

DISSERTATION

A CASE STUDY OF SOCIAL CAPITAL AND COLLABORATION AS A  
COMMUNICATION PROCESS IN AN URBAN COMMUNITY-BASED  
ECOLOGICAL RESTORATION PROJECT

Submitted by

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WE HEREBY RECOMMEND THAT THE DISSERTATION PREPARED  
UNDER OUR SUPERVISION BY CARA MARIE DIENNO ENTITLED A CASE  
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DEGREE OF DOCTOR OF PHILOSOPHY.

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ABSTRACT OF DISSERTATION

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COMMUNICATION PROCESS IN AN URBAN COMMUNITY-BASED  
ECOLOGICAL RESTORATION PROJECT

This case study examines the role of social capital and collaboration as a communicative process in an urban, nonprofit organization. The organization, the Partners for Native Plants (PNP) group, was a grant-funded project of a western U.S. nonprofit botanical organization designed to involve urbanites in riparian plant restoration projects. The PNP project was examined to (a) determine whether engagement in the social capital cycle could lead to an environmental ethic among urban participants and (b) test a combined collaboration framework, based on the Bona Fide Group Collaboration Model (Walker, Craig, & Stohl, 1998) and the Structural Model of Collaboration developed by Keyton, Ford, and Smith (2008), in a new context as PNP differs from traditional collaborating groups.

Data were collected over a yearlong period through a review of organizational documents, in-depth interviews, a focus group, and open-ended questionnaires. Results demonstrate how social capital can be conceptualized as a cycle including (a) engagement, (b) social networks, (c) collective action, and (d) individual and social benefits. I found two impediments to enhancing an environmental ethic among PNP

participants. First, Volunteer Leaders and Volunteer Participants had markedly different experiences while engaged with PNP, resulting in varying levels of satisfaction. In addition, participants' environmental ethic was not significantly enhanced by the project because participants already held strong pro-environmental values at the inception of the project, which motivated them to participate initially. The advocacy behaviors of PNP participants did increase, however. These results suggest that when participants in ecological restoration projects are willing to share their knowledge and enthusiasm with others in their communities, there may be potential for building an urban environmental ethic. Findings also suggest that a combined model of collaboration, based on the Bona Fide Group Collaboration Model and the Structural Model of Collaboration, is well suited to make sense of small community-based conservation projects. An understanding of the collaborative process through both the structural components and the communicative components including environmental exigency, collaborative partners, relational boundaries, negotiated temporary systems, and goals and outcomes yield best practice suggestions for organizations such as PNP.

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## CHAPTER 1 - INTRODUCTION

In speaking of community, then, we are speaking of a complex connection not only among human beings or between humans and their homeland but also between human economy and nature, between forest or prairie and field or orchard, and between troublesome creatures and pleasant ones. *All* neighbors are included.

-Wendell Berry (1993)

My personal experiences in the environmental movement and my interests in the nonprofit sector brought about this doctoral project. I believe conservation discussions have largely ignored the urban environment. This belief brought about a review of the literature and to a large extent, my beliefs were confirmed. This led me to conclude we need more research to understand how nonprofit organizations may be successful in their communication efforts, specifically those involving individuals in environmental initiatives in urban areas.

Because this study focused on a bona fide project (rather than a laboratory created one), the Partners for Native Plants (PNP), I selected the naturalistic paradigm to guide the research methodology (a further discussion of this framework can be found in

Chapter 3). The Partners for Native Plants is a single case study within a larger western U.S. nonprofit botanical organization. PNP will be explained in further detail in the methodology chapter. This chapter will cover the need, purpose, and relevance of the study. The research question and associated propositions will also be presented along with the framework guiding the research.

The second chapter is a summary of the literature reviewed. Chapter 3 outlines the research methodologies used in this case study. Chapters 4 and 5 present the results of research question 1 and 2 and their related propositions respectively. Finally, Chapter 6 presents a discussion of the findings and concluding thoughts.

### Need for This Study

It is not the nonprofit or government's job alone to tackle environmental problems; the citizenry is also responsible for taking action (Prakash, 2003). Though some may see people as a challenge to conservation, they are always at the root of the solution as well (McCormack, 2005). A goal of many conservation organizations is to establish a committed volunteer base, but without first ensuring we understand the local community, nonprofit communication will not be successful. In her study of third world grassroots environmental organizations, Gardner (1995) found that organizations do not spend enough time and effort understanding the culture and politics of place before reaching out to community members.

A main goal for many nonprofit organizations is to mobilize their community to create change. These organizations have the ability to actively engage communities and to influence local governments to take action (Richards & Heard, 2005). Natural resource based nonprofit organizations can encourage community participation in environmental

issues with the possibility of enhancing natural resource stewardship behavior. A civic environmentalism would not only include caring for ecosystems, but also build better human communities (Light, 2003).

The nonprofit sector has long encouraged environmental engagement, yet very little research has been conducted to study the success of their communication efforts aimed at involving people in local ecological collaborative initiatives. My study is especially important in light of the prevalence of collaborative forms of conservation. The nonprofit sector in the United States grew 68% between 1993 and 2003 and is represented by almost 1.4 million 501(c) organizations; an average of 5-6% growth per year (National Council of Nonprofit Associations, 2003). Of these organizations, 4% can be categorized as focusing on environmental or animal issues (National Council of Nonprofit Associations, 2003).

Increasingly, civic involvement in environmental issues is being recognized as an important aspect in the planning process (Buchan, 2003). This process is often approached collaboratively. Because it is difficult to maintain active participation in processes that are abstract (Selman, 2001), a distinct restoration project was selected for this study. Though efforts of the environmental movement have principally focused on rural areas or developing nations, the vast majority of environmental impact comes from developed urban centers due to their concentration of the world's population. The sustainability or capacity of the world's ecosystems to endure may require developing urban areas to be more ecologically conscious. It may also hinge on how developed urban centers use their resources. This is not to say that green environmental concerns typified by issues such as wildlife and birds are not important, but only that a complete



environmental movement should include urban issues, those that are considered brown, as well.

Meaningful contact with nature can occur in cities and influence one's ecological stewardship (Kellert, 1996). Without a closer look at how individuals develop a sense of stewardship in urban areas and the role nonprofit organizations may play in this process, we may be risking the environmental future of these communities. The process of becoming a steward, which includes heightened awareness, support, and finally active participation in environmental issues, is difficult to quantify (Selman, 2001). Therefore, a qualitative study may be more useful in revealing the factors involved in influencing the success of nonprofit community outreach efforts. I undertook this study to examine the urban community-based project, the Partners for Native Plants (PNP). Through the lens of participant-observer, I looked at group relationships by examining the social capital cycle within PNP as well as the development of the collaborative as a communication process.

### *Urbanization*

The ultimate fate of our environment lies in the hands of urban populations as a simple function of their size and concentration of the world's peoples. Flavin (2007) states:

It is particularly ironic that the battle to save the world's remaining healthy ecosystems will be won or lost not in the tropical forests or coral reefs that are threatened but on the streets of the most unnatural landscapes on the planet. (p. xxiv)

Urban areas continue to grow and without a closer look at how urbanites form an environmental ethic, we may be neglecting a significant percentage of the world in regard to encouraging environmental stewardship. Over half of the world's population lives in urban areas and are the chief consumers of resources and generators of waste (Leitman, 1999). This is an enormous growth in urbanization given that less than 10% of the world was urban at the turn of the twentieth century (Leitmann, 1999). It is predicted that over 60% of the world will reside in urban areas by 2030 (Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, 2006). Approximately 75% of those currently living in the Americas and Europe live in an urban area (Tibaijuka, 2007).

The concentrated impact of urban areas is evident in cities worldwide. We recognize cities as important engines of growth and providers of services on a large scale; however most cities are not environmentally sustainable (Tibaijuka, 2007). Cities themselves, however, may not be the root of the problem but part of the solution if we can reconnect residents with nature (Lerner, 2007). In order to reverse the unsustainable nature of the urban environment, it is important that city dwellers from all parts of society be exposed to environmental awareness campaigns that ultimately translate into action. Some of the worst environmental pollution most significantly affects those living in urban environments.

Though the environmental movement has been active for more than 50 years, most of the focus has been on the so-called green agenda, which involves such things as natural resources, wilderness, and endangered species (Leitman, 1999). Many of these issues are often global or transnational and rural in nature, such as global climate change,

loss of biodiversity, and ozone depletion. As a contrast, most critical urban problems fall into the brown agenda, those concerning environmental health, industrialization, and the unjust distribution of environmental risk (Leitman, 1999; Schlosberg, 1999). Cities are tied to nature through various markets such as food, fuel, and other materials. These typically originate outside the city itself however. When discussing ecological issues in the urban environment, we are not referring to a reliance on resources for livelihoods as is the case in rural areas, but rather an improvement in public health and well being, lowered environmental impact, increased recycling of materials and continued energy efficiency (Lee, 2007). There is a growing recognition that healthy ecosystems provide services to the human population and this reliance on nature can be disrupted by patterns of irresponsibility (Lee, 2007). Growing urban populations entail development, which tends to degrade natural environments. Local waterways and their associated surroundings often serve as avenues for pollution in urban areas and disturbed sites can encourage the spread of invasive plant species.

In order to fully understand an urbanite's beliefs about the environment, it is important to understand his or her identity through their relationship with other individuals and their city. As Lerner (2007) points out, rivers and other natural features can be highlighted as a community asset. Such assets can help build relationships between community members and their environment. Establishing these as valuable community treasures rather than altering their natural state and hiding them from view may help citizens to form a relationship with their geographic communities.

Dowie (1996) notes that to many "environmentalism means wildlife protection and wilderness conservation, while the environmental movement is identified with the

Sierra Club and similar organizations” (p. 6). Urban areas are often ignored in the discussion of environmental issues. In addition to this lack of attention, there is also a paucity of information collected in urbanized areas (Lee, 2007). This study addresses this gap in the literature by focusing on an urban community-based project, more specifically, urban plant restoration along waterways in the western United States.

### *Ecological Restoration*

What would it take to make people consider “all of the city as an environment worth respecting?” (Light, 2003, p. 44). What urban environmental issue could help create the relationships necessary to produce an urban environmental ethic? Encouraging public participation in environmental projects may help develop ecological citizenship. Providing space for individuals to commune with nature inside the city without moving out into the wild landscape may provide the opportunity to instill an environmental ethic among urbanites. This becomes important for reasons associated with the health of the environment, but also for the health of the urban residents. Urban environments that have been neglected have been linked to human disorders including a sense of social isolation, depression, and other health problems (Semenza, March & Bontempo, 2006). Many studies have demonstrated the benefits of urban green space, including longevity in urban seniors living near open space (Takano, Nakamura, & Watanabe, 2002), increased levels of physical fitness and thus well-being (Pretty, et al., 2005), ecosystem services such as the abatement of air pollution by trees (Jim & Chen, 2008), and an overall association with general health inside cities (Maas, Verheji, Groenewegen, de Vries, & Speeuwenberg, 2006).

The environmental issue of focus for this study was ecological restoration, specifically plant restoration in riparian corridors. Light (2001) points to ecological restoration as an issue that has the potential for developing an urban ecological citizenship through the involvement of the public in the participation of natural processes. Eden, Tunstall, and Tapsell (2000) demonstrate how restoration can be seen as a nature-culture relationship, “an intertwining of social, scientific, technological, and natural actors” (p. 257) in their study of the River Cole in southern England. This relationship with urban natural areas may be necessary to encourage the protection of nature rather than the trade-offs of these environments for short-term monetary gains from development and other associated activities (Light, 2001). Restoration of ecosystems involves the “practice and science of restoring damaged ecosystems, most typically ecosystems which have been damaged by anthropogenic causes” (Light, 2001, p. 21). In this sense, ecological restoration can include restoring vital natural areas, which are also important in the creation of human/nature bonds, such as urban parks, urban wetlands, or reclaiming natural river processes. These areas sustain the ecological fabric in cities by allowing plants and wildlife to continue their natural ecological functions such as migration and seed dispersal, in addition to providing flood control, clean air and water, and recreation opportunities (Lee, 2007).

Ecological restoration is defined as “the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed” (Society for Ecological Restoration, 2004, p. 3). Schroeder (1996) expands this traditional view of restoration and suggests that it include a reciprocal relationship that also restores the human bond to nature. Restoration provides individuals with an opportunity to forge meaningful

relationships not only with nature, but also each other. These relationships can be healing for both the environment and the human community (Eden et al., 2000).

Many believe that the separation of human and environmental problems has exacerbated both. The division between nature and culture has been further widened by the separation of natural and social sciences (Eden et al., 2000). Restoration has the ability to cross disciplines and include not only the scientific and ecological components, but also the social, cultural, and historical aspects. Scientific knowledge alone is insufficient to ensure the human commitment necessary to maintain a restoration project and make restoration a priority (Geist & Galatowitsch, 1999).

Restoration of degraded ecosystems is considered a conservation strategy (Geist & Galatowitsch, 1999), which has completely different advantages over preservation alone. Conservation can actively engage citizens. Projects that are not produced by volunteers do not necessarily aid in the creation of a community committed to the protection of their local environment (Light, 2001). Daniels and Walker (2001) have noted that little learning can occur without involving the cognitive, affective, and psychomotor domains. The cognitive domain has been the focus of a majority of environmental issues, but both the affective, feeling, and psychomotor, direct involvement, domains are important to consider. It is often the latter that is forgotten and the task becomes that of motivating people to get outside and recognize the benefits in doing so. Involving communities in ecological restoration has potential to not only restore nature, but also to restore the human cultural relationship with nature (Light, 2001).

Ecological restoration may provide for enhanced relationships between individuals and the natural environment, either through direct participation in a project or the indirect effects of a restoration experience occurring in an individual's community (Geist & Galatowitsch, 1999). Restoration is often measured in terms of improved ecosystem function or yields of harvestable products, but has often overlooked the benefits that accrue to society. The welfare of a community can be enhanced through the additional values restoration provides including community pride, aesthetics, and a sense of stewardship (Holl & Howarth, 2000).

River restoration was specifically chosen for this study because of its relevance in the U.S. West where water shortages are becoming increasingly common. Bernhardt et al. (2005) notes that rivers and streams are important for "fresh water, food, and recreation" (p. 636). Degradation of U.S. waterways is at an all time high with one third being classified as impaired or polluted (Bernhardt et al., 2005; Palmer & Allan, 2006). The number of river restorations has increased exponentially in the last decade. Palmer and Allan (2006) point to poor land stewardship as the primary cause for degraded waterways, including rapid changes in land use such as urbanization.

Ecological restoration has been undertaken by a variety of entities including the nonprofit sector (Holl & Howarth, 2000). Nonprofits may be expending unnecessary energy when they could be sharing best practices for involving community members in a collaborative effort that affects local conservation measures.

### Purpose Statement

Based on the research need described in the previous sections, the involvement of urban communities in riparian plant restoration projects in western U.S. natural areas is

the focus of this study. I was particularly interested in understanding whether participation in these projects could aid in the development of an environmental ethic among urban residents. I used two theories to more clearly understand the PNP project and its goal in mobilizing local action in restoration projects. I used the theory of social capital to examine social processes, and the Bona Fide Group Collaboration Model to examine the communication processes.

Landman (2004) has defined social capital as “the presence of effective human networks and social cohesion, which are manifested in effective institutions and processes where people can cooperate for mutual advantage” (p. 38). Buchan (2003) has distilled social capital down to the glue made up of community norms, values, and networks that bring people together to work toward a common cause. Without this glue, human alienation and environmental degradation occur. Thus, social capital refers to *relationships* between people and not just people themselves. Individuals may identify with several communities at any point in their lives that may affect these relationships. Community-based restoration projects may be one way to build these relationships which may encourage participation in such activities.

When representatives from various organizations come together to work toward the solution of a common problem, a collaborative group is formed (Keyton & Stallworth, 2002). Because PNP is an organization made of many partners from different organizations, I examined the collaborative processes of the project as constructed through communication. Recently, communication scholars have examined previous collaboration models. Most models, developed to elucidate the collaborative process, describe communication as a component of collaboration. Communication scholars argue



that communication is the constitutive element of collaboration and not just a single component. I examined PNP through a combined model blending two communicative collaboration frameworks, the Structural Model of Collaboration (Keyton, Ford & Smith, 2008) and the Bona Fide Group Collaboration Model developed by Walker, Craig, and Stohl (1998). Communication creates, moves and shapes the collaborative process. Systems of meaning formed through conversation and other acts of communication create the social system within which collaborations function. Examining communication as the essence of collaboration allows me to view the process as holistic, emergent, and changing over time (Walker & Stohl, 2004).

The purpose of this case study is:

*. . . to describe the roles of social capital and communication processes in shaping successful community outreach efforts in a collaborative group initiated by an urban nonprofit organization in the western United States.*

I drew from the following bodies of literature in developing this study:

1. Urbanization as it applies to environmental issues.
2. The cyclical nature of social capital, specifically:
  - a. Environmental engagement including ethics, stewardship/citizenship, and volunteerism,
  - b. Sense of belonging through community and culture,
  - c. Collective action leading to
  - d. Individual and societal benefits.
3. Small group communication from
  - a. The bona fide group perspective and

b. Based in the Bona Fide Group Collaboration Model and Structural Model of Collaboration.

Framework

The framework in Figure 1 captures the components of this study that were examined in the PNP project. Each of these overlapping models, social capital and collaboration, will be described in further detail in the proceeding chapters. I will then return to their shared components in Chapter 3.

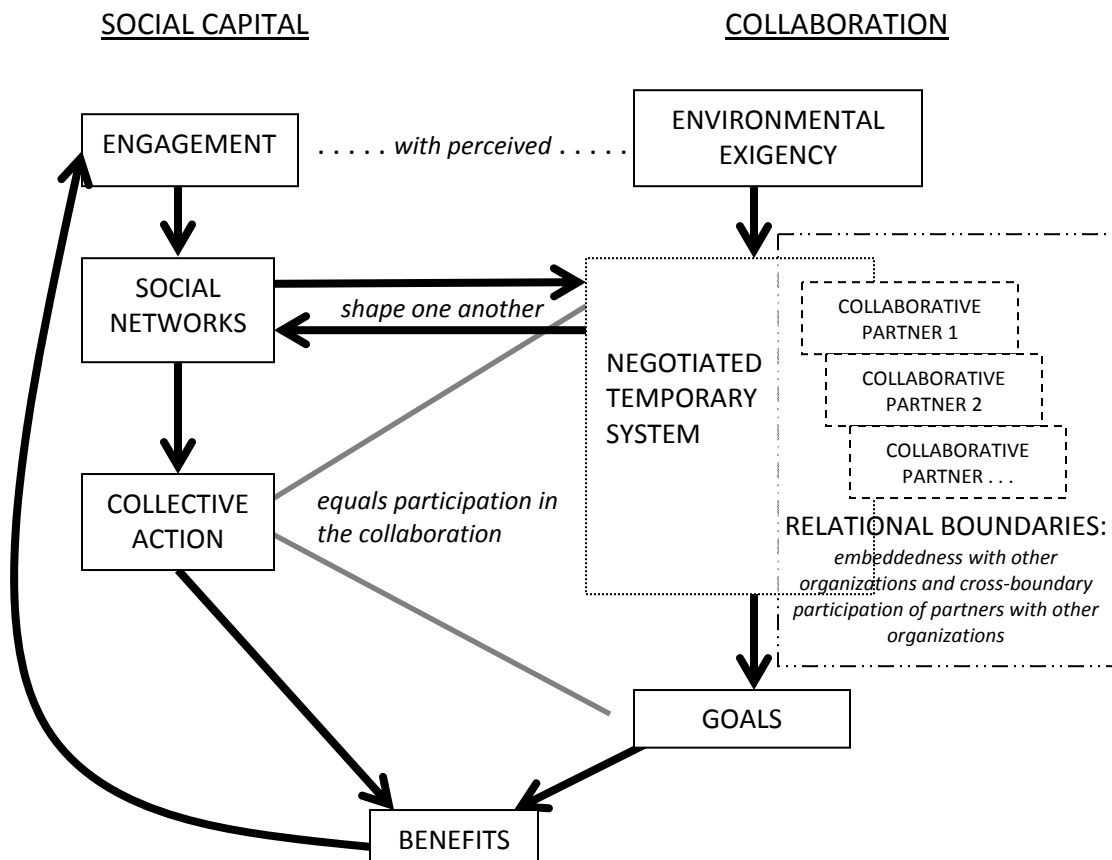


Figure 1. Framework showing the links between social capital and collaboration that provided the model for this study.

