Strategizing agency and community partnerships:  
A case study of an urban fishing program

by

Angie Carter

A thesis submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

MASTER OF SCIENCE

Co-Majors: Rural Sociology; Sustainable Agriculture

Program of Study Committee:
Lois Wright Morton, Co-Major Professor
Rebecca Christoffel, Co-Major Professor
Robert Mazur

Iowa State University

Ames, Iowa

2012

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ABSTRACT

The co-management of urban natural resources presents a new landscape for natural resource managers as they work with community and civic partners in the urban landscape. Through urban co-management, partners new to working together collaborate to address natural resource problems that they may not otherwise be able to manage on their own. The shift from a traditional, prescriptive model of natural resource management to one incorporating community engagement requires the management of social capital in addition to environmental goals. In this thesis, I analyze the role of social capital using an inductive case study of state and municipal agencies’ engagement in a beginning co-management partnership. Social capital is defined as the function of social relationships at both individual and network levels. Co-management is described as an approach to natural resource management in which diverse stakeholders share responsibilities, goals, and decisions. In their work together, these diverse stakeholders may build capacity for further collaboration and success through the creation of social capital throughout the co-management process. What makes the co-management successful is dependent upon the unique situation of the natural resource in question as well as the nature and evolution of the partnerships. Managers and partners can use social planning to address environmental problems collaboratively through a process specific to their own situation.

This case study analyzes a new collaboration among government and community stakeholders in which the government agencies hoped to increase urban residents’ understanding of the function and health of their watershed through the creation of new recreational opportunities, thereby improving water quality. The case study findings reveal that emphasizing a process-oriented approach to the planning and evaluation of co-management is central to the building of social capital within a new co-management partnership. Additionally, the case study findings suggest that prioritizing social capital’s development within the process of co-management may help partners as they plan and evaluate their program process. From this analysis, two tools have been created to assist co-management partners in the planning of their program. This case study will inform the guidance of future urban fishing programs and be of use to others studying co-management of natural resources through a recreational program initiative.
The thesis is structured as three papers. The first paper (chapter two) presents a synthesis of urban fishing program components and the need for improved evaluation and partnership-building as understood from a co-management approach. The second paper (chapter three) analyzes the role of social capital and trust within a new partnership between agencies as they begin a pilot urban fishing program initiative. The third paper (chapter four) analyzes the potential social capital of watershed resident stakeholders as the urban fishing program partners plan site selection through a social planning framework.
CHAPTER 1. CHOOSING A LURE: NATURAL RESOURCE MANAGEMENT AND PARTNERSHIPS

Introduction

Natural resource managers face an array of challenges in their work: decreased funding for resource management, changing demographics as the population shifts from rural to urban areas, and increased impairment of natural resources through human influence and extreme weather events. Partnerships are increasingly important to natural resource managers as they face these challenges (Natcher et al. 2005; Leach et al. 2002; Barber and Taylor 2000; Wondolleck and Yaffee 2000) and as they shift from a top-down approach to a collaborative one engaging diverse stakeholders in the management process (Carlsson and Berkes 2005; Koontz et al 2004, Plummer and FitzGibbon 2004). In addition to making biological improvements to meet environmental goals, collaborative natural resource management integrates social outcomes throughout the natural resource management process through increased social capital. Natural resource management partnerships offer an opportunity for increased trust and collaboration among government agencies and between government agencies and residents; however, the maintenance and management of the social relationships central to these collaborations may be new to natural resource managers (Wondolleck and Yaffee 2000). The management of these social relationships is particularly important to government agencies and community groups new to working together as they begin the shared management of urban natural resources.

Co-management is defined as a combination of local-level and state-level systems (Berkes, George, and Preston 1991) sharing the management of natural resources among government agencies and community stakeholders (Plummer and FitzGibbon 2004). Partnerships emerge through this collaborative approach (Berkes 2009). Co-management presents a continuum of collaboration from exchanges of information to governance, and the social relationships involved may evolve simultaneously both over time (Carlsson and Berkes 2005) and through increased collaboration (Wondolleck and Yaffee 2000). I use social capital as the theoretical framework through which to better understand the emergence of co-management partnerships, the evolution of their collaboration, and their potential. Social capital exists in social relationships and networks that form across similar and dissimilar individuals and groups (Robison and Flora 2003; Pretty 2003; Coleman 1990). Social capital is both an input and an outcome from collaborative processes (Wagner and Fernandez-Gimenez 2008) and is central to the co-
management process. Like co-management, social capital is defined by its function rather than its output and makes possible what would not otherwise be exist in its absence (Carlsson and Berkes 2005; Coleman 1990). Social planning is an approach used to leverage social capital through a community-oriented planning process (Weil 2005, Rothman 1995).

This case study analyzes the role of social capital within an emerging co-management program partnership among two government agencies and community residents in Des Moines, Iowa. Collaboration success stories are valuable to program managers, but collaboration is a process rather than an end-point (Wondolleck and Yaffee 2000) and analysis of the beginnings and stages of this process are missing from the literature. An “idealized narrative” of co-management exists (Conley and Moote 2003) in which co-management is viewed as a panacea (Carlsson and Berkes 2005). Similarly, within social capital literature, social capital is usually discussed in terms of its benefits rather than the negative impacts it may have within social networks (Portes 1998). The social capital embedded within these relationships among individuals, organizations, or agencies may not all be beneficial (Lin 1999). The following chapters analyze how new partners navigate the opportunities and challenges within a new natural resource collaboration, highlighting the difficult stages of the process as well as the potential for growth, thus offering more context to the success stories highlighted in much of co-management literature. Co-management, social capital, and planning are used to analyze this new partnership and its focus upon urban water quality improvements.

**Co-management and partnerships**

Since the 1990s, government agencies have faced funding constraints within their natural resource management (Plummer and FitzGibbon 2004). These constraints, combined with changing demographics as urban populations grow and rural populations decline, have inspired interest groups to challenge agency legitimacy (Wondolleck and Yafee 2000). In response to these changes, natural resource agencies at local, state, and federal levels have reoriented their traditional top-down management to incorporate more collaborative approaches, including partnerships, in an effort to more effectively address environmental problems (Koontz et al. 2004). An example of this shift is the implementation of co-management of natural resources, a new approach for many agencies (Plummer and FitzGibbon 2004). Pretty (2003) found “some 0.4 to 0.5 million groups have been established since the early 1990s for watershed, forest, irrigation, pest, wildlife, fishery, and microfinance management. These offer a route to
sustainable management and governance of common resources” (p. 1912). Co-management partnerships may be increasing; however, social capital is understudied in natural resource collaborations (Wagner and Fernandez-Gimenez 2008) and the literature lacks analysis of how these partnerships form and are maintained (Carlsson and Berkes 2005; Natcher et al. 2005).

These collaborative efforts are referred to by a variety of names within natural resource management literature, including collective resource management (Pretty 2003) and collaborative resource management (Wondolleck and Yafee 2000), among others. The literature recognizes that these efforts share a common focus—the collaboration among diverse stakeholders working together to create environmental improvements through natural resource management (Carlsson and Berkes 2005; Koontz et al. 2004; Pretty 2003; Wondolleck and Yafee 2000). Carlsson and Berkes (2005) describe co-management as the partnership networks that form as stakeholders share decision-making and responsibility for natural resource management while building trust, solving problems, and learning together through the resource management. Carlsson and Berkes (2005) further define co-management as “a continuous problem-solving process, rather than a fixed state, involving extensive deliberation, negotiation and joint learning within problem-solving networks” and suggest that co-management research should focus on the function of different management tasks rather than the structure of the system (p. 65). In this analysis, the term “co-management” will be used to describe these collaborations.

Partnerships are the foundation of the co-management process (Plummer and FitzGibbon 2004). Natural resource management often requires partners to manage what neither could manage successfully alone: “Local users alone can hardly manage most natural resources in the complex contemporary world. At the same time, we have overwhelming evidence that centralized management of local resources is problematic” (Carlsson and Berkes 2005:71). The partnerships involved in the co-management of natural resources consist of those engaged in the relationships between and among government agencies and community users (Plummer and FitzGibbon 2004) who agree to share decision-making responsibility throughout the collaboration (Arnstein 1969). While collaboration may be defined in as many ways as there are partnerships, Selin and Chavez (1995) define collaboration as an “emerging process […] between natural resource management agencies and other resource stakeholders [that evolves] in response to a host of internal and external factors” (p. 190). In addition to being emergent, these partnerships exist within a continuum from information-sharing to collaborative governance
Co-management requires increased focus upon the social relationships involved because it is not prescriptive; rather it emerges through knowledge and understanding of the diverse stakeholders who take part in the process (Natcher et al. 2005). The emergence and evolution of co-management allows managers and stakeholders to create a model that suits their resource and community best. This process can be described using the sociological principles of social capital and trust.

**Social capital and trust**

The formation of co-management partnerships relies upon the trust and social capital built over a long period of time (Koontz et al. 2004; Carlsson and Berkes 2005). The role of trust and social capital become increasingly important in this dynamic process (Carlsson and Berkes 2005), but are understudied (Wagner and Fernandez-Gimenez 2008). A process-based approach to the management of natural resources, including the management of the social capital and trust this management incorporates, strengthens the collaboration (Laurian 2009). This analysis will draw upon Coleman’s (1990) definition of social capital:

> Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of a social structure, and they facilitate certain actions of individuals who are within the structure. Like other forms of capital, social capital is productive, making possible the achievement of certain ends that would not be attainable in its absence. Like physical capital and human capital, social capital is not completely fungible, but is fungible with respect to specific activities. A given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others. Unlike other forms of capital, social capital inheres in the structure of relations between persons and among persons. It is lodged neither in individuals nor in physical implements of production. (P. 302)

These relationships and network ties embody the social capital that contributes to successful co-management: “Social capital, in turn, is created when the relations among persons change in ways that facilitate action […] it is embodied in the relations among persons” (Coleman 1990:304). “Social capital exists in relationships” (Robison and Flora 2003:1189) and co-management involves relationships among agency and community partners who may be new to working together.

Trust is a form of social capital (Coleman 1990) that is a precondition for successful planning in collaborative processes because it facilitates cooperation while increasing the likelihood of stakeholders’ participation in the process (Laurian 2009) and increases the efficiency of partners’ work (Pretty 2003). Trust is often the key success indicator in co-management, serving as a foundation for successful partnerships (Carlsson and Berkes 2005).
Trust positively influences those engaged in collaborative process and decision-making (Hosmer 1995; Dirks and De Cremer 2011) but is multi-layered within inter-organizational partnerships existing among individuals and within the partner organization (Zaheer et al. 1998). Additionally, trust lessens the negative influence of inevitable conflicts arising throughout the process of co-management. When co-management partners trust one another, they disagree without sabotaging their collaborative process (Wagner and Fernandez-Gimenez 2008), although this trust requires time to build and is fragile (Pretty 2003; Wondollock and Yaffee 2000). Trust and social capital evolve over time in the formation of co-management partnerships (Carlsson and Berkes 2005), but they also can depreciate over time: “Social relationships die out if not maintained; expectations and obligations wither over time; and norms depend on regular communication” (Coleman 1990:321). The role of partners within management of social capital and trust is important because they can strengthen or deter individual and organizational relationships (Koontz et al 2004).

The social outcomes of community partnerships include increased social capital as different stakeholder groups increase contact, communication, and trust through knowledge-sharing and collective problem-solving (Koontz et al. 2004). Pretty (2003) further describes types of social capital in terms of bonding, bridging, or linking relationships:

Bonding social capital describes the links between people with similar objectives and is manifested in local groups, such as guilds, mutual-aid societies, sports clubs, and mothers’ groups. Bridging describes the capacity of such groups to make links with others that may have different views, and linking describes the ability of groups to engage with external agencies, either to influence their policies or to draw useful resources. (P. 1913)

Berkes (2009) discusses the continuum of co-management as consisting of exchange, joint, nested, or network systems, which may or may not evolve into governance structures. As bridging, bonding, and linking social capital form within these partnerships, “people have the confidence to invest in collective activities, knowing that others will also do so” (Pretty 2003:1913). Through these interactions, social capital evolves among individuals and organizations, creating capacity for collaboration. Further, these relationships among individuals and organizations may evolve into collective social capital or civicness (Portes 2000). As stakeholders continue to collaborate and build trust through their collaboration, their social capital evolves from individual relationships to larger civic structures:

Public social capital is the transition point from micro to macro scale, from personal networks to community-wide networks. When these connections occur in a “public” group setting but
benefits are restricted to members of the group, social capital retains its micro personal resource meaning. However, when benefits accrue beyond individuals and their personal groups to the larger community, a macro scale of relationships evolves. (Morton 2003:104)

Social capital provides a means for understanding how these co-management partnerships evolve along the continuum from individual relationships to networks and organizations, and, potentially, to larger civic structures.

**Planning co-management partnerships**

The co-management of natural resources inspires partnerships as stakeholders share goals, power, and responsibility while building trust, solving problems, and learning together through the management of a natural resource (Carlsson and Berkes 2005). Partnerships are increasingly important to natural resource management (Natcher et al. 2005; Leach et al. 2002; Barber and Taylor 2000; Wondolleck and Yaffee 2000) and are essential as “local users alone can hardly manage most natural resources in the complex contemporary world” (Carlsson and Berkes 2005:71). However, the lack of literature analyzing how these partnerships are formed and maintained is a “theoretical oversight” (Carlsson and Berkes 2005) that is “surprising given the considerable multidisciplinary interest afforded to these arrangements over the past 30 years” (Natcher et al. 2005:240).

If co-management describes the process of collaboration rather than its end-point (Berkes 2009; Carlsson and Berkes 2005; Wondolleck and Yaffee 2000), then further study of how to develop these partnerships is needed. In their study of ten years of co-management case studies, Wondollek and Yaffee (2000) stress the need for evaluation methods that fit the evolutionary nature of collaborative process rather than forcing this process into specific outcomes. Instead of adopting a top-down method or formula for success, co-management and collaborative natural resource management literature stresses the need for place-based and stakeholder-oriented evaluation methods (Patton 1996, Conley and Moote 2003). The process of program evaluation may inform or refine program goals (Patton 1996). Evaluating successful partnerships requires multiple measures to match the multiple goals of diverse stakeholders (Leach et al. 2002). This is an iterative process, incorporating new stakeholder perspectives, opportunities, and challenges as they emerge. An iterative process facilitates the emergence of insights, questions, and issues that may shape the future course of action (Horton et al. 2003). Through evaluation, co-management
partners might strategically plan the evolution and expansion of their programs to engage community stakeholders through social planning.

Rothman (1995) and Weil (2005, 1996) define social planning as a process by which the community is engaged in collective problem-solving to address social change. Weil’s (1996) discussion of social planning as a route to mitigate the impact of funding and staffing cuts to government social program is similar to the discussion of the rise of co-management within natural resource literature. She cautions that increased participation at the community level may strengthen a program but does not ensure that the community participation is equitable. Planning may assist co-management partners in developing programs that are more effective because they are community-appropriate and community-specific, integrating the community’s needs and knowledge within the co-management process.

Case study background

The purpose of this case study is to document stakeholder involvement and program development of a pilot urban fishing program in Des Moines, Iowa from 2010-2012. These data provide a foundation from which to analyze partnership formation between and among agencies, community organizations, and residents. Additionally, we analyze the impacts and process in order to strategize program approaches for existing and future collaborations. Using data from key stakeholder interviews and resident focus groups, we analyze the sociological concepts of social capital and trust in relation to planning the development of the co-management partnership. Through this analysis, the case study will offer a framework and tools for agencies involved in programs incorporating partnerships within program planning or natural resource management.

Primary stakeholders were the Iowa Department of Natural Resources (IDNR) and the City of Des Moines Parks and Recreation Department (City). The IDNR and City began discussion about an urban fishing program in 2009. Additional stakeholders include the Natural Resource Conservation Service (NRCS), Polk County Soil and Water Conservation District (PCSWCD), Polk County Conservation Board, and various community and neighborhood groups within Des Moines, Iowa metro area. While this case study focuses on the Des Moines urban fishing program pilot project, it will also be a useful resource for state agencies and city government collaborating on projects in which community ownership and stakeholder participation is central to project success. The IDNR plans to use the case study to inform their
collaboration with the City. Thus, the IDNR expects to use this case study to define guidelines for the development of urban fishing initiatives in urban areas across Iowa. Iowa State University (ISU) will complete a final report of the case study and provide this to the IDNR upon completion of the project.

Case study sites

Iowa does not currently have a formal statewide urban fishing program, though the IDNR does manage urban fishing opportunities throughout the state in collaboration with county or city governments such as trout stocking at Ada Hayden Heritage Park in Ames, Iowa or the stocking of fish at Polk County’s Fort Des Moines Park. Since 2009, the IDNR has funded a summer part-time staff member to assist in the coordination of summer fishing clinics through the City of Des Moines Parks and Recreation department. In 2010, talks began about creating an urban fishing program beyond summer fishing clinics that would improve urban fisheries within the City. Also in 2010, ISU and IDNR, in conjunction with the City and Polk County Soil and Water Conservation District (PCSWCD), evaluated the sustainability of Des Moines park ponds and lakes in terms of biological, chemical, and physical criteria. They prioritized four urban pond sites (Figure 1.1) within Des Moines for potential urban fishing program development: Greenwood Park Pond, Mac Rae Park Pond, Witmer Park Pond, and Tai Dam community pond. This case study focuses on the potential for an urban fishing initiative at these four urban park ponds in Des Moines, Iowa.
Research questions

The Des Moines pilot urban fishing program presents a partnership between a state agency and municipalities in Iowa that is new for agency and municipality staff, as well as urban residents. These stakeholder groups envision common components and goals, but do not have a program model or roadmap to help them strategize how to create these components or reach these goals. Current urban fishing programs in other states offer models of success, yet the sustainability of these models has been challenged with budget and staffing cuts in recent years. The majority of literature about program partnerships focuses upon fiscal or contractual partnerships rather than offering managers tools for creating, managing, or evaluating the increased stewardship or social relationships these programs may inspire and build in communities.

My research questions evolved through initial conversations with agency stakeholders prior to the start of the case study and a thorough review of the existing literature about urban fishing programs and urban outdoor education initiatives. Based on these initial conversations, I chose the theory of social capital (Pretty 2003; Coleman 1990) as a framework for analysis of the creation and influence of partnerships in this new natural resource management partnership emerging through the urban fishing program initiative. The focus of this case study is upon partnerships because these were identified as a key component to existing programs—either they strengthened programs or their absence weakened programs—and the development of partnerships has been a challenge in the evolution of the Des Moines urban fishing program. Urban fishing managers may be able to identify that they have a strong partner, or that their program is successful because of the partnerships involved, but may not be able to identify or evaluate the role of these partnerships to their program’s success.

The following questions framed the inductive approach of the case study: 1) What existing and potential partnerships might be key to this program’s development? 2) How do these partnerships form and evolve? 3) What opportunities or capacities might these partnerships build within urban communities as they engage in public health, urban food sources, watershed improvement, or ecological awareness initiatives? 4) What are the barriers these partnerships may encounter within the community or city and state level agencies? 5) If partnerships are one measurement of success, how does one identify the strength and potential of these partnerships? All questions identify gaps in information needed for a successful urban fishing program and
provide context and background understanding for stakeholders. Questions 1 and 4 identify success indicators that can be used in program planning and assessment. Questions 1, 2, 4, and 5 identify potential for partnership building and opportunities for future knowledge sharing.

**Methodology**

Exploratory findings from a pilot urban fishing program in Des Moines, Iowa are presented using the case study method. The case study is an appropriate method of research in order to “retain the holistic and meaningful characteristics of real-life events—such as individual life cycles, small group behavior, organizational and managerial processes, neighborhood change” (Yin 2009). The new partnership between two government entities—the City and the IDNR—presents an opportunity to analyze the life-cycle of the urban fishing program, the attitudes of the neighborhood and organizational stakeholder groups within Des Moines, and the impact of the potential program within these institutions, organizations, and neighborhoods. A mixed-methods approach including participant observation, interviews, focus groups, analyses of a pre-existing survey and available archival data was used.

This case study includes focus groups with community members and semi-structured interviews with key stakeholders (Table 1.1). The IDNR and City suggested contacts within their own and related organizations for interview and focus group participation. Interview and focus group participants were selected using purposive snowball sampling, a method by which initial interview participants identify others, creating a chain of participants (Coleman 1959). Through purposive snowball sampling, initial contacts identified other stakeholder participants who have already invested social capital in the urban fishing program initiative. I first interviewed those staff from the IDNR who led the urban fishing program initiative in Des Moines. Through these interviews, additional interview participants were identified who were involved in the project development or whose perspective offered further insight about the future and scope of the collaboration. Resident focus groups consisted of four focus groups composed of neighborhood residents from the four prioritized urban park pond watersheds as well as residents from those neighborhoods immediately surrounding the park. Additionally, a fifth focus group comprised of community organization representatives who were interested in the urban fishing program as it related to their agency or group’s city-wide youth or environmental education programming provided data concerning opportunities for the expansion of social capital beyond the neighborhoods’ borders. Individuals contacted for interviews included those whose roles within
or in relation to the IDNR and City were identified as key to the program’s success. The IDNR staff involved in the project also suggested names of urban fishing program managers whose work was featured in the 2007 American Fisheries Society’s Urban and Community Fishing Program Symposium (Eades and American Fisheries Society 2008). Inclusion of these interviews with urban fisheries managers from outside the state of Iowa strengthens the case study’s external validity. Additionally, these interviews with urban fisheries managers outside the state were analyzed in relation to interviews with Des Moines City staff and IDNR staff to ensure construct validity.

Semi-structured interview and focus group guides (Robson 2002) were used and incorporated open-ended questions focusing on five themes: interviewee’s role, program structure, challenges, opportunities, and lessons learned (Appendix C and Appendix D). Research design and instruments were reviewed by the Iowa State University Institutional Review Board (ISU IRB) to protect participants and assure confidentiality. Interviews and focus group discussions were recorded, transcribed, and then analyzed using Nvivo 9 qualitative data management software (QSR International Pty Ltd. Version 9, 2010) to identify recurring themes and patterns in the data using open, axial, and selective coding. I analyzed data to find patterns and emergent themes from the interview and focus group data using an inductive approach based on grounded theory (Corbin and Strauss 2008; Charmaz 2007). Focus group participants completed a short questionnaire about park use, environmental awareness, and neighborhood involvement, as well as demographic information, prior to the start of the meeting (Appendix E). Focus group participant questionnaires were analyzed by hand to identify recurring themes and patterns in demographic data such as how long residents have lived in the neighborhood, if they rent or own their homes, their age groups, and how often and how they use the park. The research team coded data independently and then compared and reconciled their analyses to ensure intercoder reliability.
<table>
<thead>
<tr>
<th>Purpose</th>
<th>Learn opportunities/barriers within communities</th>
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<td>Sampling</td>
<td>Purposive Snowball Sampling</td>
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Participants for interviews or focus groups were contacted by phone or email and, if interested, requested to suggest a 45 minute time during the business day that would be convenient for them to meet with me at their office. In interviews and focus groups, I reviewed the consent forms (Appendix A and B) with participants based on ISU IRB protocols prior to their participation in the study. For those interviewed by phone, the consent form was mailed in a confirmation email so that the participant would have the document in hand when we began our conversation by phone. I interviewed six urban fishing program managers from 5 other states and one IDNR staff member by phone because their offices were over a 3-hour drive from Iowa State University. When contacting neighborhood associations or community organizations, I first called the director or chair, and in all cases these contacts said that they would send out an email or make phone calls to others in the group to notify them of the focus group and ask their participation. Additionally, two neighborhood associations posted the focus group on their neighborhood listserv or website. I scheduled focus groups for weekday evenings at a location convenient to the neighborhoods and parks, such as a local church or community center, and offered light refreshments.

Participants in the focus groups were entered into a raffle for one $25 Bass Pro gift card provided by the IDNR per focus group as incentive and a token of appreciation for their participation. Additionally, Bass Pro Shop donated t-shirts and caps to raffle to focus group participants. Participants in each focus group were entered into a raffle for the gift card, t-shirt, and cap and three participants were chosen randomly at the end of each focus group. Interview participants were not entered into the raffle because their participation occurred during work.

Table 1.1 Case study data collection

<table>
<thead>
<tr>
<th>#</th>
<th>Resident focus groups</th>
<th>Key informant interviews with Des Moines urban fishing program stakeholders</th>
<th>Urban fishing program manager interviews from other states</th>
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<td>Notes</td>
<td>5</td>
<td>18</td>
<td>6</td>
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<tr>
<td>Notes</td>
<td>4 with neighborhood residents from the watersheds around the prioritized pond sites; 1 with community members at-large</td>
<td>18 interviews in total with 16 participants, 2 were follow-up interviews</td>
<td>Managers were from 5 states other than Iowa</td>
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hours at their workplace. Participants will be offered a copy of the final case study by downloading it from the Iowa State University Sociology Extension and Wildlife Extension websites upon its completion.

**Thesis organization**

The following chapters are written as three journal articles. Common theoretical themes link the inductive findings based in my five research questions. Table 1.2 outlines the research questions, data collection methods, and theories used in analysis throughout the case study as they relate to individual chapters. Each chapter addresses a different perspective through a combination of the above research questions.

The second chapter (first paper) presents a synthesis of urban fishing program components and the need for improved evaluation and partnership-building as understood from a co-management approach. The challenges presented through co-management of natural resources are not unique to urban fishing programs. Analysis of foundational knowledge in existing literature and interviews with current program managers informs the tools we developed for managers to better strategize and plan programs. These tools may be of use to researchers and practitioners engaged in co-management programs. The lessons learned from the urban fishing program managers, and their acknowledgement of the importance of evaluation in the co-management process, shapes the analysis of partnerships in chapter three.

Chapter three (second paper) analyzes the role of social capital within the emerging collaborative process of the pilot urban fishing program in Des Moines, Iowa. As discussed in chapter two, co-management literature calls for more discussion of evaluation throughout the collaborative process as partnerships form, evolve, and change. This provides adaptability to the partners as they navigate conflict and change. I document and analyze a new collaboration between the two agencies as they begin the program planning process. Both organizations identified water quality improvements as the overarching goal for the program in terms of program impact and program sustainability. Further, they recognized that in order to best direct their efforts, they needed to learn more about the community and neighborhood groups. Differences in agency decision-making process and communication presented challenges to the collaborative process in the urban fishing program initiative and might be used to inform program planning in this case and beyond.
In chapter four (third paper), a social planning framework is used to analyze the potential social capital of watershed resident stakeholders as the urban fishing program partners plan site selection. The agency partners had gathered biological and physical data from the urban park ponds in prioritizing their potential as sustainable fisheries, but needed information about the social landscape of the watersheds surrounding the urban park ponds. Five focus groups provided input from residents about their attitudes towards their neighborhood’s park pond and the potential for increased recreational activity there. While specific to the proposed program sites in Des Moines, the analysis of these focus groups’ questions and ideas will be valuable to others engaged in planning watershed improvements and programs.

Finally, the fifth chapter concludes the thesis and summarizes the findings of the preceding chapters in the context of my initial research questions. Additionally, implications for natural resource managers and next steps for further research are discussed. Hopefully, this will be useful not only to the program partners and stakeholders, but to other state and local agencies attempting new co-management of resources through recreational program initiatives.

The appendices include the consent forms and the interview and focus group guides, as well as a focus group survey, used throughout the case study’s data collection (Appendix A, B, C, D, E). Additionally, the appendices include tools created throughout the process of the case study—a process model (Appendix F), a program partnership template (Appendix G), and two case study reports (the third is due in June 2012) provided to the natural resource agency partner (Appendices H and I).
Table 1.2 Thesis organization

<table>
<thead>
<tr>
<th>Section</th>
<th>Research Questions</th>
<th>Data Analysis</th>
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CHAPTER 2. KEEPING THEM ON THE LINE! EVALUATION’S ROLE IN URBAN FISHING PROGRAMS

This journal article will be submitted to the *North American Journal of Fisheries Management* in March of 2012.

Authors:
Angie L. Carter, Rural Sociology and Sustainable Agriculture, Iowa State University
317B East Hall, Ames, IA 50011
Phone: 515-294-3383
Fax: 515-294-0592
Email: carter@iastate.edu

Rebecca Christoffel, Natural Resource Ecology & Management, Iowa State University
339 Science II, Ames, IA 50011
Phone: 515-294-7429
Fax: 515-294-2995
Email: christof@iastate.edu

Abstract

Urban fishing programs are of increasing importance to fisheries managers as they face the challenges of decreasing angler numbers and funding constraints. These programs have grown in number and diversity; however, the literature lacks a holistic program evaluation process that includes a comprehensive synopsis of program components necessary for a successful and sustainable urban fishing program. Co-management of natural resource management programs offers an opportunity to engage program partners—the organizations, agencies, and community stakeholders—in proactive evaluation of program process. We reviewed existing urban fisheries program literature and interviewed urban fisheries program managers to gain insights and to synthesize available information regarding success indicators in new or existing programs. Our review identified the need for further investigation of evaluation
beyond license sales, event attendance, or fish stocked. Integrating evaluation at each stage of the program management process is important to building and maintaining the organizational and community partnerships on which urban fishing and many other programs are dependent. It is also important to evaluate partnerships as both a foundation and a result of program management. Missing analysis of evaluation represents a systemic challenge that is not specific to urban fishing programs, but also exists in resilience, development, and natural resource literature. We address this gap by presenting a template to evaluate and strategize partnerships as part of an existing process model that can be used to engage evaluation throughout a program’s life cycle. Because each urban fishing program exists within a unique geographic area, organizational structure, and social dynamic, we present a template that can be used to strategize the often multi-layered relationships among program stakeholders, staff, and components.

**Urban fishing programs and co-management**

The first urban fishing programs piloted by the U.S. Bureau of Sport Fisheries and Wildlife in the late 1960s aimed to increase recreational opportunities in proximity to low-income and inner-city areas in order to mitigate racial tension (Meneau 2008; Pape and Eades 2008). The program philosophy of urban fishing programs shifted in the late 1970s, as the “social relevance” of these programs was prioritized within agencies (Hunt et al. 2008:179). This social relevance included outreach to new anglers and partners, and required agencies to collaborate with diverse stakeholders to improve urban waters, create habitat, engage residents, and create programs (Hunt et al. 2008). Urban fishing programs are not alone in this increased reliance upon collaboration for program implementation. Since the 1990s, natural resource management has faced challenges presented by government agencies’ budget constraints (Plummer and FitzGibbon 2004), growing urban populations, and interests groups’ questions of agency legitimacy (Wondolleck and Yafee 2000). In response to these challenges, natural resource agencies at local, state, and federal levels are shifting their traditional top-down management to incorporate more collaborative approaches, including partnerships, as they try to more effectively address environmental problems (Koontz et al. 2004). This presents a challenge to urban fishing program and other natural resource managers because the social relationships
that emerge through the partnership process often require more management than the natural resource itself (Natcher, Davis, and Hickey 2005).

Carlsson and Berkes (2005) use the term “co-management” to define this process in which partners and stakeholders share goals, power, and responsibility for natural resource management while building trust, solving problems, and learning together through the resource management. Further, the authors describe co-management as “a continuous problem-solving process, rather than a fixed state, involving extensive deliberation, negotiation and joint learning within problem-solving networks” and suggest that co-management research should focus on the function of different management tasks rather than the structure of the system (Carlsson and Berkes 2005:65). The sociological theory of social capital is central to this process and describes how these partnerships “come about.” This analysis will use Coleman’s (1990) definition of social capital as it pertains to the social relevance and outcomes of urban fishing programs:

Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of a social structure, and they facilitate certain actions of individuals who are within the structure. […] Unlike other forms of capital, social capital inheres in the structure of relations between persons and among persons. It is lodged neither in individuals nor in physical implements of production. (P. 302)

The social outcomes of community partnerships include increased social capital as different stakeholder groups increase contact, communication, and trust through knowledge-sharing and collective problem-solving (Koontz et al. 2004). Pretty (2003) further describes these types of relations in terms of bonding, bridging, and linking social capital:

Bonding social capital describes the links between people with similar objectives and is manifested in local groups, such as guilds, mutual-aid societies, sports clubs, and mothers’ groups. Bridging describes the capacity of such groups to make links with others that may have different views, and linking describes the ability of groups to engage with external agencies, either to influence their policies or to draw useful resources. (P.1913)

As bridging, bonding, and linking social capital form within these partnerships, “people have the confidence to invest in collective activities, knowing that others will also do so” (Pretty 2003:1913). The prioritization of urban fishing programs’ social relevance (Hunt et al. 2008) emphasizes the importance of these relationships and network ties, or social capital, that contribute to successful co-management.

Given the variety of urban fishing program models that have emerged during the now greater than 40-year history of designated urban fishing programs (Allen and American Fisheries
Society 1984), identification of shared success indicators among diverse programs may help guide and inform managers as they shape their urban fishing programs to address the unique opportunities and barriers presented through geographic location and targeted populations. Existing literature outlines commonalities among program models, opportunities, and challenges to program implementation (Allen and American Fisheries Society 1984, Eades and American Fisheries Society 2008). Identifying these and managing for them are measures of a successful program, but the relationships among the components and a standardized method of evaluation have not been explored fully in existing program literature. Despite the growth of urban fishing programs and activities since the 1990s (Hunt et al. 2008), the literature lacks an analysis of evaluation tools that play important parts in the development, longevity and benefits derived from the program, not only in terms of catch per unit effort, but also in respect to watershed management, partnership development, and other program facets. Without this knowledge, managers are hard-pressed to develop programs that have a high likelihood of sustainability and that are able to demonstrate outcomes associated with their program, and thus, justification for their continuation.

