

# **A Community Capacity Assessment Study in the Minnehaha Creek Watershed, Minnesota**

by

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**A Community Capacity Assessment Study in the Minnehaha Creek Watershed, Minnesota**

A Final Technical Report prepared for the  
Minnehaha Creek Watershed District

by

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## EXECUTIVE SUMMARY

This report describes the community capacity assessment study conducted in the Minnehaha Creek Watershed District (MCWD) located in the Twin Cities metropolitan area of Minnesota. The study was conducted by the Department of Forest Resources, University of Minnesota, in collaboration with the MCWD. The overarching goal of the study was to assess community capacity to address water resource problems and threats along Reach 20, a highly urbanized stream segment of Minnehaha Creek. The specific study objectives were to explore local stakeholders' perspectives on (1) community assets and vulnerabilities, (2) constraints to community engagement in water resource protection and restoration, and (3) opportunities to better engage the community in water resource protection and restoration. Data were gathered through a series of in-depth interviews with 25 local stakeholders living or working in the communities of St. Louis Park, Hopkins and Edina. The study findings are organized to respond to five general research questions. The research questions along with a brief synopsis of study findings and recommendations are highlighted below.

### Study Findings

#### **1. *Who are the participants and what is their connection to the community?***

- Twenty-five participants were interviewed for this study. Interview participants' age ranged from 26 to 61. Almost half of the participants were female (n=12). Eighteen participants were white and seven participants were non-white, representing varying racial and ethnic minority groups (i.e., black, Somali, Ethiopian, Indian and Chinese).
- Local stakeholders were recruited for participation in this study based on their engagement in water resource issues, formal decision making power, active role within the community, and race and ethnicity. Participants were assigned to one of three stakeholder groups for group-level comparative analysis: formal decision makers (n=7), active non-minority community members (n=11), or active minority community members (n=7).

#### **2. *What are primary community assets and needs?***

Primary community assets and needs were identified and organized into six categories:

- Natural
- Built
- Economic
- Human
- Social and cultural
- Governance

#### **3. *What are existing community capacities for engagement in water resource protection and restoration?***

Four areas of community capacities and multiple related themes were identified:

- Member capacity including knowledge, connection, concern and engagement;
- Relational capacity including social networks and shared goals;
- Organizational capacity including leadership, responsiveness, exemplary organizations, and partnerships; and
- Programmatic capacity including planning, regulations, and community programs.

**4. What are existing constraints to community engagement in water resource protection and restoration?**

Six areas of community constraints and multiple related themes were identified:

- Capital constraints including natural, built, and economic;
- Member constraints including understanding, beliefs and attitudes, social norms, responsibility, and ability;
- Relational constraints including shared beliefs, sense of community and intercultural relationships;
- Organizational constraints including communication, resource pooling, member engagement, conflict management, and collaborative decision making;
- Programmatic constraints including program coordination, visioning and goal setting, science and decision making, and implementation; and
- Cultural constraints including cultural differences, ethnic group unity, cultural integration, and decision making power.

**5. What are strategies for building community capacity to engage in water resource protection and restoration?**

Eleven strategies were identified:

- Offer transportation for community member participation in events and programming
- Enhance community members' understanding of water resources
- Strengthen community members' connections to water resources
- Support community member action
- Strengthen relationships between community members and organizations
- Facilitate cross-cultural understanding
- Develop leaders and organizations in water resource issues
- Tailor communication programs to community members' needs
- Establish and clearly communicate goals
- Set regulations and help residents and landowners comply
- Build trust in minority communities

**Discussion**

***Shared perspectives***

Several common themes emerged across stakeholder groups that demonstrate areas of agreement and convergent perspectives on community and water resources. Participants in all three stakeholder groups identified important community assets including lakes, transportation infrastructure, good people in the community, strong sense of community, and a government that is responsive to community problems.

***Unique perspectives***

Participants in each stakeholder group expressed unique perspectives in their descriptions of community assets, needs, capacities, and constraints as well as strategies for building capacity. Stakeholder group-level analysis revealed the most consistent and notable differences, however, were between the minority community member group and the other two groups.



### ***Different tactics***

While we noted several key strategies for increasing community effectiveness in water resource management that were common to all three stakeholder groups, some different and perhaps competing perspectives emerged on the tactics viewed as necessary to implement the strategies.

### **Recommendations**

Based on the community assessment conducted and reported here, five recommendations are presented which we believe will enhance community engagement and effectiveness in water resource protection and restoration in Reach 20 of the Minnehaha Creek watershed, as well as other urban watersheds around the state and beyond.

#### ***1. Listen to and engage local experts***

- Develop partnerships with existing community organizations and especially minority-led organizations that are active in the watershed communities.
- Create a cross-cultural community advisory committee that can help water resource professionals better understand community assets, needs, constraints and capacities and provide guidance in programming, from communication to civic engagement to site design.

#### ***2. Remove barriers and address capital constraints***

- Provide transportation to meetings and events for community members.
- Hire staff and volunteers who speak the language of minority ethnic groups in the community.
- Consider and further explore with community members capital needs and constraints associated with disparities in economics, gender, health and well-being, education, and sense of belonging when planning projects or designing programs.

#### ***3. Link water resource protection and restoration to community assets and needs and cultural connections to water***

- Link water management issues to human health and water for drinking and cooking.
- Design and develop social gathering spaces and youth programs in which water resources are featured and interpreted.
- Connect water resources to culturally relevant arts and entertainment in site design and programming.
- Link water resources and local minority-owned or operated businesses through sponsorships and other partnerships.

#### ***4. Rethink and redesign communication and engagement approaches***

- Communication and engagement programs should feature multi-media (and multilingual) information campaigns, use peer-to-peer networking, reflect an understanding of community concerns and cultural constraints, and highlight culturally relevant and family-friendly events.

#### ***5. Build trust***

- Building trust in minority communities requires cultural understanding and thus, water resource professionals should rely on those partnerships developed with community leaders and organizations to further advance their own and their organization's cultural understanding and responsiveness.
- Building trust is a long-term commitment to being trustworthy and sensitive to the needs and concerns of others. Working closely with trusted community leaders and organizations and prioritizing the other recommendations highlighted in this report will lay important groundwork toward building trust in minority communities.

## PROJECT BACKGROUND

This report describes a community capacity assessment study conducted in the Minnehaha Creek Watershed District (MCWD) located in the Twin Cities metropolitan area of Minnesota. The study was conducted by the Department of Forest Resources, University of Minnesota, in collaboration with the MCWD. The overarching goal of the study was to assess community capacity to address water resource problems and threats along Reach 20, a highly urbanized stream segment of the Minnehaha Creek. The specific study objectives were to explore local stakeholders' perspectives on (1) community assets and needs, (2) constraints to community engagement in water resource protection and restoration, and (3) opportunities to better engage the community in water resource protection and restoration. Data were gathered through a series of in-depth interviews with 25 local stakeholders living or working near Reach 20 in the communities of St. Louis Park, Hopkins and Edina.

The MCWD, a local unit of government charged with the management and protection of water resources within the watershed, has made significant investments to protect, enhance and restore water quality through large-scale capital improvement projects and habitat restoration. However, the majority of the land within the watershed is privately owned, requiring a community-based civic engagement approach that inspires a commitment to enhance water resources from community decision makers, residents and businesses throughout the watershed. Demographically, the upper and lower reaches of the watershed are vastly different. For example, populations in the lower watershed, including much of Minneapolis' urban core and Reach 20, are more ethnically and racially diverse and have a significantly lower median income than populations in the upper watershed. To be successful, strategies to engage citizens and promote water resource stewardship must be tailored to these diverse audiences and respond to the unique assets and needs of their communities.

Many urban planners and water resource professionals have increased efforts aimed at re-envisioning urban stream corridors and wetlands as assets rather than liabilities. Restoring an urban watershed's natural hydrologic and ecological functioning requires visionary planning, trans-boundary policy coordination, and the collective action of multiple stakeholders including residents and local businesses. To be successful, civic engagement is critical at the onset of any stream protection or restoration project and throughout project implementation. Prior to engaging residents and businesses in watershed planning initiatives, community planners and water resource professionals must consider the question: What is the capacity of the community to engage in sustainable water resource management? An understanding of the perspectives of diverse local stakeholders on community assets, needs, resources and constraints will help build community capacity to sustainably manage water resources.

Although communities may have a variety of the foundational resources and assets (i.e. community capital) needed to cope with environmental problems, they may lack the capacity to anticipate and develop long-term and sustainable responses to environmental problems (Foster-Fishman et al., 2001). Community capacity is defined as "the interaction of human capital, organizational resources, and social capital existing within a given community that can be leveraged to solve collective problems and improve or maintain the well-being of that community" (Chaskin, Brown, Venkatesh, & Vidal, 2001, p. 7). Davenport and Seekamp (2013) established a Multilevel Community Capacity Model (Figure 1. Appendix A) to assist resource professionals and community leaders in assessing and building community capacity for sustainable watershed management. The model highlights four different levels of community capacity: member, relational, organizational and programmatic. The model served as a framework for this study and guided interview question development and analysis.

The information provided in this report is intended to inform, enhance and facilitate future community water resource planning and management initiatives in the MCWD. Study findings will be useful for designing a framework for civic engagement including communication, outreach and education programs that respond to the unique needs and concerns of the diverse audiences in the area. The community capacity assessment project will supplement existing hydrologic and ecologically-based knowledge with culturally-based knowledge to enhance water resource programming and policymaking in the MCWD and other urban watersheds throughout the state.

## STUDY DESIGN AND METHODS

The project used a participatory, community-based approach relying on qualitative data gathered through key informant interviews. Data were gathered through in-depth interviews with three stakeholder groups: (1) formal decision-makers (e.g., resource managers and community officials), (2) active non-minority community members (e.g., business owners, associations and organizations), and (3) active minority community members. The interviews engaged participants in one-on-one dialogue about community assets, needs, and capacity to respond to water resource problems.

### **Study Area**

The Minnehaha Creek is a tributary of the Mississippi River (see maps Figure 1 & 2, Appendix B). The Minnehaha Creek watershed stretches across Hennepin and Carver counties and encompasses eight major creeks, 129 lakes and thousands of wetlands. It spans 181 square miles from Lake Minnetonka through Minneapolis to the Mississippi River. The watershed is divided into 11 subwatersheds, and partially or wholly contains 27 municipalities and two townships, as well as several water bodies of recreational and cultural significance, including Minnehaha Creek, Lake Minnetonka, the Minneapolis Chain of Lakes, and the iconic Minnehaha Falls which is considered a sacred site by the Dakota community. Minnehaha Creek in particular has been significantly degraded by urban development and is listed on the state's Impaired Waters list (303d List of Impaired Waters) for excess chloride, fecal coliform and biotic community impairments.

The watershed resident population is estimated at just over 300,000 people, with a projected growth of 24% in the next few decades. In general, higher urban population densities exist within the lower portions of the watershed including Reach 20, with lower population densities (suburban/rural) in the upper reaches. There are significant clusters of minority populations, including Hispanic, Hmong, Somali, Ethiopian and other non-Hispanic ethnic groups within the urban core of the watershed (Figure 3, Appendix B; Appendix C). According to 2010 census data, median household income in many of the municipalities located within the upper watershed is over \$100,000. Municipalities in the urbanized lower watershed have a much lower median income (e.g., Minneapolis is \$35,000)

### **Data Collection and Analysis Techniques**

Data were collected through in-depth, semi-structured interviews. A stakeholder inventory was conducted to inform participant recruitment. For this project, a "stakeholder" was defined as an individual who has been active in water resource or other community issues within the study watershed. A list of stakeholders active within the communities of St. Louis Park, Hopkins and Edina was generated through internet searches, discussions with MCWD staff, and a "snowball" sampling technique in which participants were asked to recommend other stakeholders who are active in water resource and community issues in the study watershed. Three stages of recruitment took place. First, decision makers

(e.g., government officials and staff) who have had some professional engagement in water resource protection and restoration in the watershed were contacted. Next, active community members who have been involved in water resource and community planning through local organizations, associations and businesses in the watershed were contacted. Finally, racial and ethnic minority community members who have been engaged in community issues through their role in organizations or their participation in local community meetings and events were contacted.

After the first two stages of recruitment, it became clear that racial and ethnic minority groups were significantly underrepresented in our sample. Thus, a more focused approach was used to recruit racial and ethnic minority community members for participation in the project. Local organizations with racially and ethnically diverse membership or with goals relating to diversity were contacted for community member references. Additionally, project participants already interviewed were contacted for references. Stakeholders were contacted by telephone and e-mail and invited to participate in the study. A recruitment script (Appendix D), which describes the purpose of the study, the participation process, and how the study data would be used, was followed. Each participant signed an informed consent form (Appendix E). The interview guide (Appendix F) and data collection protocol were reviewed and revised based on MCWD personnel feedback and one pilot interview. Participants were also asked to complete a short background survey consisting of basic sociodemographic questions (Appendix G). The final guide, survey and data collection protocol were reviewed and approved by the University's Institutional Review Board.

A total of 24 interviews were conducted with 25 participants from June to November 2012. Four stakeholders contacted refused to participate and 24 did not respond after up to three attempts to contact them by phone or e-mail. Participation in the interviews was voluntary and all efforts were taken to maintain participants' anonymity. Interviews were audio-recorded with participants' informed consent. Interviews were transcribed verbatim using Olympus DSS Player Standard Transcription Module Version 1.0.2.0. Interview data were analyzed for underlying themes relevant to the guiding research objectives. Researchers used standard qualitative analysis methods adapted from Corbin and Strauss (2008) and Charmaz (2006) to code and organize the data, identify predominant themes, and explore relationships and patterns between themes. Qualitative data were organized using NVivo 10.0 ([www.qsrinternational.com](http://www.qsrinternational.com)) qualitative analysis software. Field notes were taken onsite to help provide context unique to a particular interview. Data are presented in theme tables and as excerpts quoted from the interview transcripts to demonstrate themes. Theme tables include categories, themes and descriptors, as well as indication of the stakeholder group from which this theme emerged. If any one participant in a stakeholder group discussed a theme (e.g., a specific asset or capacity), then the theme was attributed to that participant's stakeholder group (with an "X"). The analysis enables comparisons between stakeholder groups (e.g., two of three stakeholder groups had at least one individual who mentioned a theme) but does not enable comparisons among individuals within stakeholder groups (e.g., five of seven individuals in a stakeholder group mentioned a theme).