## Research Questions & Propositions

Based on the review of relevant theory in the next section, the following outlines the research questions guiding the project. Propositions, which represent statements about the relationship between concepts (Maxfield & Babbie, 2001) and can either be right or wrong regarding their statement of fact (Taylor & Bogdan, 1998), are also presented for each research question.

*The overarching question guiding this research was:* Can PNP contribute to building an environmental ethic among urban residents? As stated previously, to examine this question, I approached it from two distinct theoretical backgrounds: social capital and collaboration as a communicative process. I did this to enlighten both the social and communicative processes, which are inextricably linked. I also hoped for a richer understanding of the research question. This led to two research questions, sets of objectives, and associated propositions.

RQ1: If participants engage fully in the social capital process occurring through PNP can the societal benefit of an enhanced environmental ethic among urban residents be built?

The objectives related to research question one are to (a) describe how the components of the social capital cycle manifest in the PNP project and (b) investigate whether participants engage fully in the social capital processes occurring through PNP and determine whether this full engagement results in the societal benefit of an enhanced environmental ethic.

Based on the literature, I pose four propositions about the cycle of social capital within PNP:

PROPOSITION 1.1: Engagement with the PNP project will lead to increases in social networks, described as social relationships, trust and reciprocity, developed among PNP participants.

PROPOSITION 1.2: Enhanced levels of social networks within PNP will lead to participant beliefs that their collective efforts are worthwhile and successful.

PROPOSITION 1.3: Belief in effective collective action taken through PNP will lead to individual and societal benefits including enhanced environmental ethic in participants.

PROPOSITION 1.4: Benefits experienced will lead to continued engagement with the PNP project.

RQ2: Does membership in the collaborative PNP group, constructed through communication processes, lead to innovative outcomes including an enhanced environmental ethic in urban residents?

The objectives of research question two are to (a) determine whether the Structural Model of Collaboration and the Bona Fide Group Collaboration Model can be applied to PNP and, if so, describe how the components manifest in the PNP project, and (b) determine whether the communication patterns within PNP, viewed through the

components of these models, lead to success of the collaborative effort including an enhanced environmental ethic among participants.

Based on the literature, I pose five propositions about communication and collaboration within PNP:

PROPOSITION 2.1: PNP participants will articulate a shared impetus for joining.

PROPOSITION 2.2: Participant experiences, previous or current, in similar organizations will shape their expectations of PNP and interactions with others in PNP.

PROPOSITION 2.3: A strong leadership and communication structure will be present in PNP if participant investment is high.

PROPOSITION 2.4: PNP participants will be more successful in negotiating group identity and decision making and knowledge management processes if a strong structure is in place.

PROPOSITION 2.5: If group negotiations are satisfactory, the outcomes of PNP will be innovative and participants will consider their efforts successful.

### Relevance

As stated previously, the urban environment has largely been ignored in discussions of environmentalism and conservation, though the number and proportion of urban residents continues to rise. The goal of this project was to better understand how individuals become involved with collaborative environmental initiatives in their

communities and how issues of community and communication influence this involvement. Two processes are examined in this study for their potential in influencing such a stewardship: (a) relationship building through social capital and (b) communicative processes of a multi-organization collaboration.

Ultimately this information may be useful for nonprofit organizations in understanding how to communicate successfully with urban audiences and how to engage these people in hands-on environmental issues with the potential of influencing environmental stewardship. The results of this study are being presented not only in standard academic format, but also in a project report that may be used as a practical tool to help shape future efforts of the PNP project.

## CHAPTER 2 – THEORETICAL FRAMEWORK

This research weaves together theories from several disciplines. Contemporary social problems, including environmental problems, are complex and require the ability to harness and integrate various forms of expertise (Woolcock, 2004). We need a multi-theoretical and multidisciplinary lens to best understand these complex problems. This research merges concepts in urbanization, civic engagement, social capital, community group and cultural influences, environmental stewardship, communication and outreach efforts, and ecological restoration of riparian corridors. All of these are examined in the context of an urban nonprofit organization in the U.S. West and its community-based collaborative restoration initiative, Partners for Native Plants. This amalgamation is unique because it sheds a new perspective on nonprofit communication efforts aimed at encouraging environmental stewardship in an urban area.

Two frameworks were applied to elucidate the processes occurring within the PNP project: (a) relationship building through the cycle of social capital and (b) communicative processes of a multi-organization collaboration. This chapter will provide a literature review for both the social capital and collaboration theories used. In addition, the research questions and propositions will be presented again to place them in context.

### The Cycle of Social Capital

In this project I examined social capital as a process where the cycle consists of the components, adapted from Rohe (2004), engagement, social networks, collective

action, and individual and social benefits. Figure 2 shows the relationship of the components of the social capital cycle which are described in the literature review that follows. This framework does not equate social capital as analogous to social networks, but rather views social capital as a process that ends in benefits. This view of social capital relies on the belief that building relationships and networks among individuals is not social capital if no action is taken and no benefits are accrued.



*Figure 2.* The cyclical nature of social capital. Adapted from Rohe (2004).

A broad overview of social capital follows including the ways in which it has been defined as well as the theory's contested meanings. I will then address each of the components of the social capital cycle individually. Finally, I will return to the propositions listed in Chapter 1 to place them in context.



What would it take to create the commitment needed to foster relationships between humans and the natural environment (Geist & Galatowitsch, 1999)? Specifically what would it take when modern communities typically separate themselves from the natural environment, especially urban communities? Social capital is defined as “the presence of effective human networks and social cohesion, which are manifested in effective institutions and processes where people can cooperate for mutual advantage” (Landman, 2004, p. 38). Social capital may aid in the development of the necessary relationships to bring communities together to work toward a common cause and begin the process of building an urban environmental ethic.

As Leitmann (1999) points out, cities have certain advantages over rural areas in terms of creating an environmental ethic. These advantages include larger stocks of the multiple forms of capital. Bourdieu (1986) examines three of these including: (a) financial or economic capital, which can be found in people’s bank accounts as money, (b) cultural capital, high levels of cultural knowledge that can lead to advantages for individuals or groups, and (c) social capital, described as social connections or linkages. The latter two forms are seen as convertible in certain circumstances to economic capital. Additional forms of capital that can accrue to the benefit of individuals include physical and human capital. Physical capital refers to the goods or infrastructure that benefits individuals or society, while human capital refers to intellectual and scientific knowledge. These various types of capital can yield a store of value that can later facilitate action (Light, 2004). These capital advantages in cities may assist in the move toward sustainability.

### *The Contested Meanings of Social Capital*

The study of social capital has been on the rise for at least the last decade and has been contested since its inception (Fulkerson & Thompson, 2008). Some of the earliest references to ‘social capital’ have been credited, though somewhat infrequently, to Hanifan (1916) and Loury (1977). Bourdieu’s (1986) theorizing of the multiple forms of capital has received more widespread attention, though social capital was not the focus of his work but one small part (Fulkerson & Thompson, 2008). Bourdieu’s conception of social capital looks at the micro level, where networks and ties benefit individuals. The work of Putnam (1993, 2000) and Coleman (1988) take social capital research in another direction. Putnam and Coleman take a look at the aggregate influence of social capital on a macro level, benefiting communities and societies. Social capital can therefore be seen as an individual good on the micro level and as a collective good on the macro level.

Putnam’s application of social capital is credited with bringing the concept into the mainstream. Putnam’s work has also been criticized by many [see Koniordos (2008) for a summary] including the cyclical nature of Putnam’s claims, the skewing of the meaning of capital, the inherent flaws in his indices of social capital and the omniscient abilities of social capital extended to macro levels including communities, cities and even countries rather than focusing on individual or small group capacity for such types of social networks. However, some facets of his work still provide a useful context and starting point upon which to build the focus of this study.

Fulkerson & Thompson (2008) have ascribed the messiness associated with social capital to its development in different sociological traditions. They have grouped these various articulations of social capital into two broad categories: (a) normative social

capital and (b) resource social capital (explained further in Table 1). Though Koniordos (2008) notes the lack of a shared perception, unitary definition, or empirical operationalization in social capital research, Fulkerson and Thompson have suggested researchers specify with which categorization of social capital they identify themselves in order to help alleviate such messiness. I examined the PNP primarily through the normative social capital lens.

**Table 1**  
*Two Articulations of Social Capital and Their Characteristics*

Sociological Tradition	Normative Social Capitalists	Resource Social Capitalists
	Durkheimian	Interactionist and Conflict
Description	“set of features in a social structure that lead to collective action in order to bring about mutual benefit for some group of people	“An explanation for uneven patterns in the accumulation of power, prestige, and other forms of inequality”
Important Components	Trust, reciprocity, cohesion, solidarity or other aspects that lead to collective action	Investments that individuals make in their networks of relationships with the expectation of a future return
Perspective on capital	The term capital is used broadly and not interpreted strictly in the sense of profitable goods, ability to accrue interest, be spent, or replenished	Different types of capital can be converted interchangeably from one to another
Expected Outcomes	Collective or public good able to tackle social problems	Ability for individuals to secure personal benefits via participation in networks and other social structures
Authors	Hanifan (1916)	Granovetter (1973)
Associated with	Coleman (1988)	Bourdieu (1985)
Category	Putnam(1993, 2000)	

*Note.* From “The Evolution of a Contested Concept: A Meta-Analysis of Social Capital Definitions and Trends (1988-2006),” by G. M. Fulkerson & G. H. Thompson, 2008, *Sociological Inquiry*, 78(4).

Though Lin (2001), Koniordos (2008), Woolcock (1998) and others argue that social capital, especially in its normative form, may be of little utility, others including Fulkerson and Thompson (2008), Castle (2002) and Wittgenstein (2001) believe that the usefulness of any concept is in its application, which defines and redefines what it is, is not, or may be. My study applies social capital to the growing arena of community-based

conservation and may add to the redevelopment of the term. Fulkerson & Thompson (2008) further argue, “current debates [over social capital] serve a positive function in terms of illuminating divergent interpretations, and that such scrutiny is an important part of the process of paradigm formation” (p. 538). For these reasons I hope that this study adds to the discussion of social capital and in particular its utility in an environmental and conservation context.

For a more comprehensive review of the history of social capital in its various forms and criticism associated with these forms see Fulkerson & Thompson (2008) and Koniordos (2008).

### *Social Capital Defined*

Non-governmental organizations and their associated activities can be seen as one outlet for civic engagement and thus social capital. In the past decade there has been a growing recognition that local organizations are promoting environmental sustainability (Pretty & Ward, 2001). The abundance of local organizations and nonprofit groups in urban centers can help build social capital and create the relationships necessary to gain community support in resolving urban environmental issues. Landman (2004) has noted that it is the “small minority that creates a tipping point one way or the other” (p. 44) to provide the leadership and energy to bring about a transformation. North (1990) believes the ability for communities to come together and work in their best interest is directly related to the formal institution under which they work.

Social capital can be seen as an individual good and as a collective good. As an individual good, social capital can help individuals by providing social networks that enhance our ability to get ahead (Briggs, 2004). This informal organization of social

relationships categorizes our everyday experiences. Social capital as a collective good helps societies to solve problems on a larger scale and more holistically, including managing environmental commons (Briggs, 2004). At the level of a collective good, social capital may benefit many members including those who do not actively participate.

Selman (2001) refers to the use of social capital in environmental objectives as social eco-capital and recognizes that many projects draw on existing reserves of such capital while others seek to expand it during collaborative exercises. Understanding this potential cyclical process could be helpful to those hoping to recruit and sustain volunteers for specific projects.

Social capital can be a private good, but also a public good by benefiting nonparticipants as well as the individual making the investment (Putnam, 2000). Woolcock & Narayan (2000) believe that the basic tenets of social capital, that a person's family, friends and associates can be leveraged for material gain, called on in a crisis or enjoyed for its own sake also hold true for groups. In terms of environmental stewardship, restoration work often benefits entire communities rather than a select group of individuals and can thus be considered a public good. Social capital has been considered an asset in a number of studies, with topics ranging from education to economics and the environment (Grafton & Knowles, 2004). Recently, Landman (2004) looked at the potential for social capital to inform sustainable development and to aid in the resolution of the modern tragedy of the commons.

Though social capital may be helpful in engaging citizens in their communities, Putnam (2000) has outlined the decline of social capital in the US over the last third of the twentieth century. Selman (2001) attributes the lack of civic participation to “a

stressed, over-committed, atomized and morally privatized society” (p. 14) and points to diminished opportunities to devote time to voluntary activities.

One of the main challenges for social capital is encouraging cooperation among different community groups to form networks that work collaboratively toward mutual benefits (Landman, 2004). Putnam (2000) refers to this type of social capital where relationships are built *between* groups as bridging whereas bonding social capital occurs *within* groups (others have also referred to these types of social capital as horizontal and vertical). Bonding social capital tends to be intense and close-knit whereas bridging social capital is more extensive and diffuse (Woolcock & Narayan, 2000). Many recognize that ties within a community (bonding social capital) give its residents a sense of identity and common purpose (Woolcock & Narayan, 2000). Bonding social capital occurs between people who are alike in some way and is important for day-to-day life (Putnam, 2004). Bonding social capital does not include the full breadth of possibilities to solve a problem. Alone, bonding social capital is often not sufficient to tackle larger community issues. Bonding social capital that is not coupled with bridging social capital can lead to the pursuit of interests that benefit a few rather than the whole.

Bridging social capital connects groups who are dissimilar from one another but share a common interest, goal, or are linked to the same issue. Bridging social capital often leads to the formation of relationships across social divides including those based on religion, socio-economic status, ethnicity, gender, or other traits (Woolcock & Narayan, 2000). Bridging social capital is therefore often more difficult to shape and build, but no less important to achieve. Bridging social capital can help individuals get ahead and is particularly crucial in diverse societies (Putnam, 2004).

Combinations of these two forms of social capital can provide a variety of outcomes and contribute to unprecedented levels of cooperation and dialogue, which can lead to a sense of community. This can manifest in a variety of forms but can be compounded by the fact that individuals can identify with various communities throughout their lives in addition to associating with several communities at any one point in time.

Lemmel (2001) notes that trust-based relationships are key to the formation of social capital among group members working toward civic renewal. In addition to trust, ideas about reciprocity or returning acts of good will toward one another can be important in the development of cohesive relationships and communities. Reciprocity assumes a system of revolving aid whereby obligations are paid back by aiding another in the community at another point in time. Community members give knowing that somehow within the context of the group they will receive in return (Hutchinson, 2004). This form of reciprocity can be characterized as general versus more specific forms of reciprocity that might not aid in the formation of social capital (the idea that “I’ll do this for you if you do this for me”). Generalized reciprocity may be unbalanced at any single point in time within a community, yet it has the ability to yield successful collective action because opportunism can more easily be restrained (Bridger & Luloff, 2001).

In this project, the focus on social capital was examined through the Partners for Native Plants’ ability to connect community members in meaningful ways, through hands-on experience doing river restoration rather than just looking at sheer member numbers. Putnam (2000) warns that though there has been a proliferation of new organizations, many of these members’ only activity is writing a check and obtaining a

card declaring membership. True social capital is built through an organization's ability to bring people together. By encouraging trust based relationships with others in ones community, social capital may have the ability to create environmental citizens, an important arena for both researchers and practitioners to understand.

### *Environmental Engagement*

Citizens can be engaged with their local environments in a variety of ways through both their beliefs and actions. Tilly (1973) suggests that actions regarding any issue, including the environment, occur most commonly in reaction to a perceived crisis. A variety of disciplines explore the relationship between human behaviors and belief systems that influence our decisions in relation to the environment. The term environmental engagement will be used to capture this variety of perspectives, which includes environmental ethics, stewardship, environmental/ecological citizenship, and volunteerism surrounding environmental issues. Encouraging a connection between urban dwellers and nature is complex. But, because it has less to do with physical infrastructure than it does with social institutions (Lee, 2007), social processes are the focus of this study.

*Environmental Ethics & Environmental Citizenship.* In philosophy literature, urban environmental ethics have been vastly ignored (Light, 2001) in comparison to more rural, wilderness ethics. The urban environment has been seen as that outside of nature and a landscape that has generally been discounted from environmental ethics because of its anthropogenic creation (Light, 2001). There has been an anti-urban bias also found in the larger environmental movement often because of a perceived nature/culture



dichotomy, meaning that many see nature and the environment as the polar opposite of cultural entities like urban centers.

Many philosophers see the complete human experience and a greater environmental consciousness as including an experience in wilderness (see the work of Holmes Rolston, III). But, if a majority of the population were to have this experience, the stability and viability of these places we cherish would be threatened (Light, 2001). Living in a city could therefore be considered a sort of ecological citizenship (Light, 2001). Though cities are seen as a hub of environmental degradation, it is possible to concentrate and limit their impacts. There is a direct trade-off between the ability to preserve ecosystems and the extent to which urban areas are made livable (Light, 2001). Though urban environments have a more concentrated effect owing to their large populations, due to economies of scale, encouraging urban dwelling may help individuals consume less energy than more rural inhabitants (Light, 2001). True environmentalism, according to (de-Shalit, 1996) would be concerned with improving urban life rather than preaching the superiority of rural life. In urban environments, energy savings accrue from effective public transportation and dense housing structures, which equate to shared wall space and thus shared heating (Light, 2003). We must be careful to avoid the notion that those bound to the city by race, class, or circumstance are trapped in a less dignified experience due to their limitations in experiencing wilderness (Light, 2001).

Kellert (1996) and others believe that meaningful contact in nature can occur in cities and influence one's ecological stewardship, but it appears we fail to even scratch the surface of the opportunities that exist in cities to educate individuals about the environment (Light, 2001). Habitats that can provide for the bounty of nature and natural

ecological processes are certainly attainable in urban areas (Lee, 2007). To sustainability of natural environments in cities, we must have a vested interest in our conserving these local environments. Knowledge or education would be a prerequisite in this interest.

The goal of many environmental campaigns is to stimulate active environmental citizenship often through lifestyle changes or collective engagement in a specific activity, and though the results may be modest, they are valuable (Selman, 2001). Engaging people in short-term activities may produce a subtle shift in environmental citizenship, including changes in attitude, political beliefs and consumer behavior (Selman, 2001).