Most urban fishing literature examines specific programs or elements of such programs using single case studies (Eades and American Fisheries Society 2008). Evaluating success of urban fishing programs is important to their evolution and integration within city and state programs (Ballard 2008), though evaluation, while essential to a program’s future, is too often undervalued or inconsistent (Ballard 2008; Neal and Eades 2008). The increasing importance of partnerships to natural resource management (Leach, Pelkey, and Sabatier 2002) is evident in urban fishing program literature (Freudenberg and Arlinghaus 2008; Penne and Cushing 2008; Sweatman et al. 2008), yet the literature lacks discussion of evaluation’s role in collaborations. This is a significant gap because as partnership importance increases, failed or conflicted collaborations present high costs in terms of staff time, funding, and social capital (Conley and Moote 2003). The integration of evaluation within these partnerships may be influential to the success and sustainability of these programs. Evaluation of partners’ roles within a program and including stakeholders in the process of evaluation has been important to successful collaborative natural resource program outcomes (Wondollek and Yaffee 2000) because “social relationships
or interactions [are] inherent in every characteristic associated with co-management” (Plummer and FitzGibbon 2004:882).

A lack of literature focusing on the analysis of evaluation and its impact is not unique to urban fishing programs. The norm in natural resource agencies has been to initiate evaluation when there is a crisis or pressure (Wallace et al. 1994), yet evaluation may also be used as a proactive means to strengthen program collaboration. The relationship between partnership and natural resource outcomes is understudied, though Wagner and Fernandez-Gimenez (2008) offer insight into the connection between social capital and the strength of partnerships. The relationship between empowerment and outcomes has also been identified as needed within development literature (Alsop, Bertelsen, Holland 2005), suggesting that measuring the engagement of partners and community stakeholders in long-term outcomes is a systemic challenge across disciplines. Discussion of the need for increased study of program evaluation, and the role it plays in strengthening the sustainability of programs, is echoed throughout resilience and natural resource management literature (Wallace, Cortner, and Burke 1994; Bellamy et al. 1999, 2001; Nichols 2002; Plummer and Armitage 2007).

Given these gaps in the literature, this article examines the role of evaluation in terms of partnerships within the urban fishing program management process: What existing and potential partnerships might be key to program development? How do these partnerships form and evolve? What opportunities or capacity might these partnerships build within urban communities as they engage in public health, urban food source, watershed improvement, or ecological awareness initiatives? If partnerships are one measurement of success, how does one identify the strength and potential of these partnerships? We frame our discussion of these questions within the context of program evaluation in keeping with Carlsson and Berkes’ (2005) discussion of co-management as process rather than a fixed state, and suggestion that co-management research should focus on the function rather than the structure of the system.

In this article, we address the role of evaluation within urban fishing program management by synthesizing the components of successful programs and analyzing their function. We propose that the role of evaluation is central to the creation of partnerships in urban fishing programs. Through literature review and interviews with urban fishing program staff, we identify opportunities that evaluation may create in building more productive
partnerships and sustainable programs. To address the need for a cohesive explanation for the success of urban fishing programs, we identify gaps in the knowledge of success indicators and evaluation of such measures, identify factors that increase success among many different types of programs, and provide resources for individuals charged with development, implementation, management, or evaluation of urban fishing programs.

To evaluate, and then to strategize partnerships, we propose two tools that may be used throughout program development, management, and evaluation. The first tool is a template that can be used throughout the program process and for programs at any stage in their life-cycle in order to evaluate, and then to strategize, partnerships. The second tool is a process model to guide the development of new or expanding programs. Our process model presents a useful model to synthesize the often overwhelming web of stakeholders’ priorities, needs, and contributions to assist with evaluation and assessment of partnerships throughout the program life-cycle. Through our review and analysis, we formulate a process-oriented approach needed to empower fisheries managers as they work to create these connections within the urban community and maintain a program that is sustainable (Mueller et al. 2011). We undertook this review to better understand what elements of an urban fishing program are essential for evaluation of long-term success, and how a program manager may increase his or her likelihood of developing and maintaining a successful program.

Research methods

We provide a compilation summary of the American Fisheries Society (AFS) Symposia (1993 and 2007) and additional peer-reviewed literature pertaining to urban fishing program management and compliment this summary with updates from our interview data. This compilation and analysis of emergent themes informs the creation of our template, an evaluation tool that can be used to strategize program partnerships.

Literature review and synthesis

We reviewed co-management literature to learn more about evaluation of shared natural resource management because of the importance of social capital in the development and management of collaboration in urban fishing programs. To examine the extent to which existing urban fishing programs have been evaluated and success indicators have been identified, we
reviewed the existing urban fisheries peer-reviewed literature. In particular, the proceedings from the 1983 and 2007 AFS urban fishing program symposia (Allen and American Fisheries Society 1984, Eades and American Fisheries Society 2008) provide an in-depth overview of existing programs and topics of discussion. These symposia are a comprehensive body of knowledge regarding urban fishing programs because they brought together a diverse group of urban fisheries experts, including more than 150 practitioners from all areas of urban fisheries management, including biologists, researchers, administrators, and aquatic educators, in addition to academic researchers, members of federal and state level agencies, and non-governmental organizations. Insights gained through interviews with urban fishing program managers and staff, as well as a review of current peer-reviewed literature, support the symposia’s findings and add current data to our review. From these sources, we identified commonalities among urban fishing programs and used these as indicators of success and analyze these in our results.

**Interviews with urban fishing program managers**

Interview participants were selected using purposive snowball sampling, a method by which initial interview participants identify others, creating a chain of participants (Coleman 1959). Our initial interview contacts for the case study were fisheries managers and staff in Iowa. They, in turn, recommended program managers and staff in other states for further contact. Additionally, we drew upon the 2007 AFS Urban and Community Fishing Symposium and contacted authors of those articles specifically focusing on success or sustainability of program development and management. As a follow-up to the 2007 AFS Urban and Community Fisheries Programs Symposium, we contacted authors of several case studies to receive updates on existing programs and to ask additional questions. From September 2010 through July 2011, we conducted 11 semi-structured interviews with managers and staff from state agencies whose responsibilities include urban fishing programs. Of these 11 interviews, five were in-person with fisheries managers and staff in Iowa, and six were by telephone with out-of-state managers and staff from five other states. All interviews were recorded and transcribed.

A semi-structured interview guide (Robson 2002) was used and incorporated open-ended questions focusing on five themes: interviewee’s role, program structure, challenges, opportunities, and lessons learned (Appendix A). Using an inductive approach based on grounded theory (Corbin and Strauss 2008; Charmaz 2007), we analyzed data using Nvivo 9.
qualitative data management software (QSR International Pty Ltd. Version 9, 2010) to find patterns and emergent themes from the literature and interviews to illuminate how managers know success when they see it. The success indicators we propose through this research is built upon the themes and experiences shared through review of the literature and interviews and provides a better understanding of existing knowledge and lessons learned to strategize program management.

Results

In their summary of the 2007 American Fisheries Symposium on Urban and Community Fisheries Programs, Neal and Eades (2008) list “create partnerships” (p. 457) as the first of seven steps to a successful program and emphasize the multi-disciplinary and multitude of opportunities for partnership. “Evaluate program” is the seventh and final step, which the authors describe as “perhaps the most overlooked part of a successful program,” but also a process that “can help urban managers develop a resilient program which is responsive to program outcomes and flexible to refinement” (p. 459). While Neal and Eades’ seven steps to a successful program may sound prescriptive, the process is dynamic. The responsiveness of these partnerships and resilience of the program are shaped by the social capital created throughout the partnership creation and management. Steps one through seven, from “create partnerships” to “evaluate program,” represent an iterative process as partners test, refine, and adopt program components to fit within the structure of their program. The process of program management evolves: “once the system under focus has been mapped and its network structure has been analysed, one can evaluate the particular features that can be used to empower people and to reorganize relevant institutions” (Carlsson and Berkes 2005:71). This analysis focuses on the important connections between evaluation and partnership. Through this analysis, we create tools for program managers to use in strategizing their collaborative process.

What is the role of evaluation?

Evaluating success of urban fishing programs is important to their evolution and integration within city and state programs, yet evaluation, while essential to a program’s future, is too often undervalued or inconsistent (Ballard 2008). “Evaluation is an assessment at a point in time, often after the fact, that determines the worth, value, or quality of an activity, project, program, or
policy” (Horton et al. 2003:33), and evaluation of urban fishing programs’ success has taken the approach of focusing on angler or participant numbers. A process-oriented approach to evaluation that incorporates stakeholder perspectives would help program managers in meeting the goal of increased stewardship (Siemer and Knuth 2001). Evaluation that contributes to both the development of the program and the performance of the agency (Horton et al. 2003) may strengthen social capital within and beyond the agency. If the success of urban fishing programs is to reach beyond number of licenses sold, fish stocked and caught, and events held per year, managers must create methods to measure the less calculable yet perhaps more significant components of urban fishing programs—partnerships, impact, longevity. In our interviews, evaluation was a process that managers identified as important:

Yeah, I think any, starting out, getting as much, finding out as much as you can to make sure it’s successful is definitely the way to go. Yeah, because you want to be as successful as possible right from the start. 
*UFP Manager Interview 2011010*

So I would definitely tell people – Plan, filter everything through the plan, evaluate whether it’s going to help you reach your end goal, and last but not least, make sure that you say no to certain things to so you can yes to others. And then in summary, tell them you’re going to do it, do it, and then tell them you did it. 
*UFP Manager Interview 2011012*

Evaluation was also identified as a central component to a resilient program, one that can withstand internal changes and external pressures:

And it really came into play really critically for us these last two years, Angie, when everyone’s going through the recession and cities are looking yet at making some extreme cutbacks in their city budgets. And because we charge them a fee, we’re considered like an outside contractor. And usually when any government entity starts cutting back, they look at cutting their outside contracts first before you starting cutting back personnel. And there’s already been a couple situations now where cities had at one point considered putting their funding of the urban program on the chopping block. And when this information became available to them, it was so compelling and the media would coincidentally get a hold of it, and before you knew it mayors were begging the parks directors – “Don't you dare touch that urban program. That’s one that’s not going away.”
*UFP Manager Interview 20011014*

Most states evaluated program effectiveness in terms of number of anglers and youth served in addition to catch and effort, but few states conducted more thorough analyses required to justify long-term program existence such as the effectiveness of programs in recruiting and retaining anglers or cost/benefit studies (Ballard 2008; Hunt et al. 2008). Existing evaluation research within urban fishing programs literature addresses anglers’ willingness to pay for various management efforts (Mahasuweerachai et al. 2010), success of water quality improvements at fisheries (Eades et al. 2008b), fishing clinics (Richters et al. 2008), or success
of specific species (Schultz and Dodd 2008a, 2008b, 2008c). “Perhaps the most overlooked part of a successful program is evaluation and refinement,” (Neal and Eades 2008:459) and this absence of a clearly-defined framework for evaluation of program success provides an opportunity for future application and research. Availability of avid-anglers and ease of survey method may make on-site and creel surveys cost-effective, but misses important information regarding the very population most urban fishing programs hope to recruit: the potential or lapsed angler and youth. A longer-term or more holistic method of evaluation is needed in managing program success. Particularly in this era of budget restrictions and cuts, evaluation might assist managers to move beyond replication of program components to an in-depth analysis of the multi-layered relationship among program stakeholders, staff, and components.

Barber and Taylor (1990) identified that “fisheries management professionals now believe that they primarily manage people, not fish” (p. 365). Process and logic models might provide means to evaluate and manage these social relationships. Process models (Ballard 2008; Fedler 2001) illustrate program process through stakeholder, goal, objective, and short-, mid-, and long-term outcomes. These models offer a valuable tool for fisheries managers and staff to plan, measure, and evaluate progress of urban fishing programs. A logic model illustrates “a simplified chain of relationships that portrays the logic and assumptions underlying a program or intervention and how it intends to achieve its expected results” (Horton et al. 2003:94). Use of logic models may help urban fisheries directors identify measurable indicators (Ballard 2008).

Fedler’s “Conceptual Model for Program Development and Evaluation in Boating, Fishing and Aquatic Education” (Fedler 2001) is a logic model illustrating a holistic approach to educational program considerations. He recommends “a mixture of evaluation methods should be considered with the most appropriate methods selected for each aspect of the program being evaluated” (p.13). Additionally, he outlines a conceptual map for best practices that requires “an understanding of the outcomes desired from the program, appropriate methods for achieving the outcomes, resources necessary to apply the methods, and the environment and setting in which the program will occur” (p. 6). Strategic planning may enable agencies to extend beyond their traditional internal modes of evaluation to include evaluation that incorporates the complexity of their increasing partnerships (Horton et al. 2003). In this way, managers might build opportunities for partners to provide feedback and share in setting the direction of co-
management programs.

These tools may not solve the challenge many agencies face in evaluating their programs. In her discussion of program evaluations, Ballard (2008) states that the increased emphasis on evaluation conflicts with the amount of training in program evaluation possessed by urban fishing program staff. Conley and Moote (2003) found that within co-management of natural resources, “the most common form of evaluation focuses on whether and how collaborative efforts meet their identified goals and objectives. Goal setting is an important activity in many collaborative efforts, and many identify a range of social, economic, and environmental goals” (p. 377). This poses an additional challenge as managers may struggle with incorporating partners’ goals within the evaluations of collaborative programs:

Managers need new skills to move from the expert opinion role in traditional environmental management to an empowerment role as mediator, catalyst, or broker in the new order. Managers comfortable with the hierarchical decision making of public agencies are finding it difficult to cope with the lateral decisions needed to sustain effective collaboration. (Selin and Chavez 1995:189)

Horton et al. (2003) found that evaluation increases an organization’s capacity to improve performance; however, these efforts must be carefully planned and continuously monitored throughout the process. Each urban fishing program exists within a unique geographic area and social dynamic that influences the emergence of partnerships, but this may be hindered by agencies or organizations sidestepping the process of collaboration in their pursuit of funding (Bidwell and Ryan 2006). Hiring staff whose positions are dedicated to the coordination of the co-management process is one way to manage these challenges, otherwise agencies must rely upon those who value the collaboration management and see it as an added value to the larger organization (Sarason and Lorentz 1998). With the increased hiring freezes and funding constraints faced by many agencies, program managers are tasked with developing these skills or collaborating with partners who may assist in the process.

**What is the role of partnerships?**

The adaptability and flexibility of programs that have remained successful have featured key stakeholders involved in strong partnerships (Sweatman et al 2008; Balsman and Shoup 2008, Schroeder et al. 2008a, 2008b; Penne and Cushing 2008; Walsh et al. 2008; UFP Interviews 20011003, 2011007, 2011010, 2011012, 2011014). Many of those interviewed shared their investment in the partnership-building as an important aspect of the success of their programs,
however not all could specify how or why their urban fishing program became so successful. In other words, they knew they were doing something “right” but were not always able to articulate specific steps or processes they took to create the program’s success:

All I can tell you – my advice if you’re starting something is – Do not start it where you are critical for its maintenance and completion. Get as many people involved in it as possible. You have to do it.

_UFP Interview 2011012_

As echoed by the urban fishing manager in the above quote, successful programs require integration within the community through partnerships and should not be the responsibility of the agency alone. Carlsson and Berkes (2005) elaborate further:

Co-management is a logical approach to solving resource management problems by partnership. Partnerships are often essential. Local users alone can hardly manage most natural resources in the complex contemporary world. At the same time, we have overwhelming evidence that centralized management of local resources is problematic. (P. 71)

One urban fishing program manager articulated these constraints of centralized management and the need for program integration within communities through partnerships:

And that’s the thing – a lot of it is out of your control. And you may have a director or commissioners that support the program, and then three years from now priorities change. In a big agency like this, all of a sudden you get chronic wasting disease or something else that’s threatening the deer hunting – oh, my, we have to… priorities change. Now with the budget cuts and we’re going through this reorganization. And those are the things that I don’t know how you put that in a book or how… […] Hopefully some of those communities, if you’ve got built up good partnerships and hand them off, I think a lot of those communities will carry on, but when you can’t, don’t have fish to stock, we’re not a very good partner anymore when we can’t even stock the lakes for them. And then we change the regulations on them, you feel like ten years of treating them right, and then all of a sudden we say – Well, we’re not going to manage or stock your lake anymore, and we’re walking away from you.

_UFP Manager Interview 2011009_

Urban fishing programs adopting an integrated approach create opportunities for new partners and anglers (Ballard 2008; Balsman and Shoup 2008), thereby generating increased social capital. Social capital is “embodied in the relations among persons” and “facilitate[s] the achievement of goals that could not be achieved in its absence or could be achieved only at a higher cost” (Coleman 1990:304). Urban fishing program mangers interviewed expressed the importance of social capital to the success of their programs:

So as the community gets involved and invests in it, then I think they want to take care of it. But if the DNR just goes and throws fish in it, then they don’t really, they don’t have that buy-in. So it’s got to be a partnerships, and I don’t think you’re going to have much success if it’s just – Well, the DNR is going to come in here and stock fish – because the city has no stake in it.

_UFP Manager Interview 2011009_
So kind of getting them involved, getting them to take some ownership, maybe even cost-sharing on things like a fishing pier or creating just more opportunities for fishing, whether it be opening up some shoreline, putting in trails, stuff like that. So I think that’s been probably the biggest way to partner with them.

*UFP Manager Interview 2011010*

These partnerships also pose challenges to urban fishing managers, specifically extensive communication and management. Sweatman et al. (2008) outline the challenges and opportunities presented through partnerships. Maintenance of these partnerships is often not recognized though it is essential to the success of collaborations with community members and city staff and essential for the continued success of the program:

And we also understand that in an urban setting our angler customers have a different expectation of what angling is than if they went to a remote lake or stream. In urban settings people are used to high levels of customer service, and if you don't provide it, then they kind of don't like the operation so well. And so we create a lot of great relationships.

*UFP Manager Interview 2011014*

It’s like a majority of what we get done to sustain what we developed in that first phase is basically because of the partnerships.

*UFP Manager Interview 2011012*

You get to know the players, you develop a rapport, you develop communication. And then there’s like an education thing that also goes on too; it’s an education thing for us for sure because we’re not park managers, and we don't know about city processes.

*UFP Manager Interview 2011007*

Communication and collaboration among city staff, community members, and agency staff are an often undervalued and sometimes invisible component that is central to program success:

They’ll call me because they know that if it’s not my expertise, I probably have a phone number they can call. And I enjoy that. That’s why I got into all this. I got into this to be a link between the scientific community and the fishing community. I’m a passionate fisherman, and that is why I got into this. So I enjoy that, the fact that it’s somebody they can trust – it’s one of them that’s going to give it to them straight, is not going to sugarcoat it but is going to be professional about it. And if I can’t answer it, then I’ll pass it on to somebody else. At the same time giving them a product, not just being an on-call information center, but providing for them something that if we weren’t there it wouldn’t be as good as it is. That’s key. To me that’s key – Are you essential? Are you doing things that make fishing better for people? Period. And that’s kind of how I put the filter on for all that stuff.

*UFP Manager Interview 2011012*

The management of social capital through the maintenance of partnerships may not yet be an explicit component of program process or managers’ responsibilities, but many sources in addition to the manager interviews identified partnerships as an important factor in articulating and achieving goals (Ballard 2008; Penne and Cushing 2008; Sweatman et al. 2008).

In their 1990 review of the importance of evaluation in fisheries management, Barber and
Taylor fisheries managers’ views of their shifting role from the management of fish to the management of people. This shift is clear in the interviews and literature review we conducted, yet it appears that the agencies may not have revised job positions, program staffing, and program process to fit these changes. Managers we interviewed shared a great deal of programmatic knowledge about urban fishing programs, but more importantly they echoed Barber and Taylor’s (1990) call for a recognition of values in the goal-setting and decision-making processes of urban fisheries management. A great deal of work is being done across a diversity of programs to establish connections in urban areas with new partners, but much of this work is not yet documented or measured through evaluation processes. This may pose challenges as agencies and government face cuts and must share the impact of their beyond participant numbers.

**What is the relationship between evaluation and partnerships?**

Most urban fishing literature examines specific programs or elements of such programs using single case studies. The 2007 AFS Symposium on Urban and Community Fishing Programs provides a comprehensive overview of the state of urban fishing programs through discussion of national surveys and specific case studies (Eades and American Fisheries Society 2008). These case studies identify factors of success, such as goals, partner roles, leadership, and ownership (Sweatman et al. 2008) or stewardship and educational components (Penne and Cushing 2008), but not specific relationships between success and evaluation. The role of partnerships is the key connector between the many variables existing in program management (Freudenberg and Arlinghause 2008, Penne and Cushing 2008, Sweatman et al. 2008).

Urban fishing program evaluation literature has focused on the assessment of biophysical components such as stocking or species, or human dimensions such as angler identity and preference (Edwards and Okamoto 1980; Ditton and Hunt 2001; Fedler and Ditton 2011; Conway et al. 2006; Eades et al. 2008a; Emme and Buynak 2008; Hutt and Jackson 2008; Lang, et al. 2008a, 2008b; Schultz and Dodd 2008a, 2008b, 2008c; Richters et al. 2008; Taylor et al. 2008). While evaluation of these program components is important for program success and sustainability, a more holistic or comprehensive evaluation of program process may be more meaningful for both agencies administering programs and their partners (Ballard 2008). More comprehensive evaluation might be used in proactive ways to evaluate not only what is achieved,
but also to integrate what emerges throughout the program process (Bellamy et al. 1999) that might present unanticipated paths for program evolution and adaptation (Patton 1996). This more iterative evaluation of program process is dependent upon well-defined objectives to assist agency stakeholders as they navigate the program’s development, implementation, and management (Bellamy et al. 1999). Prioritizing evaluation as a starting point rather than an end point in a program life-cycle helps the evaluative process to be “utilization-focused,” informing program implementation and development, empowering stakeholders, and building relationships (Patton 1996).

The urban fishing program manager and staff interviews provided further insight into how these components influence implementation and management of programs. The process by which managers and staff dealt with change and challenges within programs highlights the strength that partnerships add to program resiliency and sustainability.

But it still always has to be more than just lip-service. You have to still be real and make that time to relate with their staff. Something we did ten years ago, twice a year we have what we call an Urban Program Roundtable meeting, where we ask all of our parks partners, we invite them all to come to a four-hour or three- to four-hour roundtable. And we talk about the urban program, and we show some of our recent videos of our program, or we talk about water quality issues, or we’ve even brought in guest speakers to talk about algae and aquatic plant control, or the newest breakout in aeration systems. […] That’s been a really great forum for them to network and for them to compare notes across one city to the other. And we invite everywhere from higher administrators to the groundskeeper to those kinds of meetings. (UFP Manager Interview 2011014)

Evaluation was important to partners’ communication and assuming program responsibilities (Sweatman et al. 2008) but is not often identified in case studies as a tool to increase collaboration and communication. The process of creating a program evaluation may inform or refine program goals (Patton 1996). Evaluating successful partnerships requires multiple measures to match the multiple goals of diverse stakeholders (Leach et al 2002). Connecting the stakeholders’ roles to program goals through stakeholder analysis makes the evaluative process specific and user-oriented (Patton 1996), rather than an approach attempting to fit all with one process.

When asked about changes in their program management, recurring themes among those we interviewed were the increasing constraints due to economic and staffing challenges and the ever-increasing scope of their work:
And in the various symposiums I’ve been to over the years on urban fishing, one of the biggest reasons I think many states have failed to launch an urban program is because they understaff and they over-expect one person to do the marketing, the promotion, the management, the stocking and the education.

*UFP Manager Interview 2011014*

One manager pointed out that the 2007 AFS Urban and Community Fisheries Symposium occurred at the height of the fishing program’s success and that soon after the program faced severe cuts (*UFP Manager Interview 2011009*). In the wake of the budget cuts and constraints that have confronted programs since the publication of the 2007 AFS Symposium, we learned that the role of partnerships and community and agency integration became especially important. These challenges and changes that have occurred since the 2007 symposium are missing from peer-reviewed literature.

Conley and Moote (2003) identify evaluation criteria in terms of process, socioeconomic, and environmental criteria. To be effective, an evaluation framework should assess environmental, economic, social, institutional, and technological impacts while serving as a tool in the process of program development, management, and implementation through iterative feedback that can improve program knowledge and objectives (Bellamy et al. 2001). Informing stakeholders of the opportunities and challenges of collaborations involved in the program management (Conley and Moote 2003) is an important part of creating this framework. Urban fishing program managers occupy a unique role in this regard, as managers must navigate their agency’s internal landscape as well as partnerships with the organizations or governments in the urban landscape (Barber and Taylor 1990). The role of fisheries managers in many urban fishing programs bridges organizations, agencies, and communities while building and strengthening ties of urban communities to their ecosystems. Rather than adopting a top-down method or formula for success, co-management and collaborative natural resource management literature stresses the need for place-based and stakeholder-oriented evaluation methods (Patton 1996, Conley and Moote 2003). Patton (1996) argues that evaluation design must fit its intended use and situation in order to be useful. Our interviews with program managers identified several situational factors that influence program process through constraints or opportunities but that are largely outside of the stakeholders’ control: funding, politics, and staff turn-over.
**What components and tools can be used in planning program evaluation?**

Plummer and FitzGibbon (2004) define three “products” of co-management: “enhanced decision-making” leading to greater equity and efficiency through the incorporation of multiple actors and integration of local knowledge, legal and non-legal legitimization as the collaboration becomes institutionalized, and increased local-level capacity (p. 881-882). They further propose these three products as both inputs and outputs, describing co-management as an emergent process in which “social relationships or interactions [are] inherent in every characteristic associated with co-management” (p. 882). In their study of natural resource collaborations in watersheds, Leach et al. (2002) found that partnerships are complex, often addressing social, economic, and ecological concerns throughout the course of their partnership. Their study found that measuring social capital is especially useful for emerging partnerships that have not yet developed other success measures. Further empirical study of social capital within urban fishing programs is needed. The acknowledged increase and importance of partnerships within both co-management literature (Leach et al. 2002) and urban fishing program literature (Schramm and Edwards 1994; Balsman and Shoup 2008; Penne and Cushing 2008; Schroeder et al. 2008a, 2008b; Sweatman et al. 2008; Walsh et al. 2008) suggests that social capital is important to incorporate within program components and evaluations.

Common among urban fishing programs in the United States are these three goals identified by Schramm and Edwards (1994): (1) Increase recreational fishing opportunities, (2) develop and increase environmental awareness and conservation ethics, and (3) increase public participation in recreational fishing. Recent literature stresses these same goals while emphasizing the importance of meeting the needs of populations that are increasingly urban as opposed to the traditional rural demographic that agencies may have been accustomed to in the past (Eades and American Fisheries Society 2008). These goals, combined with the shifting rural to urban population, national decline of fishing licenses, and increased pressure from budget cuts, signal that measureable outcomes and methods for evaluation are needed to understand how these goals are achieved in urban areas. Specifically, in response to limited funding sources and increased urbanization, goals must be set based on available resources and agency priorities (Sweatman et al. 2008) and should incorporate anglers’ interests so that success can be clearly evaluated (Balsman and Shoup 2008). Siemer and Knuth (2001) recommend that agencies
clearly define their environmental stewardship goal and objectives in order to measure and evaluate success in their achievement, but examples of such definitions are missing from the literature.

Surveys share findings about current program structures and their variables, such as target populations, funding and staffing models, available amenities, and partnerships formed at local, regional, and national levels (e.g., Gilliland 2008; Hunt et al. 2008; Schroeder et al. 2008b; Floyd et al. 2006; Gabelhouse 2005; Arlinghaus and Mehner 2004; Siemer and Knuth 2001). However, the knowledge available through these surveys and existing literature does not present specific examples of programs that have applied systemic evaluation to their program models. Despite the breadth of information and knowledge shared about audiences, program components, and program structure, the above surveys and the literature do not explore the role of partnerships as part of program assessment. In discussions and recommendations of goals in the current literature, the authors do not specify how to define measures or performance indicators. Several program managers shared that there is an increase in pressure to provide evaluation of their program success beyond numbers of participants or events (Interviews 2011004, 2011011, 201106), yet there is no commonly adopted method for providing this evaluation nor for showing the integration of these programs within existing community structures through partnerships.

An important and seemingly simple step to strengthen both partnership building and stewardship components within urban fishing programs may be to change the name of these programs. The name “urban fishing programs” fit well with the U.S. Bureau of Sport Fisheries and Wildlife’s intent to increase fishing access for inner-city and low income urban neighborhoods (Menau 2008), but the changing dynamics and needs of these programs may be better served by names reflecting the community aspects they incorporate (Pape and Eades 2008). Several programs have shifted from the name of urban fishing programs to Fishing in the Neighborhoods (FINs) or community fishing programs, and Pape and Eades (2008) suggest that it is time to re-examine if the name “urban fishing program” still best represents the scope of these programs. A name change may better reflect the collaborative process and ownership of stakeholders, as well as fit the changing nature of natural resources management.

The motivational differences among angler groups is well documented in the literature (Hunt and Ditton 2002; Arlinghaus and Mehner 2004; Hutt and Jackson 2008; Schroeder et al. 2008b).
Cost constraints, distrust of law enforcement, and uncertainty about regulations can be addressed by equipment loan programs, agency recruitment of more diverse staff for urban fisheries management, and non-license events at which would-be anglers can learn the regulations and what is required for license purchases (Schroeder et al. 2008b). Many state agencies use aquatic education and outreach programs to recruit children through activities and programs that increase interest and skill (Sweatman et al. 2008), yet promotion and outreach vary across program models. The vast majority of programs target youth and work in collaboration with city or county departments to coordinate the development, maintenance, management, and programming of urban fishing programs (Hunt et al. 2008).

Urban anglers, due to restrictions of time and mobility, value proximity to their homes in their angling destinations (Schramm and Edwards 1994), thus program managers stress convenience, access, and proximity to residence in recruiting new and under-represented anglers (Schramm and Dennis 1993; Fedler and Ditton 2000). According to the National U.S. Fish and Wildlife Service Survey of Fishing, Hunting, and Wildlife-Associated Recreation (2006a; 2006b), 92% of anglers are white and so many urban fishing programs continue to target under-represented angler groups in their aquatic education, promotion, and retention, such as Minnesota’s Fishing in the Neighborhoods program (Schroeder et. al. 2008a; Walsh et al. 2008) and Wisconsin’s urban fishing program in Milwaukee (Stabo 2008). Other programs focus on recruiting anglers, specifically lapsed anglers and youth, who live in close proximity to the fishery but are time-restricted (Balsman and Shoup 2008). Evaluation of under-represented angler recruitment is a gap in urban fisheries literature, though recruitment and retention of under-represented groups has been explored in the context of broader recreational opportunities (Floyd and Johnson 2002; Shinew et al. 2004; Shores et al. 2007).

Safety is an often-underestimated factor in limiting potential angler involvement in urban fishing programs (Schramm and Edwards 1994; Hunt and Ditton 1997). In addition to angler safety, insufficient law enforcement in some urban areas threatens angler compliance. Eades et al. (2008) wrote that the greatest challenge to Nebraska’s urban fishing program was insufficient law enforcement of regulations. In a 2007 survey, both fisheries administrators and anglers identified law enforcement as a program concern and 55% of staff involved in urban fishing program coordination reported that they did not have adequate law enforcement capabilities at
program sites (Eades et al. 2008). Safety improvements include patrol or game warden presence to monitor regulation compliance and increase angler security (Balsman and Shoup 2008; Eades et al. 2008) and inclusion of clear communication about any public health risks from consumption of fish to inform those with weakened immune systems or other health concerns (McOliver et al. 2008).

Gilliland (2008) identified the top three challenges of urban fishing programs and all are related to a lack of sustainable funding: lack of staff, availability of fish to support intensive stocking efforts, and lack of suitable sites to incorporate their programs. Particularly in the current atmosphere of budget cuts, fisheries managers are concerned about funds for pilot programs and the sustainability of funds for existing programs (Interview 2011003). Partnerships can provide sustainability even in times of budget cuts:

My point is that a lot of those partnerships and all those things are like we’ve moved in other directions, but one of the good things about [our program] is it was created with partnerships in mind to sustain the maintenance parts of it. So a lot of why they’ve been cut and I haven’t is because some of our cooperators generate between a hundred and a hundred fifty thousand dollars a year to sustain the program. So how do they argue with that? You know what I’m saying? It’s like a majority of what we get done to sustain what we developed in that first phase is basically because of the partnerships.

UFP Manager Interview 2011012

Funding varies widely among urban fishing programs and influences the implementation and continued management of a successful program. In an interview with a former statewide urban fisheries program manager, the manager commented that funding was “easy to come by” at the beginning of the program when stakeholders were excited, but a long-term funding plan was challenging (Interview 2011009). This former fisheries program manager cited funding as the one component of program structure he would change if the program were to be started again from the ground up. Evaluation may play an important role in helping managers manage programs despite limited resources: “In a resource-constrained world, agencies must carefully assess the limits and trade-offs involved in making resource commitments. Engaging in collaborative environmental management means consciously deciding how, where, and when to expend scarce and limited resources” (Koontz et al. 2004:179). Strategizing partnerships while incorporating evaluation within the program process may help to mitigate the challenges presented through funding constraints.
Logic models, such as those shared in Ballard’s (2008) discussion of evaluation in the 2007 American Fisheries Symposium, are useful models of program process. As Ballard writes, evaluation may consist of multiple methods and sources. Some urban fisheries managers with whom we spoke mentioned community partner forums where information is shared among urban partners, internal intra-agency brainstorm and feedback sessions for improving program process, focus groups, and speaking with other program managers as ways they evaluate their programs’ effectiveness and success. None of the managers with whom we spoke mentioned using logic models, nor were these mentioned as tools in the case studies included in the American Fisheries Society symposia. We encourage managers to revisit Ballard’s discussion and consider logic models as an important visualization of program process.

Discussion

Our analysis of the urban fishing program manager interview data provides insight into the current trends of urban fishing program management, in addition to topics to be revisited in future symposia or research. The literature and our analysis of the interviews support the engagement of community and external agency stakeholders throughout the natural resource management process because these partners are influential and increasingly necessary for program success (Sweatman et al 2008; Balsman and Shoup 2008, Schroeder et al. 2008a, 2008b; Penne and Cushing 2008; Walsh et al 2008; Interviews 20011003, 2011007, 2011010, 2011012, 2011014). The importance of partners to urban fishing programs has been recognized by agencies as they manage urban fishing programs, but no tool has been available for program managers to use when evaluating and strategizing key partnerships that are critical to the success of their programs. Similarly, the importance of evaluation to programs has been acknowledged and addressed in terms of number of events and fish stocked, but has lacked the attention and inclusion in the process from the beginning of development.