### **Study Limitations**

The goal of the study was not to statistically represent the opinions of the entire study watershed population or the perspectives of all the decision makers or active community members within the study communities. Thus, the opinions of all residents or decision makers have not been captured. While clearly not every value and belief system is represented in this study, a wide range and diverse set of opinions have been captured. Study participants have different backgrounds, experiences, and connections to community and water and were identified as being knowledgeable about community and/or water resource issues. This study is significant because it documents the perspectives of

members of traditionally underrepresented groups of stakeholders in water resource management— racial and ethnic minority groups. Again, we only spoke to a few experts within a few of these groups. Thus, this study only just begins to shed light on community assets, needs, capacities and constraints of significance to racial and ethnic minority communities. While study findings may not be generalizable to all urban watershed populations, we believe study findings provide important insight about community members and community engagement in similar sociocultural contexts and biophysical settings.

## STUDY FINDINGS

### **1. Who are participants and what are their connections to the community?**

The 25 interview participants were asked a series of basic sociodemographic questions, as well as questions about their connection to the community. Interview participants reported diverse sociodemographic characteristics with varying roles within the community (Table 1). Interview participants' age ranged from 26 to 61. Almost half of the participants were female (n=12). Seven participants represented racial and ethnic minority groups. Participants' roles in the community were wide-ranging and included government officials, business leaders, community organization leaders, active residents and educators. The highest level of formal education reported ranged from high school graduates to graduate degrees.

Participants were assigned to one of three stakeholder groups for analysis: (1) formal decision makers (n=7), (2) active non-minority community members (n=11), or (3) active minority community members (n=7). Project personnel assigned each participant to one of these groups based on participants' reported ethnicity and engagement in water resource issues (Table 2). Formal decision makers interviewed described their connection to the community through their professional roles in community government. Formal decision makers generally described a high level of engagement in some water resource protection and restoration activities. Active non-minority community members characterized their connection to the community as related to the work they do in community organizations or local businesses. Active minority community members primarily described their connection to the community as associated with their ethnic group, the work they do in the area through organizations, and as residents participating in local events or meetings. Nineteen of the interviewees were also residents of St. Louis Park, Hopkins or Edina.

Table 1. Study participant profile

Sociodemographic characteristics		
<b>Gender</b>	Male	13
	Female	12
<b>Race/ethnicity</b>	White	18
	Black	1
	Somali	3
	Ethiopian	1
	Indian	1
	Chinese	1
<b>Age</b>	Minimum	26
	Maximum	61
	Median	45
<b>Years lived in community (for residents only)</b>	Minimum	0.5
	Maximum	52
	Median	18.5
<b>Formal education</b>	Completed high school	1
	Associate degree or vocational degree	1
	College Bachelor's degree	6
	Completed graduate degree (Masters, PhD, JD)	11
<b>Occupation/role</b>	Government	7
	Business	5
	Community organization/association	5
	*Involved resident	5
	Education	3
<b>Community</b>	St. Louis Park	11
	Hopkins	9
	Edina	2
	Other	3

\*Residents who participate in events and meetings

Table 2. Stakeholder group characteristics

	<b>Formal decision makers</b>	<b>Active non-minority community members</b>	<b>Active minority community members</b>
<b>No. of participants</b>	7	11	7
<b>Ethnicity</b>	White	White	Racial and ethnic minority groups
<b>Primary connection to community</b>	Professional	Organizations and associations	Participation in community events
<b>Role/Position</b>	Water resource professionals, government officials	Resident, business owner, leadership positions in organizations	Community advocate, resident
<b>Engagement in water resource issues</b>	Engaged in professional capacity	Engaged through organization activities	Limited engagement

## 2. What are primary community assets and needs?

Participants were asked to describe the biggest assets of the community (see Appendix H, Table 1 for full theme tables) and to identify the most pressing needs within the community (Appendix H, Table 2).

Assets and needs were grouped into six broad categories:

- Natural
- Built
- Economic
- Human
- Social and cultural
- Governance

### ***Community assets***

*Natural* assets and recreational resources such as the creek, lakes and parks were important for participants in all three stakeholder groups. For non-minority and minority community members developing social connection through natural resources was significant. For example, a minority community member expressed how lakes provide “media to communicate” and a way for community members to know each other.

*Built* amenities such as housing, places of worship and schools were important for participants in all three stakeholder groups. In addition to the presence of these amenities within the community, accessibility of amenities was especially important for minority community members. As one minority community member described this asset, “Accessibility to a lot of things. Everything is within reach. I mean there isn’t anything I need to get out of this community for. Most of the things I need are right here.” Transportation infrastructure such as transit and light rail were important assets for participants in all three stakeholder groups. Both the formal decision makers and non-minority community members interviewed described environmental infrastructure such as stormwater infrastructure and community gardens as assets of the community. While infrastructure assets were important for both these groups, community character such as “small town feel” and low crime rates in the area were emphasized by non-minority community members.

Formal decision makers and non-minority community members described stable *economics* resulting from a good tax base and affordable housing in the community as important assets. Diverse businesses in the area and the support they provide to the community were acknowledged by formal decision makers and minority community members. In addition, formal decision makers emphasized the importance of the economic benefits stemming from natural and built assets. Property value increases from the anticipated light rail transit project and the boost to property value as a result of proximity to clean water were some of the economic benefits that these participants reported.

Although *human* capital emerged as a theme across all three stakeholder groups, the type of human capital to which participants referred varied. While formal decision makers commonly referenced “smart professionals,” non-minority and minority community members referenced “youth,” and “good neighbors” as significant sources of human capital.

Sense of community was an important *social and cultural* asset for all three stakeholder groups. Participants spoke about “a strong sense of community” and “a very small community of people” where people know each other. A non-minority community member acknowledged the strong sense of community in St. Louis Park: “What I understand and the people that I talk to that have grown up in St.

Louis Park ...there's something in their heart, in their being. They're always, they're a person from 'the Park,' they call it."

Social connections were also important for minority community members interviewed. Participants spoke about the sharing of problems and ideas and the social support within their ethnic communities as key assets. A minority community member stressed the importance of these social connections. She explained, "Staying well-connected helps us, because when you're the minority, you want to know who's around you. You feel comfortable finding another Somali in your building or another mother you can run into when you have problems. So social support is very, very critical." Formal decision makers and non-minority community members noted diversity as one of the social assets of the community. Participants in both groups characterized the community as "progressive," "advanced" and "accepting of diversity." One non-minority community member spoke about the strength of diversity:

Diversity, I think, brings strength in a lot of different ways, like, when you're trying to do neighborhood programs or projects. There's lots of different people who can contribute to those. ...And yeah, so the different viewpoints and the different background and experiences of the people who live there make it a really interesting place to be and lots of interesting projects to do together.

With respect to *governance*, a common theme that emerged across the three stakeholder groups was responsive government. Highlighting the city's proactive approach, a non-minority community member said, "The city government is really focused on longer term issues and on trying to work together to benefit the community in a way that...you know, they [work] with the community to find out what's important." A minority community member characterized the city government as responsive, but more narrowly defined responsiveness as responding to problems that arise. She used an example of problems between neighbors and noted the city "does have a phone number that you can call and report any housing situation that you think they need to look at."

The presence of organizations such as watershed organizations, neighborhood associations and other environmental and community organizations was also acknowledged as an important asset of the community by formal decision makers and non-minority community members.

### **Community needs**

Only one stakeholder group, the formal decision makers, identified needs associated with the *natural* environment and these were associated with limited recreation access to water resources and water resource threats including aquatic invasive species and pollution. Needs associated with the *built* environment identified by participants included increased transportation, multi-family housing and gathering spaces. A non-minority community member described the need for a gathering space:

The gathering space would help with greater social connectedness; so that connection I think is important in a lot of respects. It's important for health and just general well-being. ...It would help with safety just getting people out into the neighborhood and feeling like they're part of something greater.

Formal decision makers, non-minority community members, and minority community members described the economic recession and problems with the local *economy* such as funding cuts and job losses as pressing needs. *Human* health needs were identified by participants in all three stakeholder groups. Participants specifically acknowledged concerns around mental and reproductive health and the



unique needs of an aging population. A formal decision-maker explained, “It’s a trend that we have to be aware of is our aging population. With the baby boomers retiring and aging, that changes the kinds of service demands that are made on the community particularly from the public safety perspective.”

Education emerged as a major theme in the category of *social and cultural* needs that was discussed by participants in all three stakeholder groups. However, while the formal decision makers emphasized the need for “entrepreneurial education” to help people “start their own business and run their own business,” non-minority community leaders emphasized education more broadly as a need to build “a strong educational base” in the community. Minority community members stressed basic information needs related to community services. A participant explained the problem as a “lack of information, especially for the people who are newly arrived. They don’t know how to navigate the system, getting a job, getting healthcare, the basic things, housing and stuff like that.”

For some minority community members, a sense of belonging among community members was something that was missing. A minority community member explained the need to belong while also maintaining one’s own culture:

Trying to belong is important, because you understand that the world around you is different. ...Isolating is not good, because what happens is that when parents are tight-knit, but the parents are having kids, kids are Americans, they don’t care about [the Somali] culture. So then what happens is that kids are becoming Americanized and the parents are keeping the culture and whatever fear they have. So then you have two generations who are butting heads. So in order to reduce the stress and the worries and the clashes, it’s better if the community opens up and learns from the other group and then learns to live together. So it reduces stress, it opens opportunities, and I think it makes sense: you’re part of another community so you are Somali community, but you’re part of the general community. Volunteer opportunities come up, you can vote, you can run things, you know more friends. It’s good for your well-being, that’s what I can think of.

A need within the category of *governance* stressed by formal decision makers was balancing different interests and uses. For example, a participant spoke about the need to balance different land uses and economic interests. Relating to controversies over water resource access and controlling invasive species, one formal decision maker acknowledged the challenge to “balance the public’s right to access with the need to protect the resource.” The participant further explained, “There’s basically ‘closing accesses’ on one hand, and ‘doing nothing’ on the other. And where do we find the right ground so that we can protect a resource without basically saying ‘well you can’t put your boat in here.’” Both the formal decision makers and non-minority community members noted that because there are multiple issues and needs to be addressed, there is a need to prioritize issues in governance, especially “in relatively difficult economic times.”

### **3. What are existing community capacities for engagement in water resource protection and restoration?**

Participants were asked a series of questions about the community’s engagement in land use planning and water resource protection including successes the community has had in those areas and aspects of the community that have contributed to those successes. Participants were also asked to identify the three most promising opportunities to better engage the community in water resource protection and restoration. Responses were wide-ranging. However, far fewer capacities were identified by minority community member participants (only three themes out of 24) than participants in other stakeholder

groups. Initial responses from minority community member participants provide some context for this set of findings. For example, in response to questions about the community's capacity to engage in land use planning and water resource protection a minority community member explained "we've never been engaged in that area, so I don't think we are involved at all." Another minority community member said, "I never heard anything related to protecting water here. I don't know whether the local people will have some awareness in protecting the water. I'm not sure, but as far as I know, I've never seen activities related to protecting water resources."

Predominant themes across the three stakeholder groups were categorized using an existing framework of community capacity for sustainable watershed management. The framework identifies four levels of community capacity: member, relational, organizational and programmatic (Appendix A).

### ***Member capacity***

At the member (i.e., individual) level, four broad categories emerged in the analysis: knowledge, connection, concern, and engagement (Table 3). Some formal decision makers and non-minority community members described capacities associated with a well-educated community that is increasingly aware of and *knowledgeable* about water resource issues. A non-minority community member explained, "I think through education and through other opportunities ...you're finding more and more that people are aware of what they're doing and what chemicals they're using, if they're polluting or not polluting the water." Moreover, these stakeholders recognized that community members generally are *concerned* for the environment. A formal decision maker explained,

I think if you take a survey, most people will respond that water quality's the most important environmental issue, you know, more than global warming, because they see it as local and they see that they use it. They water ski. Their kids go to the beach and swim. And, water quality means different things to different people. So I think they're engaged and they care more, so then they care about other environmental issues.

All groups described community members as *engaged* to some extent. Participants referred to community members who participate in projects, stakeholder meetings, and events as a critical capacity. Referring to the importance of advocacy for water resources, one participant noted, "We have really strong advocates; my neighbor next door's a really strong advocate for fighting the invasive species, for protecting the wildlife. So we do have advocates in this neighborhood, very strong advocates for the creek." However, several minority participants emphasized that a willingness to engage is perhaps an underutilized strength in their communities. Referencing the Somali community's limited engagement in community planning, a participant acknowledged, "They want to change, so that is opportunity; it's opportunity to change, opportunity to engage. They're ready." Formal decision makers recognized the importance of public support for environmental protection that stems from the increased awareness of water resource issues and community's concern for the environment. A formal decision-maker explained,

We're fortunate... because we have this high regard for water quality. There is support for public expenditure on things to improve the natural resources and water quality all the way up to state level... A few years ago [citizens] passed that clean water fund amendment so that so much sales tax goes in this fund and it gets divvied back out to help address projects.