*Environmental Volunteerism.* According to Ryan, Kaplan & Grese (2001) “the environmental movement would not exist without the help of thousands of dedicated volunteers. Both public and private environmental organizations rely on unpaid volunteers to further the cause of protecting and helping the imperiled natural environment” (p. 629). Many nonprofit agencies, often with limited budgets, rely on the work of volunteers to accomplish their missions. A well trained volunteer force can be instrumental for nonprofit organizations in accomplishing goals.

It is the belief of many that promoting community involvement and social activism yield benefits to both volunteers and the community (Clary & Snyder, 2002). Because environmental problems are often complex, understanding the motivations that drive volunteers to get involved initially in projects as well as to stay involved in environmental issues is an important arena for nonprofit communication specialists to understand. By identifying why people are motivated to volunteer, programs can be targeted to those motivations. This may have the potential to involve people who may not have otherwise had any interest in volunteering. This is important because organizations

utilizing volunteers need to provide satisfying experiences that foster a long-term commitment.

Volunteering is often not only a simple altruistic activity, but can also be a means of recovery, of gaining self-worth or skills, or of finding company. Wardell, Lishman, and Whalley (2000) found that these were indeed the rewards people were looking for from the voluntary organizations with which they worked. Volunteerism is a type of planned helping that involves planning, sorting of priorities, and matching of one's personal interests and capabilities with the project (Benson et al., 1980). It is important then to more clearly understand why people volunteer and what keeps them coming back.

The five functions that influence volunteer participation and their meanings as identified by Clary, Snyder, Ridge, Miene, and Haugen (1994) are: (a) knowledge – involving a sense of learning and/or the ability to use and develop new skills or abilities; (b) social adjustive – having the opportunity to participate with friends and do work that is looked at as important by the people who matter to the volunteers; (c) value expressive – having the opportunity to put values into action; (d) ego defensive – using the volunteer opportunity to reduce guilt that one might have for those less fortunate; (e) utilitarian – taking the volunteer experience and using it for personal gain (e.g. career or resume booster).

In their 1999 paper, Clary and Snyder found that when persuasive messages address a specific motivation important to the target audience, participation is more likely. The functional approach to volunteerism as further developed by Clary and Snyder (1999) building off of their 1994 paper considers six different functions that play varying roles in influencing volunteerism based on the individual. These functions are an

individual's (a) values, (b) understanding in the form of a desire to learn or utilize skills, (c) enhancement of an individual psychologically, (d) ability to gain career related experience, (e) ability to strengthen social networks, and the hope of reducing negative feelings such as stress termed the (f) protective function. These general volunteer motivations can be applied to the specific study of volunteerism in regard to environmental issues.

Martinez and McMullin (2004) studied five factors explaining participation in nongovernmental organizations: (a) social networks, (b) competing commitments, (c) lifestyle changes, (d) personal growth, and (e) belief of the efficacy of one's action. For active participants in nonprofit organizations, Martinez and McMullin (2004) found that efficacy and social networks were the strongest predictors. These factors coupled with Clary and Snyder's (1999) motivations provide a clear case for further investigation into the impacts of social relationships in nonprofit volunteer projects, including community-based restoration initiatives. The ability of volunteerism to strengthen social networks has a direct effect on social capital. Volunteerism is a pro-social activity that is often desired and encouraged to create a society that functions smoothly (Clary & Snyder, 1999).

In terms of continued participation in volunteer projects, Martinez and McMullin (2004) found that efficacy of one's actions appeared to be the strongest in determining continued participation, but understanding competing commitments was also an important factor. Communication professionals should therefore be clear in the commitment required of volunteers and help show successes achieved.

Reciprocal relationships marked by collaboration and equity must be attended to in order to build long-term relationships between organizations and volunteers (Clary &

Snyder, 2002). It also follows that long-term commitments will not occur if the experience is trivial, insignificant or fails to make an impact to which it seeks. Clary and Snyder (2002) also pose that long-term commitments are more likely when service is “grounded in a broader, more abstract and value-based framework” (p. 586).

It is probable that volunteers whose motivations are met during their volunteer experience are more likely to continue their participation. Bruyere and Rappe (2007) have noted, specifically with outdoor projects, that helping the environment is an important motivating factor for volunteers and project managers should tailor such projects and take care to explain the environmental significance of them accordingly. Ryan, Kaplan, and Grese (2001) found five main motivational themes for longevity in volunteering. These five factors were learning; helping the environment; social factors; reflection; and project organization. Again, the presence of social networks is important not only in initial motivations in volunteering but also continued helping activities. The structure of the organization also affects how active a member becomes in volunteering (Donald, 1997). Barriers to participation in volunteer activities may include limited financial resources, time, skills and knowledge (Selman, 2001). Volunteers may be able to learn from the environment they serve in, develop an attachment for the area in which they are volunteering and may be more willing to advocate positive environmental beliefs (Ryan et al., 2001).

### *Social Networks*

An important component in the cycle of social capital is the networks one is associated with that encourage group life. Social capital is an invisible form of capital as it is built upon invisible social structures and relationships that form social networks

(Koniordos, 2008). The density of relationships between members in a group or network is often a good indicator of the strength of the bonds among them (Scott, 2000). Bourdieu (1986) sees social capital as the amount and strength of the resources individuals are able to mobilize through their networks. Inherent in this view is the position in society one might hold and the power available to individuals to expend time, at the very least, and possibly other forms of capital, including economic capital, to build their network relations for possible future profit. Not everyone is equal in his or her ability to activate or access social capital.

Communication processes that individuals see as normal are often shaped by the culture and community of which the individual is a part. In other words, the social networks to which individuals belong have an effect on what forms of communication are normal and acceptable. Sense of community and culture are important considerations in understanding the development of social networks.

Culture can be considered a broader concept than community. While many people can share the same cultural affiliation, they may not necessarily perceive each other as part of their community. This is because communities often refer to individuals within some distinct geographic location and personal interaction is needed in order for them to form. So there may be cultures that exist in more than a single country for instance, but these individuals identify with different communities. Some argue that culture is not a choice but community may be depending on the mobility of the individual in question. Communities have a spatial nature to them including size, placement, scale etc. but cultures are more ubiquitous. Cultures have shared norms and values whereas communities may be disparate groups linked through other means. Because of the local

nature of the restoration work done in this study and the interest in social capital (which, at its most basic level is about relationships, which can only exist with interaction) community is the variable used in this study. The two concepts however, do not exist separately (there is of course obvious overlap), both the groups of people and the geographic locations that people identify with shape their interactions with their surrounding environment. The following sections explore the various associations individuals may have.

*Community.* People may associate with many different communities throughout their lifetime. The way people perceive their membership in a community can also vary greatly. What then *is* a community? According to Rothenbuhler (1991), we typically think of community as a geographic location, but it can also be something more abstract such as a process, interaction, feeling, structure or other. In this study, participants were allowed to define and describe community in their own terms.

Interactions with others and supportive social networks are key in helping individuals feel a sense of attachment to a particular community (Rothenbuhler, 1991). This sense of belonging to a community and the consequent relationships formed may affect an individual's participation in community events. Many recognize the importance of social cohesion, civic trust and collective action as essential to the functioning of a democracy (Hutchinson, 2004). These concepts, at their core, are the components of community.

Often times the communities we see ourselves as members of are similar to the cultures we identify with, that is, the relationships we form with others are based on a shared or perceived similar culture. Agrawal and Gibson (2001) believe that three things

need to be taken into consideration when discussing communities: a) the multiple interests and actors, b) how these actors influence decision making, and c) the role of new and old institutions that help to bind communities together. In other words, those involved in community decision making may have various interest in the issue at hand and may make their decisions and related actions based on different rule sets.

Several factors are important to examine when discussing community in relations to environmental issues: (a) a common issue that binds the community, (b) having an impact on or being affected by the issue, (c) the ability to communicate successfully with one another, and (d) an interdependency and sense of inter-relatedness (Bridger and Luloff, 2001). Bridger and Luloff believe that discussions of sustainable societies are too abstract and can be relatively meaningless to the individual, but the idea of community is often much easier to grasp.

When trying to influence or manage a community, the length of time individuals have known each other, their perceptions of future relationships with one another, and their perceptions of shared values will all shape individual actions (Singleton, 2001). These factors may contribute to an individual's choice to become involved in community-based restoration as well as maintaining their involvement. In addition, an understanding of how one's community might shape the meanings associated with particular terms can be important in communicating environmental issues (Morgan, 2003). The primary finding of Morgan's (2003) research was that environmental issues are made sense of according to local systems of communication. An examination of the way both scientists and people in the communities in which they work use words associated with the environment are incredibly important.



Cities often attract settlers and retain residents because of the opportunities to meet and belong to various groups of individuals and to become someone different (Lee, 2007). It is important to recognize that members of a community, especially in regard to environmental issues, often define themselves in relation to one another (Ellis & Waterton, 2004). The omission of public spaces such as parks and open green space can result in the loss of community identity and lack of sense of place (Semenza, March, & Bontempo, 2006). For a community to exist, alienation between people must be reduced (Bridger & Luloff, 2001). Engagement around a common environmental issue may be one way to do so.

*Culture.* Cultural groups are formed through a historically transmitted system of symbols, meanings, and norms, and are more than race alone (Daniels & Walker, 2001). Culture relates to ethnicity, gender, regional identity, profession, or “any other symbol system that is bounded and salient to individuals” (Collier & Thomas, 1988, p. 103). Culture can be seen as “a socially created set of ideas, beliefs, and customs shaping people’s actions and the production of material artifacts, including landscapes and built environments” (McDowell, 1994, p. 148).

The exclusion of unheard voices due mainly to their relegation to the fringe of dominant cultures is recognized as a weakness of traditional top-down approaches to environmental issues (Selman, 2001). Can a deeper understanding of culture aid us in making better natural resource decisions? Morgan (2003), in his study of a U.S. East Coast watershed in the process of establishing a watershed council in four communities, found that the role of communication in managing water resources was integral. Cultural propositions were required to enlighten the ways in which local communities processed

ideas of what issues were salient, how issues were talked about, and the meanings associated with the issues and terminology.

In order to more fully understand how culture may affect nonprofit outreach efforts, it is important to expose the relationship between human culture and the environment. The way humans interact and relate to the environment is structured through their identifying culture(s) (Jay et al., 2002), but understanding these cultures, when different from our own, can be difficult. Richerson and Boyerhoff (1996) warn against ethnocentrism or negatively evaluating other cultural practices and rituals different from those of the observer. When we come to the table with hopes of solving problems or working collaboratively, we all come with significant cultural filters (Toupal, 2003). Without recognizing these filters and taking actions to acknowledge them, decision making process may not be truly collective or collaborative. It is important to keep in mind that one's knowledge of the environment is shaped through cultural processes (Ellis & Waterton, 2004).

Gilfoyle (1998) in his discussion of urban history and culture, notes that there can be many cultures and in fact subcultures that exert influence on individuals. Urbanism can be considered a concentration of social, political, economic and/or religious institutions (Wright, 2002) all of which may exert influence on individuals. Some of the many cultures apparent in urban settings are ethnic culture, leisure culture, political culture, racial culture, sexual culture, worker's culture, women's culture, and community culture. Without understanding the multiple cultural stimuli effecting decision making processes through an individual's many group identities, we may not be getting at the depth of influences that structure human actions, including those made in relation to the

environment. This idea is termed intersectionality by (van der Hoogte & Kingma, 2004), and is a particularly useful concept to take into consideration, especially in urban areas where individuals are increasingly shaped by multiple cultural perspectives and may participate in multiple communities. Understanding how the intersections of oneself might affect an individual's volunteer identity may be of use in understanding motivations to participate in environmental initiatives.

Often the goal of nonprofit outreach efforts is not only to enhance the local environment, but also to build relationships among community members. If environmental issues have been 'solved', but true feelings, opinions, and beliefs have not been put on the table due to different cultural approaches to the decision making process, is it truly valuable (Toupal, 2003)? Culture may be a difficult component to take into consideration in a meaningful way, but in the long run, can enhance nonprofit outreach efforts. As a democratic society we value the ability to think critically about information, seek alternate viewpoints, and come to a conclusion based on our own beliefs. The more willing nonprofit organizations are to embrace diversity and culture, the more successful they may be in having a positive effect on their local environments.

Culture, when viewed in multiplicity either within individuals or within regions, should not be seen as a constraining factor or roadblock, but rather an opportunity to strengthen our approach to environmental issues. Understanding culture and group identities and how they influence human actions may, in the end, enhance nonprofit community outreach efforts.

### *Collective Action*

Trust is an important factor in social capital which typically encourages collective action (Rohe, 2004). Collective action occurs when two or more people collaborate to achieve a collective good or shared outcome. At its most basic, collective action involves a transition from individuals acting in a private domain to taking action in a public one (Bimber, Flanagan, & Stohl, 2005). Bimber et al. see the spread of technological advances as reversing the entrenchment of private life that industrialization brought. This in turn influences collective action as it makes crossing the boundary from private to public life easier.

Typically the results of collective action are non-excludable, meaning that relevant individuals cannot be excluded from benefiting from the resulting public good inherent in collective action regardless of their contributions to the effort (Bimber et al., 2005). This is often termed free-riding as the individual can take advantage of the results provided through the action of others.

High levels of social capital demonstrate networks of trust, a feeling of reciprocity, and regular face-to-face engagement among participants. In turn this ensures a high level of success when solving a collective action problem (Putnam, 2000). Because social capital is often defined as the networks and norms that lead to collective action (Woolcock, 2004), a discussion of collective action is in order.

Many urban groups are often bound together by common interest rather than a particular place. Bridger and Luloff (2001) point out that even though clean air and water as well as healthy stocks of natural resources are in an entire community's best long-term interest, in the short-term many individuals simply become free riders, reaping the

benefits of a clean environment without actively participating in activities that contribute to the environmental health of the entire community. What would encourage these free riders to contribute to the collective good? The building of social networks, a sense of trust and reciprocity, and shared values may be part of the answer.

Many believe that homogeneous groups working locally with mutual trust and shared norms will be the most successful in environmental problem-solving (see Ostrom, 1990). Thinking about this in terms of culture, this could be taken to mean that people are working from a common cultural lens. The difficulty in building mutual trust and shared norms in large city settings is well known and we often think of cities as “melting pots” rather than homogeneous societies. Many frameworks outline the difficulties in protecting, preserving, or rehabilitating environmental resources, but are often used in the context of rural areas on a small scale.

These initial components make frameworks such as the collective action framework outlined by Ostrom (1990) seem inapplicable in urban settings. Ostrom (1990) even mentions that common pool resources (CPRs) in close proximity to economic centers (which seems to mean cities) will have many external influences and adverse impacts. From this point of view, culture (if there are many or multiple influences) may be seen as a constraining factor in CPR institutions, however the collective action framework may still contain insight for urban settings. Some of the components that Ostrom (1990) sets forth in her framework and that have applicability to urban settings are the number of those affected, the current conditions of the resource, the heterogeneity of interests and shared perception of harm if no action is taken, current rule making systems, the skills and assets of the group, and levels of mutual trust. If the

current condition of the resource is seen to be degraded or in imminent danger and human action can slow or halt this process, collective action by a group is more likely.

Individuals must also feel that they either currently possess the skills needed to make change or that they will be able to gain the necessary skills through their participation in the collective. Support from the collective structure is also needed to not only encourage participation but also to keep individuals involved with the project.

Finally, trust in collective action initiatives can be tricky as the individual participant must trust the others and also hope that the others trust him/her before they may be willing to participate for the collective good (Bridger & Luloff, 2001). Trust is likely one of the most important factors in determining whether collective action will occur. Small groups are more uniquely situated in building trust because it requires a certain familiarity with others in the group, which can be difficult if many individuals are involved (Bridger & Luloff, 2001).

Potentially, in areas including cities, where multiple cultural influences exist, the concept of bridging social capital may be helpful in determining the success of collaborative institutions, because bridging social capital can be seen as bringing diverse groups together and building social bonds between them.

If high levels of bridging social capital existed between cultures, or could be built, collective action may not only be more likely to succeed but could also benefit by the incorporation of diverse knowledge sets. Many have embraced the mantra “think globally, act locally”, yet when we look at the world’s environmental problems, we typically seek knowledge and solutions created by the western world (Gough, 2002).

To increase the capacity for environmental decisions to have positive impacts, Park (2005) calls for measures that improve diversity and are conducted on a grassroots, community-led level. At times culture has been seen as an annoyance and a constraining factor in progress, however, embracing multiple identities may be part of the solution for our future (Stratford & Davidson, 2002) and for enabling collective action in urban environments.

The elusive group processes that help shape the concept of community are deserving of scholarly attention and also hold some real-world significance in elucidating the connection between the individual and the collective (Frey, 1994).

In addition, the resulting benefits brought about by collective action, both individual and community are also a variable in the social capital cycle. These results may shape the continued existence of the collective action problem and the associated relationships and social networks of individuals.

#### Communication Processes

The building of social capital and the resulting hope for collective action are in essence communication phenomena. Flanagin et al. (2006) believe this to be because collective action always includes the following: (a) identifying and connecting people who have a shared interest, (b) communicating messages to these people, and (c) managing and coordinating the contributions of individuals. Understanding the ways in which people communicate can help researchers understand the social worlds individuals create regarding the environment (Morgan, 2003). This in turn can help us to understand what actions toward or in the environment make sense to the individual. Communication

and community are inextricably linked as they each structure the possibility of the other (Rothenbuhler, 1991).

With varying levels of communication in any nonprofit entity, especially one employing the use of volunteers, a review of the mechanisms used to share information is necessary. Group communication processes may also help mediate tensions in group experiences that would otherwise hinder the development of a sense of community (Frey, 1994).

Information flows that are open can strengthen the ties that turn groups of people into communities (Hutchison, 2004). When working on community-based projects it is important to recognize that knowledge held among community members is valuable. Rothenbuhler (1991) believes that the construction of meaningful relationships in any community hinges greatly on communication. Informal communication systems are common in the building of social capital and, if effective, are integral components to its strength (Hutchinson, 2004).

According to Rothenbuhler (1991) communication is the beginning of community involvement. One-way communication by community-based organizations can be characterized as providing services and information to community members who in turn passively receive them (Gress, 2004). This one-way communication is not really communication at all but only a simple attempt at dissemination and does nothing to encourage community involvement or help shape a sense of community. Two-way communication is therefore more engaging and includes the community members in the process beyond passive recipients to active players in the communication endeavors. Indirect communication has the potential to increase the likelihood of misunderstanding



because the original message from the source can be misinterpreted on the way to the receiver. Direct communication coupled with joint collaboration might therefore yield the most beneficial interactions.

### *Small Group Communication*

Small groups permeate every sector of society and are truly the fundamental unit by which a society organizes itself (Frey, 2002). Stohl and Walker (2002) describe a group as “three or more people meeting together face-to-face to address task and/or social needs” (p.238). Group communication is integral not only in maintaining the group but also in aiding the group’s accomplishment of tasks and helping to build a sense of groupness and cohesion. According to Infante, Rancer and Womack (2003) the larger the group the more likelihood there is of potential incompatible relationships.

Small group communication theory, specifically the study of bona fide groups using the Bona Fide Group Collaboration Model (Walker, Craig, & Stohl, 1998), was used to examine the communication processes occurring with the PNP project. The Walker, Craig, and Stohl model takes traditional group concepts, including task characteristics and coordination, decision making, cohesiveness, goals, roles, norms, power, conflict and creativity and reframes them to be understood through the lens of collaboration.