We propose two tools to address these needs. Analysis of the urban fishing program manager interviews and literature review informs the development of these tools—a strategizing stakeholders template (Table 2.1) and a process model (Appendix F). Additionally, data collected from prior research in a case study of a pilot urban fishing program in Iowa provided further basis for the development of the stakeholder template categories and the proposed use of
these tools. As discussed by Ballard (2008) and Fedler (2001), process models help to plan short-term, mid-term, and long-term program outcomes. To increase the efficacy of process models, we offer a strategizing stakeholders template (Table 2.1) as a first step for managers to use when determining the types and investment of program partners. The strategizing stakeholders template is intended to be used to plan who will provide inputs to the categories within the process model.

Based upon literature and emergent themes from the data, the stakeholders template key (Table 2.2) provides a tool to qualitatively assess the social capital present within different partnerships at a point in time in the management process. This key contains descriptions for the different categories on the strategizing stakeholders template. Coplin and O’Leary (1972) adopt a similar accounting method for measuring political influence through the assigning of numeric codes to issue positions, power, salience, and hostility-friendship patterns. From our discussions with managers and review of the literature, we recognized a pattern of partners whose roles were “key” partners, or those who fulfill gaps in what the agency can offer to the community, but also partners whose roles were “secondary” yet added needed perspective and input to the program process. The stakeholders template and key will help managers to assess the variety of partners who may engage in the development, implementation, and management of an urban fishing program. Carlsson and Berkes (2005) describe co-management of natural resources as a dynamic process; however, identification of process components is a first step to understanding their function within the program process. After evaluating the program’s partnerships, managers may use the urban fishing program process model template (Appendix F) to plan the program process with these partners in mind.

The categories of our strategizing stakeholders template provide rules of thumb for assessment and reflect the themes emergent from our interviews with urban fishing program managers as well as within the literature. Urban fishing program managers can use these categories—interest, role, support, influence, and need—to assess program partnerships. For example, in choosing a new program site, it might be critical to program managers to identify sites where there is a high level of existing community engagement through schools, community groups, or private partners.
Identifying partners’ interest describes their motivations to engage in the program. The interest of the natural resource agency might be described as an extension of recreational opportunities to urban areas. A neighborhood’s interest might be to have a safer and more usable park. Role describes the position the stakeholder holds in the program process. In most co-management programs, the key roles are held by natural resource agencies and city or local governments. Without their role in the partnership, the program would not move forward. For example, an agency with limited resources may need buy-in from the community government in order to start a new program. The community government would be a “key” partner whose support is central to the success of the program. Support describes the stakeholder’s predicted level of ownership. Influence describes the stakeholder’s power to move the program forward within the community or agency. A new program may need partners with a high level of influence in order to establish the program within the community even if these partners do not demonstrate need the program. Need identifies the priority the partnering agency or group gives to the program and helps to identify where opportunities might be greatest. For example, multiple towns may be interested, but some of these towns may have existing opportunities available that lead them to not need an urban fishing program in their community. The strategizing stakeholders template identifies the partnerships that are important to program creation, implementation, and evolution. Partnerships may be short-, medium- or long-term depending upon the existing needs and value the program offers to stakeholders (Horton et al. 2003), and so partnerships will vary depending upon location and type of program, agency, and stage of program life-cycle.

The reality of the co-management relationships as a “continuous problem-solving process” (Carlsson and Berkes 2005:65) stresses the importance of flexible tools, and the stakeholders template would need to be revisited as the program evolves and partners’ investment in the program process shift over time. A prescriptive approach to partnership planning would miss the variety of needs different programs have during their life-cycles, as well as the unique cultural situations of a program’s demographic. In the urban fishing program manager interviews, we learned that managers are stretched thin, “doing more with less,” and the management of partnerships requires a large amount of their time. This is consistent with the literature (Natcher et al. 2005; Barber and Taylor 1990). In order to help managers identify and
strategize the role of partners, the strategizing stakeholders template (Table 2.1) and key (Table 2.2) can be used to evaluate the potential capacity of partners in new or existing collaborations. Recognizing that partners’ abilities and interest in the program will change over time, we encourage managers to revisit this template as programs evolve and needs or staff change.

Building upon the recommendation that social capital is a useful evaluation measure for emerging and new partnerships in co-management programs (Leach et al 2002), our template documents these partners and their bridging, bonding, and linking social capital within urban fishing program. The strategizing stakeholders template might be useful for collaborators to use in defining together which relationships should be included in the process model. Additionally, collaborators might identify gaps in their partnership process—for instance, managers might better plan where to start an urban fishing program in a location where there would be a high level of support and influence. Our template enables program stakeholders to identify their specific roles and can be a useful tool in strategizing next-steps of a specific collaborative group. This template empowers agency and public stakeholders to discuss their limitations and contributions to program process and to better plan for future opportunities and challenges. At the same time, the template categories provide managers means to organize potential contributions beyond subjective impressions, identifying the social capital that might emerge from pairing stakeholders who, for example, have high interest and need with those who have high influence.
## Table 2.1 Strategizing stakeholders template

<table>
<thead>
<tr>
<th>Stakeholders</th>
<th>Interest¹</th>
<th>Role²</th>
<th>Support³</th>
<th>Influence⁴</th>
<th>Need⁵</th>
</tr>
</thead>
<tbody>
<tr>
<td>State Agency (Department of Natural Resources)</td>
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<td></td>
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<tr>
<td>County Agency (Conservation agencies, Natural Resource and Conservation Service)</td>
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<td></td>
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<tr>
<td>City Government (Parks and Recreation, City Council)</td>
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<tr>
<td>Neighborhoods (home owners associations, neighborhood organizations)</td>
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<tr>
<td>Schools (community colleges, universities, preschools, elementary and secondary schools)</td>
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<tr>
<td>Community Groups (youth, church, community service, scouts, friends of parks)</td>
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<tr>
<td>Private Partners (companies, local businesses, fishing or outdoors stores)</td>
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<td></td>
<td></td>
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<tr>
<td>Other (Museums, science centers, zoos)</td>
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<td></td>
<td></td>
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<tr>
<td>High profile individuals (Donors, community leaders, celebrities)</td>
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</tbody>
</table>

¹ Interest = motivation to engage in the program
² Role = position of partner within program process
³ Support = ownership of program process
⁴ Influence = the stakeholder’s power to move the program forward within the community or agency
⁵ Need = how the program partner prioritizes the program as fitting within existing goals and structure
Table 2.2 Strategizing stakeholders template key

<table>
<thead>
<tr>
<th>Interest</th>
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<tbody>
<tr>
<td>From the partner’s point of view, describe their interest in the project. For example, a near-by elementary school may be interested in visiting the resource for class field trips.</td>
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<table>
<thead>
<tr>
<th>Role</th>
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<tbody>
<tr>
<td>Key</td>
<td>Original and central stakeholder whose ownership of the process is central to program success. Responsible for aspects of program development including funding, staffing, and evaluation. Assumes ownership.</td>
</tr>
<tr>
<td>Primary</td>
<td>Central stakeholder whose ownership of the process is central to program success. Collaborator in the process of program implementation.</td>
</tr>
<tr>
<td>Secondary</td>
<td>Interested stakeholder whose collaboration and partnership will add diversity, longevity, and investment to the program.</td>
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<table>
<thead>
<tr>
<th>Support</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>High</td>
<td>Has already committed or shows interest in committing funding and staffing in the development of the program. Has already assumed or would like to assume ownership of all or some aspects of the program such as improvements, funding, staffing, mentorship programs, trainings, volunteers, etc. Assumes ownership</td>
</tr>
<tr>
<td>Medium</td>
<td>Shows interest in the program through attendance at focus group or in interview and sees possibilities for integration within current or future responsibilities or project.</td>
</tr>
<tr>
<td>Low</td>
<td>Shows interest in the program through attendance at focus group or in interview but sees little integration within current or future responsibilities.</td>
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<table>
<thead>
<tr>
<th>Influence</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Capable of putting forward the economic and social capital needed to move the program forward.</td>
</tr>
<tr>
<td>Medium</td>
<td>Capable of collaborating to move forward the economic and social capital needed to move program forward</td>
</tr>
<tr>
<td>Low</td>
<td>Capable of providing input needed to move program forward.</td>
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</table>

<table>
<thead>
<tr>
<th>Need</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Articulated that an urban fishing initiative has been expressed as a need in their organization.</td>
</tr>
<tr>
<td>Medium</td>
<td>Articulated that an urban fishing initiative would complement or support their work and/or organizations needs.</td>
</tr>
<tr>
<td>Low</td>
<td>Interested, but did not articulate that an urban fishing initiative is needed by their organization.</td>
</tr>
</tbody>
</table>
**Implications for urban fishing program managers**

Inputs required for an urban fishing program seem straightforward on paper. Most existing urban fishing programs have been managed through biological science with little incorporation of social study of stakeholders or their resources or needs (Magill 1988 in Fedler and Ditton 1994). Understanding the importance, as well as the opportunities and challenges, of the partnerships created through the implementation, maintenance, and evolution of an urban fishing program is central to the program’s success. Even if funding and staffing ceased to be concerns, the role of social capital influences programs’ futures. Penne and Cushing (2008) cited the ability of each community to take ownership and direction of their community-fishing program as the impetus for many successful partnerships and programs. The most recent surveys in the field have not asked specifics about partnerships and collaborations, though these are likely elements that will carry urban fishing programs through hardships in funding or staffing. While these social components may seem less clear than biological or economic components because they vary upon location, their cultivation and measure contribute to a program’s resilience and sustainability. To date, most programs have evaluated themselves based on participation at local events or on a short-term basis. Greater effort to truly assess whether urban fishing programs meet the objectives set for them, such as angler recruitment and retention, is needed. Applying co-management evaluation frameworks to urban fishing program assessment may engage more stakeholders throughout the program process and contribute to long-term sustainability.

We recommend future follow-up with the urban fishing program managers interviewed regarding the role of partnerships in program sustainability and the fit of the proposed success indicators. In particular, we would like to include program evaluations from 2008 to the present to build further upon the 2007 AFS Symposium. We welcome feedback from practitioners.

**Acknowledgements**

We thank the Iowa Department of Natural Resources, Fish Iowa, and the United States Fish and Wildlife Service Wildlife and Sport Fish Restoration Program for their funding of this study. The urban fishing program managers and staff who shared their insights and experiences with us added depth and value to our study—thank you.
CHAPTER 3. WHAT’S THE CATCH? PARTNERSHIP IN AN URBAN FISHING PROGRAM

Abstract

The collaborative process formed through co-management of natural resources presents opportunities and challenges for agency partners new to working together. In this article, I analyze the role of social capital in a new partnership initiated by a city government and a state agency as the initiate an urban fishing program. Interviews with key stakeholders from these agencies highlight their lessons learned and suggestions for improvements to their collaborative process. Both the city and state partners identified water quality improvements as the overarching goal for the program in terms of program impact and program sustainability. Further, they recognized that in order to best direct their goals, they needed to combine efforts. Differences in agency decision-making process and communication presented challenges to the collaborative process in the urban fishing program initiative and might be used to inform program planning in this case and beyond. This analysis finds that a prescriptive approach of adding process or goal-setting tools to collaborations without strategizing partnerships may not be adequate for new partnerships or for organizations unaccustomed to co-management collaboration. Additionally, alternative strategies to increase effectiveness of organizations’ collaborations are recommended.

Introduction

In 2009, the Iowa Department of Natural Resources (IDNR) and City of Des Moines, IA (City) began collaboration on a pilot urban fishing program within Des Moines to be located at neighborhood park ponds. The IDNR began funding a temporary summer student employee to help the City administer fishing clinics and interface with community organizations interested in learning more about fishing. The success of these summer clinics and initial contacts with community groups inspire the IDNR and City to consider further collaboration on a year-round urban fishing program initiative at urban park ponds in Des Moines neighborhoods. The IDNR evaluated the physical and biological conditions of potential sites and, from their evaluation, proposed four priority sites to the City in 2010. Also in 2010, analysis of the IDNR and City’s collaboration began as part of a larger case study funded through the IDNR. The purpose of this case study as defined by the IDNR was to provide guidance for a potentially statewide urban fishing program initiative. Documentation of their collaboration included interviews and focus
groups with key informants and stakeholder groups, as well as participant observation of their meetings.

This collaboration was unique in several regards. First, the IDNR is accustomed to working with private landowners on watershed or fisheries improvements. In this collaboration, the IDNR engaged in a partnership with a division of the city government responsible for public lands, the City Parks and Recreation Department, as well as with urban neighborhood groups. Second, in the instances in which the IDNR fisheries staff do work with municipalities on public lands, the IDNR assumes responsibility for managing the fishery and does not share responsibility for the resource’s management with the city or town. Third, the City is accustomed to working with the Parks Board and reporting to City Council, deciding future programs and improvements through the consensus of representatives of their constituents, rather than through collaboration with state or federal agencies. The IDNR’s process for watershed improvements has not historically included a similar process of citizen buy-in for their work due to their work with private landowners. Lastly, the IDNR recognized the need to increase their visibility through increased urban programs if they are to continue to reach and be valued by Iowa’s citizens. The City and IDNR partnership represents the first formal management partnership that the IDNR fisheries division had entered into with a city organization.

In this paper, the roles of the partnership agencies are analyzed in an effort to identify the opportunities and barriers the agencies face as they begin collaboration. Through analysis of social capital, the barriers and enablers within the partnership are analyzed, and patterns of communication, integration, and ownership throughout the program’s development are identified. This analysis will be of use to agency and organizational partners involved in co-management of recreational programs.

**Co-management of natural resources**

A review of partnerships within urban fishing programs literature provides insight into the current discussion of collaboration among managers responsible for these programs. Co-management provides a framework for this discussion, specifically in regards to the role of social capital within these partnerships and the evolution of trust. Horton et al. (2003) describe resources (staff, financial, infrastructure, technology) and management (planning, networks, process) as the two types of capacity needed for effective organizations. Natural resource agencies have traditionally been focused on partnerships in terms of sharing or exchanging
resources, e.g. signing a contract for a service, and now are shifting to a partnership-based approach. These changes are inspired by funding constraints and the decentralization of government services (Wondolleck and Yaffee 2000). This focus on the management capacity of organizations and maintenance of social capital adds a new dimension to resource managers’ work.

Co-management is defined as a collaborative process in which stakeholders share goals, power, and responsibility while building trust, solving problems, and learning together through the management of a natural resource (Carlsson and Berkes 2005). Berkes (2009) further defines co-management as “the sharing of power and responsibility between the government and local resource users” and “an arrangement whereby such partnerships can come about” (p. 1692). The sociological principle of social capital is important to understanding how these partnerships “come about.” This analysis will use Coleman’s (1990) definition of social capital as it pertains to urban fishing program partnerships:

Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of a social structure, and they facilitate certain actions of individuals who are within the structure. […] Unlike other forms of capital, social capital inheres in the structure of relations between persons and among persons. It is lodged neither in individuals nor in physical implements of production. (P. 302)

Environmental improvements, changes, or crises inspire the formation of co-management partnerships. The success of these environmental projects depends upon the social relationships that build and emerge throughout the co-management process. While the partnership’s focus may be upon the management of a natural resource, it is the management of the social relationships that often requires the most maintenance and attention (Natcher et al. 2005). These relationships and network ties embody the social capital that contributes to successful co-management: “Social capital, in turn, is created when the relations among persons change in ways that facilitate action […] it is embodied in the relations among persons” (Coleman 1990:304). Pretty (2003) further describes types of social capital in terms of bonding, bridging, and linking relations:

Bonding social capital describes the links between people with similar objectives and is manifested in local groups, such as guilds, mutual-aid societies, sports clubs, and mothers’ groups. Bridging describes the capacity of such groups to make links with others that may have different views, and linking describes the ability of groups to engage with external agencies, either to influence their policies or to draw useful resources. (P. 1913)

The social outcomes of community partnerships include increased social capital as different stakeholder groups increase contact, communication, and trust through knowledge-
sharing and collective problem-solving (Koontz et al. 2004). As bridging, bonding, and linking social capital form within these partnerships, “people have the confidence to invest in collective activities, knowing that others will also do so” (Pretty 2003:1913).

Trust is a form of social capital (Coleman 1990) that is a precondition for successful planning in collaborative processes because it facilitates cooperation while increasing the likelihood of stakeholders’ participation in the process (Laurian 2009) and the efficiency of partners’ work (Pretty 2003). Trust positively influences those engaged in collaborative process and decision-making (Hosmer 1995; Dirks and De Cremer 2011) but is multi-layered within inter-organizational partnerships existing among individuals and within the partner organization (Zaheer et al. 1998). When co-management partners trust one another, they disagree without sabotaging their collaborative process (Wagner and Fernandez-Gimenez 2008), but this trust requires time to build and is fragile (Pretty 2003; Wondollock and Yaffee 2000).

The role of partners within management of social capital is important because they can strengthen or deter organizational and individual relationships (Koontz et al 2004). The increasing importance of partnerships to natural resource management (Leach et al. 2002) is evident in urban fishing program literature (Schramm and Edwards 1994; Balsman and Shoup 2008; Penne and Cushing 2008; Schroeder et al. 2008a, 2008b; Sweatman et al. 2008; Walsh et al. 2008). The lack of evaluation of the collaborative process in urban fishing programs (Ballard 2008) poses particular challenges for urban fishing program managers because these programs differ from traditional management in both the recreational opportunities offered and the skillset needed to manage these opportunities (Schramm and Edwards 1994). The multi-disciplinary nature of urban fisheries work and the many opportunities and needs for partnership may quickly overwhelm agencies, especially in times of budget cuts and staff constraints.

Collaboration success stories are valuable to program managers, but collaboration is a process rather than an end-point (Wondolleck and Yaffee 2000) and the formation of these partnerships relies upon social capital built over a long period of time (Carlsson and Berkes 2005). The integration of urban fishing programs within agencies challenges managers whose responsibilities include managing existing resources while creating new opportunities for new anglers in urban areas (Schramm and Edwards 1994). Thus, these partnerships may become points of leverage or contention as fisheries managers enter new territory. Successful and sustainable programs are not inevitable outcomes of co-management (Singleton 2000). Coleman
(1990) describes social capital as “one of the forms of capital which depreciate over time. …] Social relationships die out if not maintained; expectations and obligations wither over time; and norms depend on regular communication” (p.321). While collaboration may be defined in as many ways as there are partnerships, Selin and Chavez (1995) define collaboration as “emerging process […] between natural resource management agencies and other resource stakeholders [that evolves] in response to a host of internal and external factors” (p. 190). Through this process, co-management “disrupts the settled routines of relations between different sets of actors and in so doing, creates new opportunities for both competition and cooperation and for the exercise of control and resistance,” (Singleton 2000:4).

Fisheries management has shifted its focus from the management of fisheries to include the management of social relationships central to the management of fisheries and natural resources, and this shift has challenged those in the field as they define goals, objectives, and values to their work (Barber and Taylor 1990). Perrow (1970) labels the concept of goals “one of the most ambiguous in the literature” (p. 134). The lack of shared operative goals may slow the collaborative planning process (Perrow 1961). Defining goals within an organization, much less measuring how one achieves them, is a hard process for any organization. Add to this the reality of the often multiple and conflicting goals occurring simultaneously within organizations, and it is not hard to understand how organizations engaged in co-management of a natural resource, especially those new to one another, encounter frustration and conflict in their collaboration. Barber and Taylor (1990) describe this challenge in fisheries management:

Fisheries management is more inclusive than just the decision-making process for utilizing fishery organisms. It also incorporates human interests in how the habitat and human resources are to be utilized and considers that the use of these resources is greatly influenced by external social, legal, political, scientific, technical, and economic goals, objectives, and values. (P. 367)

A process-oriented approach to evaluation that incorporates stakeholder perspectives would assist program managers in meeting the specific goals (Siemer and Knuth 2001), but examples of these approaches are missing from fishing management literature. An organization’s official goals define the broader scope of the organization’s mission, while the organization’s specific objectives are articulated through operative goals (Hatch 1997; Perrow 1961). Evaluation incorporates the operative goals as evaluative criteria (Hatch 1997), and so the evaluation process may be hindered or nonexistent if these are not defined on an on-going basis throughout the collaboration. Multiple directions may emerge among stakeholder organizations
as partners pursue goals specific to their own organization, making it difficult for the organizations to work toward a common goal (Perrow 1961). The goals of these individuals may not always align with the goals of the larger organization, which may cause unpredictability or conflict which stakeholders may not recognize as impacting their future collaborative process (Selznick 1948).

In their study of ten years of co-management case studies, Wondollek and Yaffee (2000) stress the need for evaluation methods that fit the evolutionary nature of collaborative process rather than focusing this process into specific outcomes. This presents a challenge to those new to co-management evaluation or engaging in new co-management partnerships. In her discussion of program evaluations, Ballard (2008) states that the increased emphasis on evaluation conflicts with the amount of training that many urban fishing program staff have in program evaluation. Staff may be fluent in the technical skills required for their responsibilities in the collaboration, but may be new to the time and process required for collaborative evaluation (Wondolleck and Yaffee 2000). These two challenges--needed process-oriented tools coupled with needed training--may jeopardize the collaboration processes and make it harder to rebuild trust among partners when collaborations deteriorate. Ballard (2008) presents logic models as a program management tool for fisheries managers, but these may not be effective if the managers do not have enough information or experience to make the rational decision or there are conflicting goals within their organization (Hatch 1997). Additionally, tools such as process models rely upon the users making rational decisions; however, as outlined in Simon’s (1957, 1959 in Hatch 1997) criticism of the rational model, this might not be possible if decision-makers do not have complete information, are overwhelmed by the task or problem, do not have the time needed for the process, or their organization’s goals conflict with the needed action. Finally, the design of the institutions or agencies themselves may hinder the success of co-management if there is not an environment of adaptability and knowledge sharing (Carlsson and Berkes 2005). More analysis of how co-management partnerships are successful in their collaborative process across situations and time is needed (Carlsson and Berkes 2005). Without it, the collaborative learning and knowledge sharing that bridges organizations may be constrained (Wondolleck and Yaffee 2000).

There has been a nation-wide increase in integrating urban fishing programs within existing management projects (Schramm and Edwards 1994; Hunt et al. 2008) and all states
currently have varying fishing programs established with the purpose of increasing fishing opportunities where people live (Hunt et al. 2008). The literature lacks a discussion of how to navigate the inter-agency partnerships involved in the collaborative process of these programs. How do these partnerships form and evolve? What are the barriers these partnerships may encounter within the community or city and state level agencies? How can staff or agencies identify the strength and potential of these partnerships? The missing discussion of evaluation’s role in collaborations is significant because as the importance of these partnerships increases, failed or conflicted collaborations present high costs in terms of staff time, funding, and social capital (Hatch 1997). Analysis of social capital and the building of trust within these partnerships provides insight to the function of partnerships within program process, structure, and sustainability.

**Research methods**

Exploratory findings from a pilot urban fishing program in Des Moines, Iowa are presented using the case study method. The case study is an appropriate method of research in order to “retain the holistic and meaningful characteristics of real-life events—such as individual life cycles, small group behavior, organizational and managerial processes, neighborhood change” (Yin 2009). The role and process of creating social capital within the City and the IDNR’s partnership are analyzed as they begin program collaboration in the co-management of city fisheries. The City and IDNR were the primary organizations studied in this case study; however, participants included representatives from the Polk County Conservation Board and Polk County Soil and Water Conservation District who were called upon by the City and IDNR to provide expertise and guidance in the development of the urban fishing program.

From September 2010 through January 2012, I conducted 18 (n=16; two were follow-up interviews) semi-structured interviews with key stakeholders from the agencies involved in the urban fishing program initiative. The IDNR and City Parks and Recreation department suggested contacts within their own and related organizations for me to contact for interviews. Purposive snowball sampling (Coleman 1959) was used to identify stakeholder participants who had already demonstrated support of the urban fishing program initiative. Purposive snowball sampling is a method of sampling that begins first with the key informants, and then “snowballs” as these individuals recommend others for participation. In this way, the sample reflects the
network of existing information exchange or partnership. Initial individuals contacted for interviews included those whose roles within the IDNR and City were identified as key to the program’s success. Subsequent interviews included individuals whose positions the program would influence or who were identified as important to the program’s implementation. I interviewed staff in comparable positions in both the IDNR and the City Parks and Recreation department. These staff included those whose job duties included monitoring and managing the urban park ponds or potential fisheries, as well as the supervisors and directors of these staff members.

Research design and instruments were reviewed by the Iowa State University Institutional Review Board to protect participants and assure confidentiality. The interview consent form and interview guide are included in Appendix A and C, respectively. Participants for interviews were contacted by phone or email. Seventeen of the 18 interviews were conducted in-person at the participants’ offices. One interview was conducted by phone because the office location was over a 3-hour drive from Iowa State University. I reviewed the consent form with participants prior to their participation in the study. A semi-structured interview guide (Robson 2002) was used and incorporated open-ended questions focusing on five themes: interviewee’s role, program structure, challenges, opportunities, and lessons learned (Appendix C). Interviews were recorded, transcribed, and then analyzed using Nvivo 9 qualitative data management software (QSR International Pty Ltd. Version 9, 2010) to identify recurring themes and patterns in the data using open, axial, and selective coding. Using an inductive approach based on grounded theory (Corbin and Strauss 2008; Charmaz 2007), I analyzed data to identify patterns and emergent themes from the interview data. This coded data was then compared and reconciled with selected transcripts coded independently by one other member of the research team to ensure intercoder reliability.

Results

The following analysis presents emergent themes from the stakeholder interviews and discusses these in the context of social capital to identify opportunities for further evaluation of the co-management process. The Des Moines urban fishing pilot project collaboration fits the typical co-management scenario (Carlsson and Berkes 2005): several layers of state, county, and city government and agencies, neighborhood groups, and special interest community
organizations were identified as stakeholders and potential co-managers. This analysis focuses on the two lead partners—the City and the IDNR.

Key emergent themes from the interviews were process, partnership, structure, and water quality. These themes reflect the coded phrases from interview data and the frequency of these phrases across agencies and positions within agencies emphasized their importance to those interviewed (Table 3.1). Social capital is used to analyze how trust, goal-setting, and decision-making influenced each of these themes. It is not surprising that the subjects of partnership (158 phrases), process (300 phrases), and structure (112 phrases) were most commonly discussed throughout the interviews because the program was in its pilot stages and these were common questions among interview participants. Similarly, both agencies identified the program as a way to create more opportunities for urban watershed improvements. Program sustainability and success indicators were not common themes in the interviews, highlighting the short-term urgency that participants may have felt as their partnership neared a deadline that would define its future steps. Structure is not analyzed here because even though the agencies agreed on many points, such as youth and families as the target audience and the needed improvements at the parks for amenities, their planning process has not yet reached this stage of development. However, if evaluation had been incorporated as part of the partnership process from its beginning, perhaps structure may have had more influence upon decisions and action taken.

Table 3.1 Key informant interview themes

<table>
<thead>
<tr>
<th>Emergent Themes in 18 stakeholder interviews (n=16)</th>
<th>Frequency of phrases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process (Challenges, Opportunities, Evaluation, Goals, Importance, Communication)</td>
<td>300</td>
</tr>
<tr>
<td>Partnership (Ownership, Trust)</td>
<td>158</td>
</tr>
<tr>
<td>Structure (Amenities, Audience, Use, Staffing, Role, Funding)</td>
<td>112</td>
</tr>
<tr>
<td>Water Quality (eating fish, improving watershed health, ecosystem awareness and knowledge)</td>
<td>69</td>
</tr>
<tr>
<td>Sustainability (long-term viability of the urban fishing program)</td>
<td>12</td>
</tr>
<tr>
<td>Success Indicators (what would make a successful program)</td>
<td>5</td>
</tr>
</tbody>
</table>

**Process**

The pilot urban fishing program was the first collaboration between the IDNR and the City. The IDNR described the beginning of the partnership in terms of an exchange:
So anyway they came to us. They had a big survey done of their residents, and water quality and
inglishing ranked really high among what residents would like to see with their city parks. And so I think that
was kind of the reason they came to us. So we wanted to help urban fisheries; we wanted to start putting
more effort and a larger emphasis on that, and so it worked out good for us as well to have a partner that’s
interested…
_IDNR Interview 2011001_

Yeah, I guess you’d say integrate nicely into that outdoor recreation program. But really I think this
program was kind of an eye-opener for our department to show us that demand is out there. So not only did
the survey open our eyes, but the success of this program has really been an eye-opener. So, yes, we’ll
integrate it into outdoor recreation, and I think we already have spawned off an ice fishing event that came
really because of the success of this Carp Fest that I mentioned earlier. And while you can’t say definitively
that this was the reason, I mentioned, as I mentioned, this was the eye-opener program that kind of opened
the gates to see, opened our eyes.
_City Interview 2011016_

As partnerships grow, partners move past the initial exchange mode of cooperation and begin to
collaborate in the pursuit of what neither could establish on their own (Sarason and Lorentz
1998). This illustrates the productive nature of social capital as it empowers partners to
accomplish what would not be possible otherwise (Coleman 1990). This initial exchange
between the agencies created an opportunity for the generation of social capital. The City needed
to respond to its constituents’ demands for increased fishing opportunities and the IDNR needed
to extend its reach within urban areas in order to maintain and recruit new anglers:

You know, we want this bad. […] What our research finds in Iowa is most of the fishing activity occurs
within 25 miles of where people live. And so we do a lot of programs, created new lakes, created new
fishing opportunities in streams, improving habitat across the state. But one thing we really neglected,
especially 15 or 20 years ago is urban fishing opportunities. So the big objective from our view was to try
to have strong partnerships with cities and counties to develop urban fishing opportunities that are close to
people and make these destinations, make them safe places that families can go and have a good chance to
have a high-quality fishing experience.
_IDNR Interview 2011020_

Oh, I think we did a survey in 2007, and fishing ranked really high, which surprised all of us, and that’s
available on the Des Moines website if you could pull it up. And so I think it would be very beneficial,
especially now that it seems like the economy, the whole stay-cation – you know people are staying more
around the home area. And providing more activities close to their home, I think, would really… I think
we’re seeing a big jump with that.
_City Interview 20110013_

While the IDNR collaborates with cities to provide urban fish stocking and creation of
fishing access points, this was the first time the IDNR had started a co-management relationship
with a municipality to integrate watershed improvements, fish stocking, and programming into a
cohesive recreational program. Staff of both agencies described its newness:

Landowners, it’s different — we typically work in rural settings where you have landowners who are going
to install buffers, ponds, terraces on the big tracts of land. Here you’re going to have commercial folks,
you’re going to have some properties that they rent, and you’re going to have landowners who have this
much land. Their perspective on individual impacts, I think is going to be… And I don't know… Urban
settings, yes, technically they own the land they do this, but urban, way different than rural, in terms of zoning ordinances, those sorts of things— different world.

*IDNR Interview 2011001*

And so it’s going to be a painful process, and it is. You know, things don’t happen this fast, the more partners you get, because everybody’s got to have their say, they’ve got their own people they’ve got to placate and get on board, and it’s more complicated. But ultimately it’s the right thing to do. So it’s going to be a challenge; it is. And we’re not used to doing that at that level. You know, we’re used to getting buy-in and then doing a program. Now we don’t just want buy-in, we want involvement and we want their input and we want their resources and all that kind of stuff, so it’s different.

*IDNR Interview 2011002*

So that’s where we’re at right now, I think, is kind of figuring out then, how do we go about doing this? They have the money, but it’s on park property. It’s fairly untraditional for us to not to have outsiders come into the park property and just do work, right? So I mean we usually have to be the ones facilitating it. So we’re just trying to figure out how that all works.

*City Interview 2011018*

The following quote illustrates how the City staff viewed the program as a change in the IDNR’s focus and acknowledgement of the importance of urban areas to the future of the IDNR’s work:

> Well, I would tell you, the fact that the DNR has this program, this grant program available, I was just astounded that they had the foresight to understand that they could fulfill their mission in a much more significant way by joining forces with local government. Because the state park system, which is terrific and it’s important to people and I think people value and appreciate, but who has closer contact with people in their day-to-day living? It’s people who are owning and running the parks that are right in the neighborhood.

*City Interview 2011018*

Though both partners recognized the newness of the collaboration in respect to the urban fishing project and their agencies’ institutions, only the IDNR described a need to better understand the organizational culture of their partner:

> We need to know enough about the rest of the system and what other things are going on that are crossing in front of their face on their desk every day. We need to try and understand that. And we need to understand how they work together. […] And that’s the sort of thing — I think once we’ve cracked the nut in Des Moines, once we figure the system out, it’ll be awesome. […] And I think that’s another thing, is trying to figure out who all might be doing stuff — before you do anything, figuring out who all might be there and involved in this and have an interest and take the time to have some of those conversations ahead of time. We’ve been having them over the last few years as we go. You know, if we would have taken six months and done all that ahead of time, I think we’d have been better off. But again I don't think that people knew who all to talk to. So we’re developing a heck of a list of — you think about this, kind of thing. So that’s fine.

*IDNR Interview 2011001*

In their empirical study of co-management partnerships, Wagner and Fernandez-Gimenez (2008) found that “repeated interactions by committed individuals who engage in transparent, predictable, and respectful communication will likely build social capital among group participants” (p. 341). In participant observation at meetings, I observed that it was difficult for
the two partners determine points of contact among their staff and to schedule meetings with
decision-makers from the City in attendance. This was echoed by one of the IDNR staff:

And everything’s been really good. I mean, we’ve had positive feedback from most of the time, and
unfortunately it’s just been a lack of following through on the contract is what really hurt us and frustrating.
I mean, we’ve gone back and forth and back and forth, and it seems like what’s happening is we’re talking
to the people — and these are great folks — but we’re talking to the people that don’t make the ultimate
decision. We need to have the people, when we come together with these meetings, because otherwise
we’re just wasting everybody’s time. I’d like to stop that, because we’ve been through a lot of meetings and
not getting anywhere.

