and outreach. Both EPA Region 5 and IEPA recommend increasing interagency coordination and transparency of site selection criteria of NWQI priority watersheds.

Recommendations

Through a synthesis of data gathered from the three activities of the Lake Bloomington/Money Creek watershed forum and interviews with agency partners, the NRSS research team developed the following agency-wide recommendations for NRCS and watershed specific recommendations for McLean County Soil and Water Conservation District (SWCD). The following agency-wide and watershed specific recommendations aim to improve the successful design, marketing, delivery, and implementation of NRCS supported watershed projects:

<u>NRCS:</u>

1. Increase coordination and transparency with IEPA to enable water quality monitoring and improve priority watershed selection.
2. Increase local staff to facilitate one-on-one interactions and manage additional workload of NWQI.

<u>McLean County SWCD:</u>

1. Frame watershed communication around on-farm and economic benefits of BMP adoption.
2. Identify dedicated local leaders in the watershed community and share success stories.
3. Continue working with private and municipal partners to increase public support and raise awareness of watershed health issues.

1 Introduction

1.1 Project overview

The Natural Resources Social Science (NRSS) Lab at Purdue University was contracted by the Conservation Technology Information Center (CTIC) to investigate how to improve the Natural Resources Conservation Service's (NRCS's) ability to 1) implement watershed management projects and 2) effectively communicate watershed related information. The NRSS team conducted a forum in Illinois' Lake Bloomington watershed to gather information from local stakeholders on watershed project design, marketing, delivery, and implementation associated with the NRCS's National Water Quality Initiative (NWQI). In addition to the forum, the NRSS research team gathered information from agency partners working with NRCS toward the common goal of improving watershed health.

The forum included three interactive activities with local stakeholders aimed to identify 1) watershed priorities, 2) resource needs, and 3) elements of successful watershed outreach and education. Interviews investigated the regional perspective of agency collaborators regarding NWQI's strengths and weaknesses, as well as successful watershed management, outreach, and education strategies.

This report provides the following information:

- A brief overview of the NWQI,
- current conditions in the Lake Bloomington/Money Creek watershed,
- methods and results from the Lake Bloomington/Money Creek watershed forum conducted in McLean County, IL,
- methods and results from interviews conducted with representatives from the Illinois Environmental Protection Agency (IEPA) and the United States Environmental Protection Agency (EPA), and
- recommendations to inform implementation and outreach efforts for NWQI and other NRCS supported watershed projects.

1.2 Background

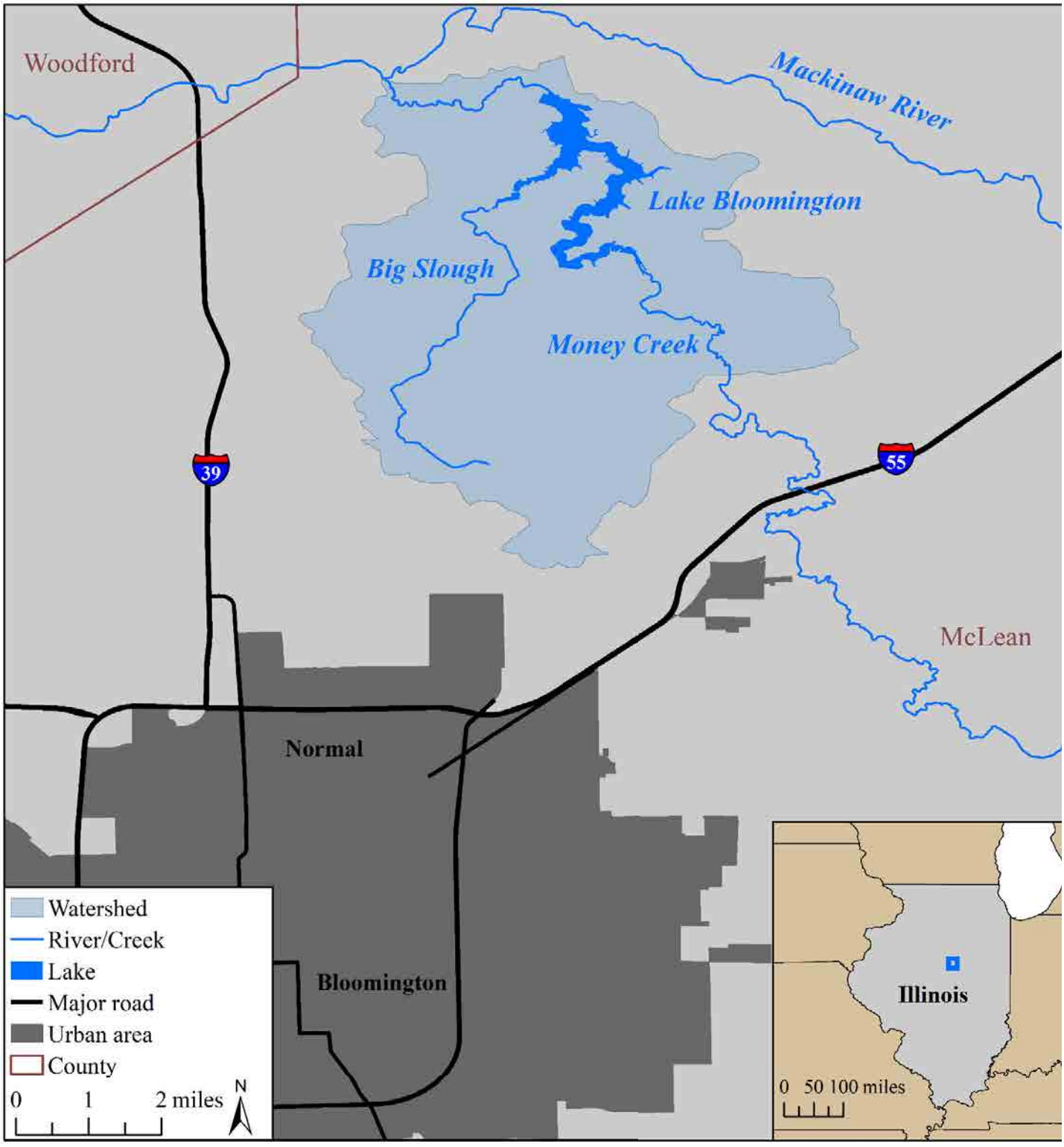
1.2.1 National Water Quality Initiative

Created to identify impaired watersheds and address water quality issues in targeted watersheds, the NWQI provides technical and financial assistance to accelerate voluntary adoption of best management practices (BMPs) on agricultural land. The NWQI uses a collaborative approach to watershed management and works with local resource managers, state water quality agencies, EPA, and other partners to improve impaired watersheds across the United States. Additionally, the initiative provides monitoring and assessment resources to track water quality improvement over time in targeted watersheds. To receive NWQI funding, resource managers in selected watersheds develop an area-wide conservation planning document, i.e., "watershed assessment." This document includes watershed characterization, water quality impairment assessment, identification of critical acres, and an outreach plan for agricultural producers in the identified critical acres. The NWQI also aims to enhance agricultural productivity by improving soil health and reducing erosion, nutrient runoff, and input costs.

1.2.2 Lake Bloomington/Money Creek watershed

The Lake Bloomington watershed (Figure 1) includes the Money Creek sub-watershed and is listed on the 303(d) list of impaired waterways due to elevated levels of nitrates and phosphorus. Located in McLean County, Illinois, the Lake Bloomington watershed (HUC - 071300040202) is part of the Mackinaw River Basin. It encompasses 43,100 acres and the towns of Towanda and Merna, IL. The City of Bloomington, IL, located approximately 15 miles south of the watershed, uses Lake Bloomington as their municipal water supply. In addition to municipal use, Lake Bloomington also supports residential development and recreational activities. Major land uses in the Lake Bloomington watershed include corn (33%) and soy (50%) row crop production with rural grassland, urban, and surface water each covering <10% of the watersheds total surface area. Lake Bloomington's NWQI program is currently managed by NRCS and the McLean County Soil and Water Conservation District (SWCD), with support from the City of Bloomington, IL.

Figure 1. Lake Bloomington/Money Creek watershed map



2 Methods

This section provides brief methods for forum and interviews conducted by the NRSS lab and approved by Purdue University Institutional Review Board. Further methods details can be found in Appendices A, B, C and D.

2.1 Stakeholder Forum

2.1.1 Development

The NRSS research team worked with McLean County SWCD staff to gather a contextual understanding of the watersheds and developed a list of diverse stakeholders to invite to the forum. The SWCD sent initial invitations via mail approximately one month before the forum. The NRSS team mailed a reminder approximately two weeks before the forum. The reminder included a brief survey and information about the forum. The survey gathered respondents' stakeholder type (e.g., producer, landowner, community member, SWCD staff) as well as their awareness of and involvement in local watershed management. Survey recipients were also asked to describe their watershed priorities and identify resources needed for a successful watershed management project in four open ended questions. Survey development, methods, and analysis conducted are included in Appendix A.

The Lake Bloomington watershed forum was conducted on March 6th from 10:00 am to 3:00 pm (Table 1).

Table 1. Forum activies and objectives.

Activity	Objective
Introduction	An NRSS facilitator oriented the participants to the project team, project objectives, forum goals, and the forum's agenda.
Identify watershed priorities	Participants ranked priority statements for watershed management then discussed the rationale for their ranking.
Lunch	Participants were provided food and an opportunity to network with fellow participants.
Identify resource needs	Participants listed resource needs for watershed management, then organized them into broad categories.
Identify elements of successful outreach and education	Participants discussed elements needed for successful outreach and education in their watershed.
Conclusion	An NRSS facilitator thanked participants for their attendance.

2.1.2 Data Collection

The following section describes methods for forum activities where data was collected.

Introduction
The NRSS facilitator introduced participants to the project and the project team. The project team included two NRSS lab staff, two CTIC staff, three WaterComm staff, and one NRCS staff. The facilitator then provided an overview of the forum agenda and a broad summary of watershed management and NWQI. Contact information including, name, email/mailing address were collected but not used for any analysis.