### *Bona Fide Groups*

The participants in the project were selected purposely for their participation in a natural group. The selection of informants for a specific reason has benefits over random sampling when particular realities regarding a situation are sought (Frey, 1994). In this particular case, the purpose was to elucidate realities regarding both social capital and

communication mechanisms. Frey (2002) believes that the study of naturally occurring groups holds much hope for strengthening our understanding of group communication. This is because communication can be understood in the context of how groups are embedded, who is considered part of the group, and how groups differentiate themselves from other groups. The bona fide perspective also has the added advantage of being able to capture not only the history of a group, but also the emotional intensity and temporal fluctuations over time (Stohl & Putnam, 2002).

The study of bona fide groups has been encouraged by many (Putnam & Stohl, 1990; Frey, 1994). A bona fide group can be characterized as naturally occurring, interdependent within a larger social system, and typified by fluidity of membership and permeable boundaries (Frey, 1994). In essence, bona fide groups exist before a researcher may decide to study them, are embedded in a larger organizational context and have members that come and go over time as well as members whose affiliations with other groups may overlap. These groups may meet on either end of the spectrum: face-to-face or virtually, or anywhere in between (Stohl & Walker, 2002).

Permeable boundaries in bona fide groups refer to the ability of the group's boundaries to be redefined or changed through the interactions within the group and the movement of members themselves in and out of the group (Frey, 2003). Boundaries are not objective and cannot be defined by the presence of members, the definition of goals or the physical location (Stohl & Putnam, 2002). This is not to say that the boundaries are not firm, because there needs to be some structure in order to separate one particular group from another, yet they are also flexible because they are dynamic and fluid as they are continuously negotiated, redefined and changed through the interaction of group

members (Frey, 2002). Boundaries are shaped and formed through the social contexts of members as they construct their roles and live out their histories (Stohl & Putnam, 2002). This characteristic of bona fide groups has an effect on the communication patterns that emerge.

Members may have a variety of perspectives about how decisions should be made and how to behave in group life (Waldeck, Shepard, Teitelbaum, Farrar, & Seibold, 2002). Waldeck et al. have identified four reasons group boundaries are permeable. These are outlined below.

1. The interactions group members may have with *other group experiences* including those both past and present may present conflicting group identities. The role a member plays in one group may be expected of him/her in another group (Frey, 2002).
2. Members also serve as representatives of the group when communicating about the group with individuals outside it, thus making them *boundary spanners*.
3. Roles and patterns of interaction of members can shift yielding *fluctuations in membership* as new members join and older members leave.
4. *Group identity*, formed through the various ways members enact a sense of belongingness, loyalty and commitment to the group, can vary among members.

Stohl and Walker (2002) distill this permeability down to “identifications with the group, overlapping and fluctuating group membership, intergroup communication, and group member relations outside the group itself, as well as group cohesiveness” (p. 242).

Small groups do not exist in a sterile environment but are situated in a larger context. Groups are embedded in multiple physical and social contexts (Stohl & Walker, 2002). Frey (2002) has identified several of these: historical – how a group is created and developed, geophysical – the spatial location of the group, economic – how a group is funded and supported, cultural – the norms and values shaping how the group operates. Waldeck et al. (2002) also describe this context in four ways:

1. *Intergroup communication* likely exists as members communicate with other individuals who are part of other groups.
2. It is not uncommon for two or more groups to coordinate actions and thus *work in cohort* to accomplish a common goal.
3. It is typically necessary for groups to *negotiate their authority and autonomy* within the organization they are rooted in.
4. *Intergroup relationships* are likely to exist among members and will need interpretation.

Additional traits of naturally occurring groups include the challenge of recruiting and maintaining members in an ever-changing environment (Frey, 2002) and unstable and ambiguous borders because the identity of a group changes over time (Stohl & Walker, 2002).

Collaborations involving environmental issues are often best understood from the bona fide group perspective (Lange, 2002) because they demonstrate the characteristics described above.

## *Collaboration*

Discussed in many fields, the study of collaboration is growing in popularity. When representatives from various organizations come together to work toward the solution of a common problem, a collaborative group sharing decision making responsibilities is formed (Keyton & Stallworth, 2002). Collaboration is a process rather than an end state. Shared decision making and a common goal are integral to any collaborative effort. Collaborations have been credited with helping build a sense of community (Frey, 2002) and are nested systems that are often changing. There are many complexities faced with collaborating groups including relational, economic, political, structural and cultural (Stohl & Walker, 2002). The benefits that collaborations may provide however often outweigh the potential struggles a group may face.

Collaborations are believed to be a benefit because they have the potential to: address complex projects in a timely fashion, pool resources of multiple entities, increase innovation by leveraging strengths, knowledge and skills of more than one (Stohl & Walker, 2002). Collaborations can also be viewed from various levels including the face-to-face interactions of group members, between collaborative teams that may be functioning within a larger process, and at the organizational level in terms of how multiple organizations interact (Keyton, Ford, & Smith, 2008).

Collaborations can be placed within the Bona Fide Group perspective's emphasis on permeable boundaries, shifting borders and the embeddedness of a group. These membership characteristics can create unique challenges for the collaborating group and are likely to influence participation, communication and ultimately the ability of group members to work effectively together. Internal communication processes and structures

shape the network between collaborating members and are essential to effectiveness and success of any group (Taber, Walsh, & Cooke, 1979; Yon, Mickelson, & Carlton-LaNey, 1993; Stegelin & Jones, 1991). Communication allows the collaborating group to develop their own unique culture and serves as a signal that the collaboration exists (Keyton & Stallworth, 2002). The culture developed helps establish an effective social environment and provides norms for accomplishing the task – the extent to which a collaborating group can create this shared community will have a direct effect on the group's success. Keyton and Stallworth identify four elements to a successful collaboration: (a) a shared goal, (b) member interdependence, (c) equal input of participants, and (d) shared decision making.

Recently, communication scholars have examined previous collaboration models. Most models, developed to elucidate the collaborative process, describe communication as a component of collaboration. Communication scholars argue that communication is the constitutive element of collaboration and not just a single component (Keyton et al., 2008; Walker & Stohl, 2004). Communication creates, moves and shapes the collaborative process. Systems of meaning formed through conversation and other acts of communication create the social system within which collaborations function. Most research has investigated communication as a variable in the process rather than a constitutive element of collaboration. In essence, reducing communication to a variable in collaboration posits the process as additive rather than holistic, static rather than emergent and cross sectional rather than longitudinal (Walker & Stohl, 2004). In the next two sections, two models that informed this study will be discussed. These are the

Structural Model of Collaboration (Keyton et al., 2008) and the Bona Fide Group Collaboration Model developed by Walker, Craig, and Stohl (1998).

*Structural Model of Collaboration as a Communicative Process*

Keyton et al. (2008) propose a meso-level communication model based on their research of a collaborative team process over a 9 month period. Their model looks at the structural elements of a multi-organizational collaboration. Keyton et al. define this collaboration as “the set of communicative processes in which individuals representing multiple organizations or stakeholders engage when working interdependently to address problems outside the spheres of individuals or organizations working in isolation” (p. 381). Because most collaborations involving multiple organizations essentially start as a zero-history group, processes must be put into place by those involved. These processes include structures for developing goals, sharing information, and making decisions. The model developed by Keyton et al. displays the overarching structure of the collaboration including the individuals involved, groups formed, organizations participating, as well as the other components that shape the collaborative effort. The model, shown in Figure 3, gives context and places a collaborative effort within the larger environments it functions, demonstrating that these boundaries can be permeable and also potentially conflicting. The model shows interactions at both the team level based on members as well as the organizational level on a broader scale. The model takes into consideration the instability of membership, which is represented in the model by  $n$ , showing that members affiliated with a particular organization may come and go. This is important to note as it leads to instability and thus uncertainty about who comprises the collaborative group which can result in communication complexity.

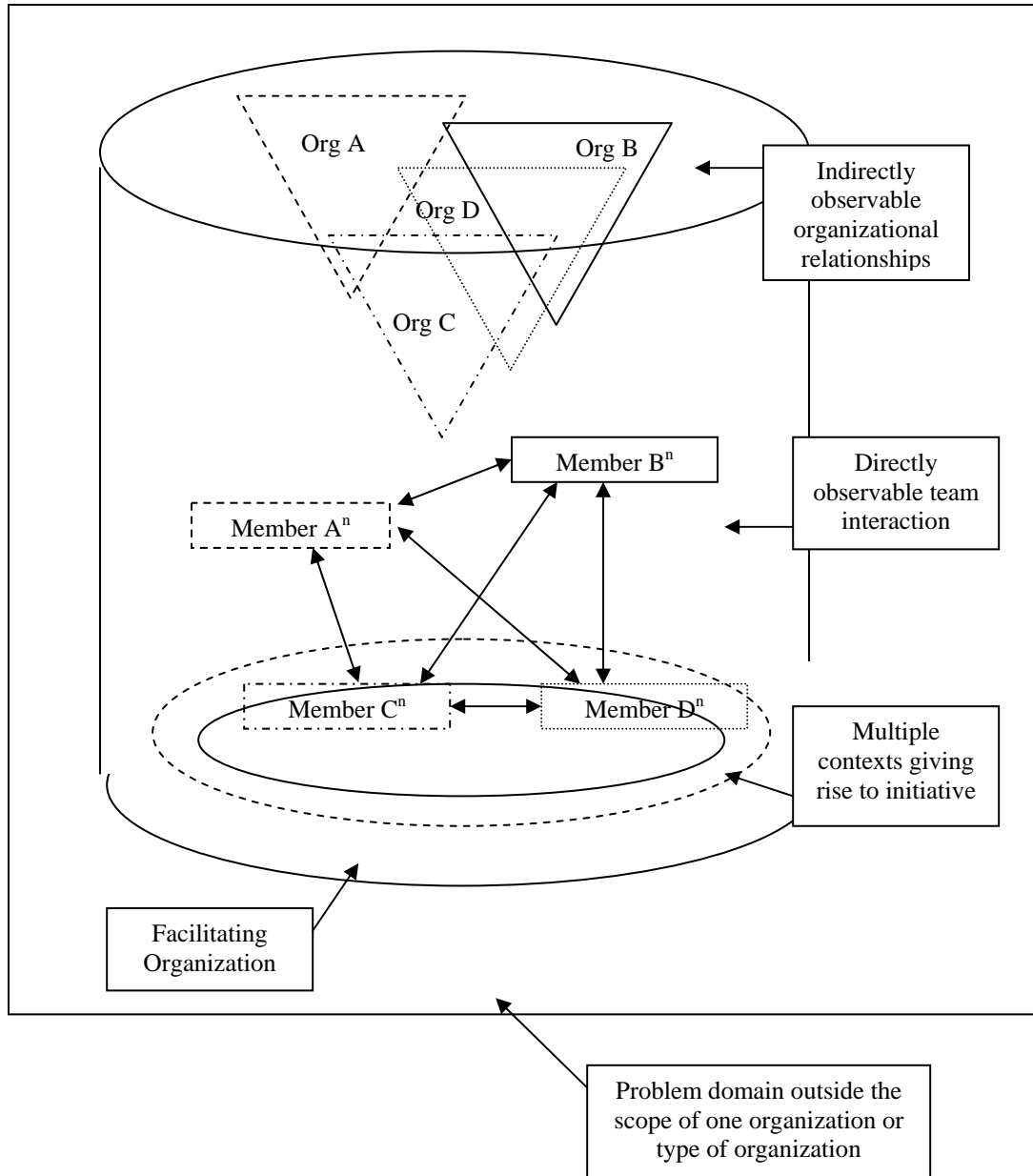


Figure 3. Structural Model of Collaboration (Keyton, Ford & Smith, 2008).

### *Bona Fide Group Collaboration Model*

The Bona Fide Group Collaboration Model developed by Walker, Craig, and Stohl (1998) and further expounded upon by Stohl and Walker (2002) positions



collaboration as a communicative process and provides a framework for understanding collaborating groups. Based on this model, Walker and Stohl (2004) define collaboration as “the process of creating and sustaining a negotiated temporary system which spans organizational boundaries involving autonomous stakeholders with varying capabilities including resources, knowledge, and expertise which is directed toward individual goals and mutually accountable and innovative ends” (p 5.). Participants manage boundaries, contexts, roles and tasks through communication (Stohl & Walker, 2002). In addition to these elements, the model also includes environmental exigencies, collaborative partners, relational boundaries, negotiated temporary systems, innovative outcomes, mutually accountable ends and individual goals in the model (see Figure 4). Each of these is described in further detail.

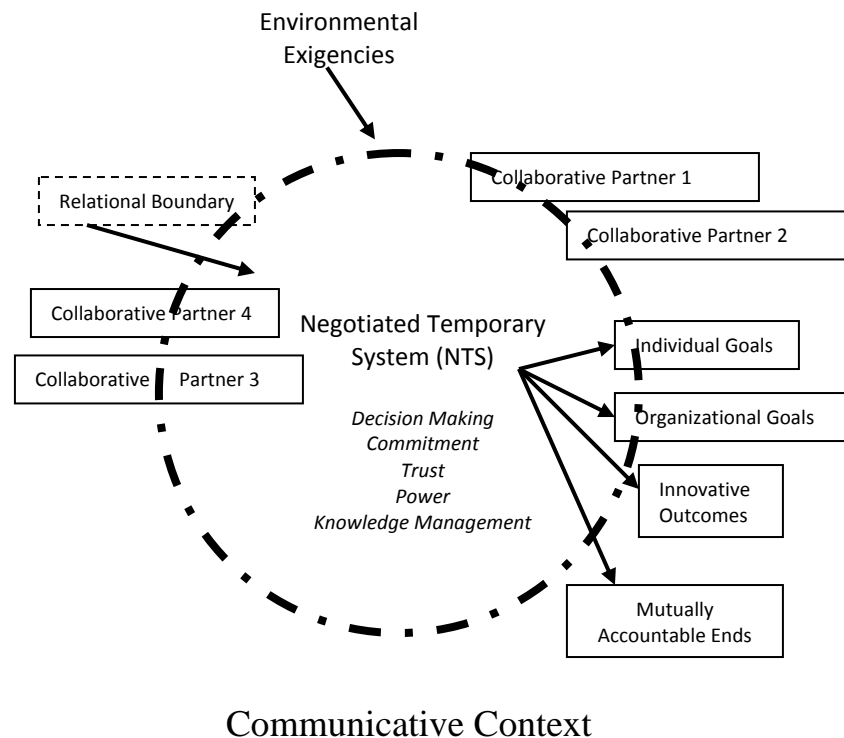


Figure 4. Bona Fide Group Collaboration Model (Stohl & Walker, 2002).

*Environmental exigencies.* Participation in collaboration typically stems from the belief that one will earn a benefit from such participation. The benefit is often the solution for some current or foreseen problem. This external motivator is the environmental exigency in the Stohl and Walker model and brings about the organizational participation in the collaborative effort. Usually this external motivation is based on urgency and a need for innovative or new results and/or approaches.

*Relational boundary.* The relational boundary of each organization can be thought of as a line of demarcation differentiating it from the other organizations involved. This line is still permeable, however, and its flexibility and fluidity often make it invisible. Collaborations with a high level of interdependence creating reciprocity among group members are most successful in coordination and cooperation. This leads to increased performance, satisfaction with the group, learning and the establishment of group norms (Keyton & Stallworth, 2002).

*Collaborative partners.* Motivations of group members choosing to participate can vary from a simple desire to help solve the problem to political or financial motivations, each having an impact on the process and the outcome (Keyton & Stallworth, 2002).

Partners may vary in their level of involvement and commitment to the project and tasks at hand. In the Stohl and Walker model, these varying levels of commitment are reflecting by the amount of overlap with the negotiated temporary system (described below). Keyton et al. (2008) identify two different characteristics that define why organizations may join collaborations: investment and impact. An organization's belief about how much they might gain as a result of the collaboration shapes the degree to

which they participate. The quality and quantity of contributions that organizations may make is often tempered by the expected impact or results of the collaborative effort.

These characteristics shape the interaction among collaborators and can be described by four different scenarios, see Table 2 for a description of each of these.

**Table 2**

*Dynamics of Collaborative Interaction Mediated by Investment of Resources and Perceived Impact (benefit or results)*

	Investment	
	High	Low
Impact  High	Full participation with the expectation or possibility for considerable return (impact) – the ideal state	Decision to invest little despite potential for high impact – often occurs if competition exists between partners; often leads to either less frequent participation or less substantive contributions
  Low	High investment of resources without the expectation or potential for profit or return for the organization or the individual; participation is likely aimed at public good rather than private	Unclear about impact but wishing to ‘stay connected’ at least loosely to the initiative – can occur for various reasons; often leads to either less frequent participation or less substantive contributions

*Note.* Adapted from “A Mesolevel Communicative Model of Collaboration,” by J. Keyton, D. J. Ford & F. I. Smith, 2008, *Communication Theory*, 18.

Keyton and Stallworth (2002) identify additional issues that shape the roles of collaborating partners including issues of leadership, member motivation, maturity and the roles and perspectives each individual holds. Although equal input is desired in collaborations, a convener is needed to form the collaboration and lead the group. Often collaborations in the nonprofit or government sector must obtain funding in order to form and are often convened by the first party to become aware of available funding (Keyton & Stallworth, 2002). This entity is then the convener of the collaborative effort.

Leaders typically play multiple roles in a collaborative effort, as both a member of the group and a representative of their parent organization, in addition to their leadership role. The selection of the leader can be an important process for the group and enabling

all members to participate in the election of this individual can help to build trust (Keyton & Stallworth, 2002). The leader's communication style as well as their parent organization can play a significant role in the collaborative process (Keyton & Stallworth, 2002). The style approach to leadership is the most applicable to the PNP project and the three styles as described by White and Lippitt (1968) are authoritarian, democratic and laissez-faire. Authoritarian leaders are very direct about the division of work. Decisions regarding outcomes are often left to the leader, whereas democratic leaders believe all issues are matters to be discussed by the group as a whole and decisions are made by either majority, consensus or participative discussion (Infante, Rancer & Womack, 2003). The laissez-faire form of leadership typically displays a low level of involvement of the leader who provides basic information and leaves decisions up to the group.

*Negotiated temporary system.* Stohl and Walker (2002) define a negotiated temporary system (NTS) as "the finite system enacted by the representatives of the collaborative partners specifically for the completion of a collaborative project and is the collaborating group" (p. 243). This system is created through both informal and formal interactions between group members and is typically created over a short period of time. A collaborating group differs from traditional groups in three primary ways (Stohl & Walker, 2002):

1. Members are diverse – from different organizations, from different backgrounds.
2. Structure is different – organization is around a reciprocal interdependency with little or no formal hierarchy.

3. Relational boundaries are more complex – members may have loyalties outside of the collaborating group and may have responsibilities to multiple and competing systems.

Components of the NTS include decision making, commitment, trust, power, and knowledge management. Trust is essential to the success of a collaborative effort as it is critical in the willingness of participants to share information (Stohl & Walker, 2002). Trust can continue to develop (or diminish) within a group as a result of both internal interactions of members and external interactions between members and those outside the group including the parent organizations involved. In addition to understanding if trust develops at all within collaboration, it is also important to identify when it developed (Stohl & Walker, 2002).