*IDNR Interview 2011002*

Topics of the meetings centered around what information the City staff would relay back to the
City rather than about sharing needed information or discussing next steps together. Both the
City and IDNR discussed goals outside of these meetings and had very different internal modes
of decision-making that influenced their expectations of the other (Figure 3.1). This resulted in
key information not being shared across the different stages of the decision-making:

Because it’s kind of been, the DNR has been doing all of this, so now we have to kind of catch up a little
bit with the public process, matching up with that.

*City Interview 2011005*

Well, I think this first phase of exploratory data gathering and research has got to be successful. I’m not
clear yet, the grant money that’s available to us and the ideas they have in mind, what we’re going to be
able to have people see tangibly that’s going to have an impact. I am concerned that, you know, I realize
these things take lots of research and study — I just hope we end up with more than research and study and
we can actually make some tangible impacts. If we aren’t, at least we’ll have some direction and a plan
where we can go out and seek funds from other sources too to do more work.

*City Interview 2011018*

Failed attempts of co-management can be traced to the lack of knowledge generation and
learning (Carlsson and Berkes 2005). The absence of information-sharing among the City and
IDNR did not allow the partners to engage in the “shared understanding, empathy, and respect
for others’ viewpoints” that contributes to trust and the strengthening of social capital (Wagner
The stated goals of the IDNR fisheries bureau are to create more angling opportunities in Iowa and to increase anglers. The stated goal of the City’s Parks and Recreation department is to create more opportunities for recreation within the City of Des Moines. While these are overlapping and the partners shared the official goal of their partnership—to create an urban fishing program—they differed in their conceptualization or lack of operative goals. Interviews with IDNR and City staff identified a multitude of goals without planning the means to reach them. The partnership did not develop to the point of identifying shared operative goals. Differences in and lack of operative goals caused frustration, as did the lack of a timeline for defining these. Improving water quality, engaging new anglers, increasing urban access, and integrating urban fishing within the City’s programming were all mentioned as operative goals among the agency staff:

Basically to get the folks that live in our urban areas outside and doing something, an activity that utilizes aquatic resources. A lot of our… We were once a very rural state, and fishing license sales have generally been in a downward trend for the last ten years or so, and a lot of that… folks that live in… cities, they have a lot more activities to do. And of course there’s not a lot of quality lakes in our cities, so we take whatever opportunities we have in those areas, trying to get people outdoors and experiencing what Iowa has to offer with wildlife and outdoor recreation.

*IDNR Interview 2011022*
But while we spend this money, or before and after we spend this money, want to get some pre-project data, look at it, potentially the water quality. We want to look at park use. We want to look at how well the anglers are doing through a creel survey. We want to try and get a bunch of this information so after we do this work we can show legislators, all kinds of folks, what the impact of these project is, because without that we really have no… That’s one of the things that I guess I feel is extremely important. And if we don’t do that, it’s just wasting our money, but it’s not getting the best use of it, plus that’s the goal is to do that… 

IDNR Interview 2011002

We want to get people outside, I should say, outside and in the parks; that’s an important part of our department. From the participant standpoint, I think it’s important for them as well to get outside. Fishing is a great lifelong skill that they can learn at any time and use for the rest of their lives. And as you know, there’s a lot of activities that you might get too old to get out, you might physically not be able to get out. Fishing is not that way. Fishing you can do forever, so that’s what I like about it, and it’s a good way for the participants to connect with nature as well.

City Interview 2011016

The varying operative goals and their sequence are visualized in Figure 3.1. Time was a challenge to the collaborative process between the City and IDNR. It is not hard to see how the IDNR felt they were waiting without communication from the City about the length of their process, or that the City felt the IDNR was rushing decision-making. Their decision-making processes are very different. Both agencies’ operative goals would strengthen the official goal to create a sustainable urban fishing program, but in the absence of collaborative goal setting or decision-making, the timing of these operative goals became sources of frustration. Without communication, the partners were unable to understand the other agency’s decision-making process. The urgency the IDNR felt about the finalization of the contract and the expenditure of the funds was not translated to the City staff.

As the collaboration continued, the IDNR staff operated within a survival model of organizational effectiveness (Hatch 1997) in their attempts to fulfill the requirements for the urban fishing program contract and program initiation:

And it would have been nice to have heard what he was telling them ahead of time and what he wanted to see, so we knew where they were coming from. But we walk in, and we’re all prepared to give him this list of what we’re doing and how these other projects are all tied […] and he starts talking and he starts talking bigger outcomes and everything. And I’m like, okay, but when we write the contact, the contracts got to be about products and checklists and pay, so we have this level. And then he wants to talk concepts, and these guys are supposed to be translation for him, and they’re like, oh, we can do that. And then they call us and say, “Can you do that?”

IDNR Interview 2011001

In this model, the organizational effectiveness relies upon each step of the process—if one step fails, the entire process falls apart (Hatch 1997). Etzioni’s (1961) alternative to this survival mode is the effectiveness model, in which steps in the process are interrelated and work together to serve a common goal. In this model, a component of the process might change or be removed
without undermining the existence of the entire process. For this to have functioned in the urban fishing program partnership, both agencies would have needed more effective modes of communication to understand the decision-making process and timelines of their respective institutions. The lack of communication caused conflict in their process. The timeline for the disbursement of the contract money was a tight one for the IDNR—the funds needed to be disbursed within the fiscal year of 2011—and so finalizing the contract became the IDNR’s priority:

You guys can roll it over, figure out what you want to do, get back with us, ‘cause if you don’t, we’ve got other cities that I’m not going to let this money go outside of, so we’re going to have to, at some point we’re going to have to set a deadline and say we need a contract written and signed by both parties— that’s what we’re going to have to say, because otherwise we’re going to need to take that money.

IDNR Interview 2011001

The focus of the City on their traditional internal process and the IDNR on the contract supports Selin and Chavez’s (1995) finding that agencies’ institutional cultures can deter collaboration through their lack of flexibility in regards to formal agreements and financial resources.

While the IDNR had, in the beginning, emphasized understanding the City’s internal process for initiating programs, the lack of communication and missing information about the City’s internal process became a roadblock as time passed:

I don't think community involvement will be an issue, or like community acceptance will be an issue; but we have to address it, and so that has led to this public meeting that we have to do before we break any ground in the Greenwood watershed. And we sort of didn’t see that coming. It’s a good thing that we’re doing it, but yet it’s like, ah, we’re on a deadline; we’re sort of scared about getting everything done now that we have to do all this.

IDNR Interview 2011003

I guess I just, I thought, I was expecting that the hundred thousand dollars sitting on the table would have made it more of a priority than what it appeared to be. And I just, I don't know, I just, yeah, it’s been tough for us. We’ve spent a lot of time on it, you know, touring the watershed, getting, working with our other partners to develop designs, getting cost estimates and then, yeah. So anyway we needed to have better communication throughout the whole thing.

IDNR Interview 2012024

In the fall of 2011, the IDNR pulled funds designated for an improvement at one of the Des Moines urban pond sites from the Des Moines urban fishing program imitative in order to put the funds toward a pond improvement at a community college pond in a neighboring community. The misunderstanding or conflict caused by a lack of communication and different operative goals led to the potential end of the partnership and strained the partners’ trust in one another. Despite the conflict, the IDNR was still hopeful about future collaboration:
And with this last meeting with the City, they must have been getting some heat from somewhere, people asking about it, because they were feeling pressure to do something there now, and, you know, we had removed that funding. So we met and talked with them about how we were going to try to continue with the project. And we mentioned that it’s still possible for them to get urban fishing fund dollars, possibly even next year, but we need to have some sort of watershed management plan put in place that both the City and the DNR agree upon. Basically, if we’re going to be putting money into it, we want to make sure that it’s going to make an impact.

_IDNR Interview 2012024_

While interview participants expressed frustration about inter-organizational conflict, the key conflict point provided an opportunity for increased understanding and planning of the next steps. The agencies agreed on a process for the discussed urban park pond improvements that better fit their institution’s timelines: the IDNR would wait for a watershed plan from the City when the City was ready to request funds. This allowed the City to use their usual process for decisions, and the IDNR to move on in planning urban fishing programs in other communities while the City created their plan.

In reflecting about their institutional challenge working with urban areas, staff within the IDNR identified changes and needs consistent with Barber and Taylor’s (1990) discussion of fisheries management shifting from management of resources to management of people:

> I think we want people to work in the urban area, but we don't give them all the tools and all the staff that they need. And because of that, you’re just always scrambling to get something done – to work with this group, that group, scrambling to get the fish in the lake, taking what you have available; and that may not be what you want to stock, but it’s what you have available to you to stock. And I just think we don't put a big enough emphasis on our urban areas and evaluating what’s working and what’s not. We just, we try to hit it from all these sides, but we don't sit down and really give ourselves the time to think about what’s working or how we should progress with it. [...] And I think we’re moving in the right direction, like I said, making sure that we can collaborate with these other groups, just to kind of spread out the word and sit down ahead of time and say – What do we want to do? Okay, now how do we evaluate it? I just think everybody’s busy; we just don't take the time to go from A to B. Yeah, success stories – this is what’s working, and here’s the proof of it, and it helps promote that program. I mean, if you don't have any results that you can share with people, it’s hard to say that, “Well, I need more of this, more people to work here.” So the evaluation is very important.

_IDNR Interview 2011021_

Evaluation, I’d say, would be the most important thing, and then certainly just effectiveness in models for education, teaching people and best practices that way and just best practices for access and probably rules and just all these sort of… I’m sure there’s, you’ve conflicts of use that come up that we have to try and talk about. It’d be interesting to know that.

_City Interview 2011005_

Evaluation was absent from the program process and, as the above interviewee specifies, would help ease the frustration caused by the “scramble.” The need for evaluation was recognized as a pivotal point in the collaboration, but no one took responsibility for this because there was no designated point person in either agency. Additionally, the partners viewed one another’s capacity in terms of resources (staffing, financial, infrastructure) rather than identifying and
valuing the management (networking and linkages, program process) (Horton et al. 2003). This made it difficult for them to build stronger partnership because they lacked the bridging and linking capital needed to form a new network and program process, which may have helped them move forward with the implementation of a new co-management program.

The IDNR staff identified internal improvements to their process. Increased internal training for staff working in urban areas was identified as a way to strengthen the effectiveness of their approach:

You know, I just wonder if more training just isn’t what needs to be done, instead of just dropping people into these areas. Do we have a cadre of folks that could put on little workshops in conjunction with something else – you know, what’s an effective way of putting on a fishing clinic? What’s an effective way of identifying your collaborators. Those sorts of real basic things that need to be done that we just don’t give people the knowledge on the first steps in getting it done.  
*IDNR Interview 2011021*

And so it’s going to be a painful process, and it is. You know, things don’t happen this fast, the more partners you get, because everybody’s got to have their say, they’ve got their own people they’ve got to placate and get on board, and it’s more complicated. But ultimately it’s the right thing to do. So it’s going to be a challenge; it is. And we’re not used to doing that at that level. You know, we’re used to getting buy-in and then doing a program. Now we don’t just want buy-in, we want involvement and we want their input and we want their resources and all that kind of stuff, so it’s different.  
*IDNR Interview 2011020*

Sarason and Lorentz (1998) discuss this as a common need in collaborative programs and describe what is lost when agencies do not adequately invest in collaboration: “What gets obscured is that coordination is not only about linking resources but […] redefining those resources (people and things) in ways that add material and personal value to the organization” (p. 58). While all levels of staff and management within both agencies articulated the value of the urban fishing program, the partnership encountered detours due to lack of communication and misunderstanding of the other’s processes. These detours prevented them from building the relationships that may have led to the further development of social capital through collaborative redefinition of the project and partnership.

**Partnership**

Selin and Chavez (1995) define collaboration as “emerging process […] between natural resource management agencies and other resource stakeholders [that evolves] in response to a host of internal and external factors” (p. 190). Despite the conflicts that arose through the attempt at program implementation, the IDNR and City had positive views of one another as partners, suggesting that their collaboration may evolve as their increased understanding of the
other’s decision-making processes strengthens social capital. The roadblocks and frustrations were recognized as stemming from organizational or institutional challenges rather than from the individuals:

It’s been a rough road for us. So just I don't know, you know, in general it seems like people are, these government agencies are understaffed, and so to communicate, just to communicate can be difficult. And I know can be for us too at times.

_IDNR Interview 2012024_

However, within these agencies, the value of partnership varied:

And just I think anytime you have an overall view you can learn from each other, and things work out better that way, instead of having these people trying this, these people trying that. I think the learning opportunity is a lot better, and you probably get to where you want to be quicker.

_IDNR Interview 2011021_

And so many states have this idea, and not all of them are successful in my eyes, so we’ve got to do better. So we can learn what they do and what works, but I think we have to… You know, it can’t be our program – it’s got to be their program – is how I look at it. And we’re to facilitate and help, to be the managers to make fishing better and how to manage these resources better, and things like that. But it’s not going to work if the cities and the counties and everybody, all the partners, and the lake associations, don’t make it their program. So I think that’s kind of the key. But our idea is we’re not footing the whole bill if it’s going to be a partnership. You know, we’re going to be strong partners with cities and counties and any organization that will play ball with us, and try to build these across the state, be as efficient as possible; because it’s not going to mean as much for them unless they’re involved fiscally and budgetarily [sic] and all that kind of stuff – and then it becomes a real priority for them, and it’s not just something that we come and do.

_IDNR Interview 2011020_

So it’s kind of… You know, if I had all the money in the world, I’d just go make it happen. I wouldn't need partners.

_IDNR Interview 2012023_

Partnerships are the foundation of the co-management process: “Partnerships are often essential. Local users alone can hardly manage most natural resources in the complex contemporary world. At the same time, we have overwhelming evidence that centralized management of local resources is problematic” (Carlsson and Berkes 2005:71). An institutional challenge presented throughout the interviews was that the process was new for the key stakeholders and not like other projects their staff had been involved in previously. This presents a potential barrier if the institutional cultures are not well understood; however, improved communication would provide increased collaboration and understanding that would extend beyond the urban fishing program. Additionally, the newness of the partnership contributed to frustration regarding ownership:

Our planners need to be more heavily involved, and part of this is kind of we’ve had this project sort of come in through the recreation team, but now to kind of get to the point where you’re talking about
construction, this is what our planners do. So it needs to get integrated into the planning process. They know the appropriate steps more than our recreation team. So I think that’s just starting to happen, that planners are really… things like – it’s getting full-speed forward – we need to get in the middle of this and make sure that they’re really helping lead it. The DNR is kind of leading it right now, and they need to get out of the way, and we need to do it. It’s on our property. It’s our project. It’s their funding but our project really. So that transition is just starting to get realized.

City Interview 2011005

Despite interest within each agency, it was difficult to identify point people for project coordination and there was confusion among the staff about who to contact when there were questions about the program’s progress:

Different people have different pieces of this whole, big project. It’s been a challenge. It’s another institutional thing – it’s been a challenge to figure out where it should get housed in terms of who should be leading it and who should… We even had this confusion yesterday of like who your main contact should be because it really could be any one of us. I mean, I really could be your main contact because it’s a recreational thing and it’s a recreational programming you’re evaluating. But just as much as planners, because you’re really discussing how these projects become successful, and planners should really be… So it’s been a challenge for us to even figure that out.

City Interview 2011005

This highlighted the need for each agency to invest in staff who have the capacity and interest in engaging in the management of the program, whether through providing more staffing support to those currently involved in the partnership or engaging staff whose responsibilities specifically include the development of the partnership. While both the IDNR and City saw the urban fishing program as an opportunity to integrate their agencies’ efforts to create a more sustainable program, neither agency invested the time in developing the partnership and viewed it more in contractual terms of the matching funding.

Water Quality

The urban fishing program was a means for both agencies to address concerns about water quality. In their process of assessing potential urban park ponds for the urban fishing program, the IDNR and City discovered that the sediment basins at Greenwood Park—the urban park pond that was targeted for the first stage of improvements with the project money—were in worse disrepair than they had originally thought. New dams and sediment ponds needed to be built. The shared goal of improving water quality through watershed improvements and increasing resident stakeholders’ engagement in the watershed was a common point throughout all interviews:

I mean, really our ultimate goals are to improve water quality, educate these landowners about what they can do to improve water, how they need to treat their yard, the water quality in the pond, and teach them the relationship between what they do and what they can have. And we also want to improve urban habitat
in the cities, and that’s where we don’t have to drive 50 to 100 miles necessarily… information says people won’t drive twenty miles and even less than that.

_IDNR Interview 2011002_

Yeah. I mean, the cities are very interested in their aquatic resources – they understand that to have an economic value and improving water quality in those areas. You know, one of the things we’ve learned in fisheries over the last 50 years is it’s not just stocking fish. If we can produce good water quality, we can produce fish. And so that’s one of our major goals of our units now is to try and engage with other agencies to try and improve water quality.

_IDNR Interview 2011022_

We have significant issues under our control in our 4,000-acre park system where we can better manage sedimentation and water quality, and not just on our land but waters that are going into the connected waterway system, more rain gardens and bio-swales, and prairie and wetland that is located in the right places and where we understand the unique qualities of some of these plant material communities. If we can get our arms around managing that, then we can say to others, “Please do the same.” But it’s kind of hard for us when we don’t have some of those practices in place ourselves to say upstream to somebody, “We need to have you do a better job of managing the watershed up there.”

_City Interview 2011018_

The IDNR did not communicate the results of their physical and biological sampling to the City, and this left some City staff unsure of why certain ponds were listed as priority sites or what the actual condition of the watershed was around these ponds:

You know, I don’t have any thoughts on that. To me that’s a scientific question, and I think we have to value and understand and respect what the scientists have to say. They did their research and came back and said to me – Greenwood was the pond that they recommended – and so I rely on that.

_City Interview 2011018_

So now the trick will be, as we get into this higher level of effort, which is really beyond research that they’ve kind of been coordinating on their own, it’s real easy for them to kind of come in and do their tests and go back to their offices. But this, because it’s really about construction work, it’s different, and so at this point now there’s just kind of more processes being added to this, where before it was kind of an easier structure to set up for them to do that work.

_City Interview 2011005_

The lack of communication to the City about the prioritization or improvement process caused the IDNR to miss opportunities for further community ownership of the watershed improvements:

And there is a tie-in, of course, to the water quality but a tie-in to testing. If there is an interest, that might be another thing to do with kids in the education process is to actually go and test some of these ponds. Might be nice to do it before they start any work on them, to have that baseline and say, “This is what it was, and this is what it is now – isn’t it great the difference you can make?” So that might be something, if they’re going to work on Greenwood Park Pond, to take some baseline measurements now before they do anything, the before and after, and those are a great educational piece.

_City Interview 2011019_

For people to have a concern or to have an interest, either one, they have to have an understanding first of all. And I don’t think that people who have water quality or quantity issues necessarily have an understanding of what their watershed is.
Connecting the sampling of the watersheds to the City’s stewardship goals would provide an opportunity for collaborative decision-making. This information may be a tool for the IDNR to connect City staff and urban residents to the urban fishing program initiative:

Until something happens in the lagoon and it’s completely silted in and no longer an amenity, which could take 15, 20 years and then re-dredge and do it again – which is what’s happening, frankly – there’s really no call to action. And that’s the way it is with a lot of things in life, and a lot of environmental issues and issues of all kinds of science are that way – until I feel the impact to myself, it’s hard for me to understand really what this particular program is and how it connects to all the other programs.

Water quality became a point of division within the partnership when IDNR and City did not agree on the type of improvements and their cost at the Greenwood Park pond where improvements had been proposed. These disagreements did not emerge until a meeting in December of 2011, months after the IDNR had pulled the funding from the project to direct it elsewhere. The IDNR had put together a plan for watershed improvements at Greenwood Park in consultation with experts outside of the City of Des Moines and assembled bids for these improvements. The City did not agree to the proposed plans and felt that the bids were too high. Additionally, the IDNR had not been aware of the liability the City would assume for some of the structures. This disagreement and lack of information had slowed the contract process and alternatives were not jointly discussed. At the December 2011 meeting, the IDNR and City discussed alternative approaches for future collaboration and it was decided that the City would put together their watershed plan and propose this to the IDNR for future funding if they wished to make improvements at the urban park pond. This left the City the latitude to use their own planning and decision-making process to create a plan and allowed the IDNR to apply their funding toward projects ready for implementation.

Discussion

Wondollek and Yaffee (2000) analyzed 10 years of study on co-management of natural resources and discuss one of the markers of successful collaborations to be “meaningful, effective, and enduring process” (p. 250) including early and frequent involvement in decision-making among stakeholders, well-managed meetings, and institutionalized collaboration. These components were missing throughout the urban fishing program collaboration. The lack of collaborative decision-making may have been a reflection of the newness of the partnership and the City and IDNR’s unfamiliarity with one another’s processes. The City and IDNR staff may
have maintained their traditional roles and modes of operation instead of assuming new conceptions of interaction with other agencies, organizations, or the public that are necessary for effective collaboration (Wondolleck and Yafee 2000). Without these new conceptions of interaction, the IDNR and City struggled with communication and moving their program forward. In addition, the IDNR’s funding of this case study may have influenced City staff to view me as an IDNR proponent rather than an independent researcher. Similarly, the IDNR may have viewed me as an intermediary in their process rather than an observer.

Social capital depends upon stability and is sensitive to disruption (Coleman 1990), and the frustration within the partnership jeopardized the trust between the two partners. The partnership became focused on the short-term action—signing the contract—rather than long-term goals as the agencies focused less on how to better partner with one another and more upon their respective agency’s needs and risk. Despite the breakdown of the partners’ collaborative process, the partners confronted this problem in their process by establishing an opportunity for future work. Though the partnership did not yet achieve their goal of co-managing an urban fishing program, they did engage in the “problem-solving process [...] involving extensive deliberation, negotiation and joint learning within problem-solving networks” that Carlsson and Berkes (2005) describe as characteristic of co-management collaborations. This suggests that the potential for future collaboration is emerging, though it may take a different form or process than originally planned by the partners.

Analysis of the interview data supports Ballard’s (2008) finding that the increased emphasis on evaluation in programming conflicts with the amount of training that many urban fishing program staff have in program evaluation. In contracting for this case study, the IDNR recognized their need to learn more about the social aspects of the landscape beyond the physical elements they are normally responsible for in their work. Horton et al. (2003) describe networking and linkages to be increasingly important as organizations’ work increases in multifunctionality through new partnerships and networks. As natural resource managers begin to engage in the co-management of more resources, the bridging, bonding, and linking social capital may shape the success and impact of their management.

**Recommendations**

In his review of co-management and collaborative natural resource management, Berkes (2009) identified bridging and knowledge co-production as indicators of successful co-
management systems in their ability to incorporate local knowledge and social capital through the process of the partnerships. Emergent themes from the data analysis of the IDNR and City staff interviews suggests that a co-management partnership framework may help these new partners as they strengthen their collaboration and move forward with the project. One recommendation to improve the process of co-management for new co-management partnerships, such as the IDNR and City urban fishing program partnership, is for state or federal agencies to approach city governments as bridging organizations that can be the intermediaries in the sharing of local knowledge, trust, conflict resolution, and future planning (Berkes 2009). The following recommendations for new co-management programs (Table 3.2) offer a framework for such an approach informed by the IDNR and City interview analysis.

Table 3.2 Recommendations for new co-management programs

<table>
<thead>
<tr>
<th>Process components</th>
<th>Approach</th>
<th>Output</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>Centralize and increase</td>
<td>Point person designated, Listserv, Stakeholder meetings, inter- and intra-agency meetings, sharing plans and showing outputs</td>
<td>Improved understanding of institutional cultures, timeline, and identification of goals; strengthening of inter-and intra-organizational relationships; trust</td>
</tr>
<tr>
<td>Outreach</td>
<td>Extend</td>
<td>Community meetings and presentations, invitations to residents to come out to learn more about improvements</td>
<td>Engagement of community stakeholders, transparency of process, education of water resources; ownership</td>
</tr>
<tr>
<td>Planning</td>
<td>Increase</td>
<td>Maintain a schedule of regular to attend to questions, challenges, and address opportunities</td>
<td>Increased institutional understanding and support; ownership; refined program implementation; trust</td>
</tr>
<tr>
<td>Analysis</td>
<td>Increase</td>
<td>Maintain a regular schedule of meetings with a research team to strategize and incorporate data analysis into project implementation</td>
<td>Incorporation of evaluation and assessment</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Include</td>
<td>Based upon defined goals and timeline, identify measurable outcomes and methods for evaluation of these</td>
<td>Program model that evolves to be more sustainable over time, fit current user needs and organizational structure</td>
</tr>
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</table>

These recommendations to improve new program partnership process were based upon the emergent themes from the IDNR and City interviews. Additionally, analysis of data from the
larger case study of urban fishing program partnerships compliments these recommendations. These data include interviews with urban fishing program managers outside of Iowa, as well as a review of urban fishing program and co-management literature. The IDNR hopes to create a state-wide urban fishing program and integrate it within community agencies, and so the improvements above focus on what would help the IDNR or a similar natural resource agency navigate the different processes and needed information while maintaining the social connections needed within a new partnership. Additionally, these recommendations may inform the process of other new partnerships and emerging co-management programs.

Communication, outreach, planning, analysis, and evaluation are all influential in the generation of social capital, specifically in establishing trust among partners. The challenge to this is the institutional culture shared by the City and the IDNR in which they are accustomed to approaching private or public partners with a proposed plan already in place rather than creating a plan in collaboration with another agency or organization. Evaluation throughout the process may provide the partners opportunities to share their internal challenges and processes, building trust and strengthening communication. Without this communication, the partners would lack the information needed for evaluation tools to be effective.

Social capital provides a means for understanding the barriers and conflicts as part of the co-management collaboration process. The exchanges and knowledge-sharing involved in the creation of social relationships between new partners produce social capital that, in turn, strengthens co-management partnership potential. The IDNR staff we interviewed did highlight that they needed information or tools to pursue more effective collaboration with the City of Des Moines or other municipalities. This acknowledgement suggests that their lessons learned through a survival mode attempt at program implementation may lead to a more strategic collaboration process in the future. When agency and City staff identified their concerns or needs, they described aspects of an evaluation process that could serve as a useful tool in guiding their partnership. The question becomes then not what partnerships are key factors to the success of the program, but how evaluation might help to guide and shape these partnerships toward more effective collaboration and steer them from the deterioration of trust and communication.
CHAPTER 4. CAN WE EAT IT? URBAN FISHING PROGRAMS AND WATER QUALITY

Abstract

Iowa’s population shift from rural to metropolitan areas inspires new natural resource programs in urban areas. Urban fishing programs present an opportunity to engage urban residents in local ecosystem improvements and water quality education. Other states’ urban fishing programs present a rich history of efforts to create new recreational opportunities in close proximity to urban residents’ homes, yet these programs lack documentation or analysis of how these programs integrate water quality goals within agency and community collaborations. This paper presents findings from a pilot urban fishing program case study examining how urban resident stakeholders engage in water quality questions and how they view their role in water quality improvements. Questions about water quality and watershed health were consistent among participants from diverse backgrounds throughout neighborhood and community organization focus groups, a focus group participant survey, and participant observation of stakeholder meetings in Des Moines, Iowa. The social landscape of urban natural resource management presents a new frontier for state agency natural resource managers working with community stakeholders. Social planning theory frames this analysis of the transformation of these questions into engagement through increased connections with local watersheds and ecosystems.

Introduction

Iowa’s population has shifted from rural to urban areas (Peters 2011), inspiring changes in local and state governments’ planning of natural resource management and recreational opportunities. Residents of Des Moines, Iowa participated in the City of Des Moines’s Satisfaction Survey in 2007 and their top request surprised City and state agency staff--residents wanted more fishing opportunities within the city. In response to this, the City of Des Moines (City) and Iowa Department of Natural Resources (IDNR) began a partnership in 2009 that involved the funding of a halftime, seasonal employee to assist the City of Des Moines Parks and Recreation department with summer fishing events. The increased programming in the summer went well and engaged partnerships with community organizations. The success of these summer clinics and initial contacts with community groups inspired the IDNR and City to consider
further collaboration on a year-round urban fishing program initiative at urban park ponds in Des Moines neighborhoods.

In 2010, IDNR received federal grant funds designated for water quality improvements in urban areas and planned to spend this money improving an urban park pond in Des Moines. They hoped to improve an existing site to be a sustainable fishery, creating more fishing opportunities within neighborhoods in Des Moines. State agency staff and Iowa State University (ISU) prioritized four urban park ponds in Des Moines, Iowa (Figure 4.1) based upon sampling and tests including study of sediment, watershed, contour, and storm water maps; biological and physical samples including fisheries, water quality, vegetation, and visual assessment of watershed; and a creel survey1 (Dodd and Konrady 2011). The IDNR and City both hoped to engage citizens in their urban watershed and this was identified as a goal of the program.

The agency partners had gathered biological and physical data from the urban park ponds in prioritizing their potential as sustainable fisheries, but needed information about the social landscape of the watersheds surrounding the urban park ponds. Five focus groups provided input from residents about their attitudes towards their neighborhood’s park pond and the potential for increased recreational activity there. While specific to the proposed program sites in Des Moines, the analysis of these focus groups’ questions and ideas will be valuable to others engaged in planning watershed improvements and programs. In order to learn the social dimensions of the watersheds and strategize partnerships in urban areas, the IDNR contracted with ISU to conduct a case study of the urban fishing program initiative’s efforts and to assess interest, knowledge,

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1 A creel survey is an angler survey asking about species caught, harvest rate, frequency of visits to the site, and demographic information.
engagement, and opportunities for future expansion. This article is a part of that larger case study.

**Social planning and urban fishing programs**

Social planning may guide the development of natural resource programs and assist agencies in evaluating how to best direct their time, staff, and funding while maximizing the creation of social capital within urban environments. Social planning is defined as an approach that “emphasizes a technical process of problem solving regarding substantive social problems” (Rothman 1995:310). Additionally, social planning provides diverse stakeholders “the ability to envision a future that is better than the present” (Weil 2005:215). Community partnerships with local, state, and federal government agencies to collectively manage natural resources are increasing (Koontz et al. 2004; Pretty 2003). This trend represents a change in natural resource management as agencies shift from a top down approach to engage diverse stakeholders in the process of addressing environmental problems (Koontz et al. 2004). This shift presents opportunities and challenges as shared environmental goals bring together new partners.

The formation of community partnerships relies upon the trust built through social capital over a long period of time (Carlsson and Berkes 2005; Koontz et al. 2004; Pretty 2003). While co-management literature discusses social capital through a variety of definitions, this analysis is based in Coleman’s (1990) definition:

Social capital is defined by its function. It is not a single entity, but a variety of different entities having two characteristics in common: They all consist of some aspect of a social structure, and they facilitate certain actions of individuals who are within the structure. Like other forms of capital, social capital is productive, making possible the achievement of certain ends that would not be attainable in its absence. Like physical capital and human capital, social capital is not completely fungible, but is fungible with respect to specific activities. A given form of social capital that is valuable in facilitating certain actions may be useless or even harmful for others. Unlike other forms of capital, social capital inheres in the structure of relations between persons and among persons. It is lodged neither in individuals nor in physical implements of production. (P. 302)

While environmental improvements or changes inspire the formation of the co-management partnerships, their success relies upon social outcomes because the social relationships that emerge through the co-management process require more management than the natural resource (Natcher et al. 2005). These relationships and network ties embody the social capital that contributes to successful co-management: “Social capital, in turn, is created when the relations among persons change in ways that facilitate action […] it is embodied in the relations among persons” (Coleman 1990:304). Pretty (2003) further describes types of social capital:
Bonding social capital describes the links between people with similar objectives and is manifested in local groups, such as guilds, mutual-aid societies, sports clubs, and mothers’ groups. Bridging describes the capacity of such groups to make links with others that may have different views, and linking describes the ability of groups to engage with external agencies, either to influence their policies or to draw useful resources. (P.1913)

The social outcomes of community partnerships include increased social capital as different stakeholder groups increase contact, communication, and trust through knowledge-sharing and collective problem-solving (Koontz et al. 2004). As bridging, bonding, and linking social capital form within these partnerships, “people have the confidence to invest in collective activities, knowing that others will also do so” (Pretty 2003:1913). There is a gap in the literature about how to create this environment of adaptability and knowledge-sharing within collaborative natural resource management (Carlsson and Berkes 2005).

Trust is a form of social capital (Coleman 1990) that is a precondition for successful planning in collaborative processes because it facilitates cooperation while increasing the likelihood of stakeholders’ participation in the process (Laurian 2009). The processes of knowledge sharing, decision-making, and goal setting influence social capital, which “is created when the relations among persons change in ways that facilitate action […] it is embodied in the relations among persons” (Coleman 1990:304). Trust is especially influential as agencies and stakeholders enter into new partnerships and opportunities for community engagement because “there is a critical difference between going through the empty ritual of participation and having the real power needed to affect the outcome of the process” (Arnstein 1969:216). Citizen involvement and responsibility within the collaborative process can rebuild trust in and within government agencies (Wondolleck and Yaffee 2000). The role of this social capital within emerging natural resource collaborations is understudied (Wagner and Fernandez-Gimenez 2008) despite its ability to strengthen the collaborative process (Laurian 2009).

Weil’s (2005) recommends that communities engaged in social planning incorporate a process of goal-setting, communication, and evaluation. Evaluation is an important component to social planning (Laurian 2009; Rothman 1995). Engaging resident stakeholders in the process of improvements is essential to meeting environmental goals (Prokopy and Floress 2011). The social planning of community-based natural resource programs may assist agencies in accomplishing their environmental goals while providing communities with influence in shaping the programs through both process and task goals. Rothman’s (1995) definition describes process goals as those that are more long-term and systemic in their focus:
Process goals are oriented to system maintenance and enhancement and local empowerment; with aims such as creating self-maintaining, problem-solving structures, stimulating wide interest and participation in community affairs, fostering collaborative attitudes and practices among people, and enhancing indigenous leadership, all linked to enhancing community integration and local problem-solving capacity” (P. 36).