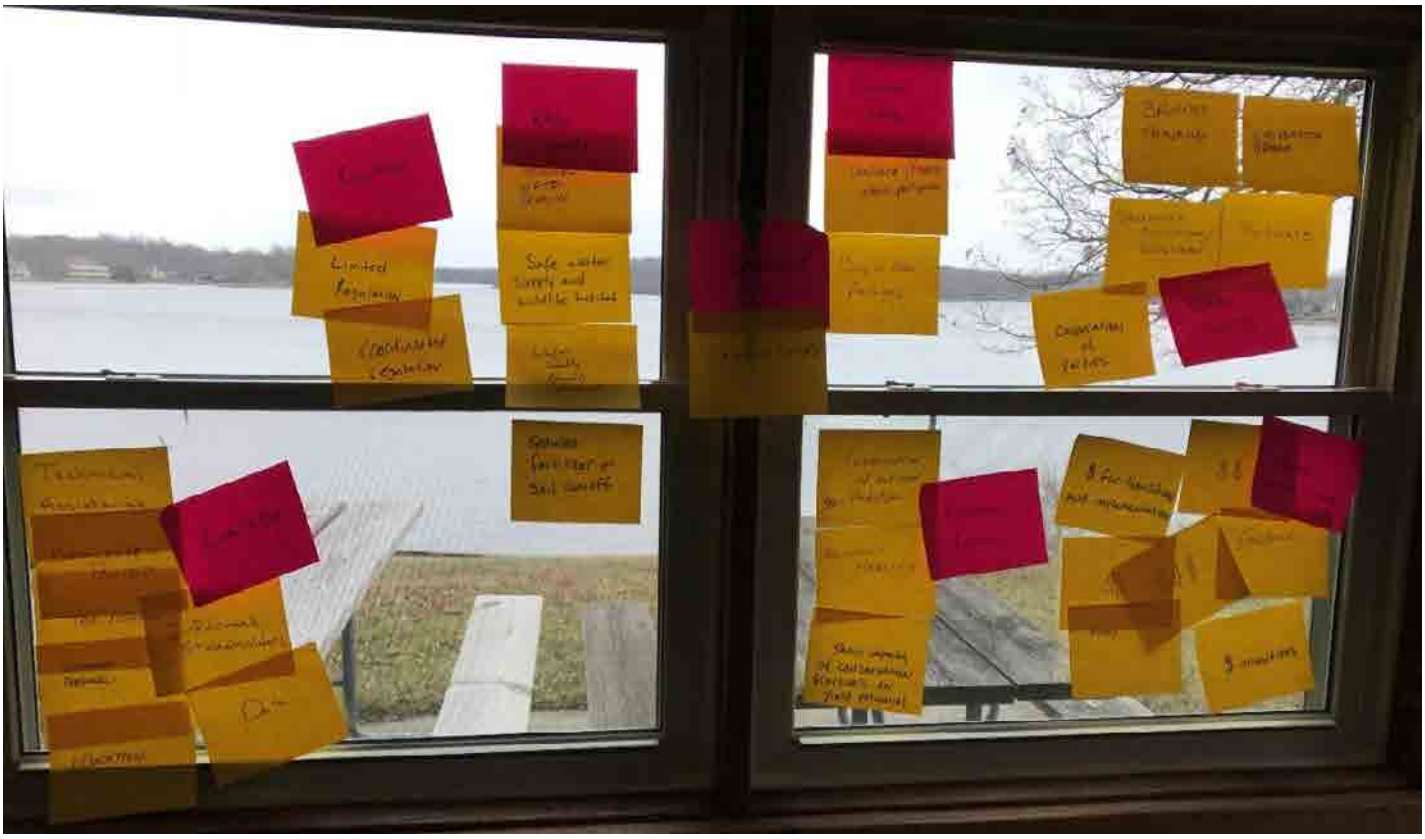
Identify Watershed Priorities
Forum participants engaged in a ranking exercise based on Q Methodology (Brown 1993) to identify watershed priorities from 36 predetermined priority statements (see Appendix B, Table B-1 for list of statements). The 36 statements were developed to represent a wide range of watershed priorities. Facilitators instructed forum participants to record the order of their watershed priorities from most disagree (-5) to most agree (5) on a provided datasheet (Appendix B, Figure B-3). Participants also reported demographic information, including their primary role in the watershed (i.e., stakeholder type), conservation practices currently in use on their property, years of experience with watershed management, years lived in the Lake Bloomington/Money Creek watershed as well as their birth year and gender. The datasheets were collected by the research team and were input into PQMethod software (v. 2.35) at a later date.

Then, in an open discussion with all forum participants lasting approximately 15 minutes, the facilitator asked volunteers to share their rationale for selecting their top watershed priorities. Participants were then assigned to three small groups. NRSS researchers assigned predetermined groups to integrate different stakeholder types within each group. In the small groups, participants shared their highest and lowest watershed priorities and their ranking rationale. Members of CTIC facilitated two small group discussions, an NRSS researcher facilitated one, and WaterComm staff took notes on each discussion. Large and small group discussions were noted and recorded. TranscribeMe, an audio transcription service, was used to transcribe audio recordings.

Identify Resource Needs

Forum participants listed resources needed to achieve successful watershed management. Researchers provided each group with seven examples of resource needs derived from the survey (Appendix A). Participants wrote resources needed for successful watershed management on 5x7 inch sticky notes. Participants displayed each written resource need (including the seven provided by the facilitators) in front of their small group. The small group facilitator prompted participants (see Appendix C for facilitator guide) to explain their rationale for resource needs they contributed, then collectively assembled resource needs into broad categories. The facilitator then documented the broad categories and displayed them on a different colored sticky note (Figure 2). After the forum, NRSS team collected all 5x7 sticky notes from each group. Group discussions were noted and recorded. Audio recordings were transcribed by TranscribeMe, an audio transcription service.

Figure 2. Example display of resource needs activity



Identify Elements of Successful Outreach and Education

In the same small groups, participants engaged in a facilitated discussion on elements of effective outreach and education. Small group facilitators provided each group six examples of elements needed for successful watershed outreach and education derived from the survey (Appendix A) then documented the discussion on a flip chart. Facilitators guided (Appendix C) participants to gather further information related to recipients, content, and delivery of watershed outreach and education. The discussions were noted and recorded. Audio recordings were transcribed by TranscribeMe, an audio transcription service.

2.1.3 Analysis

The following section describes the analysis methods for the forum activities where data was collected.

Identify Watershed Priorities
This activity used both quantitative and qualitative analyses, described below.

Quantitative
An NRSS researcher conducted a factor analysis using principal component method with Varimax rotation on the participants' ranked priorities via PQMethod software (v. 2.35). The software aggregated participants by similarly ranked priorities and identified the following:

- Priority family: participants with similar priority rankings.
- Priority framework: output that provides priority values (PV), distinguishing priorities (DP), and consensus priorities (CP) for each priority family.
    - Priority value (PV): Value assigned to each watershed priority based on priority rankings within each priority family. These values reflect family attitudes toward each priority. PVs range from -5, (low priority), to 5 (high priority).
    - Distinguishing priorities (DP): Uniquely ranked priorities from each priority framework. These priorities highlight distinct viewpoints that differentiate priority families from each other.
    - Consensus priorities (CP): Similarly ranked priorities across all priority frameworks. These priorities highlight broad agreement across all priority families.

Qualitative analysis
An NRSS researcher then developed a priority narrative to describe priorities and compare differences and similarities for each priority family. Narratives were created by organizing participants' rationale from the discussion transcriptions by priority and priority rank (MS Excel) as well as the priority framework, analyzed through PQMethod (v. 2.35). Participants' comments were not identified on the transcription relative to their datasheet; therefore, the comments could not be attributed to a specific priority family. Finally, the researcher developed a name describing each narrative based on high-ranked priorities (see Appendix B, Table B-1 for additional detail).

Identify Resource Needs
The broad categories and resource needs identified by participants were used as codes and subcodes, respectively, to organize the discussion. An NRSS researcher reviewed all transcriptions and assigned codes in NVivo (v. 12). Then, for each discussion group, the NRSS researcher developed a conceptual diagram (i.e., mind map) of the resources needed for successful watershed management based on the transcribed small group discussions. The mind maps were then synthesized by identifying reoccurring themes across all three discussion groups.

Identify Elements of Successful Outreach and Education
An NRSS researcher developed codes in NVivo (v. 12) based on reoccurring themes for each of the facilitated discussion topics: recipients, content, and delivery.

2.2 Interagency Partner Interviews

The following section describes data collection and analysis methods used to investigate the perspective of federal and state agency partners (EPA and IEPA) relative to their role within the NWQI, the strengths and challenges associated with the NWQI, and elements of successful watershed management and outreach.

2.2.1 Data Collection

An NRSS researcher interviewed representatives from IEPA and EPA Region 5. The interviewees were identified through a conversation with an EPA employee who recommended appropriate representatives. A request to participate was emailed to potential interviewees. An interview with IEPA representatives was conducted on the phone, recorded, and transcribed in February 2018. Interviews with two representatives from EPA Region 5 was conducted over telephone in February and April 2018. The interview guide developed for these interviews can be found in Appendix D.

2.2.2 Analysis

The transcripts and notes were summarized by three topics:

- Agency role in the NWQI,
- strength and challenges associated with the NWQI,
- key elements for successful watershed management and outreach.

3 Results

3.1 Stakeholder Forum

3.1.1 Demographics

A total of 13 stakeholders participated in the forum. Most participants identified as a producer or landowner (Table 2) and male (Table 3). Participants reported a mean age of 60.7 years old (Table 4) and 38.5% of forum participants reported living in the watershed (Table 5).

Table 2. Stakeholder type

Stakeholder Type	Frequency (n)	%
Producer or landowner	5	38.5
State agency staff	3	23.0
SWCD Staff	1	7.7
NRCS	1	7.7
Local govt staff	1	7.7
***Other**	2	15.4
**Other includes individuals from a neighboring watershed (Indian Creek)*		

Table 3. Gender

Gender	Frequency (n)	%
Male	9	69.2
Female	4	30.8

Table 4. Participant age

Mean age *(SD)*	Median	n
60.7 (***9.6***)	62	13

Table 5. Watershed resident

Resident	n	%	Years Mean *(SD)*
Yes	5	38.5	36.8 (*22.8*)
No	8	61.5	

3.1.2 Watershed Priorities

A total of 10 participants' ranked priorities were considered complete for analysis (Appendix B). The participants' ranked priorities are presented in the following three narratives:

1) Priority Family 1: Outreach and Planning (four participants)
2) Priority Family 2: Stakeholder Knowledge and Biological Integrity (two participants)
3) Priority Family 3: Stakeholder Outreach, Concerns and Collaboration (four participants)

Each priority given to participants were numbered (Appendix B, Table B-1). These priority numbers (PNs) are added to the following section for reference in parentheses, for example "(PN4)" refers to priority number 4, "A watershed plan is necessary".

The priority family narratives are described below by the priorities with high and low PVs and DPs (Table 6 - Table 8), CPs are discussed and the priority framework for each family is summarized in Table 9.

Priority Family 1: Outreach and Planning

This priority family includes a total of four participants who identified as local government staff, NRCS staff, SWCD staff, and state employees. This group identified statements related to outreach (PN11, PN15, PN25), inclusion (PN18), stakeholder concerns (PN2), and watershed planning (PN4) as key components for successful watershed management (Table 6).

Table 6. Priority Family 1 Framework: Outreach and Planning

Priority Narrative 1: Outreach and Planning				
PN	**Priority**	**PV**	**DP**	**CP**
High				
15	A strong working relationship between producers/landowners and watershed managers is important.	5		
25	Watershed managers should seek out and respect local knowledge, perspective and experience.	4	x	
18	The watershed planning process should include diverse groups of people working towards a common goal.	4		
11	Watershed managers should actively engage with the community.	3	x	
4	A watershed plan is necessary.	3		
2	Addressing concerns of local watershed stakeholders should be the highest priority for resource managers.	3		
Low				
13	Funding should be budgeted specifically for outreach and communication.	-3		
36	The watershed needs to be in an impaired or degraded state.	-3		x
20	Communicating about soil health is more effective than communicating about water quality.	-3		x
9	Only local organizations should be involved.	-4		x
29	Watershed managers should focus on water quality issues over water quantity issues.	-4		
35	Producers/landowners/businesses should be required to adopt best management practices.	-5		x
Additional DP				
8	Conservation practices should be adopted on more acres.	-1	x	
1	Landowners/producers should know what best management practices are and why they should be used.	-2	x	
5	Land and water should have species diversity.	-2	x	
34	Measurably cleaner water should be an outcome.	-2	x	

Notes: Priorities are ordered by PV. The priority categories are provided in Appendix B Table B-1. The "x" indicates the DP and CPs identified by the PQMethod software.
PN=Priority number
PV=Priority value
DP=Distinguishing priority
CP=Consensus priority

Stakeholder Outreach

According to this family, a strong working relationship between landowners, producers and watershed managers (PN15) is essential for successful watershed management. For example, a participant underscored the importance of conservation staff's relationship with producers and landowners:

> *"I don't think we'd be able to have a successful program without [the landowners]…Everything drives around the relationship that we have with the producers and landowners. If I didn't have the relationship I do with them, there would be no [watershed] work to come to. We have to have the producers and landowners in this watershed to make it work."*

This family emphasized the importance of active engagement with the non-agricultural community (PN11) and described benefits of engaging with the general public. Benefits included an increase in public support, a public understanding of watershed issues, and a raised awareness of efforts to improve shared water resources. They believed this is especially important in a municipal water source, like Lake Bloomington. For example, a participant articulated the importance of keeping the non-agricultural community informed and engaged:

> *"The big thing is community. While landowners and producers are critical to helping achieve watershed goals, the entire public is too because everybody drinks water, everybody requires it. Everybody needs to understand how important the issues are. The more public support you get for things that you're trying to do, the more likely it is to know they're not going to squawk as much about their water bill or some of those costs; that they know there's actually a benefit that's going to derive from all of this."*

Although this family prioritized stakeholder outreach in the watershed, they did not prioritize producer understanding of why BMPs are used (PN1).