The power dynamics within a collaborating group can be complex. An individual's status within their representative organization may not be reflected in the collaborating group and this may create tensions. A sense of balanced power and control are typically required for a collaboration to be successful. In order to come to a shared decision, participants must feel that equal input has been given. This balance can be achieved through the encouragement of contributions from all members and stopping the domination of the group by any one individual (Keyton & Stallworth, 2002).

Group hierarchies are often fluid and tend to be informally developed through group interaction. Positions within the system are often negotiated and renegotiated. Power in collaborating groups is thus more complex and also rooted in different approaches than traditional groups who may rely on behavior and status.

How a group manages shared information and knowledge within the collaborative context is also important in the formation of trust and relationships. Knowledge management is typified by a complex system of acquiring information from a variety of sources. No one individual typically holds all the information necessary to accomplish the task at hand and therefore must rely on the relational networks within the collaboration in order to address the task at hand (Stohl & Walker, 2002). Collaborative groups need to know what information is needed, as well as who knows said information (Stohl & Walker, 2002). This is not always an easy task as groups exist across distance, time organizational boundaries, and cultures.

The group's cohesion either through their liking of one another or fondness for the task at hand shapes the commitment of members. This is often demonstrated by the willingness of members to remain in the group. This can also be shaped by the commitments a member might have to their parent organization in addition to the collaborative group.

*Goals, outcomes & mutually accountable ends.* The impetus to participate clearly has an impact on the outcomes and expectations of the participants. Stohl & Walker (2002) see the results of collaboration as multi-fold involving both individual and organizational goals as well as innovative outcomes and mutually accountable ends. If individual members and their representative organizations goals are in conflict with other member's goals, tension and distrust can arise (Stohl & Walker, 2002). The achievement of both individual and organizational goals is important if the collaboration is to be sustained.

### Summary - Theoretical Framework

The cycle of social capital includes engagement, issues of community and culture, trust and reciprocity, collective action and ultimately benefits to the individual and society. This system of social capital will be examined in the context of a bona fide small group. In addition to an examination of the cycle of social capital, the communication processes that existed in PNP will be examined using a combined communication-based collaboration model.

## CHAPTER 3 - METHODOLOGY

In their simplest form, methods are those tools and instruments a researcher uses to collect and analyze data (Jennings, 2001). Methodology is a model, set of theoretical principles, and a framework that provides guidelines in the context of a particular paradigm (Jennings, 2001). Grounded theory, ethnography, phenomenology, case studies, and narrative inquiry are some examples of qualitative methodologies (also called qualitative traditions, see Creswell, 1998). Such methodologies are not static, however, and a combination of approaches is possible. This study used the case study approach but was also influenced by ethnographic methods because I was not only studying the groups under question but also working and participating with them on the restoration projects. My study was also grounded in the naturalistic paradigm which is described in greater detail in the next section.

The spiraling research approach as described by Berg (2007) was used for this project. The process according to Berg (2007) is “you begin with an idea, gather theoretical information, reconsider and refine your idea, begin to examine possible designs, reexamine theoretical assumptions, and refine these theoretical assumptions and perhaps even your original or refined idea” (p. 18). Because the research process is non-linear, no step in the process was ever fully left behind.



Because of the multifaceted nature of volunteerism, the complexity of social capital, and the intricacies of small group communication, a qualitative case study approach using multiple sources of information including observation & field notes, document analysis, focus groups and interviews was used for this project. Using these data collection techniques together provided a holistic picture and a valuable understanding of the complexities of individual's decisions to participate in volunteer opportunities.

Qualitative research has been termed many things from an approach, to a paradigm, to a methodology, to a set of methods. Regardless of which term is used, it has the capability to generate theory and to help us understand the world from participants' perspectives (Phillimore & Goodson, 2004a). Qualitative research essentially focuses on the nature of things, their meanings and descriptions, rather than the amount of something. Because this research project aimed at elucidating the what, how, why, when, and where occurring in the PNP project, a qualitative case study approach was used.

Qualitative methodology was chosen specifically because it has the ability to more closely examine social settings and the individuals who inhabit those settings (Berg, 2007). What humans say and do is a function of their interpretation of the social world in which they reside; many of our actions are learned rather than stemming from some biological instinct (Berg, 2007). Qualitative research can be considered a science as long as it provides a systematic way of discovering and explaining how the world functions and how these realities arise and influence individuals and organizations (Berg, 2007). The systematic process used in this project to answer the research questions and come to conclusions about the propositions will be further explained in later sections.

The goal of this research was to “integrate the academic world with civic purpose, learning with action, theory with practice, and reciprocal research with collective social change” (Calderón, 2003, p. 2). Research was carried out not only for the benefit of academia, but for the benefit of the community-based organization in both the short and long-term. The project moved beyond a charity model where the provider or researcher is in control of the services and moved toward a model that worked on building partnerships of equality among all participants. This attempt was made to aid in social change, to unearth the root of the local environmental problem, and empower the participants (Morton, 1995).

#### Naturalistic Paradigm

A paradigm can be thought of as a set of beliefs that structure our actions. In the case of research this structure is done through a disciplined inquiry (Jennings, 2001). Several ways of understanding via dominant paradigms exist. Positivism can be understood as the view of reality as singular, objective and tangible (Decrop, 1999). Positivism is also characterized by value-free inquiry, the ability to generalize across time and context, and independence between the knower and the known (Lincoln & Guba, 1985). Positivism is often more inclined toward quantitative methods. The influence of positivism in group communication research can be seen in the prevalence of studies conducted in a laboratory setting with zero-history groups primarily using quantitative methodology and single group observations (Frey, 1994). Alternatives to this paradigm which may provide additional insight into group communication include interpretivism and naturalistic inquiry.

Interpretivism is based on the belief that there are multiple views of reality and looks for the big picture through richness, depth, and complexity (Decrop, 1999).

Interpretivism is inclined toward qualitative methods. Lincoln and Guba (1984) describe the components of naturalistic inquiry as the belief that realities are constructed by each individual, the knower and known are interactive and inseparable, research questions are time and context-bound, and inquiry is inherently shaped by our values. The results of a naturalistic inquiry are most often reported in the form of a case study and represent the interpretation of one particular case. Researchers are therefore cautious about generalizing their findings beyond theoretical propositions to populations or universes (Frey, 1994).

The paradigm most aligned with my experiences and thoughts about the world is interpretive/naturalistic inquiry. Because I am a proponent of the theory of constructivism, which states that learners construct new knowledge building bridges based on what is already known in the individual, and that each person's construction is unique (Terwell, 1999), it is only apparent that I would believe that multiple views of reality are possible. The naturalistic paradigm was also an appropriate approach for this research because the groups under study were natural and observations and research were conducted in situ. This paradigm also allowed for greater understanding of the contextual features influencing the research questions. It was the most fitting approach for understanding both social capital and small group communication in the PNP project. Naturalistic methods also favor sustained interactions with groups (Frey, 1994). I spent an entire year interacting with those involved in PNP, which may have allowed them to become more comfortable with me through the process and potentially yielded more

truthful results when the interviews were conducted toward the end of my participation. The use of the naturalistic paradigm allowed a true look into the experiences of the group from their own perspective.

### Case Study Approach

The choice of methodology and thus the appropriate methods have been dictated not only by my preference, but also the nature of the research question. As the emergent themes at a single site were uncovered and this information was used to more deeply understand how sense of community and communication processes affect the success of urban based community outreach efforts in terms of water issues (more specifically riparian plant restoration) and building an environmental ethic, both the case study and ethnography methodologies seemed appropriate. Case studies can be described as a methodology where researchers are seeking unique description in a single phenomenon (Shank, 2002). In ethnographic research, the investigator plays a role in the lives of participants, to some degree, in order to understand informant's worldviews through their cultural perspectives and meaning-making processes (Shank, 2002).

The case study approach was chosen because it has the ability to reveal information about culture and social capital in communication outreach efforts and thus good for understanding how to effectively communicate with a diverse stakeholder set (Merriam, 1998). Gouran (1994) describes case study research as an appropriate methodology for understanding how the role and status structure of groups can affect interactions and influence choices. Because I participated in the lives and activities of the group under study, I was able to gain a better understanding of the meanings and rituals associated with the group. By immersing myself in the local community I was able to

build reciprocal relationships. The case study approach was the most appropriate as the research focused on the investigation of contemporary phenomenon in real life (Yin, 2003). Although case study research can contain both qualitative and quantitative data, this research study focused on qualitative data, specifically interviews, focus groups, and nonparticipant open-ended questionnaires.

This research study focused on a single case. The rationale for this single case design was the observation of a unique case, a rationale put forth by Yin (2003). Though it is likely there are other community-based restoration programs, the location, partner agencies and other circumstances involved in the Partners for Native Plants project offered a distinctive case. The approach taken in this study was explanatory because it is a useful approach for understanding causation especially when a plurality of influences is present (Yin, 2003).

The components of the case study research design as described by Yin (2003) are: (a) study questions (see Introduction for the study questions guiding this research); (b) propositions that narrow the scope of examination (found in Chapter 1); (c) units of analysis, in this case the participants in the Partners for Native Plants project over a one year period; (d) logic linking the data to the propositions (see data analysis procedures); and (e) criteria for interpreting the findings (see Chapters 4 and 5). In the next section, I will discuss the particular case examined in this study.

### *The Partners for Native Plants Project*

In 2005, over 80% of the United States population was concentrated in urban centers (Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, 2003). Cities have long built systems to improve public health

by channeling waste away from urban centers while inadvertently damaging the environment. For instance, rainwater that ends in drains and sewers that eventually flows into rivers at the end of those pipes more severely affect the river than if a process that included plants, soils and wetlands were to exist (Lee, 2007). Storm drains short-circuit the water cycle.

The Western United States has encouraged sustainable water use and public awareness about water-related issues. There are also many urban sections of river that have been subject to community-based restoration activities.

Much of the U.S. West has been subject to population growth and increasing demand on limited water supplies, which has a direct impact on water quality and natural river flow. Urbanites affected by community-based river restoration efforts in the metropolitan West are the center of this study. The exploration of a semi-arid, high plains urban community may show how support for water conservation initiatives may come about with the involvement of the public in hands-on water issues such as river restoration.

The Partners for Native Plants has been a somewhat amorphous project. The PNP project originated from a staff member working in a large U.S. Western nonprofit botanical organization in early 2000. The project was based on the belief that plant restoration and protection of native species is needed across the West, yet organizations that cross traditional organizational boundaries to focus on these problems are not common. It was believed that a well trained cadre of volunteers could help support not only nonprofits wishing to help protect native plants, but also various levels of government. A partnership among interested parties was sought. The project was two-

fold, to work on restoration of natural areas through the removal of invasive plant species and planting of natives and the monitoring of rare, native species. The focus of this study, which took place from 2006-2007, was on the restoration activities associated with the project. At the time of my arrival in October 2006, this was the only active part of the PNP group.

The PNP project only received its name after several years in operation. Several iterations of a name for the project occurred before Partners for Native Plants was settled on. In 2002, two current volunteers were interested in deepening their commitment to native plants and were the first experimental leaders for the project taking on restoration efforts at a local natural area. For the first few years, botanical gardens staff worked closely with these volunteer leaders assisting them in learning plant identification, restoration techniques and propagation of native species. These volunteer leaders tested several methods of engaging other volunteers and finally settled on meeting every week at the same day and time during the restoration season, which is whenever the ground and weather permit work, approximately May to October. They also occasionally hold special workdays such as a tree planting upon receiving a large donation of saplings from a local nursery. Until the receipt of a national grant to broaden the project in 2006, the restoration efforts of PNP were restricted to this one site. Additional partners who would be interested in working with a group of volunteers, trained through the Partners for Native Plants project, were sought. Several organizations offered spaces they managed to be part of the project. All of these areas were riparian in; see Table 3 for details about each of these sites.

Table 3  
*Description of Partners for Native Plants Project Sites*

	PNP Partner Sites			
	Site A	Site B	Site C	Site D
Managing Agency	Nonprofit environmental education center	City B Natural Areas Program	City C Natural Areas Program	Watershed stewardship group
Description	Considered an urban wildlife refuge and outdoor classroom. Site was left alone for over 50 years and thus rich with wildlife.	Given to city as a prairie dog park for active relocation. Not yet open to the public as the site is gated and locked, but accessible via a regional greenway trail.	Site is not actively managed, but not closed to the public as access a regional greenway trail is possible. Parts of the land are driven on by city utility crews and are therefore highly disturbed.	An old agricultural creek, channelized environment with much work already completed including reclamation and stream bank stabilization. Historic farm house on property.
Approximate Size	123 acres	36 acres	40 acres	40 acres

I also contacted and maintained connection with several other local groups that had interest in our project. At this stage I was hired to develop the program, recruit volunteers, create training materials and sessions and generally launch the project. Over the next year I worked on the PNP project in varying roles as a staff person, volunteer participant and leader. I collected data to examine this case through observations, document analysis, interviews, a focus group, and nonparticipant questionnaires.

#### Phases of the Case Study

The following timeline outlines the phases of this research project. The research plan was flexible and adapted to changes based on findings and stakeholder interests. This flexibility became very important as the PNP project grew to expand beyond its original restoration work group and encountered many unforeseen obstacles as the process of implementing new sites did not go as originally planned.



### *Acquaintance Phase*

During the initial phase, I immersed myself in the local community including the PNP project. I sought out volunteer opportunities with the preexisting PNP site to help familiarize myself with the local environment and the project as it existed for its first four years. I also visited local rivers and waterways as well as talked with individuals involved in restoration and environmental community issues. I acquainted myself with the PNP partner organizations by setting up brief interview sessions and site visits to learn more about the sites for which each partner organization hoped to garner a volunteer group to do restoration work. I also identified organizations and their projects, mission statements, goals, structure, and diverse stakeholders by reviewing websites, published materials, and informal interviews with the staff of botanical organization about their knowledge of our partner organizations for the PNP project.

### *Development Phase*

After I had a good understanding of the history of the PNP project and its current status, the second phase of the project began. I collected data through analyzing group documents, making participant observations, and through conversations with current PNP participants. I drafted recruitment materials and developed pertinent training materials as directed by the group already conducting restoration activities at the Site A. In early winter of 2007, an informational meeting was held to recruit potential volunteer leaders. I gave a brief presentation at the meeting providing an overview of the project and the new sites as well as my role as both a staff person and researcher conducting a study. Part of the purpose of the meeting was not only to recruit new volunteers, but also to begin the process of building trust and rapport with those I planned to study later. The two leaders

from the preexisting site were also present at the recruitment meeting to share their experience and help answer questions. Two of the three new organizational partners hoping to recruit a group to work with them were also in attendance and able to speak about the site they hoped to have help restoring. All attendees were asked to complete an interest form, which later enabled me to contact all those who showed initial interest but did not decide to volunteer with the PNP project in addition to our active volunteers. Twenty one people either attended the orientation session or expressed interest in participating in the project if they were unable to attend.

### *Project Initiation Phase*

During this phase, I began to formalize the volunteer manual and developed a series of three trainings including plant identification and weed management, measuring and monitoring plant species, and seed collection and propagation techniques. The purpose of the volunteer manual and the trainings was to provide volunteer leaders autonomy in their decision making regarding restoration at their sites. Control of the projects and decisions about restoration work were purposely left to the volunteer leaders. Botanical organization staff served only as support and this was made clear throughout the process. At this time, I also began regular contact with individuals who expressed interest in becoming either a volunteer leader at one of the new sites or interest in simply being a participant once the restoration season arrived. I facilitated contact through email among interested volunteer leaders and partner organizations. Further information about each individual site was sought and shared with volunteers and coupled with the trainings and manual to help leaders prepare for the start of restoration season in the early spring.

### *Active Work Phase*

Once spring arrived, volunteer leaders were ready to begin restoration work. The new site leaders were provided with information such as a restoration work calendar and other materials that the preexisting Site A group had developed. I helped facilitate the selection of work days, but left primary control in the hands of the volunteers. Each of the three new sites had varying levels of activity for their first season. Details about each of the four sites (the preexisting site plus three new sites) can be found in Table 4.

During this phase, toward the end of the restoration season, I conducted interviews with the volunteer leaders, partner organization representatives, and botanical organization staff. I conducted a focus group of general participants from the preexisting site, Site A, which was the only site to have participants beyond the volunteer leaders. Additionally, an open-ended email questionnaire was sent to all individuals who showed initial interest but chose not to participate in the PNP program. Finally, I compiled research data and finalized the writing process. Presentations to interested parties at the university, community, and organizational level were given.

### *Trustworthiness – Triangulation, Embodiment and Reflexivity*

To ensure trustworthiness, the acknowledgement that no research is conducted in a vacuum nor can it be completely value-free and objective is an important point (Phillimore & Goodson, 2004b). Trustworthiness can be considered a scientific inquiry that aims to demonstrate truth value and allows for external judgments of the consistency of procedures and neutrality of findings (Decrop, 2004).

Table 4  
*Characteristics of Partners for Native Plants Project Sites*

	PNP Partner Sites			
	Site A	Site B	Site C	Site D
My Role	Participant & Observer (and to a lesser extent, Staff)	Volunteer Leader, Staff & Observer	Staff & Observer	Staff & Observer
Actors Involved				
Participants	Active participant list, plus community members, students and other “one shot” groups for special work days	No active participants	No active participants	No active participants
Volunteer Leaders	2 since start in 2002	2 plus me (began with 3 but one individual ended participation)	1 interested leader shadowing Site A leaders in hopes of transferring once comfortable	Initial interest by a few, one attendee at site meeting, no follow through
Agency Partners	Minimally present, there to assist, power in volunteer leader’s control (note: there was a change in the Executive Director during the period of this study)	Minimally present, semi-regular meetings off site, staff there to open fenced area for access but minimal oversight or interaction	No presence, highly supportive but agency staffing transitions yielded no ability to be present	Highly present but goals and expectations not well aligned with PNP goals (though info had been provided and reviewed)
Botanical Org. Staff	No longer present though historically had been at the start	Actively present via me	No active work so no staff present	Present at initial organizing meeting at site and attempted to organize others
Restoration Activities	Active with weekly restoration meetings	Active with semi-regular meetings, each determined one at a time	Not Active	Not Active
Project Length	5 years	First season doing work	No seasons of work	No seasons of work
Data	2 Volunteer Leader interviews; 6 focus group Participants	2 Volunteer Leader interviews; 1 Agency Partner interview	1 Volunteer Leader interview; 1 agency partner interview	1 Nonparticipant interview
Additional Data: 2 interviews with botanical organization Staff, 1 interview with a propagation volunteer leader, 4 additional nonparticipant interviews, emails, observations, other documents				

In order to achieve trustworthiness we can look at its components. Lincoln and Guba (1985) have described these components and likened them to some of the tenets of quantitative research. These components are, with their quantitative equivalent in parentheses: (a) transferability (internal validity), (b) credibility (external validity), (c) dependability (reliability), and (d) confirmability (objectivity) (Lincoln & Guba, 1985). Triangulation, embodiment, and reflexivity are ways to ensure trustworthiness.