Table 3. Member capacity for engagement in water resource protection and restoration

Category	Theme Descriptors	FD*	ANMCM	AMCM
Knowledge	<b>Awareness of water resource issues</b> <i>Public awareness of water quality has improved; community members understand and recognize the importance of water quality and of restoration</i>	x	x	
	<b>Knowledge</b> <i>Community is well-educated; citizen advisors are knowledgeable</i>	x	x	
Connection	<b>Connection to natural resources</b> <i>Community is connected to the creek</i>		x	
Concern	<b>Concern for the environment</b> <i>Community members care about water quality issues; community members are engaged in the outdoors and respect the environment</i>	x	x	
Engagement	<b>Willingness to engage</b> <i>Community members are willing to engage in issues and willing to volunteer</i>			x
	<b>Engaged</b> <i>Community members participate in stakeholder meetings and social events; community members are active at the grassroots level; community members have high engagement within ethnic group</i>	x	x	x
	<b>Support for environmental protection</b> <i>Community members support rules, regulation and expenditures for water resource protection</i>	x		

\*Participant stakeholder group affiliation (FD: formal decision makers, ANMCM: active non-minority community members, AMCM: active minority community members); an “x” indicates at least one participant in the stakeholder group identified the theme.

**Relational capacity**

Strong *social networks* were seen as an important mechanism for land use planning and water resource protection among formal decision makers and non-minority community members (Table 4). A formal decision-maker explained that when people know each other, they are also more likely to be engaged in the community: “When people live in a neighborhood, and they’re part of the community and you know they’re more likely to know their neighbors and that sort of thing is when you see them showing up at council meetings and being more actively engaged in the planning process.” Some non-minority community members also acknowledged *shared goals* on some community issues, (e.g., developing youth programs) among community members that help in forming relationships.

Table 4. Relational capacity for engagement in water resource protection and restoration

Category	Theme Descriptors	FD*	ANMCM	AMCM
Social networks	<b>Strong social networks</b> <i>Community members know each other; strong sense of community; unified community</i>	x	x	
Shared goals	<b>Shared goals</b> <i>Community members work together and have shared goals that helps build relationships</i>		x	

\*Participant stakeholder group affiliation (FD: formal decision makers, ANMCM: active non-minority community members, AMCM: active minority community members); an “x” indicates at least one participant in the stakeholder group identified the theme.

**Organizational capacity**

Four broad categories of capacities emerged at the organizational level: leadership, responsiveness, exemplary organizations, and partnerships (Table 5). Leadership capacity was acknowledged in interviews with non-minority community members. Participants described *leadership* from both the city and the private sector as significant to community planning. When asked to describe why city leadership is important, a participant explained,

The leaders have a vision I think of a vibrant community in St. Louis park, a growing community and with that their policies, their procedures, their planning commission, their review boards all those bodies of government I think that are leaders in the community that set the direction are all aimed in the same direction and that’s towards a revitalized community that’s growing.

A capacity that participants in all three stakeholder groups highlighted was responsiveness of community members and government. Community responses were characterized as proactive in that members formed groups and organizations to voice concerns and address problems. Government responsiveness was characterized as reacting to those concerns. For example, a non-minority community member explained how the community was proactive in starting a discussion about protecting green space and how the city responded to those concerns:

The goal setting that we did in 1995; a lot of my neighbors got involved in coming to those dialogues and they advocated for more green space and the city’s responding to that with setting aside land; trying to provide a more walkable city, so people can walk from place to place throughout the city.

The presence of *exemplary organizations* such as the Blake Road Corridor Collaborative and MCWD, and *partnerships* between these organizations were also viewed as key capacities within the community. Partnerships between local governments, organizations and community members were highlighted, especially by formal decision makers, as a critical capacity to address land use planning and water resource protection.

Table 5. Organizational capacity for engagement in water resource protection and restoration

Category	Theme Descriptors	FD*	ANMCM	AMCM
Leadership	<b>Leadership</b> <i>Leadership of the city government and various organizations</i>		x	
Responsiveness	<b>Responsive government</b> <i>City government tries to engage the community; city is effective at responding to problems; city responds to community problems; city helps with grants</i>	x	x	x
	<b>Community proactive in addressing issues</b> <i>There are many resident initiated projects in the community</i>		x	
	<b>Adaptability</b> <i>Community is willing to adapt to changing conditions such as funding cuts</i>		x	
	<b>Community influence on city council</b> <i>Community has an influence on city council; city council is concerned about the well-being of the community</i>	x	x	
	<b>Ability to creatively respond to challenges</b> <i>Community has the ability to be creative and is willing to take risks</i>	x		
Exemplary organizations	<b>Exemplary organizations</b> <i>Presence of organizations such as MCWD, Blake Road Corridor Collaborative, Rotary club and other community organizations</i>	x	x	
Partnerships	<b>Partnerships between organizations</b> <i>City and community organizations partnerships to address community issues; partnerships among various organizations for water resource restoration projects</i>	x	x	
	<b>Partnership development</b> <i>Organizations willing to seek partnerships and make compromises to make the partnerships work</i>	x		
	<b>Member networks</b> <i>Community members connected through formal networks such as organizations and associations</i>	x		

\*Participant stakeholder group affiliation (FD: formal decision makers, ANMCM: active non-minority community members, AMCM: active minority community members); an “x” indicates at least one participant in the stakeholder group identified the theme.

**Programmatic capacity**

Several participants in the formal decision maker and non-minority community member groups described various programmatic capacities associated with land and water resource planning and management (Table 6). Three broad categories emerged in the discussions: planning, regulations, and community programs. Minority community members interviewed did not identify any programmatic capacities. Formal decision makers and non-minority community members emphasized an effective

*planning* process that engages the public as an important capacity. Speaking about the city’s visioning process, one non-minority community member said, “they [the city] do regular meetings with these community organizations and neighborhood associations where they talk about the vision for the community going forward and they turn that into a vision for the community and then that’s what guides the work that they do.”

Participants recognized *regulations* such as stormwater ordinances and guidelines for development as critical capacities. In addition, formal decision makers and non-minority community members viewed city and community member compliance with regulations such as municipal separate storm sewer systems (MS4) permitting and following “ethics and standards in regards to building permits and water runoff” as significant capacities for water resource protection. A few participants noted *programs* that help address community needs such as community block programs, loan programs and Minnesota Green Step Cities.

Table 6. Programmatic capacity for engagement in water resource protection and restoration

Category	Theme <i>Descriptors</i>	FD*	ANMCM	AMCM
Planning	<b>Effective planning process</b> <i>Planning department engages the community in the planning process; public review of planning process; city visioning process</i>	x	x	
	<b>Sound planning tools and policies</b> <i>Community uses various tools and policies for planning such as comprehensive plans, open space plans, high density development and other planning tools</i>	x		
Regulations	<b>Regulations to protect water resources</b> <i>Community has rules and guidelines to protect water resources (e.g. stormwater regulations, guidelines for development)</i>	x	x	
	<b>Compliance with regulations</b> <i>City and community members comply with regulations</i>	x	x	
Community Programs	<b>Programs that address community needs</b> <i>Programs exist that help community address needs (e.g. community block programs, Property Assessed Clean Energy (PACE), Minnesota Green Step Cities)</i>	x	x	

\*Participant stakeholder group affiliation (FD: formal decision makers, ANMCM: active non-minority community members, AMCM: active minority community members); an “x” indicates at least one participant in the stakeholder group identified the theme.

#### 4. What are existing constraints to community engagement in water resource protection and restoration?

Participants were asked questions about the community’s engagement in land use planning and water resource management. As a follow up, the interview guide included a series of questions about the challenges and setbacks the community has faced related to these activities. Participants were asked to list the three biggest barriers to better community engagement in water resource protection and restoration. As with the community capacity analysis, predominant community constraint themes were

analyzed using the Davenport and Seekamp's (2013) Multilevel Model of Community Capacity for sustainable watershed management. This guiding framework highlights four levels of community capacity (constraints): member, relational, organizational and programmatic (Appendix A). One constraint category that emerged from the interviews that is not addressed in the framework is *cultural constraints*. This theme represents an important area of challenges for many minority community members interviewed. In addition, study participants described a few basic capital constraints to community engagement in water resource management.

### ***Capital constraints***

Three categories of capital constraints emerged in the interview analysis: natural, built and economic (Table 7). Formal decision makers and non-minority community members interviewed identified natural capital constraints associated with limited physical and visual connections to the creek and other water resources. Participants noted sections of the creek that have been a "private amenity" without "public access opportunities." Participants also identified a lack of open space in these highly developed communities and limited connections between parks and water resources. Lack of *transportation* was a constraint to community engagement identified by minority community members. According to participants, even when there are opportunities to engage in community meetings, lack of transportation to those meetings is a barrier for many minority community members.

Participants across the three groups pointed to *economics* as a constraint to community engagement in water resource issues. Participants in all three groups described wide economic disparities between residents in the area. A non-minority community member explained the difficulty to engage a disadvantaged community in water resource management:

[The Hopkins Blake Road area] is probably our most disadvantaged community in the city. It's just really hard to explain to people why [water resource protection and restoration] is important, when they're much more concerned with how they will pay their rent or whether or not their kids are safe playing outside.

A minority community member added how economic disparities are connected to other social disparities, "When you're poor, you tend to get sicker; diseases, poverty and health disparity are connected."

Table 7. Capital constraints to community engagement in water resource protection and restoration as identified by participants

Category	Theme <i>Descriptors</i>	FD*	ANMCM	AMCM
Natural	<b>Lack of recreational opportunities</b> <i>Lack of public access to creek, lack of open space</i>	x	x	
	<b>Water resources are not visible</b> <i>The creek is not visible in many areas</i>	x	x	
	<b>Lack of connection to parks</b> <i>Creek and other water resources are not connected to parks</i>		x	
Built	<b>Lack of transportation</b> <i>Lack of transportation keeps people from attending meetings</i>			x
Economic	<b>Economic disparities</b> <i>Economic and social disparities between communities</i>	x	x	x
	<b>National economy</b> <i>The national recession</i>	x	x	
	<b>Local land values</b> <i>Land is expensive, thus redevelopment of infrastructure (e.g., parks) is costly</i>	x		

\*Participant stakeholder group affiliation (FD: formal decision makers, ANMCM: active non-minority community members, AMCM: active minority community members); an “x” indicates at least one participant in the stakeholder group identified the theme.

### **Member constraints**

Five broad categories of constraints were identified at the member level: understanding, beliefs and attitudes, social norms, responsibility, and ability (Table 8). All three groups cited limited *understanding* about water resource issues as a constraint to community engagement in water resource management. Participants mentioned that many community residents are not aware that the creek exists. One formal decision maker expressed being surprised by the limited awareness: “We’re shocked to find out that a lot of folks that live very close to the creek didn’t even know it went through their neighborhood.”

*Beliefs and attitudes* associated with water resources may also be constraints to community engagement. Formal decision makers mentioned that “water quality is very hard to define” and that “water quality means so many things to different people.” One non-minority community member expressed that community members are only engaged in an issue “if it’s something that is going to happen in their backyard.” When asked about engagement in water resources restoration, another non-minority community member expressed a similar perspective: “It’s not my land, so I haven’t paid that much attention.” Participants across all three stakeholder groups acknowledged that renters are not as engaged in these types of community issues because they are less connected to a specific place or geographic area.



Table 8. Member constraints to community engagement in water resource protection and restoration as identified by participants

Category	Theme Descriptors	FD*	ANMCM	AMCM
Understanding	<b>Lack of awareness</b> <i>Community members lack awareness of water resource problems and their own connection to water</i>	x	x	x
	<b>Limited knowledge</b> <i>Lack of information and limited knowledge about water resource issues</i>	x	x	x
Beliefs and attitudes	<b>Perceptions of water resources</b> <i>Water quality is difficult to define; some members have negative perceptions of creek (i.e., as “a swamp”)</i>	x	x	x
	<b>Focus on other issues</b> <i>Community pays more attention to other issues such as media entertainment than water resource issues</i>		x	
	<b>Lack of motivation to be involved</b> <i>Some community members perceive that there is no reason to be involved in water resource issues; lack of a “burning platform;” renters and the private sector are not as engaged as homeowners in water issues</i>	x	x	x
	<b>Narrow self-interest</b> <i>Some community members focus only on self-interests in water resource issues</i>	x	x	x
	<b>Idealism over pragmatism</b> <i>Individuals who focus on big changes do not understand slow, incremental changes needed for water resource restoration</i>	x		
Social norms	<b>Social norms</b> <i>Community members are constrained by social expectations like “the culture of shiny green lawns”</i>		x	
Responsibility	<b>Diffusion of responsibility</b> <i>Community members perceive that it is government responsibility to take care of water resource issues</i>		x	x
Ability	<b>Lack of time</b> <i>Community members have other priorities that take up most of their time</i>	x		X
	<b>Lack of efficacy</b> <i>Some community members believe that they are unable to do anything about water resource issues</i>	x	x	

\*Participant stakeholder group affiliation (FD: formal decision makers, ANMCM: active non-minority community members, AMCM: active minority community members); an “x” indicates at least one participant in the stakeholder group identified the theme.

The feeling that people do not have the *ability* to affect water resource outcomes (i.e., limited sense of efficacy) was perceived as a constraint to community engagement in water resource management. One

participant explained, “People don’t really want to talk about it, I think because sometimes people do probably feel a little unable to do anything about it and they table it; it’s not really a big conversation piece.” Finally, lack of time was a constraint for decision makers as well as minority community members. A decision maker stressed that the barrier to engagement is not information; it is being able to find the time when there are so many other priorities.

**Relational constraints**

Three broad categories of constraints were documented at the relational level: shared beliefs, sense of community and diversity valued (Table 9). A lack of *shared beliefs* among community members on issues was stressed as a constraint by non-minority community members. Similarly, formal decision makers pointed to “polarized society” as a constraint to engagement in water resource issues. A formal decision maker stated that polarized society leads to gridlock: “Society is more polarized about what the solutions to the problems are. And that polarization leads to gridlock and nothing happens. That goes for the federal, state all the way down, can’t do anything about that.” Another formal decision maker believed that *sense of community* at the neighborhood level was limited and served as a constraint to broader community engagement.

For minority community members, constraints associated with *intercultural relationships* emerged. Participants described limited cross-cultural understanding and distrust, which can lead to isolation. Minority participants also described the need for intercultural communities to work together. A participant explained,

It’s trust, and that trust comes in with...”You hear what my needs are, and I want you to help me get there,” or “Let’s partner.” “Don’t just use me to get your agenda across.” So then there is that kind of suspicious thing in our area, which is I think something normal. When you’re a ...minority of the area and people don’t understand who you are, they have their own little bias, so we have ours as well.