Inclusive Watershed Planning

Consistent with their attitudes towards stakeholder outreach, this family highlighted the importance of a watershed plan to include local knowledge, address local concerns, and include diverse stakeholder groups (PN4, PN18, PN2, PN25). One participant described the drawbacks of a watershed plan that lacked community input:

> *"I've seen some watershed plans that were contracted out to a private group that writes that plan and hands it to the local people. Even though there's a little bit of [local] input to that watershed plan, it's a horrible way to do it. Even though I may have supplied some documents to that plan, it was taken out of context. You start looking at the objectives and goals and say, 'Well, I don't think that's a local priority.'"*

They also emphasized the importance of a watershed plan to prioritize local concerns but did not stress the importance of cleaner water as an outcome of that plan (PN34). Although this family agreed that successful watershed management should result in cleaner water, they did not think it should be the only metric of success. A participant explained:

> *"If we are working in the watershed we are going to meet that ultimate goal of cleaner water. We may or may not be out there measuring it but the users are going to know it, the biodiversity's going to know it. For me, watershed management doesn't necessarily mean what the exact outcome is, it's the working and managing the land for those other goals."*

Other Priorities

This family did not prioritize species diversity, increasing number of acres in conservation, or allocating funds to outreach and education (PN5, PN8 PN13). However, they highlighted the importance of both water quality and water quantity issues (PN29). One participant discussed the connection between water quantity and water quality and the contribution of urban landscapes to flooding:

> *"…We are getting bigger rains and that's where you get a lot of your erosion from, it's that quantity of extra water. I attribute a lot of that just to the urbanization, there's just not any absorption there. It's got to go somewhere…Erosion causes a lot of quality issues, that's when you get your nutrients leaching and soil into your water."*

Priority Family 2: Planning, Stakeholder Knowledge and Biological Integrity

This priority family included a total of two participants self-identified as a producer/landowner and state agency staff. They identified stakeholder knowledge (PN1, PN17), watershed planning (PN4), assistance (PN8), agency collaboration (PN28) and biological integrity (PN34) as fundamental components for successful watershed management (Table 7).

Table 7. Priority Family 2 Framework: Stakeholder Knowledge and Biological Integrity

Priority Narrative 2: Stakeholder Knowledge and Biological Integrity				
PN	**Priority**	**PV**	**DP**	**CP**
High				
17	Watershed stakeholders need to understand the sources of water resource issues.	5	x	
1	Landowners/producers should know what best management practices are and why they should be used.	4		
34	Measurably cleaner water should be an outcome.	4		
28	Resources and information between local, regional, state and federal agencies should be coordinated.	3		
8	Conservation practices should be adopted on more acres.	3		
4	A watershed plan is necessary.	3		
Low				
35	Producers/landowners/businesses should be required to adopt best management practices.	-3		x
10	No stakeholders' livelihoods should be jeopardized due to watershed management activities.	-3	x	
20	Communicating about soil health is more effective than communicating about water quality.	-3		x
2	Addressing concerns of local watershed stakeholders should be the highest priority for resource managers.	-4	x	
9	Only local organizations should be involved.	-4		x
36	The watershed needs to be in an impaired or degraded state.	-5		x
Additional DPs				
12	The public needs to understand how a healthy and balanced watershed can benefit them.	2	x	
15	A strong working relationship between producers/landowners and watershed managers is important.	1	x	
29	Watershed managers should focus on water quality issues over water quantity issues.	0	x	
16	One-on-one interactions between resource managers and producers/landowners is necessary.	-2	x	

Notes: Priorities are ordered by PV. The priority categories are provided in Appendix B Table B-1. The "x" indicates the DP and CPs identified by the PQMethod software.
PN=Priority number
PV=Priority value
DP=Distinguishing priority
CP=Consensus priority

Stakeholder Education

This family underscored the need for all stakeholders to recognize watershed concerns and for producers to understand the benefits of BMP adoption. Due to municipal reliance on the watershed, they believed all water users (urban, rural and agricultural) need to understand where their water comes from, as well as impacts of watershed health and community-wide benefits a healthy watershed provides (PN17, PN12, PN1). One participant explained challenges associated with conveying those messages to the general public:

> *"We have trouble conveying that message to people. If the faucet turns on, and the toilet flushes, everything is fine and well. If not, it's a major catastrophe for the community water suppliers…They don't know how to engage the general public to really get widespread buy-in…It certainly would help if everybody bought in and understood those benefits."*

Watershed Planning and Monitoring

This family also highlighted the importance of including measurably cleaner water as an outcome of a watershed plan and prioritized water quality issues over quantity issues more than the other two families (PN4, PN34, PN29). They believed that measurably cleaner water can gauge progress and provide clear results to watershed managers and the watershed community. One participant explained further:

> *"I think [measurably cleaner water] is the thing that put everything together. We can have a good plan, we can have people involved, we can do this and we can do the other things, but if we don't do anything, if we don't get any results, then what have we done? So, my thinking is we need to get results."*

Stakeholder Outreach

This family placed a low priority on addressing local stakeholder concerns and accepted that watershed management activities could impact livelihoods of those living and working in the watershed (PN2, PN10). This family did not prioritize one-on-one interactions or a strong working relationship between landowners/producers and watershed managers (PN16, PN15). Providing insight to this sentiment, one participant elaborated:

> *"…I thought one-on-one [interactions] was a little bit too restrictive. One-on-one is great for those who want that opportunity, but do not make it a mandatory thing. A field day with 15 agency people surrounding a landowner or producer tends to go contrary to what you want to have happen. So I put it a little bit more on disagree side."*

Other Priorities

This family highlighted the importance for BMPs to be adopted on more acres, and supported resource coordination between local, regional and state agencies (PN8, PN28). One participant explained the benefits of incorporating a diversity of ideas and funding sources into a watershed:

> *"…Get diverse people with funding or different ideas…and getting involvement from every agency, local all the way up to federal all coming together. If you have these issues in the watershed, you can bring a little small part, I could bring a little small part, [and someone else] could bring a small part, and maybe you can bring funding and bigger ideas to the table to get stuff done. There's a lot of other stuff that needs to be done that [NRCS] can't deal with, so bringing more people together helps out a lot."*

Priority Family 3: Stakeholder Outreach, Concerns and Collaboration

This group of four participants identified themselves as state agency staff, landowner/producers, and community members from outside the watershed. This family identified statements relating to outreach (PN15, PN16, PN25), assistance (PN3), stakeholder concerns (PN10), and agency collaboration (PN28) as keys to successful watershed management (Table 8).

Table 8. Priority Family 3: Stakeholder Outreach, Concerns and Collaboration

Priority Narrative 3: Stakeholder Outreach, Concern and Collaboration				
PN	**Priority**	**PV**	**DP**	**CP**
High				
10	No stakeholders' livelihoods should be jeopardized due to watershed management activities.	5	x	
3	Technical and/or financial assistance for those who qualify is necessary.	4	x	
15	A strong working relationship between producers/landowners and watershed managers is important.	4		
16	One-on-one interactions between resource managers and producers/landowners is necessary.	3		
28	Resources and information between local, regional, state and federal agencies should be coordinated.	3		
25	Watershed managers should seek out and respect local knowledge, perspective and experience.	3		
Low				
20	Communicating about soil health is more effective than communicating about water quality.	-3		x
35	Producers/landowners/businesses should be required to adopt best management practices.	-3		x
29	Watershed managers should focus on water quality issues over water quantity issues.	-3		
9	Only local organizations should be involved.	-4		x
19	A management plan should support activities that include recreation, economic and environmental benefits.	-4	x	
36	The watershed needs to be in an impaired or degraded state.	-5		x
Additional DP				
22	Achievable water quality goals and targets should be set to show water quality improvements.	2	x	
17	Watershed stakeholders need to understand the sources of water resource issues.	-2		
18	The watershed planning process should include diverse groups of people working towards a common goal.	-2	x	

Notes: Priorities are ordered by PV. The priority categories are provided in Appendix B Table B-1. The "x" indicates the DP and CPs identified by the PQMethod software.
PN=Priority number
PV=Priority value
DP=Distinguishing priority
CP=Consensus priority

Stakeholder Concerns and Agency Collaboration

At the core of this family's perspective is their belief that livelihoods in the watershed should not be impacted by watershed management, and technical and financial assistance should be available for those who qualify (PN10, PN3). One participant discussed how financial assistance can mitigate the economic uncertainty some producers associate with adopting a new practice:

> *"Money talks, you would try [a BMP] if it didn't. If it's a good practice and you like it, you may continue without getting paid. A lot of times you don't want to take that step, especially if it's something that could lower your yield or it's so different to you that you're afraid to do it. With a little incentive, a lot of people would try something different. A lot of people are afraid to try different, if they got a good farming outcome they don't want to stress it. And today with all the high inputs and the really low grain prices, you're on a narrow margin."*

Stakeholder Outreach

This family stressed the importance of strong, one-on-one relationships between landowners, producers, and resource managers. They felt these relationships help develop trust and incorporate local knowledge into watershed management. Highlighting the importance of building a trusted working relationship (PN15), one participant provided a nuanced description of that relationship:

> *"I would add the word, 'trust' because that's the key to building the relationships. I can talk to [the SWCD] and they're not going to hurt me. I'm not going to get a cease and desist order tomorrow because of something we said in a conversation. Trusting that the person also has the knowledge of how to move forward and how to work with other people, it's very important."*

This family also believed that one-on-one interactions can influence a producer's willingness to consider implementing BMPs. Related, they reiterated the important role producers play in the successful watershed management (PN16). One participant explained:

> *"You're not going to see water quality change unless you can change some best management practices out in the farms. If the soil and water guy comes out and says, 'Hey, we got this program going on. What you're doing, this may be a good fit.' If [SWCD] makes that personal touch and follows it up with a postcard, [the producer] may be more likely to go and be curious."*

When discussing the importance of incorporating local knowledge (PN25), one participant emphasized the importance to consider how different soil types in the watershed impact watershed management:

> *"This is on the top because of the word 'local'. In our watershed or even our operation, we have varying soil types. Some practices are going to be just great and other ones are not going to work well. Just that close, that local soil type a farmer farms. So yeah, you have to have an overall plan but there has to be some local and specific management, even within the watershed."*

Other Priorities

This family prioritized including diverse stakeholders in the planning process, managing the watershed for multiple uses, and the need for stakeholders to understand sources of water impairments (PN19, PN18, PN17). They believe that successful watershed management includes achievable goals, a focus on both water quality and quantity, and collaboration between federal, state, and local agencies (PN22, PN29, PN28). One agency staff member explained the impact interagency collaboration can have on participating agencies:

> *"A lot of times we just don't do that coordination as well as we could. Unknowingly. We fund projects that were in the [NRCS] funding line and then a farmer says, 'Hey I can go [there and] get it without a lot of the paperwork'. We end up funding it and then NRCS ended up returning money back to DC. That looks badly on everybody. We've learned through the years how to partner and talk to each other but it still remains a problem."*

Consensus Priorities

Each family agreed that a watershed does not need to be impaired to receive attention and that local organizations should be supported by state and federal agencies (PN36, PN9). They also believed that communicating about soil health is not more effective than communicating about water quality, and adopting BMPs should always remain voluntary (PN20, PN35). Explaining their opinion required implementation of BMPs, one participant simply stated:

> *"It's not right to force regulations on everybody…If I shove something down somebody's throat, they're not going to swallow it."*