The organization or agency maintains control of the program’s outcomes while incorporating the community’s involvement through defined task goals. Rothman (1995) defines “task goals” as those that “entail the completion of a concrete task or the solution of a delimited problem in a community system: establishing new services, improving coordination of existing ones, passing specific social legislation, or changing the behavior or attitudes of residents” (p. 36). In a social planning model, input from the community influences or shapes the planning of a program, but the residents do not actively participate in the program’s development (Rothman 1995). Nichols (2002) proposes that agencies engage resident stakeholders early in the program process. She presents participatory planning as one way to navigate through the challenges that agencies’ institutional culture may present when working with resident stakeholders. Additionally, she points out, when participants are involved in the early stages of planning a community program, their concerns and questions can be incorporated within the program’s development and become evaluation measures.

The focus of urban fishing programs has historically been to increase fishing opportunities in urban areas, thereby engaging a new audience in recreational opportunities close to home (Neal and Eades 2008). The perspectives of both the agency partners and the community stakeholders are key to successful watershed changes (Morton, Selfa and Becerra 2011). Water quality improvements have been part of the highlighted accomplishments of urban fishing programs (Eades at al. 2008) and the partnerships created through site identification, restoration or construction, finance, maintenance of the fishery, and programming have inspired increased stewardship in communities (Penne and Cushing 2008), but the connection between water quality improvements, urban fishing programs, and stewardship has not been discussed in the literature.

Since the 1990s, funding constraints (Plummer and FitzGibbon 2004), adaptation to changing demographics as population shifts from rural to urban areas, and the questioning of agency legitimacy from interest groups (Wondolleck and Yafee 2000) have posed challenges to natural resource management. In their 1990 review of the importance of evaluation in fisheries management, Barber and Taylor write that fisheries management has shifted from managing fish
to managing people. The authors call for a recognition of values in the goal-setting and
decision-making processes of urban fisheries management. A great deal of work is being done
across a diversity of programs to establish connections in urban areas with new partners, but
much of this work is not yet documented or measured through an evaluation process.

Several case studies of urban fishing programs highlight community engagement in the
program implementation and management. Minnesota’s Fishing in the Neighborhood (FiN)
incorporated focus groups within their evaluation process to identify underrepresented groups’
constraints to and interest in fishing opportunities in the Twin Cities. Through the process of the
focus groups, participants also offered suggestions about promotion and partners that could
create a more successful program (Schroeder et al. 2008b). The Utah community fishing
program cites stewardship and ownership as two of their accomplishments in their program
(Penne and Cushing 2008). Feedback from events and involvement in the local community helps
agencies to be responsive to demographic changes and form new partnerships (Walsh et al.
2008), monitor regulations (Racy et al. 2008), plan more effective events (Lang et al. 2008), and
change marketing strategies (Taylor et al. 2008; Walsh et al. 2008). Some programs are
changing their names from “urban fishing program” to better reflect their partnership building
and stewardship components. The name “Urban Fishing Programs” fit well with the U.S. Bureau
of Sport Fisheries and Wildlife’s intent to increase fishing access for inner-city and low income
urban neighborhoods (Menau 2008), but the changing dynamics and needs of these programs
may be better served by names reflecting the community aspects they incorporate (Pape and
Eades 2008).

Pretty’s (2003) discussion of social capital within collective natural resource management
asks “could local people play a positive role in conservation and management of resources? And
if so, how best can unfettered private actions be mediated in favor of the common good?” (p.
1913). The impetus for increased community engagement may focus upon needed
environmental improvements, but the success of these improvements relies upon social
outcomes. The process of managing these emerging relationships requires managing more than
the natural resource (Natcher et al. 2005). The following questions guide my analysis of social
capital’s role in a community-based environmental and recreational initiative, a pilot urban
fishing program: What existing and potential partnerships might be key to program
development? What opportunities or capacities might these partnerships build within urban
communities as they engage in public health, urban food sources, watershed improvement, or ecological awareness initiatives? What are the barriers these partnerships may encounter within the community or city and state level agencies?

**Research methods**

The IDNR and City were interested in learning the potential social capital within the prioritized watersheds as they planned the urban fishing program initiative. During the spring and summer of 2011, I facilitated five focus groups with Des Moines community residents. Hatch (1997) defines stakeholders as those “individuals, groups, or other organizations that have interests (their stake) in the activities and outcomes of the organization” (p. 121). Focus group participants consisted of those who lived or worked near the prioritized urban ponds in Des Moines, as well as members of interest groups’ whose positions had the potential to shape the program. The first focus group consisted of representatives from organizations serving youth and/or engaged in environmental and community service. The subsequent focus groups recruited residents from the watersheds of the four prioritized urban park ponds and other residents whose neighborhood boundaries were adjacent to these parks.

Purposive snowball sampling (Coleman 1959) was used to contact focus group participants. Purposive snowball sampling describes the process of building a sample through participant contacts. In this case, the initial IDNR and City contacts who were project leaders identified individuals and community organizations for focus group contacts. Neighborhood association boards of those neighborhoods located within the watersheds of the proposed priority sites (Greenwood Park Pond, Witmer Park Pond, Taidam Village Pond, Mac Rae Park Pond) and/or whose neighborhood boundaries were in close proximity to the proposed priority sites were contacted. The City of Des Moines Parks and Recreation department provided neighborhood association lists and members of their boards were contacted by telephone and email. Additionally, the City staff recommended community organizations with youth programs or an interest in fishing opportunities and these organizations were contacted. Possible stakeholders of the pilot Des Moines urban fishing program were identified through discussions with the City and the IDNR; however, the Polk County Conservation Board was the most informative about potential community organization partners. Organizations and agencies of participants who took part in the five focus groups during spring and summer of 2011 are listed in Table 4.1.
Participants for focus groups were contacted by phone or email. When contacting neighborhood associations or community organizations, I first called the director or chair and in all cases this person said that they would send out an email or make phone calls to others in the group to notify them of the focus group and ask their participation. Additionally, two neighborhood associations posted the focus group on their neighborhood listserv or website. Focus groups were scheduled on weekday evenings at a location convenient to the neighborhoods and parks, such as a local church or community center. All contact methods, consent forms (Appendix A), and research instruments (Appendix B and Appendix D) were reviewed and approved by the Iowa State University Institutional Review Board. Consent forms were reviewed with participants prior to their participation in the study. Focus group participants were informed that the program planning was very new and the purpose of the study was to gain foundational knowledge for the City and the IDNR to use in planning their next steps.

A semi-structured focus group guide (Robson 2002) was used and incorporated open-ended questions focusing on five themes: community’s interest, water quality, challenges, opportunities, and recommendations. (Appendix B). Focus group discussions were recorded, transcribed, and then analyzed using Nvivo 9 qualitative data management software (QSR International Pty Ltd. Version 9, 2010) to identify recurring themes and patterns in the data using open, axial, and selective coding. Using an inductive approach based on grounded theory (Corbin and Strauss 2008; Charmaz 2007), data were analyzed to find patterns and emergent themes from the interview and focus group data. Grounded theory supports the inductive nature of social planning theory by allowing the researcher to incorporate observations, naming, and analysis of real-world patterns through cognitive categories (Rothman 1995). Focus group participants completed a short questionnaire about park use, environmental awareness, and neighborhood involvement, as well as demographic information prior to the start of the meeting (Appendix E). Focus group participant questionnaires were analyzed to identify recurring themes and patterns in demographic data such as how long residents have lived in the neighborhood, if they rent or own their homes, their age groups, and how often and how they use the park. The research team coded data independently and used comparison and reconciliation of their analyses to ensure intercoder reliability.

Participants in the focus groups were entered into a raffle for one $25 Bass Pro gift card provided by the IDNR per focus group as incentive and a token of appreciation for their
participation. Additionally, Bass Pro Shop donated t-shirts and caps to raffle to focus group participants. Participants in each focus group were entered into a raffle for the gift card, t-shirt, and cap and three participants were chosen randomly. Interview participants were not entered into the raffle because their participation was during work hours at their workplace. Participants were offered access to the final case study report by downloading it from the Iowa State University Sociology Extension and Wildlife Extension websites upon its completion.

Additionally, 22 staff from the City of Des Moines (CDSM), Iowa Department of Natural Resources (IDNR), Polk County Soil and Water Conservation District (PCSWCD), Polk County Conservation Board (PCCB), and urban fishing program managers from other states were interviewed. While the focus of this paper is the community residents’ capacity to engage in the pilot urban fishing program, an analysis of the interview data is included as context to the agency staff’s perspectives on community residents’ attitudes about water quality.

Results

Improving urban watersheds was a shared goal that the IDNR and City hoped to achieve by engaging urban residents in a fishing program. Their rationale was that if one eats a fish from the pond down the street, then one might be more thoughtful of the water cycle on their yard and pay more attention to the health of the urban park pond. Knowledge of residents’ perceptions of water quality and their use of current park pond sites was needed and valued by both agencies. Analysis of the five focus group transcripts found that the theme of water quality was consistent across all groups, however the level of ownership community residents expressed about the neighborhood park ponds varied depending upon the location. Participants in the focus groups shared interest and opportunities for engagement among existing organizations, agencies, and individuals that will be important in building an alliance and partnerships associated with an urban fishing initiative.

The problem-solving focus of a social planning approach addresses the problems of the partner agencies. The IDNR needs to increase anglers and the City needs to respond to their constituents’ request in the 2007 Resident Survey to increase fishing opportunities within the City. However, very few of the focus group participants recognized or identified problems in their watershed or pond. The City’s decision-making process through consultation with the Parks Board is an example of a social planning decision process (Rothman 1995). The use of focus groups was new to both the fisheries division of the IDNR and the City. The City was hesitant
for me to meet with the focus groups. Rothman (1995) describes information-exchange as an attribute of social planning that can lead to empowerment. A major concern of the City’s was that misinformation or false impressions may energize a neighborhood where a fishing program may never happen, yet neither the City nor the IDNR supplied information to the neighborhood focus groups in advance or following their biological and physical testing, nor did they follow-up with communication about the status of the urban fishing program initiative.

**Participants and interest**

Both the IDNR and the City shared the goal of beginning an urban fishing program that would engage surrounding residents in increased watershed awareness and ownership of their local natural resources. The focus groups were their first step in identifying task goals by learning more about current beliefs and attitudes within the watersheds of the prioritized pond sites. The input from the Des Moines focus groups shapes the planning for the program’s potential in Des Moines, as well as in other urban locations in Iowa, as the IDNR uses residents’ ideas, questions, and concerns to plan their next steps. Participants (Table 4.1) included members of local agencies, neighborhood associations, schools, and community groups.

**Table 4.1 Focus group participants**

<table>
<thead>
<tr>
<th>County Agency</th>
<th>Surrounding Neighborhood Associations and Groups</th>
<th>Schools</th>
<th>Community Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Polk County Conservation Board; Polk County 4-H</td>
<td></td>
<td>Central Iowa Anglers; Chrysalis Foundation; Freedom for Youth; Izaak Walton League; Raccoon River Watershed Association; Salvation Army; Urban Dreams</td>
</tr>
<tr>
<td></td>
<td>North of Grand Neighborhood; Waterbury Neighborhood; Founders Garden Club</td>
<td>Greenwood Park</td>
<td>Cowles Montessori</td>
</tr>
<tr>
<td>Greenwood Park</td>
<td>Beaverdale Neighborhood; Drake Neighborhood; Waveland Heights Neighborhood; Waveland Park Neighborhood</td>
<td>Witmer Park</td>
<td>Des Moines Area Community College (DMACC) Urban Campus; Drake University; Scavo High School</td>
</tr>
<tr>
<td>Witmer Park</td>
<td>Lower Beaver Neighborhood; Taidam Village Community</td>
<td>Taidam Village Park</td>
<td></td>
</tr>
<tr>
<td>Taidam Village Park</td>
<td>Grey’s Lake Neighborhood; Indianola Hills Neighborhood; McKinley School/Columbus Park Neighborhood; Southwestern Hills Neighborhood</td>
<td>Mac Rae Park</td>
<td></td>
</tr>
<tr>
<td>Mac Rae Park</td>
<td></td>
<td>Schools</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Community Groups</td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>
Four of the focus groups targeted the four priority pond sites (Greenwood, Witmer, Mac Rae, and Taidam Village Community) and one focus group was composed of representatives from community groups interested in the urban fishing initiative (Table 4.2). The county agency, neighborhood associations, schools, and community organizations taking part in the focus groups presented a wide array of varying social capital. Some stakeholders engaged in activities with their organization or neighborhood members already, exhibiting examples of bonding capital. Others were engaged in bridging capital with external partners outside of their group in collaborative projects such as environmental improvements or recreational programs for youth. A few were engaged in linking capital, connecting to city or state government agencies to further their organization’s or group’s project. Descriptions of the varying levels of social capital are described in Table 4.2.

The Des Moines focus group participants raised a lot of questions regarding the urban fishing program, ranging from basic information questions such as “What is an urban fishing program?” to ecological questions such as “What species are currently in the pond? What species are native?” to more in-depth process-oriented questions such as “Is the funding continuous? What is the source?” The focus group participants were invested in their communities at varying levels and viewed improvements at the park as an asset to their neighborhood even if they were not interested in fishing.

The site designated the lowest priority—the Taidam Village Pond—offered the greatest potential for partnership and strongest existing social capital. The Taidam Village Pond stakeholders—Lower Beaver Neighborhood Association and the Taidam Village Community—were very eager and interested in the urban fishing program and only had concerns about liability. The City owns the trail and part of the pond at this site but the Taidam community owns the majority of the site privately. The neighborhood and community stakeholders wanted more information about liability responsibility and how this would be handled if the pond were designated an urban fishing program site, but this was the only obstacle or challenge they foresaw. Both groups were already working together on improvements and had representatives on one another’s neighborhood boards. Though this site presented challenges in its joint private-public ownership, the neighborhood and community stakeholders’ communication and trust demonstrated a high level of social capital.
<table>
<thead>
<tr>
<th>Social Capital</th>
<th>Community Organizations</th>
<th>Taidam Community Park Pond</th>
<th>Greenwood Park Pond</th>
<th>Witmer Park Pond</th>
<th>MacRae Park Pond</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonding Social</td>
<td>Collaboration among City, IDNR, Polk County Conservation, Isaac Walton League already underway in development of fishing opportunities in Des Moines</td>
<td>The Taidam community plans events year-round bringing their community members together at the pond site; Surrounding neighborhood residents from Lower Beaver neighborhood were especially concerned about the welfare of the Taidam Village community and the potential risks and benefit of increased use at pond</td>
<td>High park usage among City residents; neighborhood residents recognized need for park pond improvements due to its impaired water quality</td>
<td>Diverse attendance at focus group in terms of age, interest, and gender, including students working at the pond site for class, teachers from surrounding schools, and representatives from several neighborhood associations—all concerned about park improvements</td>
<td>Little current use of park but strong nostalgic attachment to it because many had lived in the neighborhood the whole or majority of their lives; a few neighborhood residents are fishing at the park pond</td>
</tr>
<tr>
<td>Bridging</td>
<td>Many examples of partnership among City, State, and community organizations with staff dedicated to manage these relationships</td>
<td>Taidam community collaborating with City planners on property assessment</td>
<td>Area schools, Des Moines Art Center, and City already in collaboration with neighborhood residents concerned about park pond impairments</td>
<td>Drake University, Scavo High School, Des Moines Area Community College, and neighborhood groups engaged in or planning to engage in neighborhood projects</td>
<td>Area business association working to improve the business district but no current collaboration with neighborhood groups</td>
</tr>
<tr>
<td>Linking</td>
<td>Polk Co. 4-H hoped to increase outdoor urban recreational opportunities and more urban fishing access would be a benefit to their youth programs</td>
<td>Combination of public and private ownership</td>
<td>Founders Garden Club already regularly meeting with City to plan park improvements</td>
<td>Drake Neighborhood Association already receiving City beautification grants for neighborhood improvements</td>
<td>Participants felt that the proximity to Gray’s Lake made it hard to get improvement money for MacRae Park; not currently working with City or external partners</td>
</tr>
</tbody>
</table>
Opportunities

Partnership and collaboration were emergent themes from the analysis of focus group transcripts. Focus group participants shared examples of existing or lacking social capital (Table 4.2) as well as ideas for future engagement, concerns about challenges, and opportunities (Table 4.3) within their organizations and neighborhoods. Three focus groups—the Greenwood Park Pond, Taidam Village Community Pond, and Witmer Park Pond—exhibited examples of existing bonding, bridging, and linking social capital—suggesting opportunities for the City and IDNR to build upon existing collaborations within these watersheds.

The Taidam Village Community pond was an exception on the list of prioritized ponds because the majority of it is on land privately owned by the Taidam Village Community. The City owns a bike trail that passes through the site as well as the northeastern corner of the pond that the trail passes near. Refugees from the Taidam community in Vietnam immigrated to Des Moines, Iowa in the 1970s. Their cultural community bought the land on which the pond is located in an effort to create a space for their community celebrations and to share their community’s culture with the public. The Taidam Village Community bought the former brickyard and has spent significant funds and time cleaning the site to create a park for their community members, including hiring a scuba diver to inspect the pond. This is a strong example of bonding social capital among several generations of Taidam community members.

At the time of the focus group, they were in the process of building the foundation of a community cultural center at the entrance to the park. Prior to the Taidam Village Community’s ownership of the land, the Lower Beaverdale residents had experienced increased criminal activities at the site and described it as an “eyesore.” Their community’s improvements at the pond site improved the safety of the surrounding neighborhood. Members of the Taidam Village Community attending the focus group described the site as a sanctuary within the city, and hoped that one day they would be able to donate the land to the City of Des Moines to thank the City for having welcomed them as refugees in the mid-1970s. The Lower Beaverdale neighborhood and the Taidam Village Community already exchange information regularly. Each group had an appointed representative who attended the other’s board meetings. There was a high level of trust among the participants from the two groups who attended the focus group:

I don’t fish personally, but when this topic came up, like [name removed] mentioned too, [name removed] mentioned some of the other parks – it’s like okay, that’s all city-owned property. This is private property,
and so I want to make… I guess I was concerned with, I want to make sure that the Tai Dam are not being railroaded or something, that this is to their benefit, that they agree with it and that they’re in favor of it. 

*Lower Beaverdale Neighborhood participant at Taidam Village Community pond focus group*

And the neighborhood. The neighborhood is important. If the neighborhood’s not involved, then what for? We don’t live there. We… the people that live in that neighborhood. We come and enjoy it, but the neighbors live there, and we don’t want them to complain about us. We want them to stay happy, thank you. 

*Taidam Village Community participant at Taidam Village Community pond focus group*

The relationship between these two groups was very strong and was unlike any of the partnerships shared through focus groups at other pond sites. The bridging capital they shared offered a strong existing network from which to partner with the City, County, or State on pond improvements and urban fishing program collaboration. The relationship among the neighborhood and Taidam Village Community had evolved over time and seemed strong enough to find solutions to the challenges that a mostly-privately owned program site would present.

In the focus groups with neighborhood residents, two pond sites had neighborhood groups already collaborating with the City on improvements at the pond: Greenwood Park and Witmer Park. The Founders Garden Club consisted of representatives from neighborhoods around Greenwood Park and the director of the Des Moines Art Center. The group met with City staff to discuss management of the park pond and needed improvements. They were concerned about the deterioration of a sculpture on the pond bank as well as the damage numerous floods had upon the sediment ponds. The Founders Garden Club’s collaboration with the City to manage the park pond offered an opportunity for the IDNR to engage in an existing co-management partnership.

While the Witmer Park pond site was the smallest and presented challenges from a fisheries management perspective, focus group participants shared examples of bonding, bridging, and linking social capital within their neighborhood. Watershed improvement efforts were already underway. The Witmer Park focus group included students from Des Moines Area Community College (DMACC) Urban Campus, teachers from a nearby high school, a professor from Drake University, and representatives of neighborhood associations. The Drake Neighborhood Association had received beautification grants from the City for plantings along medians through the neighborhood, an example of linking social capital. Additionally, they were working with sorority and fraternity groups from Drake University to provide opportunities for service and volunteers hours through neighborhood improvements, an example of bridging
capital. Several neighborhood organizations were very active and the bonding capital exhibited by their organization officers and members demonstrated that even if they were not interested in fishing, they recognized the collective benefits of park improvements and more recreational opportunities. DMACC Urban Campus was already collaborating on improvements at the park pond through non-native species removal and was in close coordination with the City Parks and Recreation maintenance team. The social capital present among the Witmer Park stakeholders included partnerships with individuals and groups within and outside of their neighborhoods.

MacRae Park Pond focus group participants were very invested in the identity of their neighborhood. Many had several generations of family within their neighborhood and had lived there for most or all of their lives. However, they felt that park use had changed a lot and the close proximity of MacRae Park Pond to Gray’s Lake put their park at a disadvantage. Gray’s Lake is the most frequented city park in the State. Recruiting participants for the MacRae Park Pond focus group was not easy and all participants agreed that the park was not much used anymore. While two participants did fish there and would like more recreational opportunities at the park, there did not seem to be examples of existing neighborhood investment in the park.

Participants in the focus groups requested several tools to further educate citizens about the neighborhood parks, pond water quality, and an urban fishing program, as well as amenities to improve the parks should an urban fishing program be developed at the park pond (Table 4.3). Many of the proposed tools and amenities provide opportunities to further engage stakeholders in partnership. For example, an Adopt-A-Pond program could be modeled after the city of Toronto’s partnership with the Toronto Zoo to offer their Adopt-A-Pond program (http://www.torontozoo.com/adoptapond/) or a Des Moines fishing map could include information from Polk County Conservation Board or Polk County Soil and Water Conservation.

Connections to local youth organizations’ programming and events may provide increased use of the park ponds beyond angling. Some were concerned that increased use might cause over-use and attract people from outside the neighborhood who did not respect the park. In each focus group, participants expressed an initial concern about safety at parks and then raised the point that increased use of the parks would increase safety. Several times throughout this case study, the City expressed concern about contacting local residents regarding the water quality and potential for an urban fishing program at their urban park pond. The community focus group
consisted of representatives of organizations who had collaborated with the City and IDNR previously and many had the capacity within their organizations to provide volunteers for trainings or clean-ups. The bridging and linking capital existing at the Taidam Village Community pond, Witmer Park pond, and Greenwood Park pond may help the IDNR and City in integrating their efforts with the work already underway.

**Challenges**

Those who participated in the focus groups expressed interest in the program but also shared feelings of distrust and uncertainty about the sustainability of the urban fishing program initiative because integral program components, such as funding, staffing, or a timeline for defining these, were not yet specified:

But what a perfect place along the other side of the walking trail, biking trail, to develop that for fishing. But I’d want to be on the other side in the pond. But, yeah, I’m with [name removed] – gee, what a great place to develop it. And of course as you draw more people in – and I think of all the DNR cutbacks financially that they’re going through right now – I’m saying, okay, so now we’ve got this federal money to develop this. How does it get maintained? Who’s going to clean up after a weekend of fishing by the public? And you’re right – you guys have done such a marvelous job down there. Why would you ever want to put up with that nonsense in a pristine area that you’ve created there? So DNR funding scares me to death. And of course federal funding is like, it’s a good thing they’ve got it now, because they’d never get it going forward.

*Lower Beaverdale Neighborhood participant at Taidam Village Community pond focus group*

Even if funding and staffing ceased to be concerns, Penne and Cushing (2008) cite the ability of each community to take ownership and direction of their community-fishing program as the impetus for many successful partnerships and programs. These programs provide an opportunity to bring together various stakeholders and to engage citizens in outdoor activities and education about their local ecosystems and water quality. In the Des Moines neighborhood focus groups, residents expressed varying levels of ownership. Some neighborhoods were already engaged in improvements at their local park, while others were not aware there was a pond at the park or even the location of the park:

Yeah, I think part of this is about creating a sense of ownership. Yeah, it isn’t just a pond we walk by every day; it’s something we ingest things from, we send our kids down to every day. So increasing usage in that way I think would at least put it in people’s heads a little more, like – oh, yeah, this treatment I’m putting on my lawn could end up in my stomach someday.

*Community focus group participant*

But that would be a way of expanding sort of the knowledge base of people about, you know, why does Greenwood look the way it is? Well, look at the neighborhoods, the amount of fertilizer, the stuff coming out in the street, the salt, the chloride, all that’s going into that pond. But we can do some things about that.

*Greenwood Park pond focus group participant*
People are stressed right now, economically, socially, all kinds of things, and they don’t need another crusade. There’s some of us that are always looking for projects and things to do and betterment and all of that. But what you see in this room is unusual. There’s only a very few in any neighborhood that take a real active interest in it.

*Mac Rae Park pond focus group participant*

Get some volunteers.

*Witmer Park pond focus group participant*

Residents outlined challenges (Table 4.3), but their responses to these depended upon their level of use of the sites in question. The agencies’ own structure and processes pose the central challenge to engaging urban residents in watershed improvements through a community-based fishing program. Morton (2011) describes the “balancing act” of agencies working in community-based watershed approaches as they attempt to empower citizens while working within institutions whose traditional approach has been more expert-driven and less participatory. As the Lower Beaverdale Neighborhood resident expressed, some residents were weary of partnering with the IDNR because they worried that their funding of watershed improvements as something that would not be consistent over time. Without communication among the City, IDNR, and neighborhood stakeholders, such concerns could undermine the potential linking capital existing in the community.
<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Examples</th>
<th>Challenges</th>
<th>Next Steps</th>
</tr>
</thead>
</table>
| Building of Social Capital | • Integration within school programs  
• Mentorship  
• Intergenerational activities  
• Afterschool activities  
• Increased safety because of increased park usage  
• Year-round activities  
• Convenient location | • Competing with a variety of activities and technologies for participants’ time  
• Lack of engagement in neighborhoods  
• Liability concerns  
• Increased use may cause over-use and/or attract people who do not respect the neighborhood  
• Maintenance of parks and ponds  
• Lack of knowledge about regulation  
• Lack of public awareness / promotion  
• Funding | • A Des Moines fishing map that, similar to a trail map, provides locations of urban fishing program sites, regulation and contact information  
• Meetings with City and IDNR staff to discuss the initiative in more depth with their communities with time for question and answer sessions  
• Adopt-A-Pond program to engage communities and encourage stewardship  
• 4-season park for year-round use with ice fishing in winter |
| Environmental stewardship | • Education about local habitats and watersheds  
• Reconnect residents to nature  
• Reason to clean-up neighborhood ponds  
• Family activities at low or no-cost  
• Increased partnership among City, neighborhood, and community groups  
• IOWATER trainings  
• Stewardship  
• Food source and discussion about dietary and nutrition needs | • Lack of communication with those who maintain and improve the park ponds  
• Impact of fertilizers, road salts and sand  
• Invasive species  
• Water quality  
• Litter | • Increased signage at the parks detailing native plant, wildlife, and fish species  
• Explaining fishing regulations  
• Providing information about the most recent water quality test  
• Designating interpretive tours throughout the park and including the pond’s wildlife and plants  
• Highlighting the fishing program and other sites available |
**Water Quality**

Participants in the focus groups attended because they were avid anglers or were curious about improvements at their local park pond. While levels of knowledge and understanding varied, all groups discussed water quality, though the connection between watershed health and fishing varied. Participants’ concerns and questions about water quality raised questions about the approach and long-term sustainability of the initiative:

But when it comes down to actually trying to manage a water body, it just drives me crazy how little interest there is in the whole system – the mussels, the minnows, the macro-invertebrates, the water quality, the plant life, the structure. It’s like dig a hole, throw the fish in.

*Mac Rae Park pond focus group participant*

The pond doesn’t look that healthy to me, and I keep hoping that something like this, before you would put the fish in maybe we would clean it up a little. That was my hope that it would benefit the area.

*Greenwood Park Pond focus group participant*

Watershed health, education, and the safety of water/eating fish were common themes at each focus group (Table 4.4).

Participants were eager to learn more about what contributes to water quality impairment, how to make improvements, and the current water quality conditions at their local park pond. The IDNR emphasized its expert role by inviting staff from the county, City, Iowa State University, and the Natural Resource and Conservation Services to walk around the selected pond sites to discuss needed improvements. Representatives from the neighborhoods were not included in these walks. Both the City and IDNR were knowledgeable of our focus group sessions but did not share information about the status of the project, water quality, fisheries, or needed improvements. Many residents had questions for IDNR and City staff about their park pond’s water quality, improvements, management, and opportunities to help, however neither agency has followed up with neighborhoods or has planned community meetings with them.

Should the IDNR and City plan to continue toward their goal of engaging community members in local water quality improvement measures, community meetings would provide an opportunity to engage these neighborhood residents in learning about their watershed. Additionally, these meetings would provide the IDNR and City an opportunity to learn more about the attitudes within the neighborhood and which individuals or organizations may be important allies to the maintenance and success of future water quality improvements.
Table 4.4 Common themes among residents’ regarding water quality at park ponds

<table>
<thead>
<tr>
<th>Watershed health</th>
</tr>
</thead>
<tbody>
<tr>
<td>“You brought up Greenwood pond – you go to that pond and just by looking at</td>
</tr>
<tr>
<td>without even doing testing it’s full of algae, it’s full of duckweed. And I’ve</td>
</tr>
<tr>
<td>never done the test there, but I don’t need to – it’s full of phosphates and</td>
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<tr>
<td>nitrates and everything else in the world. The reason it’s green is because</td>
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<tr>
<td>the plants are growing very fast, and that’s because they have all the</td>
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<tr>
<td>nutrients that they need to grow. So that’s one thing.” Community Organization</td>
</tr>
<tr>
<td>Focus Group Participant</td>
</tr>
<tr>
<td>“Are there erosion issues with the hillside that kind of comes around the side</td>
</tr>
<tr>
<td>of the pond?” Taidam Community Pond Focus Group Participant</td>
</tr>
<tr>
<td>So there you’ve got a pond up there, and you’re getting bad water in it, but</td>
</tr>
<tr>
<td>how are you going to prevent that? How are you going to clean it up? Because</td>
</tr>
<tr>
<td>you’re not going to get everybody up the hill to quit putting fertilizer on</td>
</tr>
<tr>
<td>the lawn. […] But here we’re talking about a pond that we can’t fish in, and</td>
</tr>
<tr>
<td>the reason we can’t fish in it is because 50 years ago you could fish in it</td>
</tr>
<tr>
<td>because you didn’t have any chemicals on the ground, but now you’re living with</td>
</tr>
<tr>
<td>chemicals. The farmers have got the chemicals; they’ve got to have chemicals to</td>
</tr>
<tr>
<td>raise their crop. The people want a nice, pretty green lawn, so they’ve got to</td>
</tr>
<tr>
<td>put chemicals on it. So you just aren’t going to have fish in it – right? Witmer</td>
</tr>
<tr>
<td>Park Pond Focus Group Participant</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Education</th>
</tr>
</thead>
<tbody>
<tr>
<td>“What is…, what does that mean, “watershed table”? I don’t know what that</td>
</tr>
<tr>
<td>means.” Greenwood Park Pond Focus Group Participant</td>
</tr>
<tr>
<td>“You bet. But that would be a way of expanding sort of the knowledge base of</td>
</tr>
<tr>
<td>people about, you know, why does Greenwood look the way it is? Well, look at</td>
</tr>
<tr>
<td>the neighborhoods, the amount of fertilizer, the stuff coming out in the street,</td>
</tr>
<tr>
<td>the salt, the chloride, all that’s going into that pond. But we can do some</td>
</tr>
<tr>
<td>things about that.” Community Organization Focus Group Participant</td>
</tr>
<tr>
<td>“Yeah, and I guess again I’m naïve; I don’t know what’s actually bad, what</td>
</tr>
<tr>
<td>amount, and is it pesticide or herbicide, or what is it? Is fertilizer bad and</td>
</tr>
<tr>
<td>what kind, and I mean just more information.” Greenwood Park Pond Focus Group</td>
</tr>
<tr>
<td>Participant</td>
</tr>
<tr>
<td>“People read and have read for years articles about fertilizer. There’s probably</td>
</tr>
<tr>
<td>more awareness in Iowa than a lot of states just because of the runoff, frequent</td>
</tr>
<tr>
<td>articles about runoff from farm fields has effect on the water quality in</td>
</tr>
<tr>
<td>lakes. But I don’t think people think about it that much in town.” Greenwood</td>
</tr>
<tr>
<td>Park Pond Focus Group Participant</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Nutrition / Eating Fish</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant #1: “Would you feel comfortable eating the fish from Greenwood</td>
</tr>
<tr>
<td>Park?” Participant #2: “I’d want to see a water report first.” Greenwood</td>
</tr>
<tr>
<td>Park Pond Focus Group Participants</td>
</tr>
<tr>
<td>“That was the first question I had when I saw this, because I didn’t know.</td>
</tr>
<tr>
<td>When I was a little kid, we used to eat fish out of this lake all the time, and</td>
</tr>
<tr>
<td>we went back 20 years later, and there’s a big warning sign – … and all of this,</td>
</tr>
<tr>
<td>and I thought, geez, you know, that stuff is persistent in the environment</td>
</tr>
<tr>
<td>and they used to use it. It’s an established neighborhood, you know, an old</td>
</tr>
<tr>
<td>park. So that’s the first question I had.” Witmer Park Pond Focus Group</td>
</tr>
<tr>
<td>Participant</td>
</tr>
<tr>
<td>“I know that’s what keeps a lot of people from fishing in Des Moines is the</td>
</tr>
<tr>
<td>concern about the quality of what you catch there.” Witmer Park Pond Focus</td>
</tr>
<tr>
<td>Group Participant</td>
</tr>
<tr>
<td>Participant #1: “Well, if the pond was cleaned up, I don’t see any reason why</td>
</tr>
<tr>
<td>not. I don’t think there is a huge contamination prospect there.” Participant</td>
</tr>
<tr>
<td>#2: “Personally speaking – and I’m a food safety kind of nut – I won’t eat a</td>
</tr>
<tr>
<td>fish out of any water in the state of Iowa. Sorry.” Mac Rae Park Focus Group</td>
</tr>
<tr>
<td>Participants</td>
</tr>
</tbody>
</table>
Recommendations

Understanding stakeholders’ needs and interests is a pre-requisite to the credibility and efficacy of the program (Ballard 2008). The IDNR and City partner agency staff identified partnerships with community and neighborhood groups as a component of a successful urban fishing program and public participation as integral to a sustainable program, but lacked tools to help them with the process. Identifying the interests and needs of residents, community organizations, and key stakeholders presents opportunities for partnership and collaboration.