Table 9. Relational constraints to community engagement in water resource protection and restoration as identified by participants

Category	Theme Descriptors	FD*	ANMCM	AMCM
Shared beliefs	<b>Polarized society</b> <i>Little societal agreement exists about solutions to water resource problems</i>	x		
	<b>Lack of agreement on issues</b> <i>Disagreements about threats to the community</i>		x	
Sense of community	<b>Lack sense of neighborhood identity</b> <i>Lack of sense of identity in neighborhoods constrains engagement in those neighborhoods</i>	x		
Intercultural relationships	<b>Strained intercultural relationships</b> <i>Lack of understanding and trust between racial/ethnic community members</i>			x

\*Participant stakeholder group affiliation (FD: formal decision makers, ANMCM: active non-minority community members, AMCM: active minority community members); an “x” indicates at least one participant in the stakeholder group identified the theme.

### **Organizational constraints**

Organizational constraints were organized into five broad categories: communication, resource pooling, fair and meaningful community engagement, conflict management and collaborative decision making (Table 10).

Formal decision makers, non-minority and minority community members highlighted ineffective *communication* about water resource issues as a constraint. Several participants expressed unease that water resource issues are not talked about within the community and that community leaders have not been engaged in water resource planning.

Non-minority community members spoke about the challenge of “reaching everybody in a way that actually gets heard.” Language barriers were cited as a constraint to community engagement by both non-minority and minority community members. Minority participants also spoke about the lack of sources of information as a constraint to community engagement. One minority community member explained, “Information... especially regarding recreation, knowing there is a park near your area where you can go and walk and you can take your kids. I think that’s a big one: lack of information.” Similarly for minority community members, limited communication about opportunities to participate in water resources related activities was a constraint. One minority resident noted: “I’ve never seen activities related to protecting water resources. I never heard anything here.”

A constraint significant to minority community member participants was not feeling included as part of planning around water resources. When asked about minority *community engagement* in water resource and land use issues, one minority community member stated succinctly “we’re never part of the planning.” A constraint to member engagement identified by non-minority community members was the resistance on the part of decision makers to change engagement strategies. Speaking about the need to take risks and try new approaches, a participant explained,

I think sometimes it takes switching the way that you traditionally do the work to something new. And, it’s not really always clear what that new path should be. So it takes a little bit of risk and a willingness to be open to trying those new paths. I think sometimes there’s a tendency to fall back on doing the traditional approach to engaging residents that isn’t always the most effective. So it takes the courage and the willingness to step outside of the box and try something new. And to be ok with not being able to predetermine what the route or the process will be. Because if you’re going to truly partner together with community residents, it’s somewhat out of your hands because its being led by the residents and you’re there to support it. So I think that’s a new approach for some organizations and it might not be the most comfortable, but I think it’s what needs to happen in order to really engage.

An additional constraint to community engagement for minority community members was past experiences with projects where outcomes did not address minority community needs. According to participants, specific needs like health care and gathering spaces, expressed in community planning processes have not been addressed. A minority resident explained, “We ask a lot of times, many times to have a center for the community, Somali community; if we wanted to learn the culture or whatever, teach kids language. [City officials] don’t answer.”

Table 10. Organizational constraints to community engagement in water resource protection and restoration as identified by participants

Category	Theme <i>Descriptors</i>	FD*	ANMCM	AMCM
Communication	<b>Ineffective communication about water resource issues</b> Water resource issues are not talked about in the community; leaders do not address water resource issues	x	x	x
	<b>Language barriers</b> Language barriers exist in communicating issues with the community		x	x
	<b>Communication not inclusive</b> <i>Lack of interaction between immigrants and government agencies</i>			x
Resource pooling	<b>Lack of resources to address issues</b> <i>Organizations lack resources such as funding, time and staff to manage natural resources</i>	x	x	
Member engagement	<b>Lack of opportunities to participate</b> <i>Community lacks activities that are related to water resources</i>			x
	<b>Community engagement is not inclusive</b> <i>Minority communities are not part of dialogue and planning around water resource issues</i>			x
	<b>Lack of early involvement</b> <i>Lack of early public involvement in planning process</i>	x		
	<b>Resistance to change approaches</b> <i>Some decision makers and organizations are not willing to try new methods to engage community members</i>		x	
Conflict management	<b>Managing conflicting opinions</b> <i>People have strong opinions that sometimes are difficult to manage</i>		x	
	<b>Political barriers</b> <i>Limited political will and political support for initiatives; current political climate constrains proactive actions</i>	x		
Collaborative decision making	<b>Community needs not addressed in decisions</b> <i>Minority community needs are not addressed; programs to address needs lack understanding of minority communities</i>			x

\*Participant stakeholder group affiliation (FD: formal decision makers, ANMCM: active non-minority community members, AMCM: active minority community members); an “x” indicates at least one participant in the stakeholder group identified the theme.

**Programmatic constraints**

Four categories consistent with programmatic constraints were documented: program coordination, visioning and goal setting, science and decision making, and implementation (Table 11).

*Program coordination* and *visioning and goal setting* were constraints to community engagement according to participants in the formal decision maker and non-minority community member groups. Participants noted multiple agencies, businesses and organizations that have varying responsibilities and goals for land use and water resources in the area. As one participant suggested, these organizations and businesses have “similar interests most of the time,” however, there are “many with competing or opposing interests, as well”. Often times, other issues are prioritized over water resource issues. A non-minority community member explained, “People are busy and they have their daily lives that they have to do so to talk about a project that might be a few years out versus immediate needs; that’s hard to engage people depending on where they are with their lives.” Another participant, a formal decision-maker, made a similar point: “Number one barrier I think is that people have higher priority needs: again jobs, housing, safety, I think are still more important to most folks.”

Table 11. Programmatic constraints to community engagement in water resource protection and restoration as identified by participants

<b>Category</b>	<b>Theme Descriptors</b>	<b>FD*</b>	<b>ANMCM</b>	<b>AMCM</b>
Program coordination	<b>Multiple authorities/property owners</b> <i>There are too many organizations and too many rules around water resources; lack of clarity exists in property ownership along the creek</i>	x	x	
	<b>Lack of coordination</b> <i>Lack of coordination between multiple jurisdictions in addressing water resource issues</i>	x		
Visioning and goal setting	<b>Competing issues and interests</b> <i>Balancing competing interests and land uses while protecting the environment</i>	x	x	
	<b>Prioritization of issues</b> <i>Immediate needs such as jobs, housing and education are prioritized over water resource issues</i>	x	x	
	<b>Balancing environmental tradeoffs</b> <i>Balancing the tradeoff between different environmental services such as water and energy</i>	x		
Science and decision making	<b>Lack of sound science</b> <i>Use of faulty scientific assumptions in some decision making processes</i>		x	
Implementation	<b>Inadequate implementation</b> <i>Natural resources are not part of the mission of the city government; lack of plan implementation</i>	x		

\*Participant stakeholder group affiliation (FD: formal decision makers, ANMCM: active non-minority community members, AMCM: active minority community members); an “x” indicates at least one participant in the stakeholder group identified the theme.

### ***Cultural constraints***

Apart from constraints at the individual, organizational, relational and programmatic levels, cultural constraints emerged as significant to the minority community members interviewed (Table 12). Four categories of cultural constraints to community engagement in water resource issues are cultural differences, ethnic unity, cultural integration and decision making power.

Minority community members identified *cultural differences* as a constraint to community engagement in water resource management. Minority community members interviewed explained that because of cultural traditions in communication, some ethnic groups are not publically vocal about issues. Participants also acknowledged that recreational use of water resources is not common among certain minority communities. When asked about minority members' limited recreational use of water, one minority participant explained, "It could be influenced by where you grew up; if you didn't have water around you growing up, maybe you haven't developed that culture." Another participant stated succinctly, "No, I don't go down the creek in a canoe. It's not part of my culture."

Adapting to a new culture emerged as a constraint to community engagement. According to minority community members interviewed, the changes that come as a result of living in a new place such as changing gender roles and reduced support from extended family put time constraints on families. Speaking about the changing roles and support of women, a participant recalled,

When we were back home women only had a one role, you have a baby, you be the homemaker. Husband does only one role: bring the bread, that's it. The women had lot of support, her neighbor, her aunt, they will babysit for her, so she had time to sleep, to relax, to rejuvenate. We moved over here, there is not that support, that babysitting, that support, the woman does not have that.

Similarly, for minority community members who are new immigrants there are responsibilities that are more highly prioritized than water resource issues. Understanding and adapting to a new culture and "new ways of doing things" are the highest priorities for minority community members. A participant described,

You just have to understand that when you're a new immigrant, you have priorities. Your priority is actually doing your day-to-day thing, and surviving first, and understand your surroundings first couple of years. So knowing this kind of thing, [water resource issues] is not important. It may be important, but it's not the priority of lot of families who are trying to fit in or trying to learn the new ways of doing things.

Lack of minority decision makers in the community was also viewed as a constraint to engagement:

We actually know what we want to do; we actually know where our needs are. I want to be able to be in the circle where decisions are made, and I will help you make the decision...ones best for us... I think some people call it discrimination, but I call it a challenge. But, one of these days we'll get through it.

Table 12. Cultural constraints to community engagement in water resource protection and restoration as identified by participants

Category	Theme <i>Descriptors</i>	FD*	ANMCM	AMCM
Cultural differences	<b>Communication styles</b> <i>Minority communities are not outspoken</i>			x
	<b>Recreation styles</b> <i>Recreational use of water resources not common among minority communities</i>			x
Ethnic group unity	<b>Ethnic group division</b> <i>Lack of unity within an ethnic group</i>			x
Cultural integration	<b>Adapting to a new culture</b> <i>Adapting to changes of living in a new culture (e.g. changing gender roles; reduced level of social support)</i>			x
Decision making power	<b>Lack of minority decision makers</b> <i>Minority leaders and community members are not included in community decision making processes in water resources and other community issues</i>			x

\*Participant stakeholder group affiliation (FD: formal decision makers, ANMCM: active non-minority community members, AMCM: active minority community members); an “x” indicates at least one participant in the stakeholder group identified the theme.

## 5. What are strategies for building community capacity to engage in water resource protection and restoration?

Participants were asked what the community would need to do to be more effective at addressing water resource problems. To further expand on this discussion, two follow-up questions were asked: *how* would the community do this and what *resources* would it need? Participants’ responses to these questions were organized around 11 overarching strategies (Appendix H, Table 3). These strategies would address existing capacities and constraints across each level highlighted in the Multilevel Community Capacity Model. Within each strategy participants discussed varying tactics. In some instances, suggestions for tactics converged across stakeholder groups, and strong group agreement was revealed. In other cases, it was clear that stakeholder groups had divergent views on the most appropriate or effective tactics for addressing water resource problems. Each of these strategies are listed and described below:

- A. Offer transportation options for community members to participate in events and programming
- B. Enhance community members’ understanding of water resources
- C. Strengthen community members’ connections to water resources
- D. Support community member action
- E. Strengthen relationships between community members and organizations
- F. Facilitate cross-cultural understanding
- G. Develop leaders and organizations in water resource issues
- H. Tailor communication programs to community members’ needs
- I. Establish and clearly communicate goals
- J. Set regulations and help residents and landowners comply
- K. Build trust in minority communities

**A. Offer transportation options for community members to participate in events and programming**

Minority community members suggested providing transportation to events and programs as a strategy to better engage the community in water resource protection and restoration.

**B. Enhance community members' understanding of water resources**

Non-minority and minority community members noted that the public needs to be better informed not only about water resource problems, but also about how to address problems. A minority community member put it simply: "Let [community members] know what the problem is and let them know the solution." Non-minority community members suggested cable television, printed materials, websites, and public meetings as mechanisms for public education. Minority community members interviewed suggested awareness campaigns through schools and community center. A minority community member stressed that people have to be made aware of the connections between streams, water quality and drinking water.

A non-minority community member described awareness about water quality and riverine systems as fundamental to building capacity:

Step one would be learn why the water, why the quality of water in the creek is important, why the creek is important, how its connected and how, you know, a drop of water that goes into the creek here ... within a day is in the Mississippi river, within a week is in the Gulf of Mexico.

**C. Strengthen community members' connections to water resources**

Participants also spoke about the importance of human-environment relationships in engaging the community in water resource issues. Specifically, participants suggested that finding connections between the community and water resources would help in engaging with the community. Participants in all three groups emphasized framing water resource issues in a way that relates to community members. Participants stressed that water quality issues must be tied to the priorities and concerns of the community. A formal decision maker explained, "When there's a specific issue that they can see as concretely related to quality of life and the economy, and fiscal solvency in some of these communities, they're very engaged."

Physically and visually connecting community members to the creek through public access points and recreation opportunities was an important tactic for strengthening connections for formal decision makers and non-minority community members.

**D. Support community member action**

Participants in all three stakeholder groups described tactics for supporting community member action. Non-minority community members and formal decision makers described engaging community members in meetings and projects and establishing political, financial and volunteer support within the community. Minority community members emphasized empowering community members by fostering a sense of ownership and accomplishment. A minority community participant reflecting on a program she organized explained,

The end result is I want to create something that belongs to them, and I can give it to them and leave it, and then they'll teach each other by word of mouth or they'll go and get information from the website. So when you do that, you eventually leave them [to]



educate themselves. You just become the expert person that they can come back and say, “this is what’s happening,” or maybe when I want to do an evaluation, I can go back and I have ways to connect but I let them be the movers of the program. What that does it creates sense of empowerment, but also it creates sense of accomplishment because it’s their idea, it’s their way. We follow all the traditional steps of creating trust and here they’re accomplishing something that they thought of. And they’re doing it. It’s exhausting, but that’s what needs to happen

***E. Strengthen relationships between community members and organizations***

Relationship-building was described as an effective way to engage community members in water resource protection and restoration. Participants in all three stakeholder groups expressed a need for creating new partnerships between existing organizations such as between cities and minority and non-minority led community organizations and between local units of government. These partnerships were seen as essential to enhancing community effectiveness in water resource management. Formal decision makers and non-minority community members mentioned using existing neighborhood networks as a tactic to improve trust, information exchange and coordination with their own organizations. A formal decision maker commented that relationships are critical in responding to water resource problems: “I just think that we need to start engaging cities and watersheds in an effort to look at a little bit bigger picture and to improve coordination and trust between those organizations, improve relationships between cities and watershed organizations.”