Priority Frameworks Compared

Summary of priority framework for each priority family

Table 9. Priority framework summary

PN	Priority	Priority Family (PV)		
		1	2	3
1	Landowners/producers should know what best management practices are and why they should be used.	-2[D]	4	1
2	Addressing concerns of local watershed stakeholders should be the highest priority for resource managers.	3	-4[D]	1
3	Technical and/or financial assistance for those who qualify is necessary.	0	0	4[D]
4	A watershed plan is necessary.	3	3	1
5	Land and water should have species diversity.	-2[D]	2	1
6	Management should be done at a small geographic scale.	-1	-2	-2
7	Students (elementary through college) should understand the importance of soil and water conservation.	0	-1	-1
8	Conservation practices should be adopted on more acres.	-1[D]	3	2
9	Only local organizations should be involved.	-4[C]	-4[C]	-4[C]
10	No stakeholders' livelihoods should be jeopardized due to watershed management activities.	2	-3[D]	5[D]
11	Watershed managers should actively engage with the community.	3[D]	0	-2
12	The public needs to understand how a healthy and balanced watershed can benefit them.	0	2[D]	-1
13	Funding should be budgeted specifically for outreach and communication.	-3	-2	0
14	Watershed information should be communicated using diverse methods and reach a broad public audience.	1	-1	0
15	A strong working relationship between producers/landowners and watershed managers is important.	5	1[D]	4
16	One-on-one interactions between resource managers and producers/landowners is necessary.	2	-2[D]	3
17	Watershed stakeholders need to understand the sources of water resource issues.	0	5[D]	2[D]
18	The watershed planning process should include diverse groups of people working towards a common goal.	4	1	-2[D]
19	A management plan should support activities that include recreation, economic and environmental benefits.	1	2	-4[D]
20	Communicating about soil health is more effective than communicating about water quality.	-3[C]	-3[C]	-3[C]
21	Water monitoring is necessary.	0	2	2
22	Achievable water quality goals and targets should be set to show water quality improvements.	-1	-1	2[D]
23	The public should be aware of the range of resource issues associated with their watershed.	1	0	0
24	A clear plan for public involvement/engagement should be included in a watershed management plan.	1	1	0
25	Watershed managers should seek out and respect local knowledge, perspective, and experience.	4[D]	1	3
26	There should be a flexible plan that allows for changes in management over time.	2	0	0
27	Negative effects of watershed management on downstream stakeholders should be minimized.	0	-2	2
28	Resources and information between local, regional, state, and federal agencies should be coordinated.	2	3	3
29	Watershed managers should focus on water quality issues over water quantity issues.	-4	0[D]	-3
30	The watershed should have a user-friendly website that contains watershed information.	-1[C]	-1[C]	-1[C]
31	Watershed management should benefit my community and communities downstream of my watershed.	-1	1	0
32	Watershed management should include an evaluation of the impact of climate change on future quality and quantity in my watershed.	-2	-1	-1
33	Community members should take an active role in watershed management.	1	0	-1
34	Measurably cleaner water should be an outcome.	-2[D]	4	1
35	Producers/landowners/businesses should be required to adopt best management practices.	-5[C]	-3[C]	-3[C]
36	The watershed needs to be in an impaired or degraded state.	-3[C]	-5[C]	-5[C]

[D]=Distinguishing priority
[C]=Consensus priority
PN=Priority number
PV=Priority value
Priority Family 1: Stakeholder Needs and Knowledge
Priority Family 2: Communication and Engagement
Priority Family 3: Measurement and Flexibility

PV Color Key

5	
4	
3	
-3	
-4	
-5	

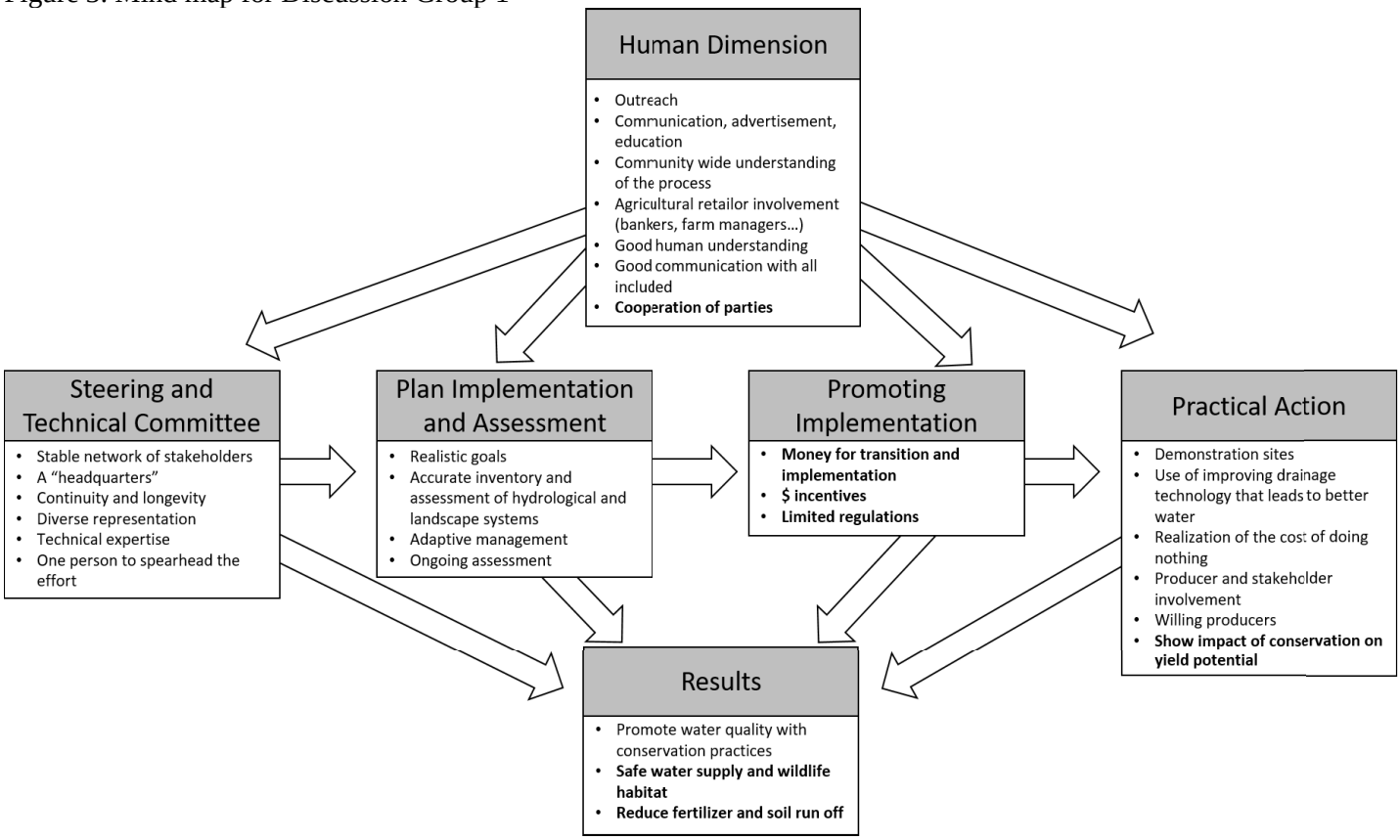
3.1.3 Resource Needs

Discussion Group 1

Group 1 developed six broad categories and included 29 resource needs for successful watershed management (Figure 3). The six broad categories include 1) Human Dimension, 2) Steering and Technical Committee, 3) Plan Implementation and Assessment, 4) Promoting Implementation, 5) Practical Action, and 6) Results.

This group believed that an understanding of the human dimension in the watershed is an important influencer of other components contributing to the overall success of watershed management. With components the human dimension category in mind, a strong steering committee can create a watershed plan that promotes BMP implementation and practical action. These components will be able to achieve the desired water quality results laid out in their watershed plan.

Figure 3. Mind map for Discussion Group 1



Bolded resource needs were provided by survey respondents

Human Dimension
This group believed watershed managers need to engage with the agricultural and non-agricultural community for successful watershed management. They felt that with effective communication, education, and advertising, the general public could gain a better understanding and appreciation of water quality improvement efforts the agricultural sector is implementing in their community. Additionally, increased communication to diverse audiences was thought to build relationships and buy-in from agribusiness professionals, including bankers and retail outlets. For example:

> *"If you get those guys on board when that curious producer goes to buy whatever or do whatever there's some one-on-one input there [that can be] encouraging…A whole lot of decisions get made right there in [those] offices…you get a lot of trust and knowledge [from them] because people work with those guys a lot."*

Steering/Technical Committee
This group viewed the steering and technical committee as the leaders of a watershed project and a driving force to keep the project on track over time. It is important to this group that this committee be comprised of a stable network of participants that includes diverse representatives from stakeholder groups in the watershed. Furthermore, this group mentioned that members of this committee do not necessarily need to have technical expertise and recognized added value of including well respected community members on this committee. For example:

> *"[Members of the committee] don't have to be too technical. When I was in [another watershed] it was private citizens on the committee that kept it going…It could be the most influential farmer there."*

Plan Implementation and Assessment
It is important to this group for a watershed plan to include realistic goals informed by an accurate assessment of their local landscape. They suggested including a mechanism to monitor the plan's progress and success. They also agreed that an assessment component to a watershed plan would provide flexibility and allow for plan adaptation over time.

Promoting Implementation
This group believed that increased cost-share benefits and limited regulation are an effective way to reach goals identified in the watershed plan. They felt that additional cost-share benefits could encourage producers limited by financial resources to adopt BMPs, and discussed reducing requirements that limit access to cost-share funding. Additionally, this group believed that the threat of additional regulation could be used as a motivator to increase BMP adoption.

Practical Action
The practical action component described by this group encompasses the people, events, and ideas necessary to achieve the goals laid out in the watershed plan. This group recognized that the involvement of producers, landowners, and other stakeholders can determine the success of a watershed project:

> *"You can have the best plan in the world, but if you don't have people doing anything—you'll just have a bunch of paper."*

This group also saw value in showing potential adopters application of BMPs by hosting demonstrations that focus on how BMPs can improve yield potential. Related to showing producers and landowners the potential positive outcomes of conservation, this group also believed it is important to communicate the consequences of inaction.