Triangulation was used in this project at the data collection level to ensure cohesive research findings using multiple data collection technologies. Lofland and Lofland (1995) suggest an immersion in the research by collecting data in three ways: presence in the actual event, extensive interviewing, and examination of written materials. Decrop (1999) has described triangulation as a method that looks at a phenomenon or research question from multiple sources to corroborate, elaborate, or illuminate. In his 1999 article, Decrop lists four types of triangulation: (a) data, (b) methods, (c) investigator, and (d) theoretical. Four additional types of triangulation are (a) informant, (b) multilevel, (c) longitudinal, and (d) interdisciplinary (Decrop, 2004). I used multiple data source as I have mentioned above and I used multiple methods as well. As I was the sole investigator triangulation by multiple investigators was not achieved. Both those choosing to participate and those who decided not to participate in the PNP project were selected for inclusion in the project, thus varying my informants. Multilevel triangulation occurs when informants and data are varied at different levels, which is a characteristic of this study. Longitudinal data were not be feasible to gather, but where possible, over the period of data collection, findings were reviewed in terms of the time gathered in the process. Theoretical triangulation can be seen as a subset of

interdisciplinary triangulation, using multiple fields of study for theories, investigators, etc. The design of my study is inherently interdisciplinary, drawing from the fields of communications, sociology, natural resources, and others.

Embodiment has been described as understanding an individual's interactions with their bodies and through their bodies with the world around them (Swain, 2004). The main idea here is that who I am, as a physical entity, influences the problems I see and the power dynamics I experience (Swain, 2004). As a researcher, I am not a disembodied authoritative figure, and recognizing this helps ensure a trustworthy study acknowledging the limitations of the researcher and the research itself (Swain, 2004).

Reflexivity calls for us as researchers to self-reflect, acknowledge the connections we have with our informants, and to address our experiences, emotions, and worldviews (Jordan & Gibson, 2004). The process, however, has some entanglements. These entanglements have been outlined by Ateljevic et al. (2005) and can be grouped as either macro or micro issues. The macro issues are those concerning the external world include difficulties with ideologies, legitimacies, and research accountability, recognizing that some qualitative accounts, and often those written in the first person, are not always viewed as significant or accepted by journal editors. The micro issues are those at the internal level of the researcher and include positionality, understanding our worldviews and experiences, and intersectionality, recognizing our relationships with participants.

I was reflexive throughout the research process by keeping a journal dedicated solely to my feelings, impressions, and thoughts regarding the project. I was also able to continue to process the thoughts and emotions that came up while looking back and was honest in reporting them and presenting them as I looked at the end-results and data. A

reflective summary sheet (see Appendix A) was completed for each participant placing my relationship and observations regarding them in context. Mauthner and Doucet (2003) have also suggested doing what they term reader-response, where the researcher listens/reads the data through at least three times. The first reading is solely to gauge the researchers response to the data and should be recorded as the feelings and emotions brought up. A contact summary sheet was developed for this purpose and was completed upon first listen to the interview tape recordings.

All of these methods can be seen as overlapping with one another, and this inherent redundancy helps qualitative research come to accurate conclusions for a particular place and time, as viewed from the perspectives of the researcher and the researched. As with all qualitative studies, my research project was a malleable process adapting to emerging themes, issues, and contextual situations that arose. I did my best to maintain acknowledgement of my biases and the ways in which my continued experiences and worldviews affected the way I generated knowledge, organized data, and interpreted information.

### Concepts Under Study

This study examined individuals at five different levels, botanical organization Staff, the Agency Partners who own and manage the protected open spaces where the volunteers performed restoration work, the Volunteer Leaders who organized restoration activities at each site, the volunteer Participants who attend restoration work days, and those who showed initial interest but later chose not to participate, the Nonparticipants. Table 5 outlines the attributes of the informants for this study. All participants agreeing to

participate in this study were given a cover letter. A variety of techniques and methods were used to collect data and will be described.

Table 5  
*Attributes of Case Study Participants*

	Participant Type				
	Botanic Org. Staff	Agency Partner	Volunteer Leader	Participants	Nonparticipants
Total PNP Members	3 <sup>1</sup>	4 <sup>2</sup>	6	Unkown <sup>3</sup>	17 <sup>4</sup>
Member Participation in Interviews or Focus Group	2	2	6	6	5
Attributes of Interview and Focus Group Participants					
Gender					
Male	1	0	1	3	0
Female	1	2	5	3	5
Time with Project					
≥ 4 seasons	2	0	2	1	0
1 – 3 seasons	0	2	4	5	0
0 seasons	0	0	0	0	5
Project Site <sup>5</sup>					
Site A	2	0	2	6	0
Site B	1	1	2	0	1
Site C	1	1	1	0	1
Site D	1	0	0	0	2
Life Stage					
Retired	0	0	2	1	1
Semi-Retired	0	0	1	2	0
Working	1	2	1	3	4
Returning to School	1	0	1	0	0
Lost Job	0	0	1	0	0

1. I am included as a staff member in this count.

2. Only two Agency Partners were available for interview. The Director of Site A had resigned. The Agency Partner from Site D was also unavailable.

3. It is unknown how many have participated with Site A over the years. A core list of approximately 10 make up the 'regular' participants but many others have participated through school, scout, neighborhood or other projects.

4. Of the total Nonparticipants 1, was male and 16 were female.

5. Staff was involved with multiple sites. Those not accounted for in the site totals for other participant types served as propagation volunteers preparing native plants for use at the sites.

### *Interviewing Methods*

Interviews were chosen for the Volunteer Leaders, Agency Partners and botanical organization Staff members. Based on the kinds of questions I wanted to ask and the



types of answers I hoped to receive, a semi-structured interview was used for this project (see Appendix B for interview scripts). The traits in semi-standard interviewing as explained by Berg (2007) are as follows: more or less structured, questions may be reordered during interview, wording of questions is flexible, interviewer may answer questions and make clarifications, and the interviewer may add or delete probes. The interview script was developed in advance and contained a predetermined number of questions. However, I also felt comfortable to digress, probe and make clarifications for the participant.

In an effort to ensure that participants clearly understood what I meant, the language used was reviewed to ensure it was at the level of the participants. Items were reviewed by experts and other researchers. Though the interview is not a natural communication exchange, every attempt was made to make the participants feel at ease. One way this was accomplished was by allowing the participant to choose the location for the interview. I made an attempt to build a rapport with the informants because I participated alongside them for several months before conducting any interviews.

I collected data about the Volunteer Leaders in the PNP project through open-ended interviews that took place over a three month period at the end of the project's grant period. These participants included botanical organization Staff who had worked on the PNP project (one former, one current), two Agency Partners, Volunteer Leaders working at the restoration sites (two with five seasons completed, two in their first season, and one shadowing in preparation for her first season), another Volunteer Leader who was solely doing propagation work for the PNP project was also interviewed. At the beginning of the interview I read information to participants regarding the study,

confidentiality and my request to tape record the interview. In addition to the open-ended questions, I asked probing questions or prompts as necessary. At times, the concepts of culture, community and reciprocity were confusing to individuals and clarification was cautiously provided. Having previously been trained through the University's School of Education in interviewing techniques for other projects, I was comfortable and relaxed in the interview process.

I personally conducted and taped all interviews which took place in a variety of locations. The locations were chosen by the interviewee at places convenient for them. Many took place at the botanical organization, several at actual restoration work sites and one at a coffee shop near one of the participant's homes. I transcribed all 10 interviews as well.

### *Focus Group Methods*

A focus group was chosen for the project Participants because I was interested in the interaction that would arise through this methodology. This group interview allowed me to direct the focus of the discussion as I played the role of moderator (see Appendix C for the focus group script). Though the focus group method has some weaknesses, such as the possibility of inaccurate information through group conformity, limitations on what a participant would say in a group or polarization whereby some participants express more extreme views than they might indeed hold, there are benefits to this type of data collection (Morgan, 1997). One of the identified strengths in the focus group approach is its ability to produce in-depth concentrated amounts of data on the exact topic of interest (Morgan, 1997). The interaction that focus groups provide can yield rich data based on group interaction that allows participants to bounce thoughts and ideas off one another

and to build upon the comments of others. Merton et al. (1990) have identified four criteria for successful focus groups including range, specificity, depth and personal context. Range was reached by covering all relevant topics as well as allowing all relevant information I may not have previously thought of to also be discussed. Specificity was obtained by using guided questions throughout the process to direct participants to share personal experiences rather than generalities. Depth was brought about by allowing the participants plenty of time to fully ponder and respond to questions. Lastly, personal context was achieved by allowing for natural interaction among focus group participants.

Because only one of the restoration sites had any active volunteers outside of the leaders, this was the only site to recruit volunteers from. Individuals that had participated with the site at any point and had provided an email address to the Volunteer Leaders were contacted. These individuals included volunteer participants who attended the restoration work days on a regular or semi-regular basis, students who had participated through one of the local universities in a special restoration work day at the site, K-12 teachers who had brought their classrooms or other school groups, as well as others who had participated in limited special work days. As the volunteer leaders had kept track of participants via email, a simple email message containing a flyer with dates, times, compensation and other information was also included. Copies of the flyer were also produced and provided to the volunteer leaders to distribute. The email solicitation was sent twice. Anyone who was interested in providing feedback, but who could not attend the focus group also had the opportunity to contact me and set up an individual appointment. Though one individual did contact me and express interest in providing

feedback, there was no follow through. Because the general rule of thumb for focus groups is between six to 10 participants (Morgan, 1997), that was the number sought for this project.

The solicitation for the focus group occurred over a one month period. Because participant involvement in the topic was high, a larger number of participants were not sought because maintaining discussion in the smaller group was not deemed to be a problem. Morgan (1997) sees small groups as having greater benefit not only when the topic is already of interest to the participants but also when the researcher is seeking a clear sense of each participant's reactions. Of the six individuals who participated in the focus group, none of them were students. Participants were compensated for their time by providing pizza and beverages as well as \$75 in cash.

The focus group took place in one of the rooms of the administration building at the botanical gardens. A relatively structured set of interview questions were used because this is an appropriate technique when research questions are well defined and a specific set of information is sought (Morgan, 1997). I taped the focus group and later transcribed the session.

The focus group session began with me discussing the project in generalities and explaining what my research interests were as well as informing the participants that I was there to learn from them about their experiences with the PNP project.

#### *Nonparticipant Questionnaires*

An open-ended email questionnaire was sent to all individuals who showed initial interest but chose not to participate in the PNP program. The email was sent to 17 nonparticipants and five email questionnaires were returned. The questionnaire can be

found in Appendix D. An initial email including an introductory letter and the questionnaire was sent and followed by an email reminder also containing the letter and questionnaire two weeks later. Nonparticipants were offered a \$5 gift card to their choice of Cold Stone Creamery or Einstein Bros. Bagels, only one individual who returned the questionnaire requested the reward.

### Data Analysis Strategy

Early steps in data analysis were derived from the suggestions of Miles and Huberman (1994) and followed a system of increasing complexity from descriptive to inferential. Propositions were analyzed and categorized using the suggested scale by Miles and Huberman (1994) and include: strong, qualified, neutral or contradictory.

Using the qualitative software, NVivo 8.0 (QSR International, 2008), three levels of coding were used to elucidate the major themes, metaphors and vignettes that gave meaning to the data. Throughout the entire process, I kept notes to myself and memos about anything in the data that stood out as unique, seemed important, appeared odd, or just made me wonder in case this information would enlighten the analysis process down the road.

The process was as follows:

1. The research questions were first reviewed in order to derive an initial coding scheme.
2. A brief contact sheet for each interview was completed by listening to the tape recording of each informant's interview.
3. The first round of coding was completed by simply reading through each of the transcripts as well as reading through the relevant documents. I took

notes about issues or ideas that came up that might add to or change the initial coding scheme developed from the research questions. Using NVivo, codes were developed (referred to as nodes in NVivo) and applied to sections of text. These codes were then placed into a tree showing the ties between them. Text that seemed relevant to the research questions but did not fit into the initial coding scheme was marked with new codes (referred to as free nodes in NVivo).

4. After the first round was complete, I revisited the coding scheme that had been derived from the research questions and revised where necessary after seeing the data holistically. The free nodes were examined for how they might fit into the coding structures and were included in the tree structure if appropriate.
5. The second round of coding consisted of reviewing the revised scheme that incorporated the free nodes and going back through the data to re-code where necessary. Sections that didn't seem to fit within the coding scheme were flagged for further inspection.
6. The third level of coding consisted of further analyzing the data for broad patterns or themes incorporating or rejecting the flagged codes from the previous step and making some conclusions about the data.
7. Finally, with the third level of coding in hand, I returned to the literature to place the analysis in context and review for any gaps needing further attention. The final coding scheme used for the study is found in Figure 5.

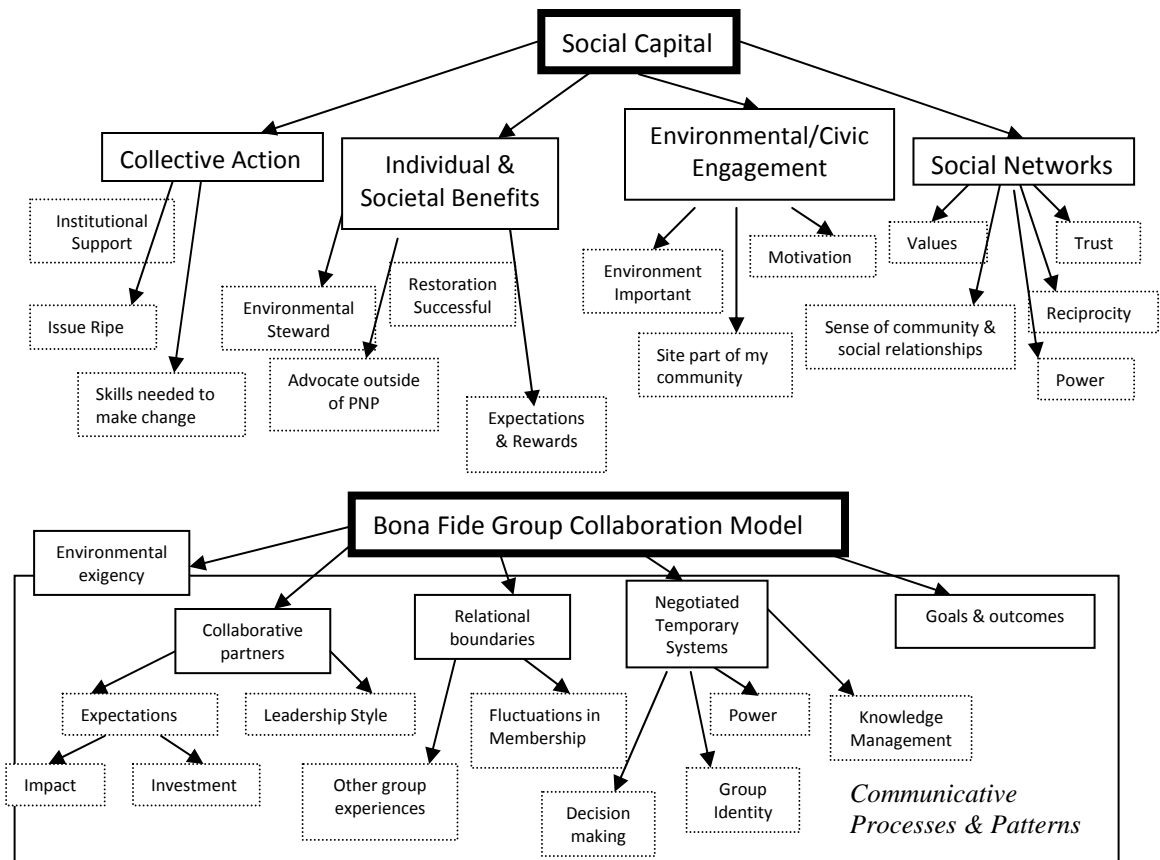


Figure 5. Final coding schemes.

## CHAPTER 4 – SOCIAL CAPITAL AND COMMUNITY-BASED ECOLOGICAL RESTORATION IN AN URBAN SETTING

### Abstract

This case study describes the role of social capital in an urban, nonprofit organization. The organization, the Partners for Native Plants (PNP) group, was a grant-funded project of a western U.S. nonprofit botanical organization designed to involve urbanites in riparian plant restoration projects. The PNP project was examined to determine whether engagement in the social capital cycle could lead to an environmental ethic among urban participants. Data were collected over a yearlong period through a review of organizational documents, in-depth interviews, a focus group, and open-ended questionnaires. Results demonstrate how social capital can be conceptualized as a cycle including (a) engagement, (b) social networks, (c) collective action, and (d) individual and social benefits. I found two impediments to enhancing an environmental ethic among PNP participants. First, Volunteer Leaders and Volunteer Participants had markedly different experiences while engaged with PNP, resulting in varying levels of satisfaction. In addition, participants' environmental ethic was not significantly enhanced by the project because participants already held strong pro-environmental values at the inception of the project, which motivated them to participate initially. The advocacy behaviors of PNP participants did increase, however. These results suggest that when participants in ecological restoration projects are willing to share their knowledge and enthusiasm with



others in their communities, there may be potential for building an urban environmental ethic.

Keywords: social capital, ecological restoration, environmental ethic, nonprofit organizations, urban environment

### Introduction

Much of the focus of the environmental movement has been on preservation of pristine landscapes in rural areas or developing nations. The vast majority of environmental impacts, however, come from developed urban centers because of their concentrated populations. Approximately seventy-five percent of people living in the Americas and Europe live in an urban area (Tibaijuka, 2007); this is an enormous growth in urbanization given that less than 10 percent of the world was urban at the turn of the twentieth century (Leitmann, 1999). There is a growing recognition that healthy ecosystems provide services to human populations and this reliance on nature can be disrupted by patterns of irresponsibility (Lee, 2007). Increased development associated with growing urban centers tends to degrade not only the remaining natural environments in these urban areas, but also the quality of life for urban residents. It is therefore becoming increasingly important to understand how urbanites might form an environmental ethic. Environmental ethic can be defined as “an ecological conscience or moral that reflects a commitment and responsibility toward the environment, including plants and animals as well as present and future generations of people” (United Nations Educational, Scientific, and Cultural Organization, 1983, p. 13).

As the nonprofit sector continues to grow (Powell & Steinberg, 2006), urban community-based conservation projects created by these organizations may have the ability to encourage an environmental ethic. Light (2001) suggests that community-based ecological restoration projects have the potential for developing an urban ecological citizenship by stimulating the public to participate in environmental issues. Ecological restoration is defined as “the process of assisting the recovery of an ecosystem that has been degraded, damaged, or destroyed” (Society for Ecological Restoration, 2004, p. 3). Schroeder (1996) expands this traditional view of restoration and suggests that it include a reciprocal relationship that also restores the human bond to nature. Ecological restoration may provide ways to enhance relationships between individuals and the natural environment, either through direct participation in a project or the indirect effects of restoration occurring in an individual’s community (Geist & Galatowitsch, 1999). The welfare of a community can be enhanced through the additional social values restoration provides including community pride, aesthetics, and a sense of stewardship (Holl & Howarth, 2000). These projects may not only enhance the well-being of those residing in the community in question, but may also enhance the natural environment as well.