***F. Facilitate cross-cultural understanding***

Intercultural relationships were a topic of discussion among both minority and non-minority community member participants. Participants from both these groups stressed the need for better understanding of minority cultures to more effectively engage community members in community issues. A minority community member highlighted the importance of cultural understanding: “It’s taking baby steps by not making the mistake that everybody does and jumping into the intervention or the education piece without understanding your community or the people you’re trying to influence.”

***G. Develop leaders and organizations in water resource issues***

A tactic suggested by both minority and non-minority community members is identifying and engaging key community leaders in water resource issues. A non-minority community member suggested that cities could share information and gather input from existing “block leaders.” For minority community members, it is important to identify key leaders and “role models” to better engage the community in water resource issues. A minority community member suggested that this is best done through existing informal networks (e.g., word of mouth).

***H. Tailor communication programs to community members’ needs***

Perhaps the richest discussions in the interviews centered on increasing community member understanding of water resources through tailored communication programs. Participants acknowledged the challenge of tailoring communication to the diverse audiences in the watershed. A formal decision maker referred to social marketing as a tool to effectively communicate with diverse audiences. According to the participant, social marketing can be used to identify and understand community member concerns: “[social marketing strategies are] a combination of what to do, how to do it, and making it easier for them to do it by giving them what they need to know: how to, where and the tools to do it.” Non-minority community members spoke about the importance of communicating problems as well as successes in water resource protection and restoration. Communicating about the successes of projects such as the creek re-meander project was highlighted as a strategy to help connect

with residents. As one participant explained, communicating about successes can also garner public support:

I think communicating the benefits. I think also communicating the success that you've had so far and what impact that has had and sharing with them the opportunities that are out there. And then seeing what kind of support they get from the residents to move things along.

Effective communication with minority community members requires understanding community concerns and addressing language barriers. One participant expressed that first "you have to find out what people are concerned with." Another minority community member suggested that one way to address language barrier is to employ individuals who speak the same language as minority residents. This participant explained,

I think the best way is they need somebody who works with the city, I mean Somali, [who speaks the] same language. If you knock the doors and say "hey, this is the project and its good for you. We need to talk about it; you going to learn this and this and if you have a question you can ask, everything you want to know. You can come and attend the meeting." If they say that, [and] it's the same language, then we'll understand. But, for example, if you knock the door and say "Hey, this is a letter, it's a project, you need to come attend this meeting," maybe I don't understand English and I don't understand you, I just took the letter and say "oh, thank you."

Non-minority and minority community members outlined some key communication tactics including multi-media campaigns (e.g., newsletters, petitions, websites and electronic media) and peer-to-peer networking. Small group meetings, family-oriented social events, and going door-to-door were noted as techniques that would appeal to community members and especially minority community members. A minority community member believed that offering culturally relevant entertainment like "singers and concerts" connected with water resource programming would increase participation. This participant added that "word of mouth" is more effective than traditional media like fliers and websites: "Yes they do do fliers and it will be on a website or something, but the most effective way is word of mouth." Hosting family friendly events was a key tactic for tailoring programs to one minority community member participant: "They have to conduct some events. They have to plan in such a way that everyone should attend. ...Some road shows or whatever, with some games for the kids...because if it is some activities related to kids or children, all families will come."

A non-minority community member explained how one-to-one meetings are a useful strategy to not only gain information but also to identify leaders: "Through the process of one-to-one meetings, being able to identify people who are interested in working on projects.... I think those one-to-one conversations are often two-way streets too, because then you're not only able to provide information but also gain information."

### ***I. Establish and clearly communicate goals***

Some formal decision makers emphasized goal setting and communicating goals as essential steps in responding to water resource problems. Minority community members also stressed the need for a plan to address water resource problems and that the plan should be developed by experts.

Non-minority community members described communication of project goals as critical to address water resource problems.

**J. Set regulations and help residents/landowners comply**

Some minority community members expressed support for a regulatory approach to water resource protection and programs to help residents and landowners comply with regulations. Participants in this group also acknowledged the need for enforcement of existing regulations. Regulations and enforcement were not identified by formal decision makers or active non-minority community members as a capacity-building tactic.

**K. Build trust in minority communities**

For minority community member participants, building trust was seen as an essential strategy to engage minority communities in water resource issues. Participants spoke about gaining trust through influential, respected and trusted minority leaders. A minority community member described these individuals as “elders” and “faith leaders.” As this participant explained, trust is critical to gaining entry into the community, “The elders and the faith leaders are the ones who will open the door for you, they will bring you in, and once they bring you in, you’re in.”

Connecting with existing, legitimate organizations is a more effective approach than attempting to create new organizations to engage minority community members and build trust. A minority community member participant explained,

The easiest way would be to use the existing system, like maybe go through the churches or the small parish nursing program that we have. It’s always, I have learned, more effective to use more established institutions instead of starting one by yourself, because you have more legitimacy and people are more open to your ideas and concerns if you’re coming that route instead of being the lone voice and saying “oh this is a problem.”

A non-minority community member participant also emphasized the importance of informal networks and word of mouth as effective trust-building approaches in immigrant communities:

100% referrals, because I think when new people come into the country they’re scared and if you know somebody that they know, they already trust somebody from their community. So I think it’s imperative to get to know somebody in the culture that you’re dealing with and then there’s automatically a bond of trust that they’re like “oh, this person knows you, they trust you, so I will know and trust you.” So I think word of mouth.

## DISCUSSION AND RECOMMENDATIONS

### Discussion

This discussion summarizes key findings across three areas: shared perspectives, unique perspectives, and different tactics. The findings are grounded in the perspectives of the 25 individuals who participated in this study and are interpreted at the stakeholder group level. Thus, assumptions about what the findings mean and how they should be applied are consistent with this focus and level of analysis and should be considered within those limits.

The findings lend theoretical support to the Multilevel Community Capacity Model (Davenport & Seekamp, 2013) as a framework for monitoring and building community capacity for sustainable

watershed management. However, the study also builds upon this model by highlighting the importance of culture and the cross-cutting issue of trust—as both potential capacities and constraints to community engagement in watershed management. Thus, we argue a broadened framework of the community capitals, capacities, culture, and trust should be considered (Figure 1).

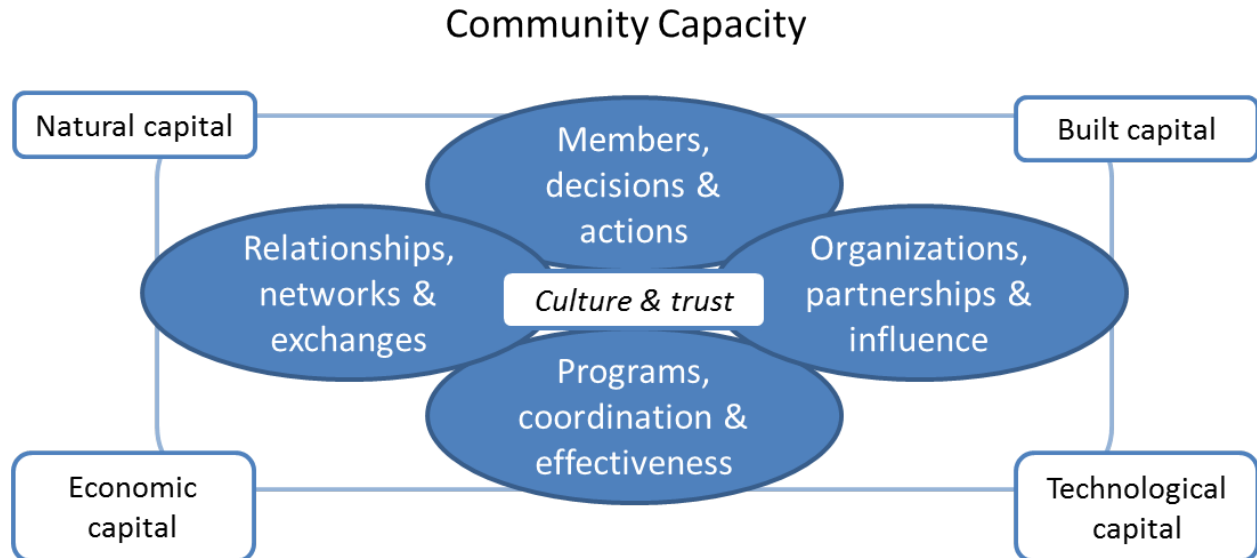


Figure 1. Relationship between community capacity, capitals, culture and trust (adapted from Davenport & Seekamp, 2013)

**Shared perspectives**

Several common themes emerged across stakeholder groups that demonstrate areas of agreement and convergent perspectives on community and water resources. Participants in all three stakeholder groups identified important community assets in common including lakes, transportation infrastructure, good people in the community, strong sense of community, and a government that is responsive to community problems. Of note, though, is that minority community members’ discussion of a strong sense of community was centered on a sense of belonging within one’s ethnic group. Most interviewed did not believe the sense of community extended outside their ethnic groups. The three stakeholder groups also generally agreed upon some basic needs within the community associated with transportation infrastructure, housing, gathering spaces, economics, health care, and education.

Considerably less convergence was observed in participants’ characterizations of community capacities to engage in water resource protection and restoration. All three groups acknowledged that community members are active and engaged in community issues, especially within their ethnic and racial groups, and viewed this as an important capacity. Participants described local government responses to community problems not only as a community asset, but also as a mobilizing resource for more effective community engagement in water resource issues. Three categories of constraints to community engagement in water resource management were identified by the three stakeholder groups. Participants observed that community members lack awareness and have limited knowledge of water resource problems and solutions. They also believed that negative perceptions of water resources, narrow self-interests, and lack of motivation to get involved in water resource issues are constraints to engagement. Participants in each group identified communication as a constraint to community engagement in water resource management. According to participants, an active dialogue about water resource issues between community members and among leaders is missing.

Formal decision makers, active non-minority community members and active minority community members shared some similar opinions about general strategies for improving community engagement in water resource protection and restoration initiatives. These strategies appear to directly address some of the capacities and constraints they identified. Participants in all three groups called for enhancing community members' understanding of water resource problems and solutions, strengthening community members' connections to water resources and building partnerships between existing organizations and networks.

### ***Unique perspectives***

Participants in each stakeholder group expressed unique perspectives in their descriptions of community assets, needs, capacities, and constraints as well as strategies for building capacity. Stakeholder group-level analysis revealed the most consistent and notable differences, however, were between the minority community member group and the other two groups.

For example, minority community member participants identified fewer different types of community assets (i.e., themes) than the other groups. Unique needs identified by minority community member participants were job skills, sense of belonging, support for cultural integration, and stricter property codes. Formal decision makers and non-minority community members overall described a greater number of distinct assets and needs in the category of governance than minority community members. Within this category non-minority community members identified the most governance *assets* of any group and formal decision makers identified the most governance *needs* of any group. This finding most likely can be attributed to the intensity and intimacy with which participants in these three groups are engaged in governance. Those involved in governance's inner workings like formal decision makers are perhaps most likely to be aware of its limitations. Similarly, non-minority community members who described being less involved in community governance had fewer critiques—positive or negative.

Data analysis also revealed that with respect to participants' perspectives on the community's capacity to engage in water resource issues, far fewer capacities were identified by minority community member participants (three themes out of the 24) than the other stakeholder groups. Again, this finding likely can be attributed to the experiences and backgrounds of our participants. Each of the minority community member participants acknowledged that they, like most other minority community members, have had very limited engagement in water resource protection and restoration initiatives. In contrast, all of the formal decision makers described having at least some involvement in water resource management activities and most of the non-minority community members reported being engaged in water resource issues. At the same time, one capacity theme unique to minority participants was the willingness of community members to be engaged and to volunteer.

A few key differences in perceptions of constraints to community engagement in water resource management also emerged. For example, even though participants in the minority community member group noted transportation infrastructure as a community asset, lack of transportation to meetings was also identified as constraint to community engagement. Non-minority community members perceived local parks and water resources as disconnected and that this serves as a constraint to connecting people to water. Formal decision makers identified the high cost of land as a constraint to the redevelopment of needed infrastructure like parks. Both formal decision makers and non-minority community members observed with concern that water resources are not visible and recreation access to water is limited. Minority participants especially viewed aspects of communication, intercultural relationships, community member involvement and collaborative decision making as constraints to

community engagement. In addition, cultural constraints were central to minority community member participants' discussion of community engagement and include cultural differences in communication and recreation styles, lack of unity within ethnic groups, the challenge of adapting to a new culture, and the lack of minority decision makers in water resource and community planning.

### ***Different tactics***

While we noted several key strategies for increasing community effectiveness in water resource management that were common to all three stakeholder groups, some different and perhaps competing perspectives emerged on the tactics viewed as necessary to implement the strategies.

One unique strategy and tactic to address the capital constraint of transportation was suggested by minority community member participants: offer free transportation to meetings. Strengthening community members' connections to water resources was a strategy that all groups mentioned. However, formal decision makers and non-minority community members described one tactic as increasing water-based recreation opportunities. Certainly this tactic would be effective for those who participate in boating, swimming, and fishing. However, according to minority community member participants, this tactic is not likely to appeal to members of a minority ethnic group that doesn't traditionally use water for recreation.

In other instances, differences emerged in how the tactics were described. All groups had participants who encouraged capacity-building by supporting community member action. For formal decision makers and non-minority community members this meant civic engagement in meetings and facilitating political, financial and volunteer support from the community. In contrast, minority community members described creating a sense of empowerment among community members in water resource management by instilling feelings of ownership, confidence and accomplishment.