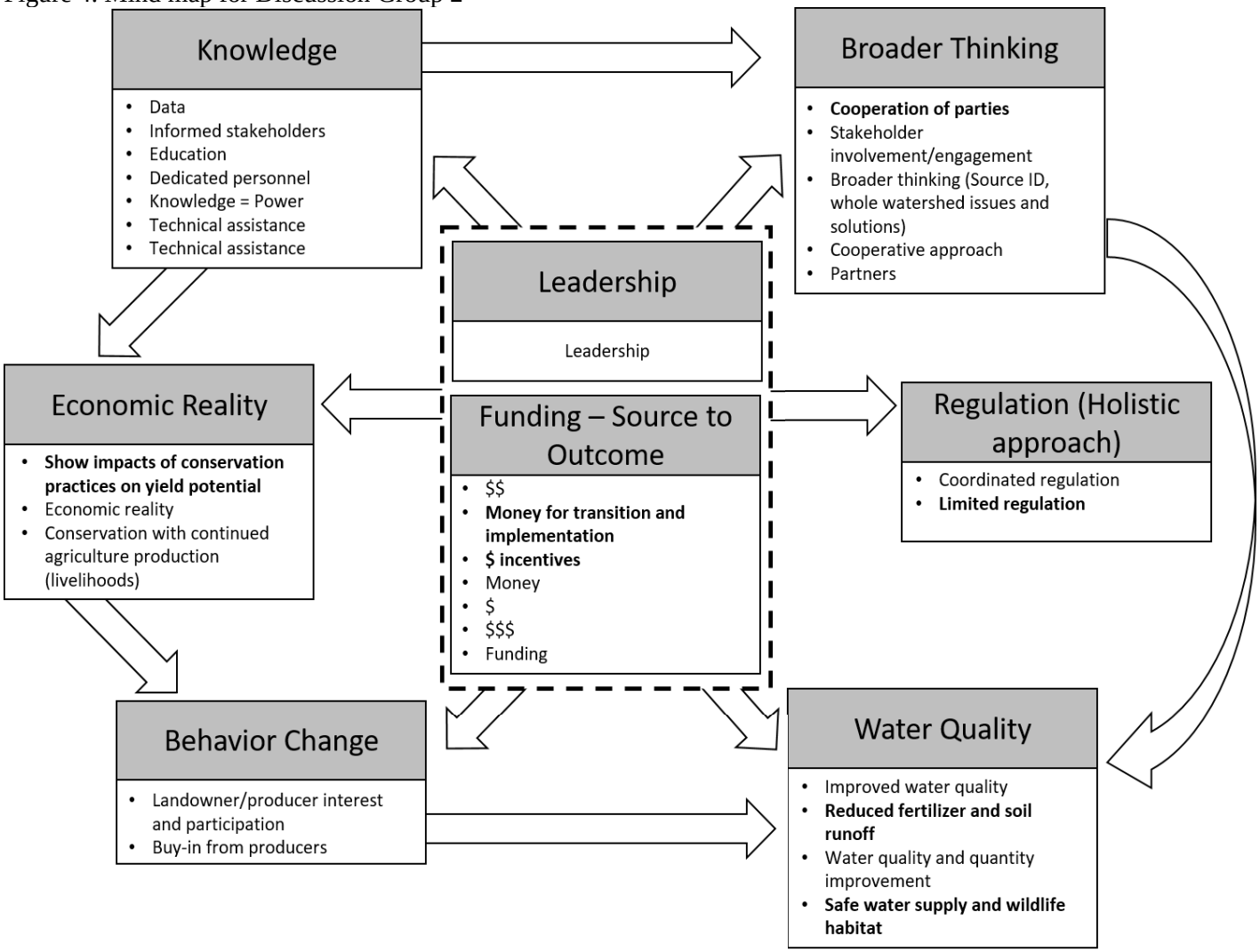
Results
Overall, this group believed a successful watershed project should result in a safe water supply for human communities and wildlife habitat by promoting water quality improvements with on-farm BMPs.

Discussion Group 2

Group 2 described eight broad categories that included 31 resource needs for successful watershed management (Figure 4). The eight broad categories include 1) Broader Thinking, 2) Leadership, 3) Funding – Source to Outcome, 4) Regulation (Holistic Approach), 5) Water Quality, 6) Behavior Change, 7) Economic Reality, and 8) Knowledge.

This group believed that effective leadership and funding through the watershed project can increase the success of watershed management. They suggested data-driven information and assurances of economic viability can lead to behavioral change, result in improved water quality and a reduced regulatory threat. They also believed funding and leadership can broaden measurements of watershed success beyond nutrient loading and include metrics such as habitat restoration.

Figure 4. Mind map for Discussion Group 2



Bolded resource needs were provided by survey respondents

Funding and Leadership

This group identified funding and effective leadership as essential components for successful watershed management. They believed leadership and funding provides foundational support to other resource categories and described the critical need for funding at every stage of a watershed project. One participant described funding needs associated with water impairment source identification as well as funding to address issues in the watershed:

> *"Money is everything. You need money to identify the problems, you need money to identify the sources of the problems, you need money for implementation to address the problems. Money is every step of the way. You need funding. If you identify problems and do not have any money to address them, you'll hit a brick wall. Without money you don't get very far."*

Participants described the need to fund demonstration projects to display BMPs in action and show producers how BMPs can fit into their farming operation. One participant shared:

> *"A lot of times it takes some seed money to do a couple projects and show what [BMPs] look like so others will be more likely to implement."*

This group highlighted the need for additional cost-share funding to incentivize producers, monitor progress of watershed management, and demonstrate that BMPs can provide both on-farm and environmental benefits:

> *"I think part of it is getting money to offset costs to producers so that they can try and do things. We need money to collect data that shows the water quality response [to watershed projects], we also [need to show that implementing BMPs] can either maintain or improve agri-production."*

Finally, participants believed that effective leadership plays an essential role in managing the daily functions of a watershed management project:

> *"You should stick that [leadership] in the middle because that encompasses everything."*

Broader Thinking

Another point of discussion in this group was the importance of broadening the scope of watershed management. First, this group suggested expanding the definition of watershed stakeholders to include a wide range of water users and interests in the watershed. One participant explained this is especially salient in the Lake Bloomington watershed because it is a municipal water supplier:

> *"Stakeholders could be ag producers, urban residents, rural residents, and even city governments, those are the big pots of people involved. That way you're bringing urban people into it, even though they're more consumers and may not be in the watershed, per se."*

This group also highlighted the importance of broadening metrics of successful watershed management. One participant suggested other watershed characteristics to consider when evaluating watershed health and watershed management success:

> *"When you're looking at watershed [success], it's not just about [reducing] nutrients, it should be flora, it should be habitat, it should be hydrologic restoration. There's all kinds of things and we tend to focus on nutrients because that's the issue of the day."*

While this group acknowledged agricultural contributions to water impairments, they believed that the full spectrum of impairment sources should be recognized and addressed:

> *"The majority of the land in civilized America or civilized Illinois is under agriculture production. The impact of agriculture is going to be [large] because it going over more land. But I don't think that's the only source that we have to keep pointing at. We keep pointing at agriculture and not paying attention to [things like] salt on the highway."*

Regulation (Holistic Approach)
A discussion about regulations and requirements focused on coordinating regulatory endorsements related to agriculture operations and requirements associated with financial assistance programs:

> *"We need to have some coordination. Which there is no coordination right now. Do I need a separate background check for each one of these? And a separate $120? They're all operating in a silo with no communication between them."*

> *"Being a livestock producer and dealing with CSPs and regulations already, I sure don't want to start dealing with them with agriculture… Regulations don't [work] - people have to want to [implement BMPs]."*

Water Quality
This group's conversation about water quality included the expected water quality improvements that result from successful watershed management.

Behavior Change
Although this group believed the entire stakeholder community should be responsible for changing their behavior to improve watershed health, they recognized the important role agriculture plays in the watershed. They believed that behavior change from the agriculture sector can improve water quality and watershed health. One participant discussed adapting his farming operation after receiving water quality results from his farm:

> *"I've been testing the water [on my farm] for four years, and at times it is disappointing to see the results from those water tests. But I do a lot of things to try to change the way I apply my nitrogen. No more Fall nitrogen. We don't even do early Spring nitrogen."*

Economic Reality
Another important component identified by this group was the ability to show the impacts of BMPs on yield potential and demonstrate positive impacts BMPs can have on agricultural production and livelihoods:

> *"We need to think about what conservation approaches we could put in place without impacting people's lifestyles too much."*

> *"[Focus on] maintaining economic viability with increased conservation activities."*

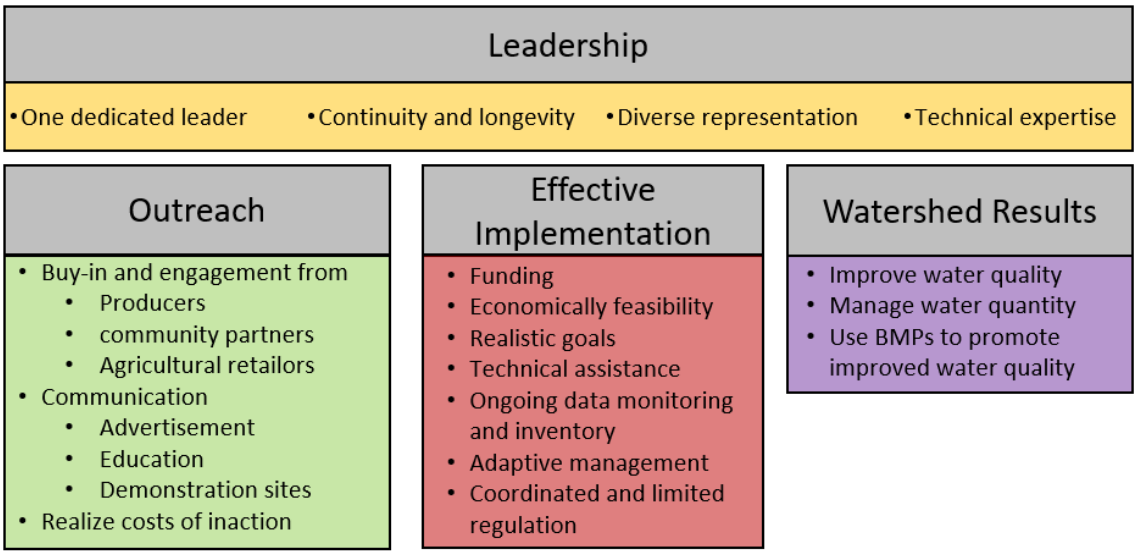
Knowledge
This group identified the need for dedicated personnel and relevant data. They felt that these resources can be used to help producers realize the economic benefits BMPs provide their operation and understand how to properly implement BMPs.

Combined Groups
The following section details overall resource needs that participants identified across each discussion group.

Resources needed for successful watershed management identified by forum participants include the following major themes (Figure 5): 1) Leadership, 2) Outreach, 3) Implementation Tools, and 4) Watershed Results.

Forum participants identified the need for dedicated watershed leadership to engage diverse stakeholders in the watershed community and work to provide necessary implementation tools. Participants believed that with dedicated local leadership and informed stakeholders, the community could achieve desired watershed management results.

Figure 5. Combined group resource needs



Leadership
Participants highlighted the need for a dedicated local leadership with technical expertise. It is important to participants that this leader be committed to the community, work with diverse stakeholder groups in the watershed, and garner public support for watershed health and management. They emphasized the importance for a watershed leader to develop trusted working relationships with producers and landowners and to earn support from diverse community partners outside of the agricultural sector. Overall, they believed that effective watershed leadership can influence other components of watershed success.

Outreach
This resource need addressed important human dimension components for successful watershed management. It focused on buy-in from potential adopters, expansive education and outreach, and a public understanding of the cost of inaction. Participants suggested outreach is important to increase voluntary adoption of BMPs, which they believe is essential for successful watershed management.

Effective implementation
After dedicated local leadership and community outreach, participants described resources and characteristics needed for effective implementation. They suggested providing financial incentives and technical assistance to mitigate financial risks and increase BMP adoption. In addition, they recognized the importance of adapting watershed management goals based upon results from ongoing water quality data monitoring.

Watershed Results
Participants believed that successful watershed management must result in improved water quality. However, they suggested expanding water quality metrics beyond nutrient levels, such as improved wildlife habitat.

3.1.4 Elements of Successful Outreach and Education

Recipients

Forum participants identified three stakeholder groups as targets for outreach and education, including: 1) Farmers, Homeowners and Non-Operating Landowners, 2) Students, and 3) Water User Decision-Makers

Farmers, Non-Operating Landowners, and Homeowners

Forum participants identified farmers, non-operating landowners, and homeowners as important recipients of outreach and education. They indicated that participation is needed from this group because successful watershed management depends on their voluntary adoption of BMPs across urban and working landscapes. Effective outreach and education was important to this group, because these stakeholder groups' actions have large impacts to watershed health.

Students

Participants also acknowledged students as an important target for outreach and education. They believed that student programming can establish a conservation ethic within future generations. Participants understood that student outreach and education is a long-term investment but believed such activities could spur generational change in the farming community. For example:

> *"Rather than kids going home and telling their dad to change his [operation], when the kid takes over the farm 30 years from now he's probably going to remember the things that he learned [in college], and he'll change it. There's a long payment for involving the kids, but I think it's there."*

Although participants agreed on the importance of targeted outreach and education for students, some believed that with limited funding and resources, focusing on students may not be the top priority for outreach and education efforts.

Water User Decision-Makers

Because this watershed provides the municipal water supply to a downstream community, it was important to participants that decision-makers and local leaders of water using communities to be informed of watershed management activities in their water supply. It is also important for these stakeholders to understand what the agricultural community is doing to improve watershed health.