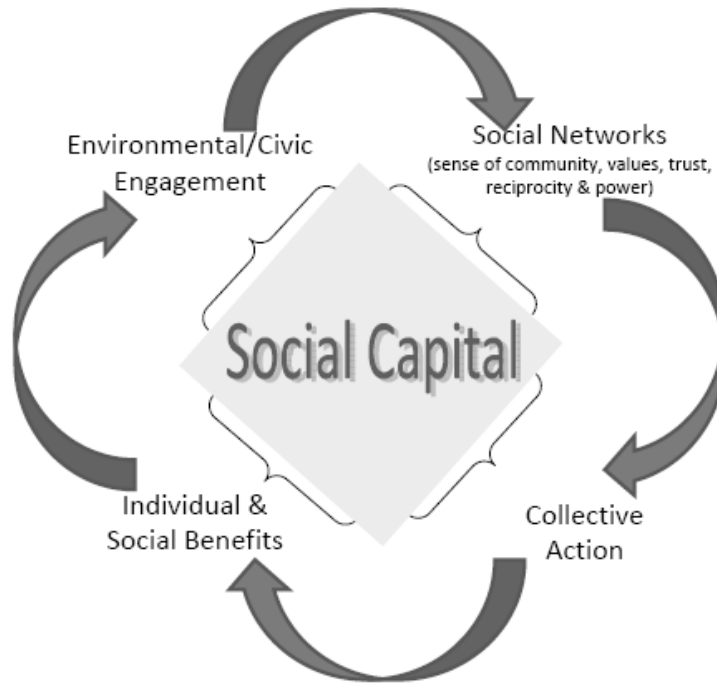
Social capital refers to relationships of trust and reciprocity leading to enhanced social networks, which may benefit individuals and communities in various ways, including facilitating collective action (Putnam, 1993). As a result, benefits may accrue on an individual and a community level. According to Wagner & Fernandez-Gimenez (2008) “further research is needed to understand . . . how social capital developed in groups translates into benefits for communities” (pp. 341-342). To assess whether ecological restoration could provide such benefits, I applied social capital theory to the

analysis of our case study. This study was undertaken to examine whether a community-based ecological restoration project, the Partners for Native Plants (PNP) encouraged an environmental ethic among urban residents. The objectives of this research were to: (a) describe the components of the social capital cycle occurring at our research site as adapted from Rohe (2004) including engagement, social networks, collective action, and social and individual benefits (see Figure 6) and (b) investigate whether the PNP project results in the benefit of an enhanced environmental ethic among urban residents. I posed four propositions about the cycle of social capital within the study site:

1. Engagement with the PNP project will lead to increased social networks, described as social relationships, trust, and reciprocity, among PNP participants.
2. Enhanced levels of social networks within PNP will lead to participant beliefs that their collective efforts are worthwhile and successful.
3. Belief in effective collective action taken through PNP will lead to individual and societal benefits including an enhanced environmental ethic in participants.
4. Benefits experienced will lead to continued involvement with the PNP project.

### Social Capital

Social capital can be defined as “the presence of effective human networks and social cohesion, which are manifested in effective institutions and processes where people can cooperate for mutual advantage” (Landman, 2004, p. 38). Buchan (2003) has distilled social capital down to the “glue” made up of community norms, values, and networks that brings people together to work toward a common cause; without this glue, human alienation and environmental degradation occur. Thus, social capital refers to the *relationships* between people and not just people themselves.



*Figure 6. The cyclical nature of social capital. Adapted from Rohe (2004).*

Social capital can be seen as both an individual and a collective good. As an individual good, social capital can help individuals by providing social networks that enhance our ability to get ahead (Putnam, 1993; Briggs, 2004). This informal organization of social relationships categorizes our everyday experience. Social capital as a collective good helps groups and communities to solve collective action problems including managing environmental commons (Briggs, 2004). As a collective good, social capital may benefit many members of society, including those who do not actively participate in creating a social benefit. Woolcock and Narayan (2000) believe that the basic tenets of social capital, that an individual's networks can be leveraged for material gain, called on in a crisis or enjoyed for its own sake, also hold true for groups. In terms of environmental stewardship, restoration work often benefits entire communities rather than a select group of individuals and can thus be considered a public good.

In this project I examine social capital as a process where the cycle consists of the components, adapted from Rohe (2004), of engagement, social networks, collective action, and individual and social benefits (see Figure 6). This perspective views social capital as a process in contrast to the more conventional view that defines social capital as a network of relationships and their characteristic levels of trust and reciprocity. Our analysis of social capital implies that building relationships and networks among individuals is not social capital if no action is taken and no benefits are accrued as a result of these relationships.

The frequent starting point in this cyclical process is engagement with a problem or issue that requires or benefits from collective action. Citizens can engage with their local environments in a variety of ways through their beliefs and actions. Tilly (1973) suggests that actions regarding any issue, including the environment, occur most commonly in reaction to a perceived crisis. Collective action occurs when community members share a perception of harm if no action is taken (Ostrom, 1990). Clary and Snyder (1999) found that when persuasive messages address a specific motivation important to the target audience, engagement is more likely. Because environmental problems are often complex, it is important to understand the motivations that drive citizens to contribute time and involvement in environmental projects.

The social networks an individual associates with encourage group life. Social capital is an invisible form of capital as it is built upon unseen social structures and relationships that form the foundation of networks (Koniordos, 2008). These networks are built upon trust, reciprocity, and a sense of community. Many believe that homogeneous groups with mutual trust and shared norms, working locally will be the

most successful in environmental problem-solving (Ostrom, 1990). Sense of community is an important consideration in understanding the development of these networks.

Collective action occurs when two or more people collaborate to achieve a collective good or shared outcome. At its most basic, collective action involves a transition from individuals acting in a private domain to taking action in a public one (Bimber, Flanagan, & Stohl, 2005). Effective collective action can lead to societal benefits. In the case of the environment, these benefits can include restored ecosystems, enhanced community relationships, and increased stewardship behavior among residents. The belief in the efficacy of actions taken can lead to benefits for the individual as well.

The application of social capital theory to natural resource initiatives is not new. Many of these studies have examined the link between social capital and collective action (as examples, see Adger, 2003; Pretty & Ward, 2001). Previous studies of social capital in natural resource collaborations often involved individuals who either derive their livelihoods from the resource the action is oriented toward or have some other direct connection to the resource. These studies frequently focus on rural areas. In addition, previous studies of social capital in the context of natural resource collaboration have focused on building trust and managing conflict (as examples, see Leach, 2002; Wagner and Fernandez-Gimenez, 2008, 2009). This study differs in two primary ways. First, I examine social capital as a process rather than an outcome. This process includes engagement and the resulting benefits from taking action. This is in part because the participants of the PNP project were urban residents working in urban natural areas that exist more for aesthetic enjoyment than for resource extraction. Participants are therefore not directly reliant on the resources provided by the restoration sites for their livelihoods.

Our focus was not to examine how or why they might take collective action, but rather to understand whether collective action leads to the community benefit of an enhanced environmental ethic. Understanding the process in its entirety was necessary to examine our research question. Second, conflicting interests were not an issue in the study group and therefore trust was less important to developing social capital than in other studies of multistakeholder collaborative contexts.

## Methods

### *Study Site*

Municipalities in the arid western U.S. states increasingly encourage sustainable water use and public awareness about water-related issues. Urban sections of river are often subject to community-based restoration activities including native plant restoration projects. The Partners for Native Plants (PNP) project was started by a staff member working in a large western nonprofit botanical organization in early 2000. The project was founded on the belief that plant restoration and protection of native species are needed across the western states, yet organizations that cross traditional organizational boundaries to focus on these problems are not common. A well-trained cadre of volunteers could help support not only nonprofit organizations wishing to protect native plants, but also various levels of government. The objectives of the PNP project are two-fold: to create a framework for interagency cooperation and to build a community of highly trained volunteers to address native plant threats that might otherwise be neglected due to limited resources.

In 2002, the botanical organization recruited two volunteers to lead a project to restore native plants and remove invasive plant species at a local natural area, Site A. For

the first few years, staff from the botanical organization worked closely with these volunteer leaders assisting them in plant identification, restoration techniques and propagation of native species. Until the group received a national grant to broaden the project in 2006, the restoration efforts of PNP were restricted to this single site. The group also sought additional Agency Partners managing natural areas in the west who would be interested in working with a group of volunteers trained through the project. Several organizations were interested and a partnership was formed where additional urban natural areas were included in the restoration efforts of the PNP volunteers (see Table 5). In addition to the botanical organization staff, PNP engaged community members on various levels: (a) Agency Partners representing the project sites, (b) Volunteer Leaders who guided the restoration efforts, and (c) Volunteer Participants who contributed to the restoration work.

I examined this case from October 2006 to September 2007, when I was hired to develop the program, recruit volunteers, create training materials and sessions and expand the project. While there, I worked in varying roles as a botanical organization staff person, Volunteer Participant and Volunteer Leader, as well as a participant observer/researcher.

### *Data Collection*

The case study approach was the most appropriate for this study because the research focused on the investigation of a contemporary phenomenon in real life (Yin, 2003). A single case design was used because PNP was a unique case. Though there are likely other community-based restoration programs, the location, partner agencies and other circumstances involved in PNP were distinct.



Table 5  
*Description of Partners for Native Plants Project Sites*

	PNP Partner Sites			
	Site A	Site B	Site C	Site D
Managing Agency	Nonprofit environmental education center	City B Natural Areas Program	City C Natural Areas Program	Watershed stewardship group
Description	Considered an urban wildlife refuge and outdoor classroom. Site was left alone for over 50 years and thus rich with wildlife.	Given to city as a prairie dog park for active relocation. Not yet open to the public as the site is gated and locked, but access is available via a regional greenway trail.	Site is not actively managed, but not closed to the public as access via a regional greenway trail is possible. Parts of the land are driven on by city utility crews and are therefore highly disturbed.	An old agricultural creek, channelized environment with much work already completed including reclamation and stream bank stabilization. Historic farm house on property.
Approximate Size	123 acres	36 acres	40 acres	40 acres

I used qualitative methods to collect and analyze the data. Specifically I conducted: (a) interviews with volunteer leaders, partner organization representatives, and botanical organization staff, (b) a focus group with nonleader participants, (c) nonparticipant open-ended questionnaires, and (d) participant observation. In addition I collected emails and other group documents. Table 6 lists the attributes of the participants.

### *Interviews*

A semi-structured interview protocol was used for this project. Participants were asked questions about their motivations and expectations for participation, their sense of community, levels of trust and sense of reciprocity, and perceptions of the environment, as well as general thoughts about their participation with PNP. The interviews took place over 3 months at the end of the project's grant period. The interview participants included botanical organization staff who had worked on the PNP project (one former, one

current), two Agency Partners, and all of the Volunteer Leaders working at the restoration sites (two with five seasons completed, two in their first season, and one shadowing in preparation for her first season). Another Volunteer Leader who was doing propagation work for the project was also interviewed.

Table 6  
*Attributes of Case Study Participants*

	Participant Type				
	Botanical Organization Staff	Agency Partner	Volunteer Leader	Participants	Non participants
Total PNP Members	3 <sup>1</sup>	4 <sup>2</sup>	6	Unkown <sup>3</sup>	17 <sup>4</sup>
Participation in Interviews and Focus Group	2	2	6	6	5
Attributes of Interview and Focus Group Participants					
Gender					
Male	1	0	1	3	0
Female	1	2	5	3	5
Time with Project					
≥ 4 seasons	2	0	2	1	0
1 – 3 seasons	0	2	4	5	0
0 seasons	0	0	0	0	5
Project Site <sup>5</sup>					
Site A	2	0	2	6	0
Site B	1	1	2	0	1
Site C	1	1	1	0	1
Site D	1	0	0	0	2
Life Stage					
Retired	0	0	2	1	1
Semi-Retired	0	0	1	2	0
Working	1	2	1	3	4
Returning to School	1	0	1	0	0
Lost Job	0	0	1	0	0

1. I am included as a staff member in this count.

2. Only two Agency Partners were available for interview. The Director of Site A had resigned. The Agency Partner from Site D was also unavailable.

3. It is unknown how many have participated with Site A over the years. A core list of approximately 10 make up the 'regular' participants but many others have participated through school, scout, neighborhood or other projects.

4. Of the total Nonparticipants, 1 was male and 16 were female.

5. Staff was involved with multiple sites. Those not accounted for in the site totals for other participant types served as propagation volunteers preparing native plants for use at the sites.

### *Focus Group*

A focus group was conducted with the Volunteer Participants to encourage interaction. Only one of the restoration sites, Site A, had active volunteers outside of the leaders, and was therefore the only site represented in the focus group. Individuals who had participated with the site at any point were contacted. These individuals included Volunteer Participants who attended the restoration work days on a regular or semi-regular basis, students who had participated through one of the local universities in a special restoration work day at the site, K-12 teachers who had brought their classrooms or other school groups, as well as others who had participated in limited special work days. As the Volunteer Leaders had kept track of Volunteer Participants via email, an email message was sent to participants containing an invitation to participate in the focus group. Six participants attended the focus group, which began with an overview of the project and research questions. Focus group participants were asked a similar set of questions as those posed to interview participants.

### *Nonparticipant Questionnaires*

An open-ended email questionnaire was sent to all individuals who showed initial interest but chose not to participate in the PNP program. These individuals had either attended the informational recruitment session or contacted the botanical organization about interest in the project. The email was sent to 17 Nonparticipants and five email questionnaires were returned.

### *Data Analysis*

The data analysis process followed the recommendations of Miles and Huberman (1994), beginning with descriptive analysis leading to later inferences. Propositions were

analyzed and categorized using the scale suggested by Miles and Huberman (1994) which classifies support for each proposition as strong, qualified, neutral or contradictory.

Using the qualitative software, NVivo 8.0 (QSR International, 2008), three levels of coding were used to elucidate the major themes that gave meaning to the data. Codes were applied to sections of text in the transcriptions of the interviews and focus groups as well as the emails, group documents, and participant-observer notes using the following process.

First, the propositions were reviewed in order to derive an initial coding scheme. Second, a brief contact sheet for each interview was used to record informant attributes. Third, I completed the first round of coding by reading through each of the transcripts as well as reading through the relevant documents. I took notes about issues or ideas that came up that might add to or change the initial coding scheme developed from the propositions. Using NVivo, codes were developed (referred to as nodes in NVivo) and applied to sections of text (e.g. 'sense of community', 'trust', 'motivations', etc.). These codes were then placed into a tree showing the ties between them. Text that seemed relevant to the research questions but did not fit into the initial coding scheme was marked with new codes (referred to as free nodes in NVivo). Fourth, after the first round was complete, I revisited the coding scheme that had been derived from the research questions and revised where necessary after seeing the data holistically. The free nodes were examined for how they might fit into the coding structures and were included in the tree if appropriate. The fifth step involved a second round of coding, which consisted of reviewing the revised scheme that incorporated the free nodes and going back through the data to re-code where necessary. Sections that didn't seem to fit within the coding

scheme were flagged for further inspection. The sixth step involved a third level of coding which consisted of further analyzing the data for broad patterns or themes incorporating or rejecting the flagged codes from the previous step and making some conclusions about the data. Finally, with the third level of coding in hand, I returned to the literature to place the analysis in context and review for any gaps needing further attention.

## Results and Discussion

In this section I will present the results of our analysis by summarizing the main findings in the text and tables, and providing supporting evidence in the form of representative quotations from interviews and focus groups. As each major finding is reported, I discuss the results and their significance in the context of the relevant literature.

Our presentation of the results is organized in relation to the two main research objectives: (a) describe the components of the social capital cycle occurring at our research site as adapted from Rohe (2004) including engagement, social networks, collective action, and social and individual benefits and (b) investigate whether the PNP project results in the benefit of an enhanced environmental ethic among urban residents. Thus, I present both descriptive findings that address objective a, as well as the evaluation of the evidence in relation to our propositions (objective b), to determine if the findings show strong, qualified, neutral or contradictory support for each.

## *Engagement*

Table 7 summarizes the findings of the Engagement measures including: (a) the motivations by participant type and (b) other factors that influenced engagement from Nonparticipants.

Table 7  
*Engagement Measures and Results by Participant Type*

	Botanical Organization Staff	Agency Partners	Volunteer Leaders	Participants	Nonparticipants
	One common: Environmental protection				
Motivations	Engaging citizens, help with important work, agency too small to do it alone		Career, learning, physical activity, social		Similar to participants, but no follow through
Other factors influencing engagement					Time constraints, life transitions, apathy

### *Motivations for Participation*

The functional approach to volunteerism developed by Clary & Snyder (1999) considers six different functions that play varying roles in volunteer motivations, these include: (a) values, (b) understanding in the form of a desire to learn or utilize skills, (c) enhancement of an individual psychologically, (d) ability to gain career related experience, (e) ability to strengthen social networks, and (f) the hope of reducing negative feelings such as stress, termed the protective function. Bruyere and Rappe (2007) have noted, specifically with outdoor projects, that helping the environment is an important motivating factor for volunteers. These motivations were demonstrated in participant comments, which included:

1. gaining career related experience,

“It really just helps in my career direction but also just ethical standpoint of the environment too.” – Participant Chris

2. learning new or using current skills and knowledge,

“I went to the volunteer department here and said how can I meaningfully volunteer whatever skills I might have?” – Participant Sam

“You’re always learning, you’re always finding out things that other people know, you know? Things that interest you that you didn’t know before, and it’s just a way to learn a lot more.” – Participant Pat

“I wanted to see if I could further my plant knowledge.” – Nonparticipant Terry

3. getting physical activity, and

“It provides me a satisfaction of working in the outdoors, being active, physically active, which I find very rewarding.” – Participant Sam

“I was looking for something to do . . . something more physical and more participatory.” – Volunteer Leader Robin

4. connecting with others and building their social networks.

“A desire to connect with other kind and like-minded folks while doing something good for the environment.” – Nonparticipant Jessie

“I got to the point where [I thought] ‘wouldn’t it be nice to meet more people, and talk to more people with my same interest?’” – Participant Chris

Because individuals deliberately invest in strategies to grow their networks (Koniordos, 2008), it is not surprising that some of the PNP participants expressed an interest in these types of connections and relationships in their motivations for joining. Two of the participants involved were new to the area and expressed a desire to meet others and build their community.

“I lost my job [and moved], so I’m having to start over and find a new community which has kind of been a challenge . . . trying to find people my own age, my own interests, my own community . . . but the gardens is good for doing that and the [PNP] project.” – Volunteer Leader Robin

Additional participants also expressed common aims in joining the PNP group.

“For me it’s a chance to preach the gospel of restoration ecology and try and work with people . . . share that feeling of satisfaction.” – Participant Parker

A few others expressed different views, sharing that though the experiences volunteering with others had been pleasant, interaction with others was not a primary motivation or a required component for their involvement with the project. When asked if camaraderie was a driver for her at all, one participant responded:

“Um, no, because it’s not . . . well, for me just being outside, helping an area get better established with native plants or plantings that are there not necessarily native but uh just trying to do the best for that area. I’ve worked alone many times and it doesn’t bother me working alone as camaraderie isn’t one of my top reasons for volunteer projects.” – Volunteer Leader Francis

Another participant remarked:

“I never found working with other people to be the motivating force for me. I know that’s different with other people, I’ve seen other people like the . . . I tend to shy away from the group effort, just because that’s my personality but I’m sure there’s a lot of other people who just enjoy that fellowship.” – Participant Sam

Agency Partners and staff of the botanical organization expressed their motivations for initiating and participating in the project slightly differently than the other participants. Their desire was to engage citizens in their environmental work in hope of creating stewards and educated voters, build a committed community, and receiving much needed assistance in this type of work.