Tailoring communication programs was a consistent strategy across all three groups. Yet, some important differences were noted in how the groups view this strategy should be implemented. Minority community members emphasized addressing language barriers and understanding community concerns as critical tactics for tailoring communication. This group, along with the non-minority community member group, also described multi-media campaigns and peer-to-peer networking as appropriate tactics for enhancing communication. Formal decision makers tended to focus on more formal tactics including social marketing research and public input processes as ways of better understanding the community.

Building trust within minority communities was a strategy for increasing community engagement emphasized by minority community member participants. Three tactics including building trust through existing institutions, cultural understanding, and minority leaders were described. Non-minority community member participants also stressed building trust with new immigrants through informal networks. Setting regulations, assisting residents and landowners with compliance, and enforcing regulations was a strategy and set of tactics for increasing community effectiveness in water resource management discussed exclusively by minority community member participants.

### **Recommendations**

We believe that each of the perspectives presented here is valuable and provides compelling insight for enhancing community engagement and effectiveness in water resource management. We were struck by the different narratives and frames participants used to share their stories with us about community and about water. Some stories may be familiar or expected. Others may be new or unanticipated and challenge conventional ways of thinking about the relationship between community and water.

Altogether the stories offer different lenses for examining the ways in which communities and community members might be better engaged in water resource issues. They remind us of the importance of developing understanding and fostering meaningful dialogue. They remind us of the value of nurturing relationships and building trust. They urge us to remember how culture shapes everything we do—how we value water and how we interact with one another. The stories reveal to us that the voices of racial and ethnic minority groups have been overlooked and in some cases discounted in water resources planning and management. Each of the stories presented here advocate for new approaches to understanding communities and engaging them in water resource protection and restoration.

Based on the community assessment conducted and reported here, five recommendations are presented which we believe will enhance community engagement and effectiveness in water resource protection and restoration in Reach 20 of the Minnehaha Creek watershed, as well as other urban watersheds around the state and beyond.

**1. *Listen to and engage local experts***

Develop partnerships with existing community organizations and especially minority-led organizations that are active in the watershed communities. Identify local community leaders across ethnic groups who are respected and trusted in their communities. Meet with these organizations and leaders to discuss their perspectives on community, water and community engagement in water resource management. Create a cross-cultural community advisory committee that can help water resource professionals better understand community assets, needs, constraints and capacities and that can guide programming, from communication to civic engagement to site design. Consistent with principles of collaborative and participatory planning, don't design programs *for* communities; design programs *with* communities.

**2. *Remove barriers and address capital constraints***

Make removing barriers and addressing capital constraints to community engagement a priority. Provide transportation to meetings and events for community members. Hire staff and volunteers who speak the language of minority ethnic groups in the community. Develop multilingual print materials and websites. Consider and further explore with community members other capital needs and constraints associated with disparities in economics, gender, health and well-being, education, and sense of belonging when planning projects or designing programs.

**3. *Link water resource protection and restoration to community assets and needs and cultural connections to water***

Connect water resources to issues that matter to community members. For example, link water resource management issues to human health and water for drinking and cooking. Design and develop social gathering spaces and youth programs in which water resources are featured and interpreted. Connect water resources to culturally relevant arts and entertainment in site design and programming. Link water resources and local minority-owned or operated businesses through sponsorships and other partnerships.

**4. *Rethink and redesign communication and engagement approaches***

Even though some participants identified community member knowledge and awareness as an asset, most participants acknowledged that water resource issues are not talked about in communities and community leaders are not engaged in water resource management. There may be several opportunities for community members to get involved but few to none tailored to the needs of minority community members. Communication tactics that target “block leaders” or deliver messages in fliers are

not likely to reach racially and ethnically diverse audiences. Instead, water resource professionals who seek out informal networks and trusted community leaders and who disseminate information by word of mouth are more likely to have success. This study indicates that conventional approaches to engaging “the community” in water resource protection and restoration—strategies and tactics commonly developed by racial and ethnic *majority* decision makers primarily for *majority* community members—are not necessarily effective or appropriate for engaging *minority* community members. Communication and engagement programs should feature multi-media (and multilingual) information campaigns, use peer-to-peer networking, reflect an understanding of community concerns and cultural constraints, and highlight culturally relevant and family-friendly events.

Interviewees told us that the most successful civic engagement programs in ethnic minority communities are those that focus on empowering individuals and building skills. These programs build a sense of ownership, increase self-confidence, and imbue a feeling of accomplishment to participants.

### **5. Build trust**

Trust is something that can take a long time to build but can be very quickly destroyed. Trust can be developed through interpersonal relationships or in more formal exchanges between individuals and organizations. Building trust was a strategy emphasized by minority community member participants for increasing community engagement in water resource issues. Trust develops through repeated positive interactions and beneficial exchanges with an individual or organizations. Trust is strengthened when a shared sense of values or identity is created through those interactions. Participants in our study believe trust is most likely to be forged in minority communities through trusted and respected minority group leaders and existing institutions within minority communities such as places of worship and community centers. Building trust in minority communities requires cultural understanding and thus, water resource professionals should rely on those partnerships developed with community leaders and organizations to further advance their own and their organization’s cultural understanding and responsiveness. Several participants acknowledged that while many racial and ethnic minority community members have a strong sense of belonging within their own racial and ethnic groups, beyond those social groups community members’ sense of belonging is wanting. Therefore, it may be assumed that trust will not be built easily or quickly. Building trust is a long-term commitment to being trustworthy and sensitive to the needs and concerns of others. Working closely with trusted community leaders and organizations and prioritizing the other recommendations highlighted in this report will lay important groundwork toward building trust in minority communities.

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## APPENDICES

## APPENDIX A: Multilevel Community Capacity Model

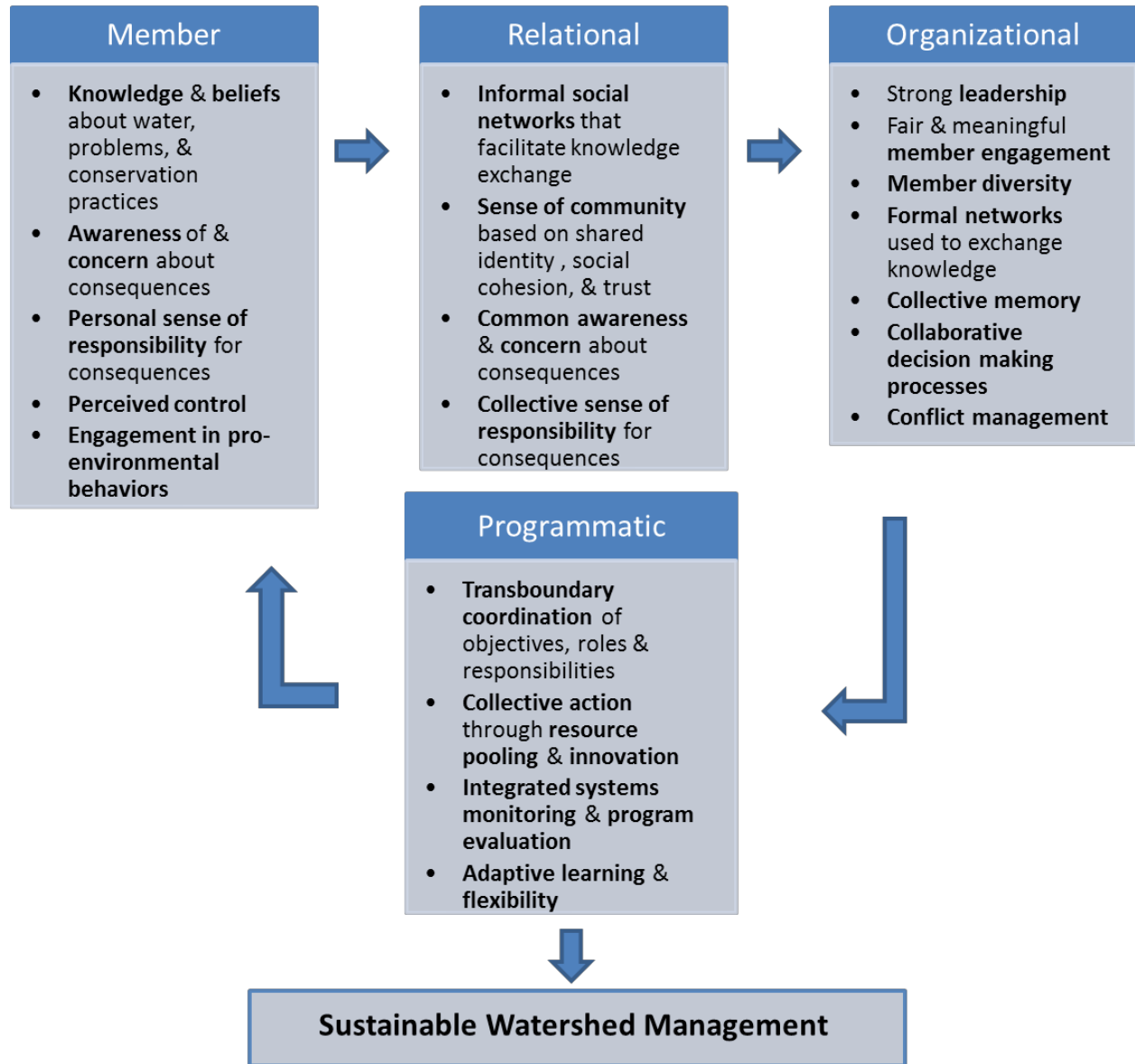


Figure 1. Multilevel Community Capacity Model for sustainable watershed management (Davenport & Seekamp, 2013)

**APPENDIX B: Study Area Maps**

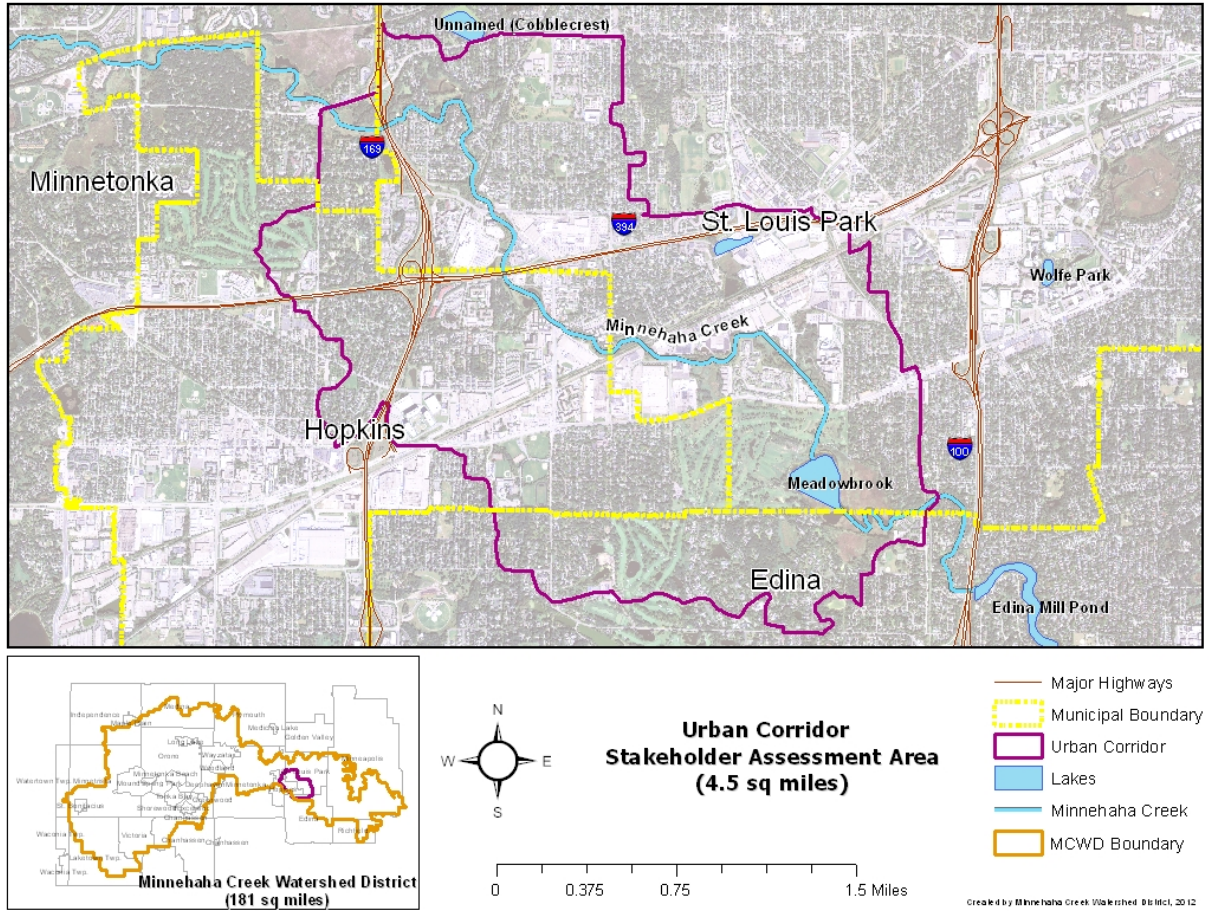


Figure 1. Minnehaha Creek Watershed Urban Corridor (Reach 20)