> *"The City of Bloomington needs their decision-makers to be informed and help the public works to do their job. Start with city council members and the mayor, those types of people."*

Content

Success Stories

Participants believed outreach and education should promote success stories of people in their area who farm under similar conditions. Although each farming operation is unique, producers often face similar challenges associated with BMP adoption and program enrollment that contribute to successful watershed management. Additionally, participants felt that sharing success stories could create successful delivery of outreach and education efforts by facilitating beneficial peer-to-peer interactions:

> *"Show them the field that works. Show them different practices that it doesn't impact their outcome, their production stays high, things work better, their tractor doesn't fall in the ditch because they're farming up the edge. That seems to work."*

Economic and On-Farm Impacts

Participants expressed that including messages that address producers' economic concerns is important for successful outreach and education. Assuring producers that implementing BMPs will not impact profit margins or crop yields could alleviate major concerns associated with BMP adoption and participating in watershed projects:

> *"Most people want to do the right thing but they have to weigh economics with conservation. So showing that you don't have to give up one to have the other, you can meld conservation [and economics] while still meeting a bottom line that's acceptable."*

Additionally, participants highlighted the importance for outreach and education to promote long-term benefits of BMPs. They felt producers need to have reasonable expectations of benefits and understand timeframes associated with BMP benefits.

"One of the messages we need to drive home is 'changing a practice may actually benefit you in the long run'. It may not be this year and it may not be next year, but it may be that drought year, or it may be that really wet year. So just having that conversation [is important]."

Participants agreed that producers need to feel comfortable accepting potential risks associated with adopting BMPs. One participant suggested mitigating the perceived economic risks by providing an "economic safety net" for producers if their operation takes an economic hit after adopting BMPs. For example:

"Show them that they can try it, that it's not going to cost anything to their outcome in the end if it fails…Pay for the cost of the thing that you do, whether it's cover crops, wetlands or whatever. Then make sure that you're covering, say, the average past production per acre if it's decreased from that."

Focus on On-Farm Benefits

Forum participants indicated that outreach and education focused on impacts to downstream water users is not an effective message for producers. They recommended framing messages to highlight on-farm benefits of adopting BMPs and noted that producers are motivated by on-farm benefits of BMP adoption, rather than off-farm improvements. While producers understand that Lake Bloomington supplies water to downstream communities, participants believed that it is not a motivator to adopt BMPs:

"For ag producers by and large in this watershed, it's more about soil health, and it's more about sustainability, and it's more about economics. And the more you try and sell, 'This is protecting our water supply' the less you're going to get the buy-in. It actually [works better when you] take the message out."

"When I ask [producers] to do something it's not 'Will you put this wetland in so that [city water] doesn't have as high a nitrates?' I sell it more like 'Will you do it and let's just worry about what's coming out of your tile here.' It's all going to make a difference to [city water], but to get them to buy into it, saying 'Let's do good on your piece of property right here' works better. It may affect [city water], but I don't think they look at it like that."

Regulatory Threat and Voluntary Options

Some forum participants suggested that threats of impending regulation could motivate producers to voluntarily adopt BMPs:

"If there are [regulatory] threats hanging over us and we want to avoid them, we can do more voluntary actions. I don't really want to be forced into doing anything; nobody does. There was a movement in the previous [Presidential] administration of, 'I want to control the water and everything running out of your backyard to the Mississippi river.' There's always that [regulatory] threat."

In a direct response to emphasizing threat of regulatory action, one participant recommended reframing the threat of regulation to a more positive message that communicates to producers that their voluntary actions will improve watershed health and achieve desired goals and objectives:

"I might counter that with 'volunteer actions will meet goals' as a message. Which is saying the same thing more positively. Hopefully a positive message [will encourage] communities who want to do the right thing if given the right tools."

Delivery

Participants indicated that information from trusted sources is the foundation for the successful delivery of outreach and education related to watershed management. Participants identified two groups as appropriate partners to disseminate information about watershed management, including: 1) Peers 2) Private Sector and Commodity Groups, then discussed challenges associated with programmatic structure of NRCS.

Peers

Forum participants emphasized peer-to-peer interactions as an important tool for outreach and education. Participants felt that endorsement from local leaders in the farming community could establish credibility and give potential adopters a candid perspective of the challenges and benefits associated with BMP adoption. It was important to participants that the farming community be assured that the information they receive is from a trusted source that understands farming operations and economics. A forum participant explained:

"It takes a long time to develop trust with people. One of the best ways to develop that trust is to have a farmer leader, somebody that's respected in the community as a farmer who starts showing that they're doing stuff and communicating what's working for them or not…That farmer-leader startup works best I've seen."

Related to peer-to-peer interactions, a forum participant (who was part of the academic community) believed that representatives from the academic community are not necessarily effective ambassadors of outreach or education efforts.

Private Sector and Commodity Groups

Forum participants shared that the private sector and commodity groups have played a major role in promoting conservation efforts in Illinois and are an excellent source of information for producers. Citing increased involvement from private sector and community groups participating in the Regional Conservation Partnership Program (another NRCS program focused on watershed improvement), one participant explained:

"The corn growers and several other commodity groups really stepped up in Illinois and adopted the nutrient loss reduction strategy as, 'We are here. We're going to take the lead on this. We want to show Illinois farmers are doing the right thing.' They're putting a lot of their own dollars into some of these new, innovative projects, and it's pretty interesting."

Additionally, participants recognized that private sector partners are beneficial to watershed management when they provide information about opportunities available through NRCS. They suggested these groups bridge the gap between public and private opportunities. Participants discussed that private sector organizations (e.g., seed/fertilizer retailers) could inform producers of resources available to them through NRCS, which bring producers into NRCS offices and thereby increase BMP adoptions across the watershed:

"There are [private sector] people who sit down with [farmers] every day, really most of those clients don't even come in NRCS's office. So, then that [private sector] person is dealing with them and trying to [get farmers to] come to the NRCS office. That was exciting for us. It's a unique way to get the farmers from the private sector."

While this group emphasized the potential benefits of working with the private sector, they stressed that underlying trust is still a relevant factor for successful outreach. One participant expressed concern related to trust while working with the private sector, and explained that private sector entities experience similar challenges associated with trust as NRCS or SWCDs:

"The [private sector] person works in four or five counties. When he comes into McLean County no one knows him and I'm [asked to] provide names for him to go out and talk to people. That [puts me] at risk because they use my name to talk to this producer. If it goes bad, [my reputation is in] jeopardy. It's the whole trust thing. It's great what they're doing, but you can't just put somebody out there. If [producers] don't know him, they're not going to be near as receptive."

Programmatic Structure

Forum participants also discussed a critique that NRCS programs appear to reward bad actors and do not use positive reinforcement as a tactic to recruit or retain participants, which may be counter to effective education and outreach:

"There are a lot of incentive programs for the bad actors. I've been no-tilling for 25 years, there's no way they are going to give me an incentive to no-till because I've already been doing it. There's no reason why it's not up to me to keep nitrogen on my land, to keep all the inputs from running off, to keep the rest of it there. So what do you do? Do you go after the worst offenders? Do you try to give a pat on the back of the people that are doing a good job? Where do we go? There's a lot of questions here. There's a lot of ways to do things."

3.2 Interagency Partner Interviews

In February and April of 2018, an NRSS researcher interviewed representatives from IEPA and EPA Region 5 to investigate their role in NWQI, NRCS's role as a local partner in watershed management, and resources needed for successful watershed management and outreach (Appendix D).

3.2.1 IEPA

IEPA reported their major role in NWQI is to act as technical advisors for the development of watershed plans, facilitate access to 319 funds in NWQI priority watersheds, and provide staffing and analysis support as needed for water quality monitoring efforts in NWQI watersheds across Illinois.

Although NRCS requested IEPA provide input toward priority watershed selection, NRCS has not yet incorporated IEPA recommendations in site selection. IEPA reported they intended to provide recommendations that included both NRCS and IEPA criteria, but NRCS' NWQI priority watershed site selection criteria lack transparency and consistency. Although IEPA reported basic information regarding NWQI is shared with IEPA (e.g., yearly contracts signed, money spent) they indicated that NRCS does not share sufficient BMP location data to inform the water quality monitor needs of IEPA. This lack of information exchange inhibits IEPA's ability to measure water quality impacts of NWQI. IEPA commended NWQI's focus on water quality monitoring but did not believe NWQI promotes interagency collaboration.

IEPA representatives indicated that successful watershed management needs a detail-oriented planning process with an ultimate goal of pollutant reduction. The resulting plan must incorporate stakeholder needs, track BMP implementation (frequency and type), and include sustained water quality monitoring. Furthermore, IEPA identified outreach and education as another essential component of successful watershed management. They stressed the importance of watershed managers to know which messages resonate with their target audience and understand which messengers are most effective in their watershed community.

3.2.2 EPA Region 5

Representatives from EPA Region 5 described their role in NWQI as providing programmatic oversite and support to IEPA and allocating 319 funds to qualified watershed management projects. EPA reported they do not play a large role in NWQI because NRCS does not adequately consult EPA or IEPA regarding site selection of priority watersheds. Moreover, they expressed that lack of coordination and transparency of site selection criteria reduces EPA's potential resource contributions to NWQI watersheds. Although NWQI has increased interagency discussions at the state and regional level, EPA representatives felt that it falls short of providing formal infrastructure for an ongoing dialog to coordinate with IEPA in a meaningful way. EPA also suggested a lack of adequate NRCS staff in priority watersheds is a challenge for NWQI and emphasized the importance of quality over quantity regarding the number of priority watersheds in the state. EPA representatives recommend focusing resources on existing priority watersheds rather than spreading limited resources across multiple watersheds.

EPA believed that due to NRCS's role as a non-regulatory agency, they play an integral part in establishing local infrastructure, increasing community support for watershed projects, and providing critical technical resources needed for successful watershed management. Although EPA has identified areas for improvement, they believe NWQI's focus on water quality monitoring is an essential first step to a formal collaborative arrangement to improve water quality.

EPA believed successful watershed management must include a watershed plan that targets critical areas and provides a suite of practices to address identified resource concerns. They also identified outreach and education as an important component for successful watershed management and emphasized the necessity of working with trusted social networks within the watershed community to inform effective delivery and consistent messaging.

4 Recommendations

The NRSS research team developed the following recommendations through the synthesis of the stakeholder forum conducted in McLean County, IL on March 6th 2018 and the interagency partner interviews conducted in early 2018. This section provides recommendations to NRCS and McLean County SWCD.

4.1 NRCS

1. ***Increase coordination and transparency with IEPA to enable water quality monitoring and improve priority watershed selection.***

We recommend NRCS coordinate with IEPA regarding site selection criteria for priority watersheds and provide BMP location data that addresses confidentiality needs of producers as well as the water quality monitoring needs of IEPA.

Both IEPA and EPA cited challenges associated with transparency of selection criteria for NWQI priority watersheds. In order to contribute water quality monitoring resources, IEPA highlighted the need to increase communication and transparency of priority watershed selection criteria. This information will inform IEPA recommendations for priority watersheds and increase their ability to contribute resources to NWQI watersheds. While agency partners acknowledge the importance of maintaining producer confidentiality, they expressed the need for more specific BMP location data to inform placement of monitoring resources in NWQI watersheds.

2. ***Increase local staff to facilitate one-to-one interactions and manage additional workload of NWQI.***

We recommend NRCS supports increasing local staff in NWQI watersheds to manage additional work load and facilitate additional on-farm interactions.

Forum participants and agency partners both highlighted the importance of strong working relationships between local resource managers and producers as well as the broader non-agricultural community. They believed these relationships can increase likelihood of BMP adoption as well as raise awareness of watershed improvement efforts to downstream water consumers. Although local resource managers have developed trusted relationships with producers in the watershed, additional local staff can support current efforts, increase one-on-one interactions with producers and increase awareness in the agricultural and non-agricultural community.

4.2 McLean County SWCD

1. Frame watershed communication around on-farm and economic benefits of BMP adoption.

We recommend McLean County SWCD focus watershed communication messaging to promote on-farm and economic benefits of BMP adoption.