I have applied a tool to identify these needs and their potential for program partnership. This tool—a strategizing stakeholders template—was developed based upon analysis from the larger urban fishing program case study and informed by interviews with urban fishing program managers within and outside of Iowa. To contextualize the social planning steps of goal-setting, communication, and evaluation (Weil 2005), agency partners first need to identify the partners who will be involved in this planning process. This strategizing stakeholders template and key can assist agency staff as they strategize stakeholders’ involvement in the program planning process (Tables 4.5 and 4.6). Additionally, a process model, based upon input from the focus groups and program partners, may help the agencies as they forge new collaborations within the community (Appendix F). The categories of role, support, influence, and need of each stakeholder were identified as information needed by the agencies. This categorization will aid in planning the next steps of the urban fishing program initiative and strategizing partnerships. This categorization only includes those who attended focus groups.

The categories of our strategizing stakeholders template provide rules of thumb for assessment and reflect the themes emergent from our interviews with urban fishing program managers as well as within the literature. Urban fishing program managers can use these categories—interest, role, support, influence, and need—to assess program partnerships. For example, in choosing a new program site, it might be critical to program managers to identify sites where there is a high level of existing community engagement through schools, community groups, or private partners. The strategizing stakeholders (Table 4.5) template key offers descriptions for the template that define the capacity partners may have to contribute to the program’s implementation, management, or growth.

Identifying partners’ interest describes their motivations to engage in the program. The interest of the natural resource agency might be described as an extension of recreational
opportunities to urban areas. A neighborhood’s interest might be to have a safer and more usable park. *Role* describes the position the stakeholder holds in the program process. In most co-management programs, the key roles are held by natural resource agencies and city or local governments. Without their role in the partnership, the program would not move forward. For example, an agency with limited resources may need buy-in from the community government in order to start a new program. The community government would be a “key” partner whose support is central to the success of the program. *Support* describes the stakeholder’s predicted level of ownership. *Influence* describes the stakeholder’s power to move the program forward within the community or agency. A new program may need partners with a high level of influence in order to establish the program within the community even if these partners do not demonstrate need the program. *Need* identifies the priority the partnering agency or group gives to the program and helps to identify where opportunities might be greatest. For example, multiple towns may be interested, but some of these towns may have existing opportunities available that lead them to not need an urban fishing program in their community. Agency or government managers may use this template in working with community stakeholders to better identify the partnerships that are important to program creation, implementation, and evolution.

The reality of the co-management relationships as a “continuous problem-solving process” (Carlsson and Berkes 2005:65) stresses the importance of flexible tools, and the stakeholders template would need to be revisited as the program evolves and partners’ investment in the program process shift over time. The strategizing stakeholders template might be useful for collaborators to use in defining together which relationships should be included in the process model. Additionally, collaborators might identify gaps in their partnership process—for instance, managers might better plan where to start an urban fishing program in a location where there would be a high level of support and influence. Our template enables program stakeholders to identify their specific roles and can be a useful tool in strategizing next-steps of a specific collaborative group. This template empowers agency and public stakeholders to discuss their limitations and contributions to program process and to better plan for future opportunities and challenges. At the same time, the template categories provide managers means to organize potential contributions beyond subjective impressions, identifying the social capital that might emerge from pairing stakeholders who, for example, have high interest and need with those who have high influence.
Table 4.5 Strategizing stakeholders template

<table>
<thead>
<tr>
<th>Participant</th>
<th>Interest</th>
<th>Role</th>
<th>Support</th>
<th>Influence</th>
<th>Need</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Neighborhoods</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greenwood</td>
<td>Pond improvements</td>
<td>Primary</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Mac Rae</td>
<td>Increase park use; nostalgia</td>
<td>Primary</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>Taidam Pond</td>
<td>Increase park use; create a resource</td>
<td>Primary</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Witmer</td>
<td>Increase park use; improve the pond</td>
<td>Primary</td>
<td>High</td>
<td>High</td>
<td>Medium</td>
</tr>
<tr>
<td><strong>Schools</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cowles Montessori</td>
<td>Class visits to Greenwood Park</td>
<td>Secondary</td>
<td>Low</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>DMACC Urban Campus</td>
<td>Courses design improvements and do field work at Witmer</td>
<td>Secondary</td>
<td>High</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td>Drake University</td>
<td>Student groups volunteer hours for improvements</td>
<td>Secondary</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Scavo High School</td>
<td>Faculty have interest in Witmer</td>
<td>Secondary</td>
<td>High</td>
<td>Low</td>
<td>High</td>
</tr>
<tr>
<td><strong>Community Groups</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central Iowa Anglers</td>
<td>More youth and recreational fishing</td>
<td>Secondary</td>
<td>High</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Chrysalis Foundation</td>
<td>More activities for young and adolescent girls; working with IDNR on a pond study with 5th grade girls in Des Moines</td>
<td>Secondary</td>
<td>High</td>
<td>Medium</td>
<td>Medium</td>
</tr>
<tr>
<td>Founders Garden Club</td>
<td>Improvements at Greenwood Park</td>
<td>Secondary</td>
<td>Medium</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Freedom for Youth</td>
<td>More urban activities for recreation and mentorship opportunities</td>
<td>Secondary</td>
<td>Medium</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Izaak Walton League</td>
<td>More recreational activities in urban areas</td>
<td>Secondary</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Raccoon River Watershed Association</td>
<td>Watershed improvements</td>
<td>Secondary</td>
<td>High</td>
<td>Medium</td>
<td>High</td>
</tr>
<tr>
<td>Salvation Army</td>
<td>Summer youth camps</td>
<td>Secondary</td>
<td>Medium</td>
<td>Low</td>
<td>Low</td>
</tr>
<tr>
<td>Taidam Community</td>
<td>Create a resource for the city</td>
<td>Primary</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Urban Dreams</td>
<td>More urban activities for recreation and mentorship opportunities</td>
<td>Secondary</td>
<td>Low</td>
<td>Low</td>
<td>Low</td>
</tr>
</tbody>
</table>
The assessment criteria in table 4.5 was defined by the following operationalizations:

**Table 4.6 Strategizing stakeholders template key**

<table>
<thead>
<tr>
<th>Role</th>
<th>Key</th>
<th>Support</th>
<th>Influence</th>
<th>Need</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key</strong></td>
<td>Original and central stakeholder whose ownership of the process is central to program success. Responsible for aspects of program development including funding, staffing, and evaluation. Assumes ownership.</td>
<td>Has already committed or shows interest in committing funding and staffing in the development of the program. Has already assumed or would like to assume ownership of all or some aspects of the program such as improvements, funding, staffing, mentorship programs, trainings, volunteers, etc. Assumes ownership</td>
<td>Capable of putting forward the economic and social capital needed to move the program forward.</td>
<td>Articulated that an urban fishing initiative has been expressed as a need in their organization.</td>
</tr>
<tr>
<td><strong>Primary</strong></td>
<td>Central stakeholder whose ownership of the process is central to program success. Collaborator in the process of program implementation.</td>
<td>Shows interest in the program through attendance at focus group or in interview and sees possibilities for integration within current or future responsibilities or project.</td>
<td>Capable of collaborating to move forward the economic and social capital needed to move program forward</td>
<td>Articulated that an urban fishing initiative would complement or support their work and/or organization’s needs.</td>
</tr>
<tr>
<td><strong>Secondary</strong></td>
<td>Interested stakeholder whose collaboration and partnership will add diversity, longevity, and investment to the program.</td>
<td>Shows interest in the program through attendance at focus group or in interview but sees little integration within current or future responsibilities.</td>
<td>Capable of providing input needed to move program forward.</td>
<td>Interested, but did not articulate that an urban fishing initiative is needed by their organization.</td>
</tr>
</tbody>
</table>

**Limitations**

Several interested groups were unable to take part in the focus groups because of scheduling conflicts. In some cases, these individuals called to talk with us by phone. I took notes during these conversations but left them out of my analysis as exceptional cases. Sometimes I was viewed as a proponent of the urban fishing program or a representative of the IDNR or City even though I took care in recruiting and introductions to clarify my role as a
graduate student researcher. This may have influenced focus group participants’ perceptions of me.

Discussion

The newness of the initiative and the partnership between the City and IDNR presents opportunities and challenges to the building of social capital throughout the program’s future process. The urban fishing partnership is new to both the IDNR and the City, as is engaging stakeholders in improving urban watersheds. The City and IDNR attempted a different path than their traditional top-down model of decision-making, but they have not yet shared requested information with the community groups. This communication is critical to the building of trust in social planning. Laurian (2009) describes trust, collaboration, and communication as interdependent and mutually reinforcing and Weil (2005) describes it as the first step for agencies engaging community members in the program planning process. Lack of a feedback loop among the IDNR, City, and community groups challenges the engagement of community members in their watershed.

While it has been discussed that natural resource managers may need increased skills and experience to engage in successful management of social networks involved in the co-management of resources (Barber and Taylor 1990), there is little study of the importance of trust within the planning literature (Laurian 2009). The traditional planning approach lacks the dialogue and cooperation tools to facilitate participation (Laurian 2009). The City’s hesitancy to engage in discussion with neighborhood residents prior to defining the course of action for the watershed improvements highlights a consequence of this lack of dialogue. Residents’ understanding or awareness of water quality and watershed health poses a serious challenge to the social planning involved in the urban fishing program initiative. The bridging organization, whether it is the City or another organization, provides an opportunity for learning and knowledge sharing (Berkes 2005) but this opportunity hinges on trust.

A feedback loop would facilitate the bridging capital and complement the use of the template and process model. This feedback loop would include state agency, city and county government, and community and/or resident stakeholders in the communication, relationship management, collaboration, and assessment and evaluation phases of program planning, implementation, and development. The feedback loop would increase trust and the opportunities for bridging, bonding, and linking capital among stakeholders as stakeholders engage in
information sharing, collaboration, and transparency of the process. This model would encourage the synergistic processes that provide opportunities and support for program implementation, increase ownership among the various stakeholders, and provide an inclusive structure for program development. Currently, communication is concentrated between the key stakeholders but doesn’t include the primary and secondary stakeholders. In order to create the feedback loop, key stakeholders in the urban fishing program might meet to discuss the process of program development using the template (Figure 4.5 and Appendix F). This will create a road map for evaluation of the program’s next steps while designating responsibility and strengthening credibility of the program.

The shared concern or lack of knowledge about water quality among these groups provides the IDNR and City the opportunity to provide a valuable service to these neighborhoods. Their focus group participants’ concerns and questions about water quality provide both opportunities and challenges for the IDNR and City moving forward in efforts as they try to connect individual actions in watersheds to water quality through urban fishing programs. Even if urban park ponds were not selected for improvements to be made into sustainable fisheries, residents were eager to learn more about their watershed and better understand its health. Both the City and the IDNR hoped to engage residents in increased understanding and stewardship of their watershed, but the focus group participants’ discussions illustrated that that a lack of shared information among stakeholders compromises this goal. Residents who do not understand their relation to their watershed, are not aware of water quality impairment, or are unfamiliar with their ability to impact the health of their watershed are unable to plan where to begin to take action for needed improvements. The lack of communication within the City and IDNR partnership led to important information about the health of the neighborhood park ponds and timeline for needed improvements not being exchanged with the focus groups. This occurrence is consistent with the role of “expert” knowledge within social planning (Rothman 1995) in which planners view the neighborhood residents and community organization members as consumers rather than collaborators. Water quality improvement information and program updates could be shared through community meetings or a neighborhood walk through the park with residents. Alerting neighborhood residents to stages of the City or IDNR’s improvement process, e.g. days that the IDNR might be sampling fish, might further engage residents in what the process of water quality improvement means.
Both partners involved in the program initiative hoped to engage more urban residents in awareness about their watershed through a recreational opportunity. The findings from the focus groups suggest that even those residents who are not or will not be anglers may be important to the success of the fishing program. The City and IDNR both acknowledged the importance of including resident stakeholders in the process of the urban fishing program planning. Opportunities identified through the focus groups found existing and potential social capital that would contribute to the management of the resource and planning of the fishing program. Many of these opportunities only need increased communication in order to be integrated within the City and IDNR’s existing projects and process. The information and feedback shared by focus group participants highlighted the importance of social capital as a complement to biological and physical measures in selecting program sites.
CHAPTER 5. THE TACKLE BOX: CO-MANAGEMENT PARTNERSHIPS, EVALUATION, AND PLANNING

Findings

The increased focus on partnerships within urban fishing program management (Sweatman et al. 2008; Balsman and Shoup 2008, Schroeder et al. 2008a, 2008b; Penne and Cushing 2008; Walsh et al. 2008) is found throughout the larger context of co-management literature (Carlsson and Berkes 2005; Koontz et al. 2004; Plummer and FitzGibbon 2004; Pretty 2003; Leach et al. 2002; Wondolleck and Yaffee 2000). As agencies face funding constraints (Plummer and FitzGibbon 2004), strategic planning of these partners and the evaluation process become difficult due to increasingly limited time, staffing, and skills. Natural resource managers increasingly find their work incorporating the management of partnerships (Natcher et al. 2005; Barber and Taylor 2000), requiring more attention to the creation and maintenance of social relationships in addition to natural resource management.

Five research questions framed the inductive findings of this case study: 1) What existing and potential partnerships might be key to this program’s development? 2) How do these partnerships form and evolve? 3) What opportunities or capacity might these partnerships build within urban communities as they engage in public health, urban food source, watershed improvement, or ecological awareness initiatives? 4) What are the barriers these partnerships may encounter within the community or city and state level agencies? 5) If partnerships are one measurement of success, how does one identify the strength and potential of these partnerships?

These questions were addressed through the previous chapters’ analysis of social capital’s role within program evaluation, program partnerships, and community engagement in the context of a pilot urban fishing program in Des Moines, Iowa, as well as through analysis of interviews with urban fishing program managers in other states who are viewed as leaders in their field because of the success of their urban fishing programs. Emergent themes from interviews and focus groups suggested that these questions are critical to a co-management program’s development. The research findings (Figure 5.1) may change over time as state politics and funding mechanisms shift, or as programs begin, evolve, and end. However, the case study findings were consistent with the literature regarding natural resource partnerships, evaluation, and planning.
Chapters two and three highlight the need for investment in staff who have the capacity and the interest in engaging in the management of the social capital needed for successful urban natural resource partnerships. Chapters three and four find that the role of social capital within emerging partnerships shapes the course of these partnerships and influences the implementation of programs. Findings presented in chapter four also suggest that while there are many opportunities within the urban watersheds to engage citizens in water quality awareness and improvement, a successful and sustainable program will require the IDNR and City to engage in purposeful planning and evaluation of their process.

The template and process model are two tools the partners might use to continue to engage in strategizing the social capital offered through these partnerships and within the program process. Additionally, the social capital—whether negative or positive—within the relationships among the agency and community partners shapes the course of these collaborations. The case study partners are only just beginning their partnership process with one another and have not yet begun collaboration with community stakeholders. Water quality was a common interest and concern for the agencies and community residents, and may provide opportunities for further engagement of existing and new social capital within the community. The Des Moines partners struggled with knowledge-sharing and communication, two aspects of the co-management process that are needed to generate trust, yet they continue to try to move forward together. If the urban fishing program were to continue to focus on partnership building,
then it is possible that the common theme of water quality may bring together diverse stakeholders through knowledge exchange and engagement. As Berkes summarizes, “Successful co-management is a knowledge partnership,” (2009) and the template and process model provide two means to illustrate and share existing knowledge about partnerships and social capital existing in programs.

**Implications**

The missing discussion of partnership process in the urban fishing program management literature presents a challenge to new programs attempting to apply the lessons learned elsewhere. The gaps documented in the co-management literature—the formation of partnerships (Carlsson and Berkes 2005), the formation of social capital within new partnerships (Wagner and Fernandez-Gimenez 2008), and evaluation (Ballard 2008)—suggest a need for additional analysis of case studies sharing the complexity, and even failure, of the co-management process. The existing literature shares success stories of natural resource managers who are adapting to changes within and outside of their agencies’ work adaptations, but not analysis of the evolving nature of co-management programs, contributing to what Conley and Moote (2003) label as an “idealized narrative” of co-management within the literature.

Starting a program partnership, integrating evaluation, and managing both the natural resource and social capital within the program would be a challenge even in ideal situations. The challenges presented through funding cuts and limited staffing further constrain the time managers have to engage in and evaluate this process. The frustrations and uncertainties that the Des Moines urban fishing program partners encountered throughout their process are not well documented within the urban fishing program literature; however, the managers I interviewed readily shared lessons learned from similar experiences. One urban fishing program manager in another state shared that he would revisit what he had previously written about the success of his program because state budget cuts had severely constrained the program’s ability to operate and, without established partnerships and integration within communities, the program was slowly being phased out:

Yeah, so I’d rewrite the chapter, but I don’t know what the answers are. And that’s the other part of it. There’s a lot of questions, and even after ten years I still don’t know the answer because there’s just so much you can’t control.

*UFP Manager Interview 2011009*
The gaps in the literature could be filled with analysis of the knowledge and experience current managers have gained throughout the changes in their agencies. Additionally, analysis of process-oriented approaches and tools that incorporate stakeholder perspectives would assist program managers in meeting the goals of increased stewardship (Ballard 2008; Fedler 2001; Siemer and Knuth 2001) while integrating programs within the social capital existing among other organizations and agencies.

Cases of success from natural resource management partnerships share important knowledge about what has worked, but not always the process of how managers reached their accomplishments. Further study of partnerships extending beyond their existence to analysis of their formation and maintenance is needed and is a “theoretical oversight” in the literature (Carlsson and Berkes 2005). Wagner and Fernandez-Giminez (2008) suggest that the gap in the literature stems from the complexity of social capital and the difficulty in measuring bonding, bridging, and linking capital in their various dimensions, such as trust. The partnership process requires multiple measures in evaluation to match the multiple goals of diverse stakeholders (Leach et al 2002) and further study of evaluation within co-management partnerships may help to measure the evolution of social capital. Just as agencies have shifted to include more community-based and collaborative management, evaluation processes must shift to include and legitimize the iterations and evolutions of the co-management process. Through these shifts, partners may accomplish together what neither could accomplish on their own (Sarason and Lorentz 1998) as “the placement of trust allows an action on the part of the trustee that would not have been possible otherwise” (Coleman 1990:97). Evaluation of co-management requires analysis of partners’ and components’ functions within the process because it is a “continuous problem-solving process, rather than a fixed state” (Carlsson and Berkes 2005:65) and is emergent (Selin and Chavez 1995). Focusing on social capital’s role within collaborative processes might be one way to emphasize the function of co-management partnerships rather than their structure.

As natural resource management shifts to address environmental problems collaboratively, government agencies may need to invest more in the training and experience sharing among staff, or the hiring of staff to facilitate these partnerships and co-management. The findings from this case study are consistent with Selin and Chavez’s (2005) discussion of the challenges within natural resource management:
Managers need new skills to move from the expert opinion role in traditional environmental management to an empowerment role as mediator, catalyst, or broker in the new order. Managers comfortable with the hierarchical decision making of public agencies are finding it difficult to cope with the lateral decisions needed to sustain effective collaboration. (P. 189)

As noted by Weil (2005), community participation in collaborative management may not always create positive impacts within a community and may reinforce existing exclusion. The only use of this approach present within urban fishing program literature is the case study of the Minnesota Fishing in the Neighborhood program’s use of focus groups to engage new audiences and underrepresented anglers in their programs (Schroeder et al. 2008a). Approaching community engagement with a planning approach may help agencies navigate existing barriers and exclusions, assisting managers as they develop programs that are accessible, safe, and inclusive.

Current evaluation tools used most often in urban fishing programs—creel and other surveys and surveys—are important and useful for evaluation of angling pressure, angler demographics, or species preference. Additional evaluation measures that fit the goals of collaborative programs and process are needed, but a standard process-oriented evaluation method has not been adopted. Each urban fishing program location and its partners will be unique in the opportunities and challenges presented, yet the importance of social capital within program management is common among programs. Focus groups might be a useful planning tool for programs valuing information about watershed residents and community engagement with local stakeholders, as in this case study, or programs attempting to reach new demographics, such as the Fishing in the Neighborhood program in the Twin Cities, Minnesota (Schroeder et al. 2008a). Focus group participants may anticipate follow-up or follow-through, and so inaction on the agencies’ part may signal to communities that their feedback or contributions to the program were not of importance. More discussion of evaluation and planning methods used and analysis of their benefits and constraints would benefit managers trying to begin, maintain, or expand programs, especially as many face funding or staff cuts in their agencies. The strategizing partnerships template and process model discussed in chapters three and four encourage partners to plan and evaluate their process throughout the program’s development and in the context of the existing social capital of their co-management stakeholders. These tools present one option. The recognized need for further study within the literature and the gap in analysis of the process of partnership will hopefully encourage urban fishing program and other natural resource
program managers to share and analyze their methods, especially as the trends of decentralized programs and push for partnerships continues.

**Conclusion**

Most existing urban fishing programs have been managed from a biological perspective in terms of habitat, water body improvements, and sustainability with little incorporation of social study of stakeholders or their resources or needs (Magill 1988 in Fedler and Ditton 1994). The increased focus on collaborative resource management suggests that urban fishing program managers’ responsibilities will continue to be complex, especially as funding constraints continue. The Des Moines urban fishing program pilot project attempted to include new partners in efforts to improve water quality through a recreational fishing program. The challenges in the new partnership slowed the progress of its development, yet the partners continued to share opportunities for needed actions. Data collected from the focus groups, stakeholder interviews, and interviews with urban fishing program managers from other states suggest that assessment of the needed and potential social capital exists for the initiative to define its direction and begin implementation. The urban fishing program case study reveals that further analysis of partnership process and evaluation measures is needed. Understanding the importance, as well as the opportunities and challenges, of the partnerships created through the implementation, maintenance, and evolution of an urban fishing program presents potential for systemic intervention in how urban stakeholders interact with their natural world and one of our most limited resources.
REFERENCES


Dodd, Ben, and Steve Konrady. 2011. City of Des Moines Urban Fisheries Project. Presentation to the City of Des Moines Parks Board. Des Moines, IA.


Leach, William D., Neil W. Pelkey, and Paul A. Sabatier. 2002. “Stakeholder partnerships as collaborative policymaking: Evaluation criteria applied to watershed management in


APPENDIX A. INTERVIEW CONSENT FORM

INFORMED CONSENT DOCUMENT

Title of Study: Urban Fishing Formative Assessment and Case Study
Investigators: Angie Carter, MS candidate, ISU Department of Sociology
Dr. Lois Wright Morton, PhD, ISU Department of Sociology
Dr. Rebecca Christoffel, PhD, ISU Natural Resource Ecology and Management Department

This is a research study. Please take your time in deciding if you would like to participate. Please feel free to ask questions at any time.

INTRODUCTION

The purpose of this study is to document stakeholder involvement and the participatory planning process used to develop an urban fishing program in the Des Moines metro area. Interviews with those involved in the planning process and those potentially influenced by a future urban fishing program will shape the development of the pilot urban fishing program in the Des Moines metro area as well as the program’s future statewide. You are being invited to participate in this study because your work within the Des Moines metro area offers a valuable perspective to the development of the program.

DESCRIPTION OF PROCEDURES

If you agree to participate in this study, your participation will require an appointment that will last for approximately 45 minutes. During the interview, you may expect that I will ask you questions concerning the following subjects:

- Urban fishing programs
- Proposed locations of an urban fishing program
- Partnership building, community involvement, and educational programming related to an urban fishing project
- Opportunities and challenges an urban fishing program may present
- Water quality

Our conversation will be digitally recorded and then transcribed. You will not be identified by name and will only be identified by demographic descriptors such as gender, age, positions of leadership, and kinds of activities you are engaged in related to your community involvement. The digital recording will be destroyed two years after this project is completed. You may request a copy of the interview transcript. If, during our interview, you are asked a question that you do not want to answer or that makes you feel uncomfortable, please indicate so and we will move on to other questions. You may end the interview at any time without consequences.
RISKS
There are no foreseeable risks from participating in this study.

BENEFITS

It is hoped that the information gained in this study will benefit society by establishing a framework and guidelines for development of successful urban fishing programs in population centers across Iowa. If you decide to participate in this study you may request and receive a copy of the case study. This case study will be used in the development of urban fishing programs in other communities.

COSTS AND COMPENSATION

You will not have any costs from participating in this study other than your time, approximately 45 minutes. You will not be compensated for participating in this study.

PARTICIPANT RIGHTS

Your participation in this study is completely voluntary and you may refuse to participate or leave the study at any time without consequences.

CONFIDENTIALITY

Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. However, federal government regulatory agencies (Iowa Department of Natural Resources as project grantor), auditing departments of Iowa State University, and the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect and/or copy your records for quality assurance and data analysis. These records may contain private information.

To ensure confidentiality to the extent permitted by law, the following measures will be taken: interviewed subjects will be assigned a unique code that will be used on forms instead of their names. Study records will be available to the research team (Dr. Lois Wright Morton, Dr. Rebecca Christoffel, Angie Carter). Recordings of interviews will be secured in Dr. Lois Wright Morton’s office and destroyed two years after the project is completed. If the results are published, your identity will remain confidential.
QUESTIONS OR PROBLEMS
You are encouraged to ask questions at any time during this study.

- For further information about the study, contact: Dr. Rebecca Christoffel, Iowa State Extension Wildlife Specialist and Department of Natural Resource and Ecology Management Assistant Professor, 339 Science II, Ames, IA, Tel: 515-294-7429, Email: christof@iastate.edu OR Dr. Lois Wright Morton, Interim Director of the Leopold Center of Sustainable Agriculture and Iowa State University Department of Sociology Professor, 303 East Hall, Ames, IA, Tel: 515-294-2843, Email: lwmorton@iastate.edu.
- If you have any questions about the rights of research subjects or research-related injury, please contact the IRB Administrator, (515) 294-4566, IRB@iastate.edu, or Director, (515) 294-3115, Office for Responsible Research, Iowa State University, Ames, Iowa 50011.

******************************************************************************

PARTICIPANT SIGNATURE

Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document, and that your questions have been satisfactorily answered. You will receive a copy of the written informed consent prior to your participation in the study.

Participant’s Name (printed) ______________________________________________

______________________________________________________________________

(Participant’s Signature) (Date)


Investigator’s Name (printed) ______________________________________________

______________________________________________________________________

(Investigator’s signature) (Date)
APPENDIX B. FOCUS GROUP CONSENT FORM

INFORMED CONSENT DOCUMENT

Title of Study: Urban Fishing Formative Assessment and Case Study

Investigators: Angie Carter, MS candidate, ISU Department of Sociology
Dr. Lois Wright Morton, PhD, ISU Department of Sociology
Dr. Rebecca Christoffel, PhD, ISU Natural Resource Ecology and Management Department

This is a research study. Please take your time in deciding if you would like to participate. Please feel free to ask questions at any time.

INTRODUCTION

The purpose of this study is to document stakeholder involvement and the participatory planning process used to develop an urban fishing program in the Des Moines metro area. Focus group meetings with those potentially influenced by a future urban fishing program will shape the development of the pilot urban fishing program in the Des Moines metro area as well as the program’s future statewide development. You are being invited to participate in this study because you live near and/or are involved with an organization near one of the proposed sites for the urban fishing program and your perspective is valuable to the development of the program.

DESCRIPTION OF PROCEDURES

If you agree to participate in this study, your participation will require attending a focus group meeting that will last approximately one and a half hours. During the focus group meeting, you will complete a short questionnaire and may expect that I will ask you questions concerning the following subjects:

- Urban fishing programs
- Proposed locations of an urban fishing project
- Partnership building, community involvement, and educational programming related to an urban fishing project
- Challenges and opportunities an urban fishing program may present for your neighborhood or organization
- Water quality

Our discussion will be digitally recorded and then transcribed. You will not be identified by name and will only be identified by demographic descriptors such as gender, age, positions of leadership, and kinds of activities you are engaged in related to your community involvement. The digital recording will be destroyed two years after this project is completed. You may request a copy of the focus group’s discussion transcript. If, during our focus group, you are asked a question that you do not want to answer or that makes you feel uncomfortable, please
indicate so and we will move on to other questions. You may leave the focus group meeting at any time without consequences.

RISKS

There are no foreseeable risks from participating in this study.

BENEFITS

It is hoped that the information gained in this study will benefit society by establishing a framework and guidelines for the development of successful urban fishing programs in population centers across Iowa. If you decide to participate in this study you may request and receive a copy of the case study. This case study will be used in the development of urban fishing programs in other communities.

COSTS AND COMPENSATION

You will not have any costs from participating in this study other than your time, approximately an hour and a half. You will not be compensated for participating in this study but your participation will enter your name into a random drawing for one $25 Bass Pro gift card that will be awarded to one participant from your focus group.

PARTICIPANT RIGHTS

Your participation in this study is completely voluntary and you may refuse to participate or leave the study at any time without consequences.

CONFIDENTIALITY

Records identifying participants will be kept confidential to the extent permitted by applicable laws and regulations and will not be made publicly available. However, federal government regulatory agencies (Iowa Department of Natural Resources as project grantor), auditing departments of Iowa State University, and the Institutional Review Board (a committee that reviews and approves human subject research studies) may inspect and/or copy your records for quality assurance and data analysis. These records may contain private information.

To ensure confidentiality to the extent permitted by law, the following measures will be taken: interviewed subjects will be assigned a unique code that will be used on forms instead of their names. Study records will be available to the research team (Dr. Lois Wright Morton, Dr. Rebecca Christoffel, Angie Carter). Recordings of interviews will be secured in Dr. Lois Wright Morton’s office and destroyed two years after the project is completed. If the results are published, your identity will remain confidential.
QUESTIONS OR PROBLEMS
You are encouraged to ask questions at any time during this study.

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PARTICIPANT SIGNATURE

Your signature indicates that you voluntarily agree to participate in this study, that the study has been explained to you, that you have been given the time to read the document, and that your questions have been satisfactorily answered. You will receive a copy of the written informed consent prior to your participation in the study.

Participant’s Name (printed) ____________________________________________

____________________________________________________________________

(Participant’s Signature) (Date)

____________________________________________________________________

Investigator’s Name (printed) ____________________________________________

____________________________________________________________________

(Investigator’s signature) (Date)
APPENDIX C. INTERVIEW GUIDE

1. How important is a fishing program in Des Moines?
   a. What potential benefits might a fishing program present to Des Moines citizens?
      To the City of Des Moines?
   b. What potential concerns might a fishing program present to Des Moines citizens?
      To the City of Des Moines?
   c. Are you familiar with urban fishing programs in other cities or states?

2. In your opinion, what would make a fishing program successful in Des Moines?
   a. Who would use a fishing program in Des Moines? (e.g., youth, families)
   b. What types of activities or programs would be important to them?
   c. What are your thoughts about sites for the pilot program?
   d. Who do you think would be important partners in the success of the program?
   e. How might a fishing program in Des Moines be staffed and funded?

3. In your opinion, how do Des Moines metro citizens view water quality within the city?
   a. What do you think Des Moines metro citizens think about the safety of eating fish
      from Des Moines water bodies?
   b. Are there differences among citizen groups?
   c. Would a fishing program connect to existing efforts to manage water quality in
      Des Moines?
   d. How might a fishing program motivate changes in citizens’ awareness about
      water quality?

4. What opportunities would the development of a fishing program present Des Moines?
   a. Are there connections between the development of a fishing program and existing
      projects or programs?
   b. Are there possibilities to integrate a fishing program with current city projects or
      programs?
   c. What community organizations or businesses might be interested in the
      development of the fishing program?

5. What challenges might be faced in developing a fishing program in Des Moines?
   a. What preconceptions might be faced?
   b. What are the institutional challenges?
c. What might be the challenges within Des Moines neighborhoods?

d. Would there be any safety concerns in managing a fishing program?

e. What recommendations do you have for addressing these challenges?

6. Would the development of a fishing program in Des Moines impact any of your position’s responsibilities?

   a. How long have you been in your position?

   b. What could your position offer to the development of the program?

7. What steps are needed to move this project forward?

   a. Who are the key decision makers regarding this program’s development within the City?

   b. What additional information might be needed for City staff? For citizens?

8. What questions do you have regarding the structure or development of the program?
APPENDIX D. FOCUS GROUP GUIDE

Introductions

Hello. My name is Angie Carter. I’m a graduate student at Iowa State University representing a pilot urban fishing program in the Des Moines metro area. I’m meeting with neighborhood and organization groups in the Des Moines to learn more from you about how a fishing program might influence your community. Your thoughts, ideas, and questions about the program are valuable to the development of a Des Moines fishing program as well as to the future development of a fishing program in other cities and towns across Iowa. I appreciate the time you have set aside to be here this evening.

I have passed out a short survey in order to learn more about you. Please take a few minutes to fill out the survey. Also, I have brought slips to sign up for a raffle for a $25 Bass Pro gift card provided by the DNR as a thank you for your participation. One $25 Bass Pro gift card will be raffled off to one member of this focus group.

We will begin with introductions and then discuss the potential impact of an urban fishing program in your area. Our time together tonight should last approximately an hour and a half. Please feel free to excuse yourself at anytime.

Questions

1. What is your interest in fishing?
   a. Have you ever gone fishing in Des Moines?
   b. If yes, what did you enjoy most about this fishing experience?
   c. What types of fish do you like to catch or are you interested in catching?
   d. If you had access to a nearby fishing area, what would be your interest in learning to fish?
   e. If you had access to a nearby fishing area, would you take family members to the area?

2. Would you be interested in a fishing program in your neighborhood?
   a. Who do you think would use a fishing program in Des Moines?
   b. What types of fishing-related activities do you think would interest this audience the most?
   c. What would be the best way to share information about the program with them?
   d. What types of fishing would be most popular at the park? (e.g., fishing for food, catch and release)
   e. What types of fish would you most like to catch?
   f. How important would a fishing program be to your neighborhood?
g. What impact would a fishing program have upon your neighborhood?