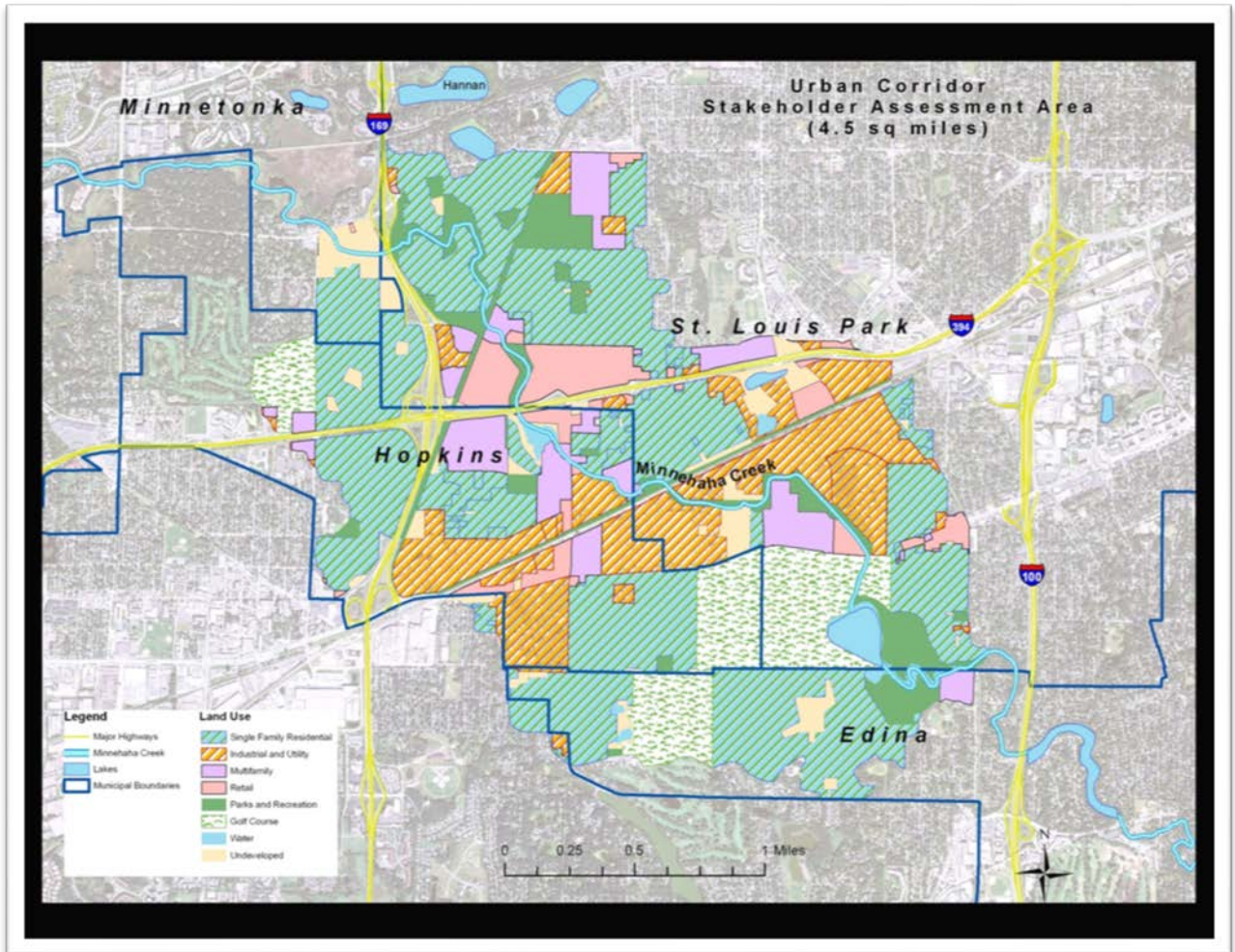


Figure 2. Minnehaha Creek Watershed Urban Corridor Land Use

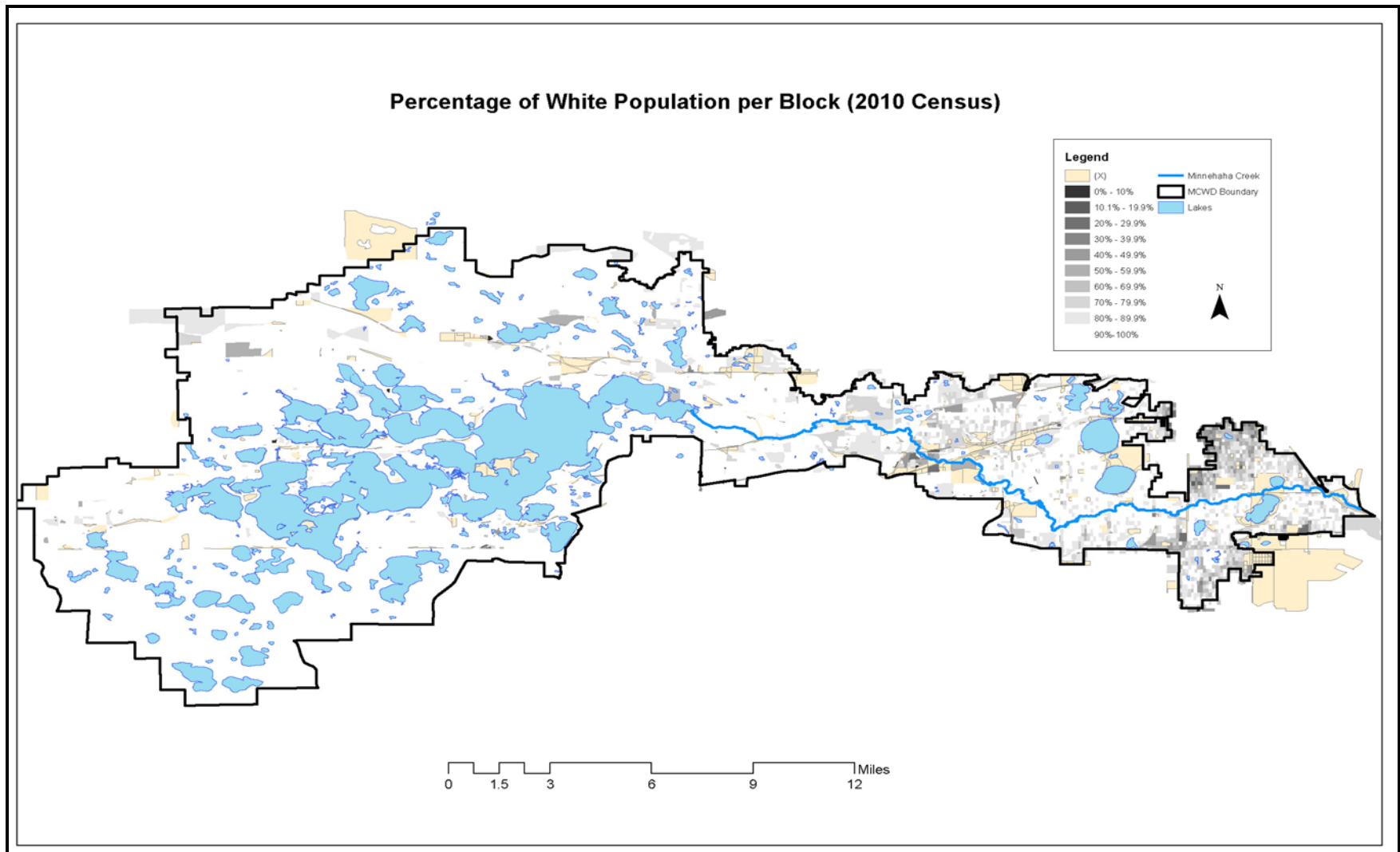


Figure 3. Percentage of White Population per Block in the Minnehaha Creek Watershed

**APPENDIX C: Study Community Sociodemographic Characteristics (2010 U.S. Census)**

	<b>St. Louis Park</b>	<b>Hopkins</b>	<b>Edina</b>
<b>Race</b>			
White persons	83.30%	70.40%	88.10%
Black persons	7.50%	13.50%	3.00%
American Indian and Alaska Native persons	0.50%	0.60%	0.20%
Asian persons	3.80%	8.50%	6.10%
Native Hawaiian and Other Pacific Islander	0.10%	-	-
Persons reporting two or more races	3.10%	3.60%	1.80%
<b>Ethnicity</b>			
Persons of Hispanic or Latino origin	4.30%	7.90%	2.30%
White persons not Hispanic	81.20%	66.60%	86.60%
<b>Income</b>			
Median household income	\$62,694	\$46,828	\$48,533

**APPENDIX D: Interview Recruitment Script**

## **Minnehaha Creek Watershed District Community Assessment Study Script for Initial Contact**

“Hello, my name is \_\_\_\_\_. I am a graduate student conducting research on communities and water resources for Mae Davenport, Associate Professor in the Department of Forest Resources at the University of Minnesota. This study involves watershed and community stakeholders in the Minnehaha Creek watershed. One goal of this study is to identify different resources communities need and strategies they can use to enhance their ability to respond to water resource problems. To do this, I have been conducting interviews with people in the watershed about their perspectives. I am hoping you would be able to assist me by participating in the study and sharing your perspectives with me. We are offering an optional \$50 gift for your participation. The interview takes about one hour. Would you be willing to participate?”

**If yes:** “Thank you. I am available on \_\_\_\_\_ (days of week, times, have alternates ready) is there a time that would work best for you? [Set date, time, location (get directions)]. I would like to send you a confirmation email with date, time and location information. The email will include all of my contact information, in case you have any questions or concerns. Do you have an email address I can send the confirmation to?”

- a. **If yes,** take it down or confirm we have the correct email address for them. “Thank you. I look forward to meeting with you on \_\_\_(agreed upon date)\_\_\_.”
- b. **If no,** “Is \_\_\_(phone # you contact them with)\_\_\_ the best way for me to get a hold of you? In case you need to get a hold of me with questions or concerns, my phone number is \_\_\_\_\_.” I look forward to meeting with you on \_\_\_(agreed upon date)\_\_\_.

**If no:** “Ok, thank you for your time. Good bye.”

**If they seem unsure:** “Just to be clear, participation is completely voluntary and if you decide to participate you can withdraw at any time. Your identity will remain confidential and we won’t include any information that would make it possible to identify you in the final report. We’re only talking to a limited number of key representatives, so capturing your perspective is important. Can I ask what your concerns about participating are?” [Try to address their concerns]

**If they want to know why they are being asked to participate:** “We’re interviewing a variety of community members to try to get diverse perspectives and a range of experiences. I’ve been conducting background research and see that you are a [position in organization] **OR** [Name of person] recommended I contact you. Since we are only able to conduct a limited number of interviews, capturing your perspective is important.”

**If they want to know how the information will be used:** “We are trying to understand the critical capacities that communities need to respond to water resource problems. We’ll be putting together a final report that identifies community needs and assets to share with community leaders, educators and water resource professionals. Your information will be kept confidential and there will not be any identifying information in the report.”



**If they want to know what the study is for:** “This project is aimed at understanding the critical capacities communities need to respond to water resource problems. We’re collecting social data to assess the needs and opportunities in your community and identify strategies that could be used to address community problems. This will lead to an improved understanding of local perspectives around water resource management.”

**If they want to know who is supervising the research:** “Mae Davenport is the supervisor for this study. She is an associate professor in the Department of Forest Resources at the U of M. If you would like to contact her directly I can give you her phone number [612-624-2721] or email address [mdaven@umn.edu].”

**If they ask about IRB:** The research project has been approved by the IRB/Human Subjects Committee.

## **APPENDIX E: Interview Consent Form**

## **Minnehaha Creek Watershed District Community Assessment Study Consent Form**

You are invited to participate in a research study of adaptive capacity of a community to respond to water resource problems and stressors. You were selected as a possible participant for an interview because of your association with or participation in projects with the watershed. We ask that you read this form and ask any questions you may have before agreeing to be in the study. This study is being conducted by: Mae Davenport, Assistant Professor at Department of Forest Resources, University of Minnesota.

### **Background Information**

The purpose of this study is to better understand the critical capacities communities need to respond to water resource problems.

### **Procedures:**

If you agree to be in this study, we would ask you to do the following things:

Participate in an interview, lasting approximately 60 minutes. The interview will be audio recorded and transcribed.

### **Risks and Benefits of being in the Study**

Risks associated with this study are minimal, responses are confidential and names will not be linked to any information in any publications. Benefits of participation include increased awareness of watershed and community issues. Study results will be made available to the public and all participants will have access to them.

### **Compensation:**

A gift or cash, valued at \$50, will be offered for participation in an interview.

### **Confidentiality:**

The records of this study will be kept private. In any sort of report we might publish, we will not include any information that will make it possible to identify a subject. Research records will be stored securely and only researchers will have access to the records. Your responses to the interview questions will be audio recorded, transcribed and kept for three years in a locked office. Afterward, these tapes will be destroyed. Only those directly involved with the project will have access to the audio tape of the interview notes.

### **Voluntary Nature of the Study:**

Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships.

### **Contacts and Questions:**

The researcher conducting this study is: Mae Davenport. You may ask any questions you have now. If you have questions later, **you are encouraged** to contact her at address: 115 Green Hall 1530 Cleveland Ave. North, St. Paul, MN 55108-6112, phone: 612-624-2721, email: mdaven@umn.edu.

If you have any questions or concerns regarding this study and would like to talk to someone other than the researcher, **you are encouraged** to contact the Research Subjects' Advocate Line, D528 Mayo, 420 Delaware St. Southeast, Minneapolis, Minnesota 55455; (612) 625-1650.

*You will be given a copy of this information to keep for your records.*

**Statement of Consent:**

I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

"I agree \_\_\_\_\_ I disagree \_\_\_\_\_ to have my responses recorded on audio tape"

"I agree \_\_\_\_\_ I disagree \_\_\_\_\_ that Mae Davenport may quote me anonymously in her papers"

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Signature of Investigator: \_\_\_\_\_ Date: \_\_\_\_\_

## **APPENDIX F: Interview Guide**

**Minnehaha Creek Watershed District Community Assessment Study**  
**University of Minnesota**  
**Interview Guide**

Project objectives are to explore local stakeholders' perspectives on (1) community assets and needs, (2) past experiences in responding to community problems, and (3) future responses to water resource problems.

***First, I have some questions about you and your connection to this community.***

1. How would you define community?
2. How would you describe your connection to this community?
3. What has been your role as [position/] in this community?
4. What would you say are the best things about the work you do in this community?
5. What have been some of the most challenging things about the work you do in this community?