Participants believed promoting on-farm and economic benefits to potential BMP adopters would be an effective messaging strategy. Communicating this information could alleviate producers' economic concerns related to BMP adoption and incentivize participation in watershed-related NRCS programs, such as NWQI.

2. Identify dedicated local leaders in the watershed community and share success stories.

We recommend McLean County SWCD identify and recruit dedicated watershed leaders to participate in education and outreach activities within the agricultural community.

Participants indicated that peer-to-peer information sharing is an effective method for watershed information delivery. By sharing success stories, producers can inform their own decision making with the experiences of trusted peers.

3. Continue working with private and municipal partners to increase public support and raise awareness of watershed health issues.

We recommend McLean County SWCD continue working with private sector and municipal partners to increase public support of watershed improvement projects and promote the value of agriculture.

Participants recognized the important role private sector partners have in the agricultural community and suggested these relationships can raise awareness of watershed related issues in the agricultural community. Additionally, participants suggested continuing to develop relationships with municipal partners to promote watershed health to the non-agricultural community.

5 References

- Brown, S. R. (1993). A primer on Q methodology. Operant subjectivity, 16(3/4), 91-138
- Lake Bloomington Watershed Plan, Lake Bloomington Watershed Planning Committee, 2008

Appendix A: Survey – Survey Methods

This appendix describes the development, data collection, analysis, and results of the Lake Bloomington watershed survey (Figure A-1).

Development

The NRSS research team developed a survey to identify stakeholder priorities, suggestions for successful watershed management, and elements of successful watershed outreach and education (Figure A-1). The survey was designed to incorporate stakeholder responses into forum activities.

Data Collection

McLean Co. SWCD invited stakeholders via mail and word of mouth to participate in the watershed forum. Approximately two weeks before the forum the NRSS team mailed a total of 16 surveys to invited participants. No survey reminders were sent to those who did not respond. Respondents were provided a link to take the online version of the survey, administered by Qualtrics, an online survey software (Qualtrics, Provo, UT).

Additional information collected from the survey include 1) involvement in Lake Bloomington watershed planning, 2) who recipients receive watershed related information from, and 3) preferred method(s) to receive watershed management related information. This information was not used in the forum activities and therefore not included in this report.

Analysis

Survey response rate was calculated by dividing the total number of completed survey responses by the total number of surveys sent. Survey questions incorporated into the forum included four open ended questions (Table A-1). One NRSS researcher analyzed survey responses by identifying emerging themes in MS Excel.

Table A-1. Survey questions used in forum activities

Survey Question (Q#)	Survey Question (text)
Q4	In your opinion, what does successful watershed management look like?
Q5	In your opinion, what resources are needed for successful watershed management implementation?
Q6	In your opinion, what are key elements of successful watershed outreach and communication?
Q7	In your opinion, what resources are necessary for successful watershed outreach and communication?

Results

Of the 16 surveys sent, a total of 9 surveys were completed, for a final response rate of 56.3% (Table A-2). All respondents identified as a producer or landowner (Table A-3).

Table A-2. Response rate

Completed (n)	Sent (n)	Response Rate (%)
9	16	56.3

Table A-3. Respondent stakeholder type

Stakeholder type	Frequency (n)	%
Producer or landowner	9	100

Survey responses to four open ended questions (Q4, Q5, Q6, and Q7) from a different watershed were incorporated into the watershed priority activity as individual priorities. Derived from Q4, Q5, Q6, Q7 emergent themes, five priorities were incorporated into the watershed priorities activity including priority numbers 1, 5, 7, 14 and 30 (Appendix B, Table B-1). Researchers used survey responses from a different watershed to enable comparisons between different watersheds.

Survey responses to Q4 and Q5 were incorporated into the resource needs activity as examples. Derived from Q4 and Q5 emergent themes, seven resource needs were provided to each group as examples, including:

- Reduced fertilizer and soil runoff
- $ incentives
- Limited regulation
- Money for transition and implementation
- Safe water supply and wildlife habitat
- Cooperation of parties
- Impact of BMPs on yield potential

Survey responses to Q6 and Q7 were incorporated into the outreach and education activity as examples. Derived from Q6 and Q7 emergent themes, 6 elements of a successful outreach and education campaign were provided to each group as examples, including:

- One central hub agency
- Regular updates
- Capital to cover $ loss in transition period
- Direct contact
- Working through/with community leaders
- Show how practices are useful to production systems

Conclusion

Survey information gathered from recipients and incorporated into the forum include 1) priorities for successful watershed management (Q4), 2) resource needs for successful watershed management (Q5), 3) elements of a successful watershed outreach and education campaign (Q6), and 4) resources needed for successful watershed outreach and communication (Q7).

The following open-ended survey questions were incorporated in the watershed forum activities:

Activity	Survey question(s)	Format in forum
Identify Resource Needs	Q4, Q5	Resource need on 5x7 sticky note
Identify Successful Watershed Outreach and Education Campaign Elements	Q6, Q7	Examples on a pre-populated flip chart

Figure A-1. Lake Bloomington watershed survey

Watershed Management Forum
Your Views on Watershed Management and Communication

Thank you again for helping us understand your perspective on watershed management and your opinions on how NRCS can be an effective local partner. The information you provide will help inform future watershed work as well as funding and technical assistance for local conservation efforts in Illinois and across the US.

General Information

1. Please indicate your primary role in the Lake Bloomington-Money Creek watershed (check one):

- ☐ Community member
- ☐ Local government staff
- ☐ Natural Resources Conservation Service staff (NRCS)
- ☐ Non-governmental organization staff
- ☐ Producer
- ☐ Research scientist
- ☐ Soil and Water Conservation District staff (SWCD)
- ☐ Other: _____

2. Are you aware of watershed planning in the Lake Bloomington-Money Creek watershed?

- ☐ No, I am not aware of watershed planning in the Lake Bloomington-Money Creek watershed.
- ☐ Yes, I am aware of watershed planning in the Lake Bloomington-Money Creek watershed, but *I am not* currently involved.
- ☐ Yes, I am aware of watershed planning in the Lake Bloomington-Money Creek watershed, and *I am* currently involved.

3. If you are involved in watershed planning in the Lake Bloomington-Money Creek watershed, how are you involved?

Watershed Management

4. In your opinion, what does successful watershed management look like?

5. In your opinion, what resources are needed for successful watershed management implementation?

Watershed Communication

6. In your opinion, what are *key elements* of successful watershed outreach and communication?

7. In your opinion, what *resources* are necessary for successful watershed outreach and communication?

8. From whom do you receive information about watershed management in the Lake Bloomington-Money Creek watershed? (check all that apply)

- ☐ Extension agent
- ☐ Illinois Environmental Protection Agency (IEPA)
- ☐ McLean SWCD (Soil and Water Conservation District)
- ☐ NRCS (Natural Resources Conservation Service)
- ☐ Social media (Facebook, Twitter...)
- ☐ Your crop advisor
- ☐ Your peers
- ☐ Other: _____

9. Please indicate how you prefer to receive information about watershed management in the Lake Bloomington-Money Creek watershed (check all that apply):

- ☐ Email
- ☐ Letter
- ☐ Newspaper
- ☐ Personal conversation
- ☐ Phone call
- ☐ Public meeting
- ☐ Website
- ☐ Other: _____

Please feel free to let us know any other thoughts or comments you may have about watershed planning, management or communication below.

If you have any questions or concerns regarding this survey or the upcoming forum, please contact Linda Prokopy at (765) 496-0260 or LProkopy@purdue.edu

Watershed Management Forum
Your Views on Watershed Management and Communication

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Appendix B: Watershed Priorities - Detailed Methods

Development

The NRSS lab developed 36 priority statements to represent a wide range of watershed priorities for this watershed priority activity. Statement development was informed by two data sources, including 1) current literature about successful watershed management and 2) input from stakeholders in a different NWQI watershed

Researchers reviewed content that addressed successful planning, design, marketing, and delivery of watershed initiatives. To gather information from watershed stakeholders, researchers incorporated voices of watershed stakeholders in the different watershed by adapting survey responses to the question, "What does successful watershed management look like?" (see Appendix A for more detail). Each statement was assigned one of 11 priority categories, based on the subject of the priority (Table B-1).

Table B-1. Priority statements and associated categories

PN	Priority	Priority Category
1	Landowners/producers should know what best management practices are and why they should be used	Knowledge/Education
2	Addressing concerns of local watershed stakeholders should be the highest priority for resource managers	Stakeholder Concerns
3	Technical and/or financial assistance for those who qualify is necessary	Assistance
4	A watershed plan is necessary	Watershed Planning
5	Land and water should have species diversity	Biological Integrity
6	Management should be done at a small geographic scale	Geographic Scale
7	Students (elementary through college) should understand the importance of soil and water conservation	Knowledge/Education
8	Conservation practices should be adopted on more acres	Assistance
9	Only local organizations should be involved	Agency Collaboration
10	No stakeholders' livelihoods should be jeopardized due to watershed management activities	Stakeholder Concerns
11	Watershed managers should actively engage with the community	Outreach
12	The public needs to understand how a healthy and balanced watershed can benefit them	Knowledge/Education
13	Funding should be budgeted specifically for outreach and communication	Outreach
14	Watershed information should be communicated using diverse methods and reach a broad public audience	Communication
15	A strong working relationship between producers/landowners and watershed managers is important	Outreach
16	One-on-one interactions between resource managers and producers/landowners is necessary	Outreach
17	Watershed stakeholders need to understand the sources of water resource issues	Knowledge/Education
18	The watershed planning process should include diverse groups of people working towards a common goal	Inclusion
19	A management plan should support activities that include recreation, economic and environmental benefits	Watershed Planning
20	Communicating about soil health is more effective than communicating about water quality	Communication
21	Water monitoring is necessary	Biological Integrity
22	Achievable water quality goals and targets should be set to show water quality improvements	Biological Integrity
23	The public should be aware of the range of resource issues associated with their watershed	Knowledge/Education
24	A clear plan for public involvement/engagement should be included in a watershed management plan	Watershed Planning
25	Watershed managers should seek out and respect local knowledge, perspective, and experience	Outreach
26	There should be a flexible plan that allows for changes in management over time	Watershed Planning
27	Negative effects of watershed management on downstream stakeholders should be minimized	Stakeholder Concerns
28	Resources and information between local, regional, state, and federal agencies should be coordinated	Agency Collaboration
29	Watershed managers should focus on water quality issues over water quantity issues	Biological Integrity
30	The watershed should have a user-friendly website that contains watershed information	Communication
31	Watershed management should benefit my community and communities downstream of my watershed	Stakeholder Concerns
32	Watershed management should include an evaluation of the impact of climate change on future quality and quantity in my watershed	Watershed Planning
33	Community members should take an active role in watershed management	Inclusion
34	Measurably cleaner water should be an outcome	Biological Integrity
35	Producers/landowners/businesses should be required to adopt best management practices	Regulation
36	The watershed needs to be in an impaired or degraded state	Biological Integrity

Data Collection

Upon arrival to the forum, NRSS facilitator explained the watershed priority activity and provided participants with additional written instructions (Figure B-2), 36 priority statement cards, a datasheet (Figure B-3), and a list of all 36 priorities for reference. The activity included three stages: 1) ranking, 2) open discussion, and 3) group discussion. Each stage is described below:

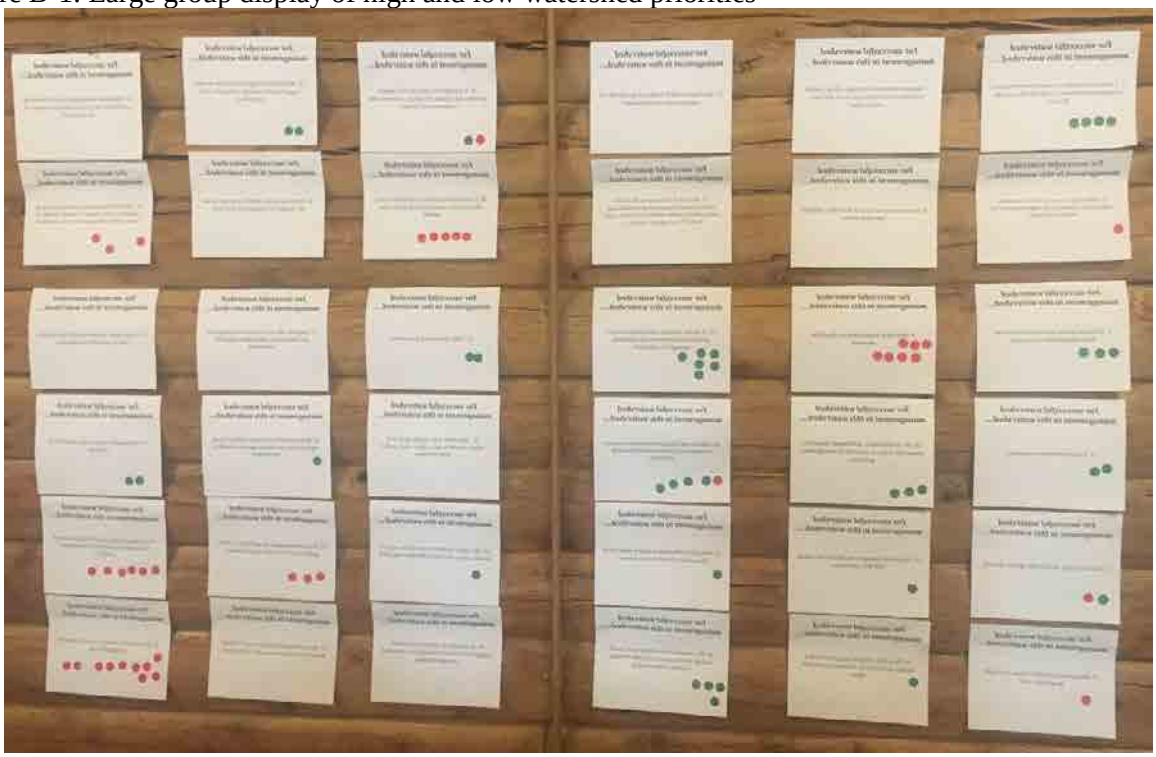
Stage 1: Priority ranking

Facilitators instructed participants to read and rank each priority according to how much they believed each statement was necessary for successful watershed management. Each priority statement included the phrase "For successful watershed management in this watershed…" and was then followed by one of the 36 priorities (e.g., "For successful watershed management in this watershed…a watershed plan is necessary"). Participants were given approximately 20 minutes to record their ranked priorities onto the datasheet. Participants ranked priorities on their data sheet by level of agreement with each priority (most disagree = -5 to most agree = 5). Facilitators were available to answer questions as needed.

Stage 2: Open discussion

Each of the 36 priorities were printed on an 8½ x 11 sheet of paper and displayed at the front of the room. After completing stage 1, participants were provided three green stickers and three red stickers then asked to place green stickers on their top three priorities and red stickers on their lowest three priorities. As participants placed green and red stickers on the large priorities, similarities and differences of stakeholders' ranked priorities were visually displayed (Figure B-1). To initiate the open group discussion, the lead facilitator asked volunteers to share their top priority and explain their rationale to the group. After approximately 10 minutes of open discussion, participants moved into preassigned small groups.

Figure B-1. Large group display of high and low watershed priorities



This photo displays high (green stickers) and low (red stickers) priorities and was used to visually display broad agreement and disagreement amongst forum participants and facilitated the large group discussion

Stage 3: Small group discussion

Small groups were predetermined by the research team to ensure diversity of stakeholder types in each group. Each group included seven to nine forum participants, a group facilitator (NRSS), and a note taker (WaterComm). For approximately 45 minutes, participants shared their high and low ranked priorities, then discussed rationale for their priority rankings.

At the conclusion of the small group discussion, the NRSS research team collected datasheets from each participant and input them into PQMethod software (v. 2.35) at a later date. Large and small group discussions were recorded and transcribed by TranscribeMe, an audio transcription service.

Analysis

Only completed priority ranking datasheets were included in analysis. Completed datasheets were defined as sheets with all 36 priorities ranked and only ranked once.

Family Selection

An NRSS researcher conducted a factor analysis using principal component method with Varimax rotation in the PQMethod software (v. 2.35) to identify similarities between participants' priority rankings. The NRSS researcher used the following criteria to identify priority families (i.e., factor groups).

- Eigenvalue >1 (according to the Kaiser criterion)
- Participants in each family ≥ 2

The PQMethod software then created a priority framework for each factor selected by the NRSS researcher. Each priority framework included the following:

- Priority value (PV): Value assigned to each watershed priority based on priority rankings within each priority family. These values reflect the participants' attitude in that family toward each priority. PVs range from -5, indicating a low priority, to 5, indicating a high priority.
- Distinguishing priorities (DP): Uniquely ranked priorities from each priority framework. These priorities highlight distinct viewpoints that differentiate the priority families from each other.
- Consensus priorities (CP): Similarly ranked statements in all priority frameworks. These statements highlight broad agreement across all priority families.

Narrative Development

The NRSS researcher reviewed each priority framework and identified relevant DPs from each priority framework. If PQMethod identified a DP that was not a high (PV ≥3) or low priority (PV≤-3), the PV was compared across all priority families.

Additional DPs incorporated into priority narratives include:

- DPs identified in only one priority family,
- Only DPs with the highest and lowest PVs, if identified in all priority families,
- Only when the absolute value of PVs was ≥3 compared to other priority families.

Reference

Borisova, T., Racevskis, L., & Kipp, J. (2012). Stakeholder Analysis of a Collaborative Watershed Management Process: A Florida Case Study 1. *JAWRA Journal of the American Water Resources Association*, 48(2), 277-296.

Church, S. P., & Prokopy, L. S. (2017). The influence of social criteria in mobilizing watershed conservation efforts: A case study of a successful watershed in the Midwestern US. *Land Use Policy*, *61*, 353-367.

Druschke, C. G., & Hychka, K. C. (2015). Manager perspectives on communication and public engagement in ecological restoration project success. *Ecology and Society*, *20*(1).

Focht, W. (2002). Assessment and management of policy conflict in the Illinois river watershed in Oklahoma: an application of Q methodology. *International Journal of Public Administration*, 25(11), 1311-1349.

Osmond, D., Meals, D., Hoag, D., Arabi, M., Luloff, A., Jennings, G., ... & Line, D. (2012). Improving conservation practices programming to protect water quality in agricultural watersheds: Lessons learned from the National Institute of Food and Agriculture–Conservation Effects Assessment Project. *Journal of Soil and Water Conservation*, *67*(5), 122A-127A.

Schall, D., Lansing, D., Leisnham, P., Shirmohammadi, A., Montas, H., & Hutson, T. (2018). Understanding stakeholder perspectives on agricultural best management practices and environmental change in the Chesapeake Bay: AQ methodology study. *Journal of Rural Studies*, 60, 21-31.

Steelman, T. A., & Maguire, L. A. (1999). Understanding participant perspectives: Q-methodology in national forest management. Journal of Policy Analysis and Management: *The Journal of the Association for Public Policy Analysis and Management*, 18(3), 361-388

Figure B-2. Watershed priorities instruction sheet

Lake Bloomington-Money Creek Watershed Management Forum

Session One: What is Successful Watershed Management?

In this activity you will be asked to sort 36 cards in order of your agreement with each statement. Each card contains a statement from forum participants and current literature that describes necessary elements for successful watershed management. This activity should take approximately 30 minutes.

1. Read each of the 36 statement cards and consider to what extent you agree or disagree with the statement.

2. Organize the statement cards into 3 piles based on whether you agree, feel neutral or disagree with the statement.

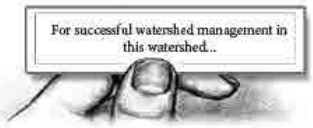
3. Examine the score sheet on the opposite page. Notice there are 36 boxes in 11 columns ranging from *Most Disagree* in column -5 to *Most Agree* in column 5. When complete, you will have sorted your statements into columns that exactly match those on the score sheet.

4. Re-read each statement in your "agree" pile and decide which 1 statement you most strongly agree with.

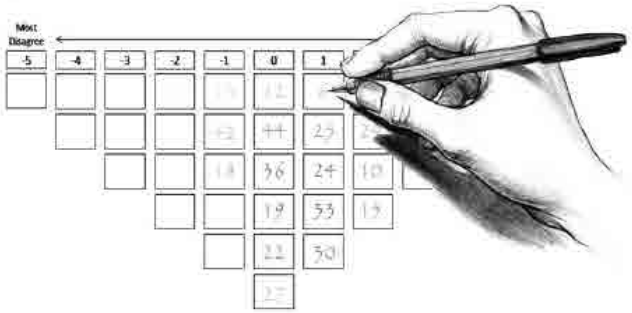
5. On the score sheet, write the number associated with your chosen statement in the furthest right column, labeled "Most Agree".

6. Continue ranking the remaining statements and transcribe the numbers on the blue score sheet.

Figure B-3. Watershed priority datasheet



The number on the statement card is the number you will write on the score sheet below.



Score Sheet

Most Disagree										Most Agree
-5	-4	-3	-2	-1	0	1	2	3	4	5

Once you have finalized your ranking, please fill out the questions on the back on the score sheet.

1. Please indicate your primary role in the Lake Bloomington-Money Creek watershed (check one):

- ☐ Community member
- ☐ Producer or landowner
- ☐ Local government staff
- ☐ Research scientist
- ☐ Natural Resources Conservation Service staff (NRCS)
- ☐ Soil and Water Conservation District staff (SWCD)
- ☐ Non-governmental organization staff
- ☐ Other:_____

2. If applicable, please list any conservation practices you currently use on your property:

3. Years of experience with watershed management:.....

4. How many years have you lived in the Lake Bloomington- Money Creek watershed?.....

5. In what year were you born? .....

6. What is your gender? .....

Thank you for your time and participation.
Please write down any additional comments below:

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Appendix C: Facilitator's Guide

Activity 1: Identify Watershed Priorities

We will start with a full group activity and discussion. About half an hour before lunch, we will break in to small groups. Probing questions to ask in the small groups. Note: some of these may already have been discussed in the open group:

- What is the role of planning in watershed management? Specifically, what is the role of the plan in this watershed?
- What is the best role for NRCS in small watersheds?
- What is the ideal scale for watershed management? (HUC 12, bigger?)
- What is success in watershed management? How can this be measured?
- What elements of successful watershed management were missing from the statements you sorted?

Activity 2: Identify Resource Needs

Lead facilitator will provide the directions for the activity.

- When people bring their post-it notes to your wall, ask them to arrange them with other similar post-its.
- Group the post-its and create labels for the categories.

Ask:

- Does everyone agree that these are necessary categories of resources?
- What resources are missing?
- Which resources are most important?

Activity 3: Identify elements of successful outreach and education

Facilitate a small group discussion using the following questions:

- Who should deliver education and outreach? Who are trusted partners?
- What should education and outreach look like?
- When should it happen?
- What is the role for NRCS in this?

In last 10 minutes

Ask the group to select top 3 things they want to share with the entire group

Appendix D: Interview Guide

1. What is your role in EPA/IEPA?
2. What role does EPA/IEPA play in NWQI?
3. What role does EPA/IEPA play in the Lake Bloomington watershed?
4. What resources does EPA/IEPA contribute to NWQI?
5. What resources does NRCS contribute?
    a. Is anything missing? If so, what additional resources would you like NRCS to contribute?
6. Does NWQI impact interagency collaboration?
7. What is the biggest challenge working with NWQI?
8. What makes NWQI a unique program?
9. What is successful watershed management and what resources are needed to achieve it?
10. What are key elements to a successful watershed outreach/communication plan and what resources are needed to achieve it?