3. How would you describe the water quality in Des Moines?
   a. What is the source of water at the park?
   b. What are your thoughts about the quality of the water at the park?
   c. Where does water run-off from your yard go?
   d. Have your thoughts about water quality changed during the past few years?
   e. What are your thoughts about eating fish from Des Moines area water bodies?

4. What challenges might a fishing program face in your neighborhood?
   a. What improvements or additions would be needed at the park in order to accommodate a fishing program?
   b. How would you describe the safety of the park?
   c. What safety concerns might a fishing program pose at the park?
   d. How could these concerns be managed? (e.g., community involvement, water safety classes, safety patrols, etc.)

5. What opportunities might a fishing program present your neighborhood?
   a. Are there individuals who are actively involved in your neighborhood?
   b. What neighborhood groups or homeowners’ associations are involved in your neighborhood?
   c. What local businesses or organizations are involved in your neighborhood?
   d. What might be their interest in a fishing program in your neighborhood?

6. What would you recommend that city or state staff think about as they develop the fishing program in Des Moines?
   a. Have you been involved with a city or state program before?
   b. What information would be most valuable to your community if a fishing program were developed at the park? (e.g., regulation, advisory, educational information)
   c. How does your neighborhood share information? (e.g., neighborhood listserv, website, monthly meeting)

7. Do you have ideas or questions you haven’t mentioned yet but would like to share
APPENDIX E. FOCUS GROUP SURVEY

Instructions: Please answer every question. Use black or blue ink. Mark boxes like this ☐. If you want to change your response, completely fill in the incorrect box and mark the appropriate one.

Your participation is completely voluntary and confidential. Do not write your name or address on the survey. Please do not fill out this survey more than once.

1. Why have you chosen to take part in this focus group?

2. Do you apply fertilizer to your lawn?
   - ☐ Always
   - ☐ Often
   - ☐ Sometimes
   - ☐ Rarely
   - ☐ Never

3. Do you recycle?
   - ☐ Always
   - ☐ Often
   - ☐ Sometimes
   - ☐ Rarely
   - ☐ Never

4. Do you currently own or rent where you live?
   - ☐ Own
   - ☐ Rent

5. How many years have you lived in the area?

6. What recreational activities have you taken part in at the park?
   - ☐ Walking/jogging/running
   - ☐ Picnicking
   - ☐ Sun bathing
   - ☐ Fishing
   - ☐ Playground use
   - ☐ Sports events
   - ☐ Ice skating
   - ☐ Biking
   - ☐ Other (please specify):

7. Who comes with you to use the park? Please check all that apply.
8. Which of the following do you think affects water quality at the park? Please check all that apply.

- [ ] Fertilizers
- [ ] Sediment/Erosion/Soil loss
- [ ] Pesticides
- [ ] Bacteria
- [ ] Petroleum products (e.g. oil, gasoline)
- [ ] Sewage
- [ ] Pet waste
- [ ] Pharmaceuticals
- [ ] Industrial waste
- [ ] Litter
- [ ] Road salts or other minerals

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
<th>No Opinion</th>
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<tr>
<td>9a.</td>
<td>Water quality at name of proposed site here is an important issue for me.</td>
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<td>9b.</td>
<td>The water quality at name of proposed site here affects my community.</td>
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<td>9c.</td>
<td>The water quality and condition of name of proposed site here affects the value of my home and property.</td>
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<td>9d.</td>
<td>Water quality is important to the activities that I engage in at name of proposed site here.</td>
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<td>9e.</td>
<td>Concern for water quality in my neighborhood has increased since the floods of 2008.</td>
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<td>9f.</td>
<td>Fish caught at name of proposed site here are safe to eat.</td>
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10. What is the highest level of education you have completed?

- [ ] Some high school
- [ ] High school graduate/GED
- [ ] Technical/vocational school
- [ ] Some college
- [ ] Bachelor’s degree
- [ ] Some graduate school
- [ ] Graduate or professional degree

11. Are you

- [ ] M
- [ ] F

Thank you for completing this survey
APPENDIX F. URBAN FISHING PROGRAM PROCESS MODEL

Urban Fishing Program Process Model Template

**Inputs**
- State Resource Agency Staff
- City Government Staff
- University Extension or Research Staff
- Funding from State Resource Agency
- Funding from City Government

**Activities**
- State Resource Agency & City Government Meetings
- Data collection and assessment of potential sites
- Presentations to stakeholders
- Focus groups & stakeholder interviews
- State Resource Agency, City Government, University Staff

**Outputs**
- State Resource Agency and City Government Staff
- State Resource Agency, City Government, University Staff
- State Resource Agency, City Government, University Staff

**Participation**
- Increased angling opportunities
- Increased educational and membership opportunities
- Increased awareness of watershed and ecosystem health
- Greater partnership among City, State, and community residents
- Increased watershed health, water quality, and ecosystem awareness

**Short**
- Project collaboration, understanding of organizational processes
- Expand site development within city and two state
- Begin watershed improvements at potential sites
- Engage local stakeholders in program development and ownership
- Learn City and resident needs & existing resources through knowledge

**Medium**
- Integration of program within City and community programming
- Increased awareness of watershed and ecosystem health
- Greater partnership among City, State, and community residents
- Increased watershed health, water quality, and ecosystem awareness

**Long**
- Increased angling opportunities
- Increased educational and membership opportunities
- Increased awareness of watershed and ecosystem health
- Greater partnership among City, State, and community residents
- Increased watershed health, water quality, and ecosystem awareness

**Assumptions:** City, State, and community residents will engage in collaborative process.

**External Factors:** The availability of continued funding and staffing depends upon external factors.

**Evaluation**
- Ongoing through State Resource Agency and City Government collaboration.
### APPENDIX G. STRATEGIZING STAKEHOLDERS TEMPLATE

<table>
<thead>
<tr>
<th>Participant</th>
<th>Interest</th>
<th>Role</th>
<th>Support</th>
<th>Influence</th>
<th>Need</th>
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<td>State Agency</td>
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<td>County Agency</td>
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<tr>
<td>City Government</td>
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<tr>
<td>Neighborhoods</td>
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<td>Schools</td>
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<td>Community Groups</td>
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<td>High profile individuals</td>
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<td>Museums, zoos, other</td>
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<tr>
<td><strong>Interest</strong></td>
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<td>From the partner’s point of view, describe their interest in the project. For example, a near-by elementary school may be interested in visiting the resource for class field trips.</td>
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<th><strong>Support</strong></th>
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<th><strong>Influence</strong></th>
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<td><strong>Low</strong></td>
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Urban Fishing Formative Assessment and Case Study

Task 1: Research and Review
February 28, 2011
Urban Fishing Program Assessment and Case Study

Prepared by

Angie Carter
Graduate Research Assistant
Department of Sociology
Graduate Program in Sustainable Agriculture
carter@iastate.edu

Rebecca Christoffel
Assistant Professor
Natural Resource Ecology and Management
christoff@iastate.edu

Iowa State University
Ames, Iowa

Funding
Support for development of these materials was provided through Fish and Wildlife Restoration funding.
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Summary
The first urban fishing programs were initiated by the U.S. Bureau of Sport Fisheries and Wildlife Service in 1969 in response to the racial tension and unrest experienced in the inner-cities (Pape and Eades 2008). Urban fishing programs have evolved to include a variety of program models started through state or community-led initiatives. As fishing license sales and angler numbers decline, today’s urban fishing programs compete with a multitude of activities and require a community-based approach for success (Sweatman, De Jesus et al. 2008). Urban areas are expanding nation-wide, yet funding for urban fishing programs remains a challenge (Gilliland 2008).

National surveys and specific program case studies identify the strengths of existing models, as well as the challenges and components these programs have in common (Eades, Pape et al.)
2008; Gilliland 2008; Hunt, Schramm et al. 2008). These studies have identified the following components and criteria of successful urban fishing programs:

Criteria Specified for Urban Fishing Programs
- Early assessment of existing and potential anglers' interests
- Suitable sites that provide access, safety, and desired amenities
- Law enforcement or security to ensure safety
- Staff, volunteers, and mentors to administer, promote, and teach
- Partnerships with community and agency stakeholders
- Market strategy to target lapsed and new anglers

Goals Identified for Urban Fishing Programs
- Increased fishing opportunities
- Enhanced fishing opportunities in populated areas
- Increased stewardship of natural resources and retention of new anglers
- Education of participants of all ages about fisheries and fishing

Lessons Learned
- Goals must be set upon available resources and agency priorities
- Goals should be set upon anglers' interests so success can be clearly evaluated
- Most states evaluated program effectiveness in terms of number of anglers and youth served in addition to catch and effort, but few states conducted more thorough analyses required to justify long-term program existence such as the effectiveness of programs in recruiting and retaining anglers or cost/benefit studies
- Creel surveys and focus groups help to determine existing and potential anglers’ interests, as well as community knowledge
- Surveying local residents is useful in determining effectiveness of program
- Longitudinal studies of anglers would be useful for program evaluation
- Site must be near to potential anglers' residences and accessible by public transportation, bike, or foot to attract youth and underrepresented anglers
- Pressure at urban fisheries exceeds that of rural fisheries so intensive stocking is often needed
- Partnerships with departments of tourism and economic development, city and county staff, Parks and Recreation departments, local businesses, schools, museums, and community groups such as angling clubs are important to success of program and provide community-based solutions
- Two-way communication key to maintaining relationships
- Partners rarely assumed additional responsibilities
- Work plans must incorporate rewarding partnership efforts
- Providing sense of ownership to partners is critical to ensuring success
- Promotion can take a lot of time
- Facilities such as parking, restrooms, picnic areas, and playgrounds are very important
- Law enforcement often an afterthought but was a main concern of current program administrators and anglers
Structure
Audience is a common factor among existing urban fishing programs. The differences in program structures vary according to several factors:

- funding and staffing models
- available amenities
- partnerships formed at local, regional, and state levels

Audience
While the earliest urban fishing programs were developed to target underrepresented anglers, current programs focus on recruiting anglers, specifically lapsed anglers and youth, who live in close proximity to the fishery but are time-restricted (Balsman and Shoup 2008).

Youth
The vast majority of programs target youth and work in collaboration with city or county departments to coordinate the development, maintenance, management, and programming of urban fishing programs (Hunt, Schramm et al. 2008). Many state agencies use aquatic education and outreach programs to recruit children through activities and programs that increase interest and skill (Sweatman, De Jesus et al. 2008).

Underrepresented Anglers
Underrepresented angler groups and traditional anglers have different motivations and concerns (Hunt and Ditton 2002; Schroeder, Fulton et al. 2008). Fishing for food, fishing with family and friends, and fishing as relaxation are all motivations for communities of color (Schroeder, Nemeth et al. 2008). Underrepresented angler groups’ concerns included water safety, lack of knowledge about regulations and fear of citations, lack of information in their language, and fear of being targets of violence. These concerns can be addressed in the planning of an urban fishing program by including water safety classes, signs in multiple languages, readily available information about regulations and licenses, and presence of public safety staff at the park. Cost restraints, distrust of law enforcement, and uncertainty about regulations can be addressed by equipment loan programs, agency recruitment of more diverse staff for urban fisheries management, and non-license events at which would-be anglers can learn the regulations and what is required for license purchases (Schroeder, Nemeth et al. 2008).

Funding
Funding varies widely among urban fishing programs and influences the implementation and continued management of a successful program. In an interview with a former state-wide urban fisheries program manager, the manager commented that funding was “easy to come by” at the beginning of the program when stakeholders were excited, but a long-term funding plan was challenging. This former fisheries program manager cited funding as the one component of program structure he would change if the program were to be started again from the ground up (Personal Interview).
A 2006 funding survey identified the top three challenges of urban fishing programs to all be tied to a lack of sustainable funding: lack of staff, availability of fish to support intensive stocking efforts, and lack of suitable sites to incorporate their programs (Gilliland 2008). Additionally, 80% of reporting agencies depended upon a combination of license dollars and Federal Aid in Sport Fish Restoration (SFR) to fund all or part of their urban fishing program activities (Gilliland 2008). This is a shift from the 1980s, when events sponsored through private donations from corporate sponsors were an important component of funding models for urban fishing programs. Throughout the 1990s and 2000s, SFR funds increased and potential partners in Departments of Tourism, Economic Development and Commerce, and others, may have been ignored (Gilliland 2008).

The following list of funding sources is detailed further in Appendix I:

- Urban fishing licenses
- Private or corporate sponsorship
- State tax incentives
- Lottery
- Legislation funds or appropriations
- United States Forest Service and Bureau of Land Management grants
- Funded in part by fish kill mitigation funds, fines collected by agency for pollution violations fund, and/or fines from general fish & wildlife violations
- Cities pay a flat fee, percentage of the total cost, or provide in-kind contributions such as staff time. Exceptions are sometimes made for smaller cities that cannot afford fees.
- Volunteer or in-kind contributions

**Staff**

An April 2007 survey of 43 of 51 state agency fishery administrators by Hunt et. al. found the following in regards to staffing and time:

- 70% of agencies have a designated urban fishing program director with oversight responsibility who spends about 50% of time on program (0.5 FTE)
- 42% had biologists whose primary duties were working with the urban fishing program; each had on average 1.9 urban fisheries biologists who spent 82% of time on urban fishing activities (1.6 FTE)
- 25% of agency district/regional fisheries biologists and 23% of fisheries technicians worked on Urban and Community Fishing (UCF) activities; spent 8% and 18% of time respectively on urban fishing activities (2.1 FTE)
- For those agencies with a full complement of personnel working with the urban fishing programs (urban fishing biologists, technicians, and fisheries biologist) this amounts to slightly more than 4 FTE who deal specifically with UCF program activity or about 7.5% of all inland fisheries management activity.
Amenities

Access and awareness
Anglers often choose settings because of convenient location and facilities, and so successful urban fishing program sites should be within walking distance or easily accessible by public transportation to target youth and underprivileged anglers (Balsman and Shoup 2008). Success depends upon residents in the area viewing the site as both desirable and accessible (Schramm and Dennis 1993; Fedler and Ditton 2000).

Structures and Equipment
- Boat ramp/pier construction needed at some locations
- Rod Loaner Programs in FL, IL, UT have been popular and supported in part by local businesses such as bait and tackle shops, Bass Pro shops, etc. (Balsman and Shoup 2008; Sweatman, De Jesus et al. 2008)
- Facilities such as parking, restrooms, picnic areas, and playgrounds are very important to attract families
- Parking lots
- Water sources and tables help those who wish to clean fish
- Bike racks can help to attract youth
- Proximity to existing greenbelts, bike paths

Safety
Safety is an often underestimated factor in limiting potential angler involvement in urban fishing programs (Schramm and Edwards 1994; Hunt and Ditton 1997). In addition to angler safety, insufficient law enforcement in some urban areas threatens angler compliance. Eades et al. (2008) wrote that the greatest challenge to Nebraska's urban fishing program was insufficient law enforcement of regulations. In a 2007 survey, both fisheries administrators and anglers identified law enforcement as a program concern and 55% of staff involved in urban fishing program coordination reported that they did not have adequate law enforcement capabilities at program sites (Eades, Pape et al. 2008).

The following recommendations are examples of safety improvements:
- Police patrol/game warden presence to monitor regulation compliance and increase angler security (Balsman and Shoup 2008; Eades, Pape et al. 2008)
- Water safety classes encourage new anglers to feel confident and comfortable at sites
- Bilingual information is needed to communicate events, regulations, and advisories
- Clear communication about any public health risks from consumption of fish is needed to inform those with weakened immune systems or other health concerns (McOliver, Graczynz et al. 2008)

Partnerships
Communication and collaboration among city staff, community members, and agency staff is an often undervalued and sometimes invisible component central to program success. An urban fishing program manager in Utah cited communication as an important factor in articulating and achieving goals. He commented that this ongoing effort took more time than was
recognized (Personal Interview). However, the maintenance of these partnerships created through site identification, restoration or construction, finance, maintenance of the fishery, and programming inspired increased stewardship in communities (Penne and Cushing 2008).

Sweatman, De Jesus et al. (2008) outline the challenges and opportunities presented through partnerships:

- Partnerships may include Departments of Tourism and Economic Development, city and county staff, Parks and Recreation departments, local businesses, schools, museums, and community groups
- Two-way communication is key to maintaining relationships
- Partners rarely assumed additional responsibilities
- Work plans must incorporate rewarding partnership efforts
- Consistent assessment allows both the urban fishery manager and the partner to know they are on the same page and taking on tasks that most suited them
- A sense of ownership is important to success
- Communication was the most important tool to maintain these relationships

Tools and approaches used by existing fishing programs to cultivate and maintain successful partnerships include:

- Memorandum of understanding or similar informal contract: The Utah Community Fishing Program drafts a memorandum of understanding between the community and agency and cites. This as an important tool in further program development. This memorandum is used at the beginning of all partnerships to communicate expectations, responsibilities, and timeline for all involved in the project (Personal Interview).

- Community meetings: The Utah Community Fishing Program holds yearly meetings that are initiated by the state wildlife agency and bring all communities involved in the program together. The meetings serve as a forum for the exchange of information and experiences, as well as a way to highlight exceptional efforts and programs, provide updates among levels of administration, and informal trainings. These yearly meetings are attended by approximately half of those involved in the program and, for those who attend, are an event they look forward to throughout the year (Penne and Cushing 2008).

- Focus groups: Minnesota’s Minneapolis urban fishing program conducted focus group meetings with communities of color to identify barriers, constraints, and concerns. These focus groups were important for the agency to determine how to change their urban fishing program to reach out to more underrepresented anglers. Through the process of the focus groups, participants also offered suggestions about promotion and partners that were used to create a more successful program (Schroeder, Nemeth et al. 2008).

- Sponsorship of events by local groups: Minnesota’s Fishing in the Neighborhood (FIN) program in the Twin Cities area engages with community members through attendance
at dozens of events each year. This involvement in the local community allows the
agency to be responsive to demographic changes and form new partnerships (Walsh,
Levitt et al. 2008).

Program Highlights

Arizona
In 2006, Arizona's urban fishing license in 2006 was $18.50 and these license accounted for 8%
of the total urban fishing program budget (Gilliland 2008). An urban fisheries program manager
cited Arizona's funding model as the model he would use if he were to reconstruct his state's
urban fishing program from scratch (Personal Interview).

Florida
Florida's urban fishing program highlights the importance of partnerships. Sweatman, De Jesus
et al. (2008) summarized key partnered projects:

<table>
<thead>
<tr>
<th>Project</th>
<th>Partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boat ramp/pier construction</td>
<td>Fleet and facilities maintenance divisions</td>
</tr>
<tr>
<td></td>
<td>and civic groups</td>
</tr>
<tr>
<td>Development of rod loaner</td>
<td>Parks and Recreation departments</td>
</tr>
<tr>
<td>programs</td>
<td></td>
</tr>
<tr>
<td>Creation of fishing lanes</td>
<td>Public works personnel</td>
</tr>
<tr>
<td>Fish attractor installation</td>
<td>Public works personnel</td>
</tr>
<tr>
<td>Rental boats</td>
<td>Parks and Recreation departments</td>
</tr>
<tr>
<td>Liability disclosures</td>
<td>City and county legal departments</td>
</tr>
<tr>
<td>Remove nuisance vegetation</td>
<td>Public works personnel</td>
</tr>
<tr>
<td>Maintenance</td>
<td>Local or city government</td>
</tr>
<tr>
<td>Publicity</td>
<td>Radio stations, outdoor writers, private industry, community groups</td>
</tr>
</tbody>
</table>

Minnesota
Minnesota revamped their urban fishing program in the Twin Cities through the use of focus
groups. These focus groups targeted communities of color, who were not participating in the
cities' fishing programs at very high rates. Through these focus groups, the Minnesota
Department of Natural Resources identified gaps in information and different community needs
(Walsh et al.)

Programming is a strength of Minnesota's urban fishing program. The Fishing in the
Neighborhood (FiN) program and MinnAqua Fishing: Get in the Habitat! school education
program target youth (Ibid.; Kelly and Sigurdson 2008). Minnesota's MinnAqua Program has
evolved into much more than a fishing program, offering education in aquatic ecology, fisheries
management, and aquatic stewardship through the teaching of systems-thinking, or awareness
of the interrelationships among the ecosystem's elements (Kelly and Sigurdson 2008).
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Nebraska
Nebraska’s population has shifted from rural to urban during the last fifty years (Eades, Gabelhouse et al. 2008). Nebraska fishing permits fund the urban fishing program activities, and this funding is complimented by funds from state lottery proceeds, the Nebraska Department of Environmental Quality (NEDQ), the Community Lakes Enhancement and Restoration Program, and private organizations (ibid.)

The selected program sites were very shallow and the Nebraska Department of Environmental Quality (NDEQ), Nebraska Games and Park Commission (NGPC), and the University of Nebraska-Lincoln administered improvements. These improvements included deepening of the lakes, dredging, stabilizing shorelines, construction of fishing docks and jetties, installation of aeration systems, and settling basins or wetlands. To improve fishing quality, the urban fisheries specialist and District fisheries supervisors work together to create regulations specific to each urban lake. The program targets new and young anglers through education and recruitment activities that include tackle loaner programs, Youth Fishing Program (YFP) activities, civic group involvement, volunteers, and city Parks and Recreation staff. In 2007 the urban fishing program partnered with NGPC to create a “Fishing Host Program,” similar to a campground host program, in which volunteers earned free camping and access at recreation areas in exchange for their time and mentorship in free fishing clinics and instruction (ibid.).

Utah
Partnerships are highlighted in Utah’s program model, as well. For example, one fisheries manager commented that sometimes city park staff do not initially have knowledge about wetland plantings. With agency help, staff gain the knowledge needed to maintain the wetland and new relationships are forged in the process. Later, if the city needs to ask for consultation, the partnership needed is already in place. Maintenance of these partnerships is often not recognized though it is essential to the success of collaborations with community members and city staff (Personal Interview).

One Utah communities fishery manager shared that if he could change one thing about their program, he would change their funding model to incorporate an urban fishing license. Additionally, he said models that charge communities a flat rate per acre of pond or lake maintained also have a smart model. Both provide consistent funding outside of state or federal support, private donors, or city matches. An urban fishing license would help to institutionalize urban fishing program funding within the state programming budget and prevent fisheries staff from “having to give away something for free then ask for money later on,” which the fisheries manager felt was the greatest challenge facing his state’s fishing program (Personal Interview).

Goals
Goals must be set based on available resources and agency priorities (Sweatman, De Jesus et al. 2008) and should be set upon anglers’ interests so success can be clearly evaluated (Balbman and Shoup 2008).
Existing urban fishing programs share three common goals (Schramm and Edwards 1994):

- Increase recreational fishing opportunities
- Develop and increase environmental awareness and conservation ethics
- Increase public participation in recreational fishing

Urban fishing programs aim to increase fishing license sales with the recruitment and retention of new, lapsed, young, or underrepresented anglers through improving urban fishing opportunities. The outcome of increased anglers may not be realized immediately. Based upon their study of Minnesota’s Fishing in the Neighborhood (FIN) program in the Twin Cities, Walsh et al. (2008) suggest a tracking system to measure the repetition of youth participation and later buying habits. Siemer and Knuth (2002) recommend that agencies clearly define the environmental stewardship objectives in order to measure the success of this goal.

**Objectives**

**Needs Assessment**

In the beginning stages of an urban fishing program, existing and potential urban anglers’ interests should be assessed so that the program can incorporate their needs (Balsman and Shoup 2008). Additionally, program administrators should identify the stakeholders at the beginning of the process in order to design an evaluation plan that will be useful in the future of the program (Ballard 2008). The program’s success depends upon resident awareness and accessibility (Fedler and Howard 1991; Schramm and Dennis 1993; Fedler 2000 in Balsman and Shoup 2008). City and agency staff should communicate with existing and potential urban anglers in order to better understand their needs and potential investment because not much is known to date about what these existing and potential urban anglers value (Mahasweerachai, Boyer et al. 2010). Understanding these stakeholders’ needs and interests is a pre-requisite to the credibility and efficacy of the program (Ballard 2008).

**Increased Interaction Among Cultural Groups**

Urban fishing programs provide an activity of community building by increasing and strengthening connections among residents from different backgrounds (Balsman and Shoup 2008). If successful connections are maintained, the program presents an opportunity to increase community identity by bringing together residents whose ethnic, racial, or class backgrounds otherwise separate them (Walker 2004 in Balsman and Shoup 2008).

**Impact Monitoring and Evaluation**

Monitoring and evaluating the impact of the program in terms of fishery, vegetation, water quality, land stewardship, use and user satisfaction are important to furthering partnerships, funding, and staffing.
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- Most states evaluated program success in terms of angler numbers and catch effort, ignoring the analyses needed to justify long-term sustainability and influence (Hunt, Schramm et al. 2008)

- Creel surveys capture data only from existing anglers

- Longitudinal studies of anglers would be useful for program evaluation

- Texas Parks and Wildlife used Geographic Information System (GIS) to map anglers by ZIP code (Taylor, Scott et al. 2008) to gather preliminary data for a later survey

- Tracking participation at youth events would assist later analysis of license buyer habits (Walsh, Levitt et al. 2008)

- Many agency and community staff do not have adequate training in the creation, implementation, or analysis of comprehensive program evaluation (Ballard 2008)

- A logic model assists agencies with identifying performance indicators and providing program a framework for program evaluation (Ibid.)

- Integration of quantitative and qualitative data provides information that can be used for both fiscal needs and evaluation (Ibid.)

- Most states evaluated program effectiveness in terms of number of anglers and youth served in addition to catch and effort, but few states conducted more thorough analyses required to justify long-term program existence such as the effectiveness of programs in recruiting and retaining and cost/benefit studies

Outcomes

Secured Funding
Sustainable funding remains a challenge for urban fishing programs.

Evaluation and Assessment
The foundation for evaluation and assessment is often not included in initial planning of urban fishing programs. There is a gap in the literature describing the use of evaluation and assessment regarding long-term assessment of urban fishing programs. The majority of evaluations or assessments are conducted on a nation-wide scale or address a specific program component.

For example, an urban fisheries manager of a successful urban fishery program shared that he felt neighborhood members surrounding fisheries were cautious at first about the programs; these same neighborhood members became the programs' best proponents and took pride in the success of the fishing program. He knew that the programs had increased property values
and was curious how this influenced neighborhood residents' landscaping practices or views regarding conservation, but no data had yet been collected (Personal Interview).

Developing evaluation and assessment tools or plans at the start of an urban fishing program's development will aid the measure of a program's impact in terms of long and short-term goals (Ballard 2008).

**Pilot Program**
Over 70% of agencies with community or urban fishing programs surveyed in 2007 had a pilot phase prior to program designation that lasted an average of six years (Hunt, Schramm et al. 2008).

**Approach**
An holistic approach promises more successful management of programs (Fedler and Ditton 1994). Urban fishing programs adopting a multidisciplinary approach create opportunities for new partners and anglers (Balsman and Shoup 2008).

**Conclusion**
Inputs required for an urban fishing program seem straightforward on paper. Most existing urban fishing programs have been managed through biological science with little incorporation of social study of stakeholders or their resources or needs (Magill 1988 in Fedler and Ditton 1994). Understanding the importance, as well as the opportunities and challenges, of the partnerships created through the implementation, maintenance, and evolution of an urban fishing program is central to the program's success. Even if funding and staffing ceased to be concerns, Penne cited the ability of each community to take ownership and direction of their community fishing program as the impetus for many successful partnerships and programs (2008). These social components are less clear and vary upon location and resources, though their cultivation and measure contribute to a program's sustainability. To date, most programs have assessed themselves based on participation at local events or on a short-term basis. Greater effort to truly assess whether urban fishing programs meet the objectives set for them, such as angler recruitment and retention, is needed.
### Appendices

#### Appendix I: Comparison of Urban Fishing Programs by Status and Funding Model

**Sources: Gilliland 2008, Personal Interview 2011**

<table>
<thead>
<tr>
<th>Programs/Sites</th>
<th>Status</th>
<th>Pilot Year</th>
<th>Program Year</th>
<th>Funding</th>
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<tr>
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<td></td>
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<td>Volunteer Match</td>
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<td>1999</td>
<td>2002</td>
<td>UFIP State Sales Tax</td>
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<td>State</td>
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<td>City</td>
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<td>Previously</td>
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<td></td>
<td>Lottery</td>
</tr>
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<td>Connecticut</td>
<td>Pilot</td>
<td>2006</td>
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<td>Fines/Mitigation</td>
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<td></td>
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<td>State</td>
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<td>2002</td>
<td>Fines/Mitigation</td>
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<td>Kentucky</td>
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<td>Maine</td>
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<td>Maryland</td>
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<td></td>
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<td>Conservation Grants; In-Kind</td>
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<table>
<thead>
<tr>
<th>State</th>
<th>Region</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Funding Sources</th>
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<td></td>
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<td></td>
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<td>State Sales Tax</td>
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<td>State</td>
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<td>1996</td>
<td>1998</td>
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<td>Fishing tournaments</td>
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<td>NL</td>
<td>2002</td>
<td>In-Kind; Volunteer Match</td>
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<td>Oregon</td>
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<td>Fishing license; commercial salmon landing tax</td>
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<td>Pennsylvania</td>
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<td>South Carolina</td>
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<td>2000</td>
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<td>City; USFS &amp; BLM</td>
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<td>Vermont</td>
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## Urban Fishing Formative Assessment and Case Study 16

<table>
<thead>
<tr>
<th></th>
<th>Integrated</th>
<th>Legislation</th>
<th>Fines/Mitigation</th>
<th>USFS &amp; BLM</th>
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<tbody>
<tr>
<td>Washington</td>
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<tr>
<td>West Virginia</td>
<td>Plan</td>
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<td>Fines/Mitigation</td>
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<tr>
<td>Wisconsin</td>
<td>Regional</td>
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<tr>
<td>Wyoming</td>
<td>Integrated</td>
<td></td>
<td></td>
<td>USFS &amp; BLM</td>
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**Program Key:**
- Integrated: Designated urban fishing program not needed because already incorporated within state fishery management
- State: Urban fishing program established at statewide level
- Regional: Urban fishing program established at a regional level
- Pilot: Urban fishing program in pilot phase
- Previously: Once had an established urban fishing program but have incorporated it back into statewide or regional fisheries management program
- Plan: Plan to pursue urban fishing program
- None: Do not plan to pursue

**Funding Key:**
- Lottery: State lottery used to finance portions of program
- State Sales Tax: Special state tax earmarked for urban fishing program
- Legislation: Annual legislation funds or appropriations
- USFS & BLM: United States Forest Service and Bureau of Land Management grants
- Fines/Mitigation: Funded in part by fish kill mitigation funds, fines collected by agency for pollution violations fund, and/or fines from general fish and wildlife violations
- City: Cities pay a flat fee, percentage of the total cost, or provide in-kind contributions. Exceptions sometimes made for smaller cities that cannot afford fees.
- Volunteer Match: Volunteer match of staff time and/or equipment
- In-Kind: In-kind contributions of staff time and/or equipment
Appendix II: Summary of Urban Fishing Programs

National surveys and specific program case studies identify the strengths of existing models, as well as the components these programs have in common.