***Next, I have some general questions about community assets and needs.***

6. What would you say are the biggest assets of the community?
  - a. What makes these assets important?
7. What do you believe are the most pressing needs in the community?
  - a. What makes these needs important?
8. In the past 5 years, what would you say have been the most significant problems the community has faced?
9. How effective has the community been at responding to or managing these problems?
  - a. What made it effective/ineffective? Can you provide examples?

***Now, I have some specific questions about community planning and water resources in the [X] watershed, which intersects the community [Map: point to watershed boundaries on map].***

10. How important are water resources such as local streams and lakes to quality of life for residents in this community?
11. Is the community actively engaged in land use planning in this watershed?
  - a. What success has it experienced? Please explain.
  - b. What challenges or setbacks has it experienced? Please explain.
12. Is the community actively engaged in water resource protection and restoration in this watershed?
13. What success has the community had related to water resource protection? Please explain.
  - a. What has contributed to these successes? (e.g., leadership, funding, citizen groups, etc.)
14. What challenges or setbacks has the community had related to water resource protection? Please explain.
  - a. What has contributed to these challenges?

15. As you may know, certain streams and lakes in the area have been identified as polluted or impaired with respect to water quality and aquatic habitat. How concerned are you about the quality of water resources in the community? Please explain.
  - a. Are there any issues that you are most concerned about?
16. If the community was going to be more effective at addressing these types of water resource problems...
  - a. What would it need to do?
  - b. How would it do this?
  - c. What resources would it need to accomplish this?
17. What do you see as the 3 biggest barriers to better engage this community in water resource protection and restoration?
18. What do you see as the 3 most promising opportunities to better engage this community in water resource protection and restoration?
19. Is there anything else you would like to share with me about the community or water resources in this area?

***Finally, I would like to get some recommendations from you as we proceed with this project.***

20. What other community representatives (e.g., from government, organizations or interest groups) could give us an important perspective on community assets and needs or water resources in this area? (Those with similar or very different perspectives than you.)

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- a. What makes them a key representative (organizations they are involved in, how are they involved in watershed management in this area)?
  - b. May we tell them you recommended them?
21. We would like to identify representatives willing to provide input, receive information and serve as community liaisons for the duration of this project. Would you be interested?  
 Yes       No

**APPENDIX G: Interview Sociodemographic Form**



**Minnehaha Creek Watershed District Community Assessment Study  
University of Minnesota**

**Demographics**

**Age:**

**Highest level of formal education:**

**Years lived in community:**

**Occupation:**

**Gender:**

**Race/Ethnicity:**

**Community groups/organizations:**

**APPENDIX H: Additional Theme Tables**

Table 1. Community assets identified by participants

Category	Theme Descriptors	FD*	ANMCM	AMCM
Natural	<b>Natural resources and features</b> <i>Lakes; creek; parks; trails</i>	x	x	x
Built	<b>Location</b> <i>City close to Minneapolis/St. Paul</i>	x	x	
	<b>Transportation infrastructure</b> <i>Transit; light rail; buses</i>	x	x	x
	<b>Environmental infrastructure</b> <i>Community garden; stormwater infrastructure</i>	x	x	
	<b>Amenities</b> <i>Housing; places of worship; schools; community center; hospital; playground for kids</i>	x	x	x
	<b>Easy access to amenities</b> <i>Schools, hospitals and police station are nearby</i>			x
	<b>Community character</b> <i>Small town; little crime; good place to do business</i>		x	
Economic	<b>Stable community economics</b> <i>Good tax base; affordable housing</i>	x	x	
	<b>Local businesses</b> <i>Presence of diverse businesses in the area</i>	x		x
	<b>Economic benefits of natural and built assets</b> <i>Property value increases with proximity to transit and clean water</i>	x		
Human	<b>Human capital</b> <i>Good neighbors; youth; people in the community; smart professionals; community members identify with water resources</i>	x	x	x
Social and Cultural	<b>Diversity</b> <i>Community members value different backgrounds, viewpoints and interests in the area; community is accepting of racial and ethnic diversity</i>	x	x	
	<b>Connection to natural resources</b> <i>Community's social connections tied to the lakes and natural resources; lakes provide a site where people communicate</i>		x	x
	<b>Involved members</b> <i>Many community members are active and involved in community issues</i>	x	x	
	<b>Strong sense of community</b> <i>Community members know each other; strong sense of community; community members are well-connected and support each other; strong sense of community within ethnic groups</i>	x	x	x

Category	Theme Descriptors	FD*	ANMCM	AMCM
	<b>Community organizations</b> <i>Presence of organizations such as MCWD, Blake Road Corridor Collaborative, Rotary Club and other community organizations; organized neighborhoods</i>	x	x	
<b>Governance</b>	<b>Leadership</b> <i>Strong, respected city leadership that has a vision</i>		x	
	<b>Responsive government</b> <i>City reaches out to the community; city employees, police and fire department are responsive to community needs</i>	x	x	x
	<b>Community involvement in planning</b> <i>Planning is done by neighborhood sections; city involves community in the planning process</i>	x	x	
	<b>Community support</b> <i>Community supports the schools and activities such as arts and sports; community values education and is supportive of students</i>	x	x	x
	<b>City proactive in addressing issues</b> <i>City takes a long-term view; city takes initiative and is proactive in addressing issues such as demographic changes</i>		x	
<b>Total themes</b>		16	18	10

\*Participant stakeholder group affiliation (FD: formal decision makers, ANMCM: active non-minority community members, AMCM: active minority community members); an “x” indicates at least one participant in the stakeholder group identified the theme.

Table 2. Community needs identified by participants

Category	Theme Descriptors	FD*	ANMCM	AMCM
Natural	<b>Recreation</b> <i>Limited access to water for recreation</i>	x		
	<b>Healthy environment</b> <i>Protect water; address aquatic invasive species and water quality concerns</i>	x		
Built	<b>Transportation</b> <i>Limited transportation infrastructure, need buses to preschools</i>	x	x	x
	<b>Housing</b> <i>Need multiple-family housing; higher density development</i>	x	x	x
	<b>Environmental infrastructure</b> <i>Need infrastructure that is environmentally sensitive</i>	x		
	<b>Social infrastructure</b> <i>Few gathering spaces; more playgrounds</i>	x	x	x
	<b>Community character</b> <i>Downtown needs to be upgraded; increased safety; improved traffic flow</i>	x	x	
Economic	<b>National economy</b> <i>Foreclosures, the recession</i>	x	x	
	<b>Local economy</b> <i>Funding cuts; increased cost of housing; lack of jobs; finances to meet needs</i>	x	x	x
	<b>Job skills</b> <i>Need skill building</i>			x
Human	<b>Health needs</b> <i>Need to address health issues such as mental health and reproductive health; needs and concerns of an aging population</i>	x	x	x
Social and Cultural	<b>Education</b> <i>Increase entrepreneurial education, school education opportunities; information programs needed for immigrants to help them understand the system; need to close achievement gap in school; limited awareness of water issues among kids</i>	x	x	x
	<b>Sense of belonging</b> <i>Minority community members need to be part of the larger community in the area; need to be understood by other non-minority community members</i>			x
	<b>Social support</b> <i>Need more community members supporting and helping each other; better understanding he needs</i>		x	x

Category	Theme Descriptors	FD*	ANMCM	AMCM
	<i>and concerns of diverse groups; need stronger social services and support for the disadvantaged</i>			
Social and Cultural	<b>Community outreach</b> <i>More community outreach from organizations</i>		x	
	<b>Support for cultural integration</b> <i>Increase support for adjusting to new culture while being able to keep culture from background and ethnic group</i>			x
Governance	<b>Stricter property codes</b> <i>Stricter property codes and enforcement of those codes so neighboring properties are not negatively affected</i>			x
	<b>Continuous improvement</b> <i>Community needs to continue to grow and stay vital</i>	x		
	<b>Self-reliance</b> <i>City needs to be self-reliant, cannot depend on state or federal level for resources</i>	x		
	<b>Ability to adapt</b> <i>Adapt to decreased funding while meeting community needs</i>		x	
	<b>Balancing interests and uses</b> <i>Balancing different land uses and interests in the area when planning for infrastructure; maintaining public benefit of natural resources while protecting them</i>	x		
	<b>Prioritizing issues</b> <i>Community has too many issues to address, therefore needs to prioritize issues</i>	x		
	<b>Improved planning</b> <i>Planning in the past did not consider natural resources; need to change approach</i>	x		
<b>Total themes</b>		16	11	11

\*Participant stakeholder group affiliation (FD: formal decision makers, ANMCM: active non-minority community members, AMCM: active minority community members); an “x” indicates at least one participant in the stakeholder group identified the theme.

Table 3. Strategies for enhancing community capacity for water resource protection and restoration as identified by participants

<b>Strategies</b>	<b>Tactics</b> <i>Descriptors</i>	<b>FD*</b>	<b>ANMCM</b>	<b>AMCM</b>
<b>Capital Building Strategies and Tactics</b>		<b>FD*</b>	<b>ANMCM</b>	<b>AMCM</b>
Address capital constraints	<b>Offer transportation</b> <i>Provide transportation for community members</i>			X
<b>Member Capacity-Building Strategies and Tactics</b>		<b>FD*</b>	<b>ANMCM</b>	<b>AMCM</b>
Enhance understanding of water resources	<b>Raise awareness</b> <i>Raise community member awareness of water resource problems; raise awareness of impacts of human actions on the creek; raise awareness of consequences of not having water</i>	X	X	X
	<b>Increase knowledge</b> <i>Inform community members about water resource issues and opportunities to be part of the solution; communicate through media and public meetings</i>	X	X	X
Strengthen connections to water resources	<b>Make issues relevant</b> <i>Relate water resource issues to quality of life, health and economy; find community member's personal relevance to water resource issues; explain issues in layperson terms</i>	X	X	X
	<b>Connect people to the creek</b> <i>Identify community's connection to the creek and encourage more recreational use of the creek</i>	X	X	
Support action	<b>Engage community members through meetings and projects</b> <i>Encourage civic engagement through meetings and organizations; get people involved in current projects</i>	X	X	
	<b>Change behavior one action at a time</b> <i>Encourage small incremental actions and personal behavioral change that make a difference</i>	X		
	<b>Empower community members</b> <i>Create sense of empowerment among community members through ownership and accomplishment</i>			X
	<b>Establish community member support for programs</b> <i>Facilitate civic support (e.g., political, financial, volunteerism) for programs and actions</i>	X	X	

Relational Capacity-Building Strategies and Tactics		FD*	ANMCM	AMCM
Strengthen relationships	<b>Improve existing relationships</b> <i>Improve coordination and trust between organizations; use existing network of neighborhoods to improve formal relationships</i>	X	X	
	<b>Create partnerships between existing organizations</b> <i>Form partnerships with other community organizations, engage minority-led organizations</i>	X	X	X
Facilitate cross-cultural understanding	<b>Gather diverse perspectives</b> <i>Set up a process to gather diverse perspectives</i>		X	
	<b>Foster cultural understanding</b> <i>Build understanding of minority culture by forming relationships; know that this process takes time</i>		X	X
Organizational Capacity-Building Strategies and Tactics		FD*	ANMCM	AMCM
Develop leaders and organizations	<b>Develop organizations in water protection and community engagement</b> <i>Use existing organizations and create new ones</i>	X		
	<b>Develop leaders in water protection and community engagement</b> <i>Identify key community and minority leaders using informal networks (e.g. word of mouth); engage these and other leaders in water resource issues and advocacy</i>		X	X
Programmatic Capacity-Building Strategies and Tactics		FD*	ANMCM	AMCM
Tailor communication programs	<b>Employ social marketing tools</b> <i>Use tools such as social marketing to effectively communicate with diverse audiences</i>	X		
	<b>Provide opportunities for public input</b> <i>Allow stakeholders to voice their concerns</i>	X		
	<b>Communicate successes</b> <i>Demonstrate the positive impacts and social benefits of water resource protection</i>		X	
	<b>Develop multi-media campaigns</b> <i>Raise community member awareness of water resource issues through newsletters, websites, signage, petition, and electronic media</i>		X	X
	<b>Use peer-to-peer networking</b> <i>Support dialogue through one-to-one and small group meetings, word-of-mouth and by going door-to-door</i>		X	X



Programmatic Capacity-Building Strategies and Tactics		FD*	ANMCM	AMCM
Tailor communication programs	<b>Address language barriers</b> <i>Address language barrier by employing people who speak same language as minority residents</i>			X
	<b>Understand community concerns</b> <i>Find out what most concerns the community</i>			X
	<b>Host culturally relevant and family friendly events</b> <i>Events should highlight culturally relevant entertainment and activities for children</i>			X
Establish and communicate goals	<b>Goal setting</b> <i>Set targets for environmental services; plan and redevelop to correct past mistakes; planning from experts to meet needs; set long-term, larger scale priorities across organizations</i>	X		X
	<b>Communication of goals</b> <i>Clearly communicate project goals</i>	X		
Set regulations and help residents and landowners comply	<b>Set environmental regulations</b> <i>Set regulations and codes to protect water resources</i>			X
	<b>Provide information about compliance</b> <i>Provide community members with information on how to comply with regulations</i>			X
	<b>Enforcement</b> <i>Enforce regulations</i>			X
Trust Building Strategies and Tactics		FD*	ANMCM	AMCM
Build trust in minority communities	<b>Build trust with new immigrant community</b> <i>Gain trust of immigrant community using personal connections and informal networks</i>		X	
	<b>Build trust through minority leaders</b> <i>Gain trust of minority community through trusted and respected minority leaders</i>			X
	<b>Build trust through cultural understanding</b> <i>Gain trust by demonstrating understanding of minority culture</i>			X
	<b>Build legitimacy through existing institutions</b> <i>Using existing institutions like places of worship and community centers to build legitimacy</i>			X

\*Participant stakeholder group affiliation (FD: formal decision makers, ANMCM: active non-minority community members, AMCM: active minority community members); an “x” indicates at least one participant in the stakeholder group identified the theme.