Sources: (Balsman and Shoup 2008; Eades, Pape et al. 2008; Gilliland 2008; Hunt, Schramm et al. 2008; Sweatman, De Jesus et al. 2008)

<table>
<thead>
<tr>
<th>Goals Identified for Urban Fishing Programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Increased fishing opportunities</td>
</tr>
<tr>
<td>• Enhanced fishing opportunities in populated areas</td>
</tr>
<tr>
<td>• Increased stewardship of natural resources</td>
</tr>
<tr>
<td>• Recruitment and retention of new anglers</td>
</tr>
<tr>
<td>• Education of participants of all ages about fisheries and fishing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Criteria Specified for Urban Fishing Program</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Assessment of anglers’ interests early so that program can develop to meet these</td>
</tr>
<tr>
<td>• Suitable sites that provide access, safety, and desired amenities</td>
</tr>
<tr>
<td>• Law enforcement or security to ensure safety</td>
</tr>
<tr>
<td>• Staff, volunteers, and mentors to administer, promote, and teach</td>
</tr>
<tr>
<td>• Partnerships with community and agency stakeholders</td>
</tr>
<tr>
<td>• Market strategy to target lapsed and new anglers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Target Audience</th>
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<tbody>
<tr>
<td>• Earliest programs targeted underrepresented anglers while current programs focus on recruiting youth and those who can fish close to home but are time-restricted, have never fished, or are lapsed anglers</td>
</tr>
<tr>
<td>• Many state agencies use aquatic education and outreach programs to target children through activities and programs that increase interest and skill</td>
</tr>
<tr>
<td>• Underrepresented angler groups have different motivations and preferences than those of traditional anglers; targeting them requires an understanding of their needs and skill</td>
</tr>
<tr>
<td>• Underrepresented angler groups’ concerns included water safety, lack of knowledge about regulations and fear of citations, lack of information in their language, fear of being targets of violence</td>
</tr>
<tr>
<td>• Majority of existing programs target youth</td>
</tr>
<tr>
<td>• Family-centered promotion and activities attract diverse anglers</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Considerations</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Amenities and access</td>
</tr>
<tr>
<td>• Rod Loaner Programs in FL, IL, UT have been popular and supported in part by local businesses such as bait and tackle shops, Bass Pro shops, etc.</td>
</tr>
<tr>
<td>• Intensive management and stocking most common program model but not always required</td>
</tr>
<tr>
<td>• Site should be within walking distance or on public transportation to target underprivileged anglers and youth</td>
</tr>
<tr>
<td>• Police patrol/game warden presence needed to increase security for anglers and encourage compliance with regulations</td>
</tr>
<tr>
<td>• Water safety classes encourage new anglers to feel confident and comfortable at sites</td>
</tr>
<tr>
<td>• Bilingual information is needed to communicate events, regulations, and advisories</td>
</tr>
<tr>
<td>• Advisory information concerning water pollution and pathogen levels must be clear, accessible, and distribution through media channels, newspapers, signs at the site must planned in advance</td>
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<table>
<thead>
<tr>
<th>Challenges</th>
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</thead>
<tbody>
<tr>
<td>• Staffing</td>
</tr>
<tr>
<td>• Availability of fish to support intensive stocking efforts</td>
</tr>
<tr>
<td>• Lack of suitable sites to incorporate programs</td>
</tr>
<tr>
<td>• Lack of sufficient or sustainable funding</td>
</tr>
<tr>
<td>• Safety and security: many would-be anglers list safety as a factor limiting their involvement</td>
</tr>
<tr>
<td>• Enforcement of regulations</td>
</tr>
<tr>
<td>• Communication among stakeholder groups requires a significant amount of time</td>
</tr>
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<table>
<thead>
<tr>
<th>Opportunities</th>
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</thead>
<tbody>
<tr>
<td>• Increased license sales: license sales increase as new anglers are recruited and current non-licensed anglers take part in the program</td>
</tr>
<tr>
<td>• Community building: program can increase and strengthen connections among residents from different backgrounds</td>
</tr>
<tr>
<td>• New partners and anglers: multidisciplinary approach that is needed in an urban fishing program creates opportunities for collaboration and involvement</td>
</tr>
<tr>
<td>• Watershed protection: program can increase participants’ understanding and awareness of water quality and practices to improve water quality such as landscaping practices, lead-free fishing gear</td>
</tr>
<tr>
<td>• Food source: some programs provide food source for urban residents</td>
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<table>
<thead>
<tr>
<th>Lessons Learned</th>
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</thead>
<tbody>
<tr>
<td>• Goals must be set upon available resources and agency priorities</td>
</tr>
<tr>
<td>• Goals should be set upon anglers’ interests so success can be clearly evaluated</td>
</tr>
<tr>
<td>• Evaluation of program effectiveness is often in terms of angler numbers or license sales instead of the long-term studies needed for program expansion and to attract additional funding such as tracking of recruiting efforts, analyzing retention, costs/benefits, or investigating angler behavior</td>
</tr>
<tr>
<td>• Creel surveys and focus groups are helpful in determining anglers’ interests and community knowledge</td>
</tr>
<tr>
<td>• Longitudinal studies of anglers would be useful for program evaluation</td>
</tr>
<tr>
<td>• Site must be near to potential anglers’ residencies and accessible by public transportation, bike, or by foot to attract youth and underrepresented anglers</td>
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<tr>
<td>• Pressure at urban fisheries exceeds that of rural fisheries so the intensive stocking needed was sometimes underestimated</td>
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<tr>
<td>• Partnerships with Departments of Tourism and Economic Development, city and county staff, Parks and Recreation departments, local businesses, schools, museums, and community groups such as angling clubs are important to success of program and provide community-based solutions</td>
</tr>
<tr>
<td>• Two-way communication key to maintaining relationships</td>
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<tr>
<td>• Work plans must incorporate rewarding partnership efforts</td>
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<tr>
<td>• Providing sense of ownership to partners and community is critical in ensuring success</td>
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<tr>
<td>• Promotion can take a lot time</td>
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<tr>
<td>• Facilities such as parking, restrooms, picnic areas, and playgrounds are very important</td>
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<tr>
<td>• Law enforcement often an afterthought but was a main concern of current program administrators and anglers</td>
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</tbody>
</table>

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Sources


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Personal Interview. February, 17, 2011.


APPENDIX I. SECOND URBAN FISHING CASE STUDY REPORT

Urban Fishing Formative Assessment and Case Study

Tasks 2a and 3a: Documentation and Assessment
June 30, 2011
Urban Fishing Program Assessment and Case Study

Prepared by

Angie Carter
Graduate Research Assistant
Department of Sociology
Graduate Program in Sustainable Agriculture
carter@lastate.edu

Rebecca Christoffel
Assistant Professor
Natural Resource Ecology and Management
christoff@lastate.edu

Iowa State University
Ames, Iowa

Funding
Support for development of these materials was provided through Fish and Wildlife Restoration funding.
### Urban Fishing Program Assessment and Case Study

**Prepared by**

1

**Funding**

1

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#### Stakeholders

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- County Government
- City Government
- Neighborhood Associations
- Educational Institutions
- Community Organizations

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#### Connections

8

#### Limitations

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#### Questions from Interviews

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#### Tools and Amenities

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#### Opportunities

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#### Recommendations

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- Process
- Partnerships
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- Next Steps

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Executive Summary
The first part of this report will share preliminary findings from the relationships and connections documented through 19 interviews, 5 focus groups, and participant observation of meetings during 2010-2011.

In the second part of this report, we will propose process recommendations and next steps for the Des Moines Urban Fishing Program initiative based upon the collected data.

This report builds upon the literature review and program component analysis provided in the previous report, Task 1: Research and Review, and fulfills the following tasks:
- Document relationships and connections task 2a: Document findings related to and report on relationships and connections including, but not limited to, stakeholder relationships and connections;
- Conduct formative assessment task 3a: Develop a “feedback loop” for formative assessment of the pilot urban fishing program. Analyze data collected through Tasks 1 and 2, and in conjunction with IDNR and other stakeholders as appropriate, review findings and make recommendations for any revisions in process for developing approaches and/or expectations for outputs and outcomes.

Task 2a: Relationships and Connections
Purposeful snowball sampling was used to contact participants for interviews and focus groups. For interviews, we first contacted those individuals whose job duties were directly impacted by or responsible for the initiative, who had expressed interest in the project, or who had been recommended to us. For focus groups, we first contacted the neighborhood association boards of those neighborhoods located within the watersheds of the proposed priority sites (Greenwood Park Pond, Witmer Park Pond, Taidam Village Pond, Mac Rae Park Pond) and/or whose neighborhood boundaries were in close proximity to the proposed priority sites. We used neighborhood association lists provided by the City of Des Moines Parks and Recreation department to contact the boards of these associations. Additionally, we contacted community organizations recommended by City staff that had youth programs or an interest in fishing opportunities.

When contacting the neighborhood association boards or organizations, we asked if there might be members of their board or community interested in attending the focus group. When asked, we said we hoped for no more than 15 attendees at each meeting in order to have a conversation together in which all participants had the opportunity to talk, so several neighborhood boards or organizations contacted members directly, others recommended members for us to contact directly, but most sent the announcement over their listserv.
Organizations and agencies of participants who took part in interviews and focus groups during September of 2010 and June of 2011 are listed in Table 1.

<table>
<thead>
<tr>
<th>Table 1</th>
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<tbody>
<tr>
<td><strong>Participants</strong></td>
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<tr>
<td><strong>State Agency</strong></td>
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<td><strong>County Agency</strong></td>
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<td><strong>City Government</strong></td>
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<td><strong>Neighborhood Associations</strong></td>
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<td><strong>Schools</strong></td>
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<td><strong>Community Groups</strong></td>
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From the above interview and focus group participants, we learned of interest and opportunities for engagement among existing organizations, agencies, and individuals that will be important in building alliance and partnerships associated with an urban fishing initiative.
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We categorized the role, support, influence, and need of each stakeholder based upon participant observation and transcripts. This categorization will aid in planning the next steps of the urban fishing program initiative and strategizing partnerships. This categorization only includes those who attended focus groups or an interview. We defined each of these categories as follow and summarize the data in Table 2:

Role:
- **Key** = Original and central stakeholder whose ownership of the process is central to program success. Responsible for aspects of program development including funding, staffing, and evaluation. Assumes ownership.
- **Primary** = Central stakeholder whose ownership of the process is central to program success. Collaborator in the process of program implementation.
- **Secondary** = Interested stakeholder whose collaboration and partnership will add diversity, longevity, and investment to the program.

Support:
- **High** = Has already committed or shows interest in committing funding and staffing in the development of the program. Has already assumed or would like to assume ownership of all or some aspects of the program such as improvements, funding, staffing, mentorship programs, trainings, volunteers, etc. Assumes ownership.
- **Medium** = Shows interest in the program through attendance at focus group or in interview and sees possibilities for integration within current or future responsibilities or project.
- **Low** = Shows interest in the program through attendance at focus group or in interview but sees little integration within current or future responsibilities.

Influence:
- **High** = Capable of putting forward the economic and social capital needed to move the program forward.
- **Medium** = Capable of collaborating to move forward the economic and social capital needed to move program forward.
- **Low** = Capable of providing input needed to move program forward.

Need:
- **High** = Articulated that an urban fishing initiative at neighborhood park ponds in Des Moines has been expressed as a need in their organization.
- **Medium** = Articulated that an urban fishing initiative at neighborhood park ponds in Des Moines would compliment or support their work and/or organizations needs.
- **Low** = Interested, but did not articulate that an urban fishing initiative at neighborhood park ponds in Des Moines is needed by their organization.
<table>
<thead>
<tr>
<th>Table 2</th>
<th>Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Participant</strong></td>
<td><strong>Interest</strong></td>
</tr>
<tr>
<td><strong>State Agency</strong></td>
<td></td>
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<tr>
<td>Iowa DNR</td>
<td>Urban Fishing Initiative</td>
</tr>
<tr>
<td><strong>County Agency</strong></td>
<td></td>
</tr>
<tr>
<td>Polk County 4-H</td>
<td>Starting youth angling club, mentorship</td>
</tr>
<tr>
<td>Polk County Conservation Board</td>
<td>Recreation, education, programming</td>
</tr>
<tr>
<td>Polk County SWCD</td>
<td>Education, stewardship</td>
</tr>
<tr>
<td><strong>City Government</strong></td>
<td></td>
</tr>
<tr>
<td>City of Des Moines Parks &amp; Rec.</td>
<td>Residents’ expressed interest</td>
</tr>
<tr>
<td>Des Moines Water Works</td>
<td>Education</td>
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<tr>
<td><strong>Neighborhoods</strong></td>
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</tr>
<tr>
<td>Greenwood</td>
<td>Pond improvements</td>
</tr>
<tr>
<td>Mac Rae</td>
<td>Increase park use; nostalgia</td>
</tr>
<tr>
<td>Tadlam Pond</td>
<td>Increase park use; create a resource</td>
</tr>
<tr>
<td>Witmer</td>
<td>Increase park use; improve the pond</td>
</tr>
<tr>
<td><strong>Schools</strong></td>
<td></td>
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<tr>
<td>Cowles Montessori</td>
<td>Class visits to Greenwood Park</td>
</tr>
<tr>
<td>DMACC Urban Campus</td>
<td>Courses design improvements and do field work at Witmer</td>
</tr>
<tr>
<td>Drake University</td>
<td>Student groups volunteer hours for improvements</td>
</tr>
<tr>
<td>Scavo High School</td>
<td>Faculty have interest in Witmer</td>
</tr>
<tr>
<td><strong>Community Groups</strong></td>
<td></td>
</tr>
<tr>
<td>Central Iowa Anglers</td>
<td>More youth and recreational fishing</td>
</tr>
<tr>
<td>Chrysalis Foundation</td>
<td>More activities for young and adolescent girls; working with IDNR on a pond study with 5th grade girls in Des Moines</td>
</tr>
<tr>
<td>Founders Garden Club</td>
<td>Improvements at Greenwood Park</td>
</tr>
<tr>
<td>Freedom for Youth</td>
<td>More urban activities for recreation and mentorship opportunities</td>
</tr>
<tr>
<td>Izaak Walton League</td>
<td>More recreational activities in urban areas</td>
</tr>
<tr>
<td>Raccoon River Watershed Association</td>
<td>Watershed improvements</td>
</tr>
<tr>
<td>Salvation Army</td>
<td>Summer youth camps</td>
</tr>
<tr>
<td>Tadlam Community</td>
<td>Create a resource for the city</td>
</tr>
<tr>
<td>Urban Dreams</td>
<td>More urban activities for recreation and mentorship opportunities</td>
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</tbody>
</table>
Stakeholders
The following description of the stakeholders listed in Tables 1 and 2 shares summaries of our communications and data collected from focus groups and interviews. Four of the focus groups targeted the four priority pond sites (Greenwood, Witmer, Mac Rae, and Taidam Village Pond) and one focus group invited organizations or agencies interested in the urban fishing initiative.

State Government
The IDNR is a very important player in the implementation of the urban fishing program and has the opportunity to create a course for the program that builds upon existing partnerships and integrates the program within existing city or neighborhood structures.

County Government
Polk County Soil and Water Conservation District expressed the hope for cross-collaboration among program partners in defining the program objectives so that the program has the greatest impact in Des Moines. Polk County Conservation Board already partners extensively with community groups and the City and offers valuable contacts and previous urban programming and maintenance experience. Polk County 4-H is interested in beginning a youth angling club and using it to increase environmental stewardship and mentorship opportunities within Polk County.

City Government
We found substantial support for the urban fishing program within Des Moines Parks and Recreation. Staff from management, maintenance, public relations, programming, and planning expressed excitement for the project and desire for its success. A number of park maintenance staff are avid anglers and would be a good resource about the day-to-day use and conditions of the ponds.

Neighborhood Associations
Support for the project varied among those attending focus groups composed of neighborhood residents from the areas surrounding the park ponds. Overall, neighborhood residents who attended meeting were interested in “anything that improves our neighborhood.” The Lower Beaver neighborhood was especially concerned about the welfare of the Taidam Village community and invested in making sure that the urban fishing program exist only if it was to the benefit of the Taidam Village community. The relationship between these two groups was very strong and while we did witness partnerships among different community organizations, the partnership between the Lower Beaver community and the Taidam Village Community unlike any of the partnerships we learned about or witnessed during the course of the focus
groups. Their relationship seemed strong enough to find solutions to the challenges that a mostly privately owned program site would present.

Educational Institutions
Opportunities for collaboration with area colleges and schools may benefit the processes of improvements and maintenance at the neighborhood park ponds. For example, Scavo High School and Drake University near Witmer Park both have student organizations requiring volunteer hours. Representatives from these institutions who attended the Witmer Park focus group thought that their students would be very interested in volunteering at the park. In addition, the Des Moines Area Community College Urban Campus students worked with the City of Des Moines Parks and Recreation Department to remove invasive species around Witmer Park pond as part a required class component for an environmental science course. Representatives from DMACC Urban Campus, Drake University, and Scavo High School discussed opportunities such as mentoring and volunteerism at the park among their student groups and courses as a possible route for high school students to learn about environmental education opportunities at DMACC Urban Campus, Drake University, or Iowa State University. A teacher from Cowles Montessori school shared that they take their students to Greenwood Park pond each spring and use it as an important part of their environmental education curriculum. She shared a collection of drawings the students made in preparation for their spring 2011 visit to Greenwood Park pond.

Community Organizations
Community organizations interested in the urban fishing initiative attended a separate focus. Participants raised the following topics as opportunities an urban fishing program would present to their organization: mentorship, environmental education, afterschool and summer recreational opportunities, stewardship, and food sources.

Connections
Each focus group shared ideas about connections to existing or potential partners and programs.

Neighborhood beautification committees, neighborhood association members, volunteer groups, and school courses engaging in hands-on research projects provide opportunities for valuable partners in surveying and maintenance of the park ponds. For example, an Eagle Scout project at Mac Rae Park resulted in the building of a needed footbridge and a DMACC-Urban Campus course taught by Melanie Sadeghpour removed invasive species from Witmer Park pond and re-established some native species.
Four-season use of the parks was an expressed interest in the focus groups with neighborhood residents. Ice fishing and ice-skating during the winter months are options for engaging residents with the neighborhood park pond beyond the summer.

Connections to local youth organizations’ programming and events may provide increased use of the park ponds beyond angling. In each focus group, participants expressed an initial concern about safety at parks and then raised the point that increased use of the parks would increase safety. Some were concerned that increased use might cause over-use and attract people from outside the neighborhood who did not respect the park.

**Limitations**
Several interested groups were unable to take part in the focus groups because of scheduling conflicts. In some cases, these groups or individuals provided contact information to us or called to talk with us by phone and asked to remain updated about the timeline and outcome of the project. The contact information of specific individuals who wished to remain updated is not included in this summary; however, this information can be provided. In all cases, we provided our contact information at Iowa State University in case participants had questions or thoughts they wished to share throughout the course of our project. Table 4 in Appendix I details which groups had members who contacted us but were unable to attend focus groups.

**Task 3a: Feedback and Assessment**
Feedback gained from interviews and focus groups supported the literature review and interviews we had with urban fishing program managers in other states. We include a summary of questions, tools and amenities, opportunities, and challenges identified through the focus groups and interviews.

**Questions from Focus Groups**
Des Moines focus group participants raised the following questions about the urban fishing program initiative:

- What is an urban fishing program?
- Why was Des Moines chosen as a pilot city?
- Why and how were the selected priority sites chosen?
- How does the pond compare to other urban park ponds?
- Did water quality testing include testing for endocrine disrupters?
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- Does the City currently use fertilizer in City parks?
- What species are currently in the pond?
- What species are native?
- What if people try to sell the fish they catch in the pond?
- Who will be in charge of the funding, maintenance, stocking, patrol, and programming?
- Will the funding be continued? What is its source?
- Who will be the point person for the urban fishing program?
- How will the improvements and stocking be maintained?
- What is the timeline of the project?
- Will there be more meetings about the project?
- Where can I get more information about the project?

Those who participated in the focus groups expressed interest in the program but also shared feelings of distrust and uncertainty about the sustainability of the urban fishing program initiative because integral program components, such as funding, staffing, or a timeline for defining these, were not yet specified. The participants in the focus groups were invested in their communities at varying levels and viewed improvements at the park as an asset to their neighborhood even if they were not interested in fishing.

The Taidam Village Pond stakeholders—Lower Beaver Neighborhood Association and the Taidam Village Community—were very eager and interested in the urban fishing program and had concerns about liability. The City owns the trail and part of the pond at this site but the community wanted more information about liability responsibility and how this would be handled if the pond were designated an urban fishing program site.

Questions from Interviews:

Interview participants raised the following questions about the urban fishing program initiative:

- Who should be designated as the point person?
- What was the factor of community support and awareness of program sites when determining the priority sites? Why not Grey’s Lake, for example?
- How can we volunteer or help?
- What is the timeline of the project?
- What is the source of the funding and how will it be sustained?
- What will be our role?
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An institutional challenge presented throughout the interviews was that the process was new for the key stakeholders and not like other projects their staff had been involved in previously. This presents potential barrier if the institutional cultures are not well understood; however, improved communication would provide increased collaboration and understanding that would extend beyond the urban fishing program.

Staffing and funding were primary concerns. For example, the parks maintenance staff has been cut by 50%. Many of the park maintenance staff are interested in fishing and excited about the program but may need assistance in maintenance of the park improvements. When talking to urban fishing program managers in other states, they shared that often City and County staff called them with questions about the fishing program sites and the state agency provided assistance in the site management. Improving information flow to partners at all levels of program development from hands-on to the decision makers will build capacity and collaboration.

Tools and Amenities
Participants in the interviews and focus groups requested several tools to further educate citizens about the neighborhood parks, pond water quality, and an urban fishing program, as well as amenities to improve the parks should an urban fishing program be developed at the park pond. Many of the proposed tools and amenities provide opportunities to further engage stakeholders in partnership. For example, an Adopt-A-Pond program could be modeled after the city of Toronto’s partnership with the Toronto Zoo to offer their Adopt-A-Pond program (http://www.torontozoo.com/adoptapond/) or a Des Moines fishing map could include information from Polk County Conservation Board or Polk County Soil and Water Conservation District.

Proposed tools included:

• Increased signage at the parks:
  o Detailing native plant, wildlife, and fish species
  o Explaining fishing regulations
  o Providing information about the most recent water quality test
  o Designating interpretive tours throughout the park and including the pond’s wildlife and plants
  o Highlighting the fishing program and other sites available

• A Des Moines fishing map that, similar to a trail map, provides locations of urban fishing program sites, regulation and contact information

• Meetings with City and IDNR staff to discuss the initiative in more depth with their communities with time for question and answer sessions

• Adopt-A-Pond program to engage communities and encourage stewardship
Proposed amenities included:
  • Increased parking
  • Increased lighting
  • Increased patrols
  • Restrooms
  • Signs

**Opportunities**
Focus group participants raised the following opportunities they thought an urban fishing program would present at their neighborhood park:
  • Food source and discussion about dietary and nutrition needs
  • Convenient location
  • Reconnect residents to nature
  • Reason to clean-up neighborhood ponds
  • Year-round activities
  • Integration within school programs
  • Education about local habitats and watersheds
  • Mentorship
  • Intergenerational activities
  • Afterschool activities
  • IOWATER trainings
  • Stewardship
  • Family activities at low or no-cost
  • Increased partnership among City, neighborhood, and community groups

**Challenges**
Focus group participants shared the following challenges they thought an urban fishing program would encounter at their neighborhood park:
  • Funding
  • Litter
  • Maintenance of parks and ponds
  • Lack of knowledge about regulation
  • Lack of public awareness / promotion
Such a feedback loop (Figure 1) would include stakeholders in information exchange at each stage of program development in order to build a sustainable program integrated within agency structures while increasing trust and partnership among stakeholders. Stakeholder exchange would facilitate information sharing, collaboration, and transparency of the process. This model would encourage the synergistic processes that provide opportunities and support for program implementation, increase ownership among the various stakeholders, and provide an inclusive structure for program development.

Currently, the communication is shared between the key stakeholders but doesn’t include the primary and secondary stakeholders. The dashed line in Figure 2 represents the missing information between key stakeholders and the need for increased communication and collaboration:

![Diagram of current communication between stakeholders, State Agency, Urban Fishing Program, and City Government]

**Figure 2** Current Communication

**Process**

In order to create the feedback loop, we recommend that the key stakeholders in the urban fishing program meet to discuss the process of program development as detailed in Figure 3. This will create a road map for the program’s next steps while designating responsibility and strengthening credibility of the program. Adaptability, creativity, and collaboration were highlighted as important aspects of the program planning process by one urban fishing program manager. A road map will provide the key stakeholders a starting path for these important aspects.
Figure 3 Logic Model Process

We include a preliminary logic model in Appendix II as a tool to refine and to use in future planning and strategy meetings.

Partnerships
Collaboration was a central theme of the interviews with urban fishing program managers and within the literature review. Central components of successful collaboration in community projects are individual citizen champions who engage others and those governmental or organizational agencies driven by specific program goals (Morton 2000). In speaking with urban fishing program managers, we found that these individual citizen champions sometimes emerged from City partner staff, neighborhoods or community groups, or from the urban fishing program staff itself.

We recommend that primary and secondary stakeholders be integrated within the program planning, development, implementation and assessment. The urban fishing program managers with whom we spoke in our interviews identified partnerships with community and neighborhood groups as a component of a successful urban fishing programs and public participation as integral to a sustainable program. As Morton writes, “When community members become partners in solving water issues, these connections create webs of influence rather than chains of command. This approach mobilizes resources that include people traditionally left out of decision-making processes and generates collective problem solving.” (Wheatley 1999 and Morton 2008 in Morton 2011: 29).
Managing relationships with program partners and stakeholders is a vital part of an urban fishing program. The urban fishing program managers with whom we spoke all expressed that they spend a large amount of their time on relationship maintenance with state, county, and city level contacts. The amount of ownership assumed by the partners varied depending upon the program model. For example, during recent budget cuts, the urban components of several states’ fishing programs were viewed by the state agency as “extra” or “additional” and not central components to the state fishery programs. Some states’ urban fishing programs withstood cuts because they had integrated their programs within the city, county, and state through collaboration and partnerships. These states’ urban fishing programs are able to sustain, but not grow, during this time of restricted funding. One state’s urban fishing program manager shared that they built their program with specific partnerships in mind to sustain the program through staff or funding cuts and that this has worked even though their agency re-organized and their division’s staff was cut by over half. In contrast, another state’s urban program was cut despite widely acknowledged successes because it revolved around a single staff member and was not integrated vertically and horizontally within the organizational structure.

Inter-agency partnerships are also central to program success. The Minnesota Fishing in the Neighborhoods Program incorporates feedback and input meetings with other departments and agency staff within their program planning cycle to increase agency support and the visibility of the program.

Needs Assessment
Understanding stakeholders’ needs and interests is a pre-requisite to the credibility and efficacy of the program (Ballard 2008). Identifying the interests and needs of residents, community organizations, and key stakeholders presents opportunities for partnership and collaboration.

Next Steps
The following recommendations are suggested to improve the relationship and communication among stakeholders at agency and resident levels, increasing collaboration as the program develops. We summarize these next steps in Table 3:

Communication:

- Meet regularly with the Iowa State University research team to coordinate efforts, share information and processes, and facilitate increased communication. Create a listserf for the research and planning teams to share successes, questions, resources, updates, and ensure information transfer among the team.

- Designate a point person within each the City of Des Moines and the Iowa Department of Natural Resources to serve as a contact person for meeting scheduling and information dissemination. Information from other states’ urban fishing programs suggests this point person will be most successful if he or she has a permanent investment in the outcome of the program.
• Plan a meeting with the staff from the IDNR and City of Des Moines who are key players in the program's development to outline the status of the project, define the timeline, designate contact people, outline program goals, and plan evaluation and assessment methods. Include the ISU research team in this meeting to present report findings and recommendations.

• Plan an informational meeting sponsored by the Iowa DNR for Des Moines City staff employees to learn more about the program, fishery management, and the designation of the priority sites, provide input, increase institutional support for the program and partnership, answer staff questions, and identify staff strengths and needs.

• Plan intra-agency meetings within Iowa Department of Natural Resources to increase communication across districts and departments to increase institutional support for the program through feedback. Other states' fishing programs have relied upon institutional support created through collaboration and feedback to overcome challenges in staffing and funding.

Outreach

• Schedule joint-IDNR and City of Des Moines meetings at locations convenient to the neighborhoods surrounding each of the four priority sites to discuss the initiative with community members and share timeline, water quality, and fishery information, as well as to share more information about the program site selection, fishery management, and urban fisheries. Community investment and ownership of the park pond improvements will educate residents about the technical and physical aspects of the watershed and encourage community engagement that may lead to attitude or behavior changes (Flora 2004).

• Share the schedule of vegetation, water, or fish sampling days with the City of Des Moines and with Des Moines neighborhood associations surrounding the parks and interested local partners, such as area schools and community organizations, to engage City staff and community residents as active participants in the process of improving their local park pond and educate them about water quality and watershed health. A holistic approach promises more successful management of programs (Fedler and Ditton 1994).

• IDNR, Polk County Soil and Water Conservation District, Polk County Conservation Board, and City of Des Moines Parks and Recreation might partner to provide trainings and resources about urban conservation, urban fisheries, youth programming, water safety, and water quality for one another's organizations as well as for the public.

Planning

• Creation of an advisory or steering committee composed of the IDNR staff responsible for the improvements funding, stocking, water monitoring; City staff responsible for programming and maintenance; interested staff from NRCS, Polk County SWCD, and
Polk County Conservation Board; community members from Des Moines conservation and youth organizations; a neighborhood representative from the neighborhoods surrounding each the priority program sites. This committee would have a listserv and meet quarterly to update about the status of the program development, exchange information to overcome barriers, collaborate and partner to create more opportunities, and assist with the integration of the urban fishing program initiative within existing programmatic and City structures. Such a committee would encourage a multidisciplinary approach to challenges and create opportunities for new partners and anglers (Balsman and Shoup 2008) and encourage horizontal communication among stakeholders (Hall 1999).

Analysis

- Develop a timeline of meetings with specific goals, objectives, and outcomes with the Iowa State University research team for updates, recommendations, and sharing of the data analysis throughout 2011-2012.

Assessment

- Integrate assessment within the planning at the beginning stages of the pilot program. Build the program incorporating measures of shared goals. As discussed in the previous report, the foundation for evaluation and assessment is often not included in initial planning of urban fishing programs. Developing evaluation and assessment tools or plans at the start of an urban fishing program's development will aid the measure of a program's impact in terms of long and short-term goals (Ballard 2008). A process of regular evaluation and assessment created in partnership with inter- and intra-agency contacts helps an urban fishing program become more resilient when funding or staff changes occur and increases trust and communication among stakeholders (Urban Fishing Program Manager Interviews).
<table>
<thead>
<tr>
<th>Approach</th>
<th>Output</th>
<th>Outcome</th>
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<tbody>
<tr>
<td>Communication</td>
<td>Centralize and Increase</td>
<td>Improved understanding of institutional cultures, timeline, and identification of goals; strengthening of inter- and intra-organizational relationships; trust</td>
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<tr>
<td>Outreach</td>
<td>Extend</td>
<td>Engagement of community stakeholders, transparency of process, education of water resources; ownership</td>
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<tr>
<td>Planning</td>
<td>Increase</td>
<td>Increased institutional understanding and support; ownership; refined program implementation; trust</td>
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<tr>
<td>Analysis</td>
<td>Increase</td>
<td>Incorporation of evaluation and assessment</td>
</tr>
<tr>
<td>Assessment</td>
<td>Include</td>
<td>Program model that evolves to be more sustainable over time, fit current user needs and organizational structure</td>
</tr>
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</table>
**Conclusion**

Data collected from the focus groups, stakeholder interviews, and interviews with urban fishing program managers from other states all suggest that the Des Moines Urban Fishing Program initiative is in an important place as it begins to define its direction. All the urban fishing program managers from other states expressed that they had either consulted with other states’ programs when revising or beginning their state’s program or wished that they had the time to do so. Increasing communication and developing a plan for the program will encourage collaboration among stakeholders.
Appendices

Appendix I: Neighborhood Connections

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Neighborhood Connections</th>
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<td>Site</td>
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<td>Greenwood</td>
<td>Ingersoll Park</td>
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<tr>
<td>Greenwood</td>
<td>Salisbury Oaks</td>
</tr>
<tr>
<td>Greenwood</td>
<td>Linden heights</td>
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<tr>
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<td>Ingersoll Park</td>
</tr>
<tr>
<td>Greenwood</td>
<td>Waterbury*</td>
</tr>
<tr>
<td>Greenwood</td>
<td>Westwood*</td>
</tr>
<tr>
<td>Greenwood</td>
<td>North of Grand*</td>
</tr>
<tr>
<td>Greenwood</td>
<td>Greenwood</td>
</tr>
<tr>
<td>Mac Rae</td>
<td>Indianola Hills*</td>
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<td>Mac Rae</td>
<td>McKinley School/Columbus Park</td>
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<td>Magnolia Park</td>
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<td>Grey’s Lake*</td>
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<tr>
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<td>Walrous South</td>
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<tr>
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<td>Southwestern Hills</td>
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<td>Lower Beaver</td>
</tr>
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<td>Beaverdale</td>
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<td>Drake</td>
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<td>Waveland Park</td>
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<td>Wilmer</td>
<td>DMACC Urban Campus</td>
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<td>Scafo High School*</td>
</tr>
<tr>
<td>Community Group</td>
<td>Description</td>
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<td>--------------------------</td>
<td>-----------------------------------------------------------------------------</td>
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<td>Greenwood</td>
<td>Founders Garden Club from Des Moines Parks and Recreation, Art Center, Parks Board, neighborhood representatives, and others</td>
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<tr>
<td>Tai Dam Pond</td>
<td>Tai Dam Village Community 2 attended; very supportive of creating resource in collaboration with City, IDNR, Lower Beaver Neighborhood</td>
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<tr>
<td>Character Counts*</td>
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<td>Friends of Parks</td>
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<td>Urban Dreams</td>
<td>2 attended</td>
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<tr>
<td>Sierra Club of Central Iowa</td>
<td>Could not attend focus group</td>
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<tr>
<td>Salvation Army</td>
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<tr>
<td>Raccoon River Watershed Association</td>
<td>1 attended</td>
</tr>
<tr>
<td>Izak Walton League*</td>
<td>1 attended; 1 had scheduling conflict</td>
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</table>
Des Moines
Urban Fishing Program Initiative

**Inputs**
- Iowa Department of Natural Resources (IDNR) Staff
- City of Des Moines staff
- Iowa State University Faculty & Staff
- Funding from Iowa Department of Natural Resources
- Funding Match from City of Des Moines

**Activities**
- IDNR and City meetings
- Data collection and assessment of potential sites
- Presentations to stakeholders
- Focus groups & stakeholder interviews
- City staff, community, ISU, IDNR, local businesses

**Outputs**
- Des Moines Parks and Rec, IDNR staff
- IDNR, ISU, City of Des Moines
- City staff, community, ISU, IDNR, local businesses
- Learn City and resident needs & existing resources through knowledge exchange

**Outcomes**
- Project collaboration, understanding of organizational processes
- Prioritize and plan site development
- Begin watershed improvements at potential sites
- Engage local stakeholders in program development and ownership

**Short**
- Integration of program within City and community programming
- Expand site development within Des Moines
- Learn City and resident needs & existing resources through knowledge exchange

**Medium**
- Increased angling opportunities
- Increased educational and membership opportunities
- Increased awareness of watershed and ecosystem health
- Greater partnership among City, IDNR, and community residents
- Increased watershed health, water quality, and ecosystem awareness

**Long**
- External Factors: The availability of continued funding for succeeding years depends upon external factors.

**Assumptions**
Based upon the 2008 Des Moines resident park use survey; it is assumed that Des Moines residents will welcome a fishing program.

**Evaluation**
Ongoing through IDNR and City of DSM meetings
Sources


ACKNOWLEDGEMENTS

Thank you to all of the city, state, and county agency staff and residents of Des Moines who shared their time and experiences through interviews and focus groups. Thank you Barb, Ben, and Steve for your patience and understanding with all of my questions and encouraging me throughout the case study. I am honored to have Rebecca and Lois as mentors. Thank you both for your guidance throughout the thesis research and all else. As always, thank you to my family and friends whose inspiration and love encourage me every day. Thank you to the Iowa Department of Natural Resources for their funding of this project.
BIOGRAPHICAL SKETCH

Angie Carter is a fifth-generation Iowan and the fourth generation in her family to graduate from Iowa State University. She earned a BA in English and French Literature from the University of Iowa in 2001 and an MFA in creative writing from the University of Arizona in 2004. She plans to earn her MS from Iowa State University in 2012 and plans to continue her doctoral studies at Iowa State pursuing a PhD in rural sociology and sustainable agriculture. Her research interests include water quality, landowners’ engagement in conservation programs, food systems, agency evaluation and assessment, and social justice.