“. . . we were interested because [we] want to promote native plants and removing non-native plants particularly in our riparian ecosystems . . . we also foster the use of citizen scientists and citizen stewards because that just creates better neighbors we think and um, a better stewardship ethic in the whole community. . . stewardship is the most powerful way to do a



better job of taking care of our resources because we can't do it by ourselves, our department is too small." – Agency Partner Jamie

"I think the sort of unspoken goal has been that the more people we can get involved, the more understanding we'd have from people, the general public about these issues . . . you know so that people understand . . . and could help us when it came time to, you know, thinking about drilling in the Roan Plateau, they would understand rare plant issues and you know, maybe were able to make a more informed decision voting . . ." – Botanical Organization Staff Sydney

All participants no matter their role shared one common motivation. Each participant and nonparticipant expressed the importance of human care for the environment. This shared interest was vital in initiating involvement with PNP.

"I feel really strong about the environment and doing what's right by it." – Participant Alex

". . . cities, counties, municipalities, have all been allowed to dump their street trash into our rivers, which then flow to our oceans and subsequently end up in many different places, but in huge amounts. And when I looked at this, I thought, how can this city dump trash in the middle of a nature preserve and get away with it? . . . so I myself decided I'm taking this project on . . . you need a champion who can say 'wait a minute, enough is enough'." – Participant Sam

"I think its more philosophical . . . what God puts in your hand to care for and I think that there are a lot of things around environmentally that we have little control over, but I think there's a phenomenal amount that we are[able to care for] and I think as stewards of that we have an obligation to for it as a whole." – Volunteer Leader Robin

"[The environment is] extremely important. Our natural environment is the essence of our humanity." – Nonparticipant Cameron

Although participants and Nonparticipants shared a common interest in caring for the environment, many additional constraints can account for the difference between those who became involved with PNP and those who did not. These differences include:

(a) time constraints, (b) connection to the site as part of one's community, and (c) transitions in one's life.

"Reasons [for not participating] were hectic life, tiredness, job transition, and regrettably, apathy." – Nonparticipant Jessie

"I am overextended and had a very busy schedule this season." – Nonparticipant Taylor

"The location was so far away and the place was so average that it didn't at all seem a part of my community – I have places like that in my own neighborhood I could work on, why would I drive 20 miles to work on 'someone else's' piece of land?" – Nonparticipant Devin

One individual even expressed that she hadn't ended her participation but rather put it on hold until she would be able to more fully commit.

"I haven't ended my participation; I have just not been able to participate as I had planned because of my current work situation. I'm hoping to remedy that in the future." – Nonparticipant Cameron

#### *Proposition 1. Engagement Leads to Social Networks*

Volunteer Leaders believed that participation strengthened their social networks but Volunteer Participants did not. Leaders expressed that their involvement with and engagement in PNP led to enhanced relationships with others inside the group. One of the Volunteer Leaders stated:

"The people I volunteer with I would consider friends and they're part of my community . . . just because they come I feel like we have some sort of link." – Volunteer Leader Morgan

Volunteer Participants, however, expressed how participation in PNP had not lead to stronger relationships or a sense of community within the group. One participant commented:

"I volunteered more in the past, but I still volunteer some amount . . . but it's like I would drive out on Wednesday mornings and hop out of the car – whether I came or not was kind a, 'oh – you're here', and it's like 'oh,

OK’ – it’s like nobody seemed to care whether I came – I mean, I think they cared because there was one less person to bag [weeds].” – Volunteer Participant Alex

Proposition 1 was found to be neutral. The differences in the roles of PNP participants seem to influence whether social networks were built. The proposition is supported by the beliefs of the Volunteer Leaders, but contradicted by the Volunteer Participants. For the PNP, both engagement and a participant’s role within the group determined whether social networks were built.

### *Social Networks*

According to Rothenbuhler (1991), community is frequently thought of as a geographic location, but it can also be something more abstract, such as a process, interaction, feeling, or structure. Community can also be a group of individuals who share values, interests, occupations or other mutual commonalities. Often individuals identify with people whom they perceive as similar to them and will consider this group their community. This sense of belonging to a community and the consequent relationships formed may influence an individual’s participation in community events.

To examine social networks in this study, I allowed participants to define and describe community in their own terms. Table 8 summarizes the findings of the Social Networks measures including: (a) community descriptions, (b) site part of community (c) sense of community, (d) values, (e) trust, and (f) reciprocity.

### *Community Description*

Individuals described their existing social networks and new relationships they hoped to gain in a variety of ways. Most described these networks by the characteristics

of those they tend to associate themselves with, namely people who share traits or beliefs with them.

Table 8

*Social Network Measures and Results by Participant Type*

	Botanical Organization Staff	Agency Partners	Volunteer Leaders	Participants	Nonparticipants
Community description	Common: Occasionally by geography, often by traits such as liberal, educated, tree huggers, plant people, etc.				
Site part of community	Yes	Yes	Yes	Yes	No
Values	Common environmental value, predominantly shared perception that those outside PNP were different or those involved in PNP were the fringe				
Trust	Shared sense of trust for all people				
Reciprocity	General feeling of good will toward others and given by others				

When asked to describe the community they identified with, participants described it as follows:

“. . . educated but not in an exclusive way . . . people who are interested in learning and in changing and seeing other places and trying things.” – Volunteer Leader Morgan

“The liberal fringe of the white middle class . . . I think like most people, I surround myself with people like me.” – Volunteer Leader Lou

“You tend to associate or to align yourself with people who tend to support or agree with what you’re doing . . . I enjoy being around people who are not as material as our society tends to be, who are more earthy, like the natural world and wildlife . . . who are concerned about other feelings whether its both animal or another human being.” Agency Partner Avery

“Liberal, educated, hippie types . . . the environmental and socially conscious! I associate with a similar group of people [to me].” – Botanical Organization Staff Sydney

“The plant geek in me likes people that feel like doing something concrete, giving something back to the world, concrete is important. Plant lovers and animal lovers.” – Volunteer Leader Shawn

However, some participants described their community in terms of geography or attributes of a physical location.

“I think community to me and the projects that I’ve been involved with are anything that has to do with conservation and preservation of any type of land. . . anything that has to do with that, regardless of where it is is kind of my community.” – Volunteer Leader Francis

### *Site Part of Community*

Feeling a connection to the physical PNP sites was important. Almost all of the Volunteer Leaders, Participants and Agency Partners stated that the PNP site they were involved with was part of their self-described community.

“Well, the water that comes down the Creek hits the [my city] water treatment plant and I get some of my water from there . . . The older you get, the bigger you realize that your community is.” – Volunteer Leader Lou

“The particular area that we were working on this summer is a wildlife and human corridor because a lot of our riparian areas serve not only as wildlife corridors, but also as trail corridors . . . so its part of our community.” – Agency Partner Jamie

The one notable exception in feeling connected to the PNP sites came from the individual, who showed initial interest in the project, attended one site meeting, but then chose to end her participation. This lack of connection to the site as part of her community was a primary reason she chose not to participate in the project. Her comment can be found as one of the constraints listed in the engagement section.

### *Shared Values*

Participants believe that others in the PNP group share similar values with them; again all individuals involved expressed a strong motivation demonstrating care for the environment. Additionally, many of the PNP individuals expressed their belief that others outside the group did not possess the same environmental values.

“I see myself being on the fringe and that fringe edge that I’m in is populated by other environmentalists and they um, they think differently than the people in the middle.” – Volunteer Leader Lou

“I think I’m the minority. I think if it went to the minority we wouldn’t have these issues. I think there would be more protection and more appreciation of our open space, our natural open space. I don’t think that wildlife would be endangered like it is.” – Agency Partner Avery

One of the Volunteer Leaders even gave an example showing her surprise that more people did not hold environmental values similar to those in the PNP group.

“. . . the highway department was going to, talking about putting wild, or native species on the medians and stuff, but there was this big thing [about it] and we were like, ‘of course they should’, and we couldn’t really understand why anybody would prefer the pristine mowed lot that is there now.” – Volunteer Leader Morgan

Only one participant expressed a slightly different view, believing that most people do value the environment as the PNP participants do, yet for a variety of reasons do not take action.

“I think most people have that kind of value though they may not act on it, um for various reasons, lack of time, you know, whatever, but I do have this sense that most people have that view and value, deep seated value in the importance of environmental work.” – Volunteer Leader Dee

These shared environmental values among the PNP participants helped create a bond and a commonly held perception that many outside the group were different than those inside the PNP project.

### *Trust and Reciprocity*

Lemmel (2001) notes that trust-based relationships are key to the formation of social capital among group members working toward civic renewal. In addition to trust, ideas about reciprocity or returning acts of good will toward one another can be important in the development of cohesive relationships and communities. Reciprocity assumes a

system of revolving aid whereby obligations are paid back by aiding another in the community at another point in time. Community members give knowing that somehow, within the context of the group, they will receive in return (Hutchinson, 2004). Trust and reciprocity were articulated by all of those involved. In particular, most of the participants expressed a *benefit of the doubt* kind of mentality toward people in general.

“I’m the kind of person that generally trusts people at the outset . . . with everybody I have met [through the project] I felt real comfortable with, nobody’s betrayed me I guess, or the trust that I’ve felt for them over time.” – Volunteer Leader Dee

“I think that most people should be trusted initially and then if for some reason they should be anymore, I like to give people the benefit of trust at the beginning. . .” – Agency Partner Jamie

However, some participants also expressed that their trust could depend on the situation. Others stated that they have been told their trust in people is naive or in need of closer evaluation.

“. . . I know others approach it differently, but I know our staff is very much lets trust people first to do the right thing.” – Agency Partner Jamie

“I know a lot of people who are the reverse; they don’t trust people until they see how people behave, what they do and what their actions are.” – Volunteer Leader Dee

“I think I would trust lots of people, but I’ve been told that that’s naive and that people shouldn’t be trusted.” – Volunteer Leader Morgan

“I think that’s why you have to pick the people to relate to because those are the ones that you tend to trust. I think people who are earthy and really care about others, I think they can be trusted, but people who are out to claim fame for themselves, the political environment, the political environment can’t be trusted.” – Agency Partner Avery

In terms of reciprocity, or returning acts of good will, many respondents when asked “does it seem like most people in your community return acts of good will” had

similar responses such as “yeah, I think so” (Volunteer Leader Dee) and “yes, yes” (Volunteer Leader Robin) and “very much so, yeah, yeah, unless they’re very proud” (Botanical Organization Staff Sydney). Other PNP folks described this in further detail stating:

“I think that people are . . . in the area they live in that they do acts of good will within that conscious framework.” – Volunteer Leader Lou

“I’m always impressed by how kind people are . . . usually acts of kindness bring back more acts of kindness.” – Botanical Organization Staff Casey

### *Proposition 2. Social Networks Lead to Collective Action*

As with the first proposition, there was a divide expressed among participant types. A sense of community was strong among Volunteer Leaders but weak among the Volunteer Participants. A pattern emerged showing that Volunteer Leaders and Volunteer Participants did not feel the development of social networks equally.

Volunteer Leaders at the long standing site expressed a sense of fellowship as did Volunteer Leaders who had joined the project during the year of the study. They articulated how these relationships encouraged their participation in the project.

“. . . camaraderie, its always nice to have a bunch of people that have similar interests and it’s a sort of synergy I guess to have people come together, and there’s a lot of energy I guess . . . you end up like colleagues and we work together..” – Volunteer Leader Dee

“I feel pretty close to [the others] and we talk a lot while we are volunteering so it’s fun. Stuff is getting done and there’s a sense of accomplishment, but it’s also fun like we talk about our book groups and what’s going on and news . . . I feel like I have friends there.” – Volunteer Leader Morgan



One of the Volunteer Leaders even expressed how her former community didn't value the environment so she took less action. Now that she was finding a new community with the PNP, she described how this influenced her to take more action.

“The community that I came from didn't highly value environmental things . . . so it was always easy to say, well I couldn't possibly do that, I have to work all weekend. I couldn't possibly do that I have to work tomorrow night. Well, now that I'm having to start over and find a new community . . . it's like you have no more excuses, so it's a put up or shut up kind of operation.” – Volunteer Leader Robin

However, in response to a question about the relationship with others in the PNP project, Participants of long-standing Site A articulated quite different views:

“I've never drawn, in my work as a volunteer, I've never had a sense of community drawn from the other volunteers . . . Because there are so many opportunities out there, and if it doesn't work out here, I'm gonna go somewhere else.” – Participant Sam

And in response another participant said:

“Are the volunteers something instead of just slave labor?” – Participant Parker

Even though not all participants articulated a motivation to build their social networks, it was still an important factor in encouraging action among individuals. Just as building social networks encouraged taking collective action, the lack of social network building influenced individual decisions to end their action with PNP. These findings lead us to the conclusion that Proposition 2 is strongly supported.

#### *Collective Action & Societal Benefits*

Typically the results of collective action are nonexcludable, meaning that relevant individuals cannot be excluded from benefiting from the resulting public good inherent in

collective actions regardless of their contributions to the effort (Bimber, Flanagan, & Stohl, 2005). Bridger and Luloff (2001) point out that even though clean air and water, as well as healthy stocks of natural resources, are in an entire community's best long-term interest, in the short-term many individuals simply become free riders reaping the benefits of a clean environment without actively participating in activities that contribute to the environmental health of the entire community. This free riding, in essence, demonstrates how collective action can produce social benefits to the broader community in which the PNP project operates.

To examine the collective action occurring at our study sites, I looked at whether participants believed that their efforts were successful. Table 9 summarizes the findings of the Collective Action measures and also shows the societal benefits from taking action.

Table 9

*Collective Action Measures, Societal Benefits and Results by Participant Type*

	Botanical Organization Staff	Agency Partners	Volunteer Leaders	Participants	Nonparticipa nts
Restoration Successful	An overall agreement that environmental change has been successful				Not applicable
Societal Benefits					
Stewardship behavior	Slight change in perception	No change	No change	No change	Not applicable
Advocating	No change due to PNP		Enhanced knowledge led to discussions with others and actions outside PNP		Not applicable

Agency Partners, Volunteer Leaders, and Volunteer Participants alike expressed the success of the PNP restoration efforts.

“I think some areas we had really, really made a headway on . . . some areas we had really cleaned up and kept clean.” – Participant Alex

“It was several years ago that I volunteered but this summer I took a day to walk around to take a look at what I had participated in, and the teasel [invasive plant] really stood out . . . and it seemed a lot better now, years later.” – Participant Riley

“I’ve definitely seen a diminishing amount of weeds, just invasive weeds. There are huge patches of various types of invasive weeds, and slowly they have a program out there for weed control, and they’re slowly implementing it, and that’s being run by volunteers!” – Participant Sam

“I think it affirmed and if not affirmed, even elevated my sense of ‘gosh this [the PNP project] can really work’ in any environment.” – Agency Partner Jamie

“I think it would be great to see it [PNP] grow and develop because we talk about what it could mean and that’s where I’d like to see it go and then it will have a huge influence because it will influence society.” – Agency Partner Avery

In addition to a belief in the efficacy of the actions taken through PNP, the social benefits of the project include enhancing the aesthetic value and other environmental services the PNP sites may provide.

*Proposition 3. Collective Success Will Lead to Benefits Including an Environmental Ethic*

There was no increase in self-reported environmental ethic of the participants of the project as a direct result of action taken. When asked if the project had influenced their stewardship behavior or beliefs about the environment, participants stated:

“I mean, I think I came here because I felt that way, not the reverse of it. I don’t feel that way because I came here, I came here because I felt that way.” – Volunteer Leader Robin

“I don’t think it has, I think it has confirmed what I felt all along.” – Volunteer Leader Dee

“No, I think it will continue the way it is. My actions will continue the way they are.” – Volunteer Leader Lou

Though participants did not express that the project enhanced their own environmental ethic, many of the participants did express how the project increased their knowledge of native plants and the threats of invasive plants. Participants described how the new skills and information learned through PNP have extended to restoration work outside the project. The project has given them the knowledge and information about ecological restoration issues to share with others. In turn this may influence behaviors of individuals outside of the group thus expanding the societal influence of the project. There were a variety of ways participants expressed how they advocated for the environment, but most mentioned influencing someone close to them.

“My daughter . . . organized a bunch of neighbors and they went out and cleaned up a lot of non-native plants after I could identify them. We’ve done that a couple of times and got rid of a lot of non-natives . . . I’ve been able to share some of that information with other people who are interested and now, probably actually kind of got them motivated.” – Participant Alex

“. . . certainly, whenever the subject comes up, wherever I might go, I try to heighten people’s awareness of the danger of noxious weeds in the west.” – Participant Riley

“It’s hard now because even cocktail parties when it comes up it’s really hard somehow, even just getting into a conversation. Because I feel like you’re always a spokesperson. But even if you’re not actively getting dirty, and skuzzy, and you know, sunburned, you still have an opportunity to share what’s so cool about natural resources.” – Agency Partner Jamie

Another Agency Partner remarked that the project had not yet had the impact she desired, but she believed it had the potential to influence society in the future.

“Its been too small, too young, and not very much an impact for us at this time, now you know I think it would be great to see it grow and develop because we talk about what it could mean and that’s where I’d like to see it go . . . and then it will have a huge influence because it will influence society.” – Agency Partner Avery

I found qualified support for Proposition 3. Participant self-reports suggest that the project did not directly increase their environmental ethic (most reported that they had strong ethics to begin with). However participants clearly described increased knowledge and advocacy behaviors. I hypothesize that these advocacy behaviors may indirectly shape an urban environmental ethic among those with whom the PNP participants interact.

### *Individual Benefits & Continued Engagement*

Individual benefits include the satisfaction of contributing to a cause one believes in, having one's expectations and motivations for participating met, and enhancing one's social networks which may yield dividends at a later time. To examine individual benefits in this study, I looked at volunteer expectations and whether these were achieved. Table 10 summarizes these individual benefits.

Table 10  
*Individual Benefits and Results by Participant Type*

	Botanical Organization Staff	Agency Partners	Volunteer Leaders	Participants	Nonparticipants
Expectations and rewards	A desire to grow the program and a sense limited success		Fun, learning, creating change, enhanced relationships, and wellbeing		Not applicable

### *Expectations and Rewards*

A variety of benefits were experienced by the Volunteer Leaders and Volunteer Participants in the PNP project including:

1. having fun and enjoying the company of others,

“It’s been the greatest experience of my life.” – Volunteer Leader Shawn

“I feel like I have friends there. . . I like the people and I enjoyed going and I felt like I did have a bond with them on some level and so uh, you know when I do miss going because I’m too tired or I worked too late or

whatever its like I am almost disappointed because its fun it's a nice part of my week." – Volunteer Leader Morgan

2. learning more about native and invasive plant species

"I think it's helped me to some degree because I did learn a lot about native plants." – Participant Alex

"Well for me it's been an opportunity to learn about noxious weeds and the extent of the threat of noxious weeds." – Participant Riley

3. feeling the ability to create positive environmental change,

"I guess my main expectation was to see some improvement in the environment at Bluff Lake . . . in that effort, those [expectations] have been met." – Volunteer Leader Dee

4. enhanced relationships with others both inside and outside the PNP group, and

". . . what I gained from volunteering out there, which was some knowledge about native plants, that's opened the door with other relationships [outside of PNP]." Participant Alex

"Over the years . . . you develop relationships with the people who work there . . . I think it intensifies and makes you feel better about your participation in things . . . at a personal level it makes a big difference." – Volunteer Leader Dee

5. increased positive feelings about oneself.

". . . by caring and responding to help for volunteer projects I think that makes me feel better about myself and who I am and about being able to help a particular project . . . as long as I know I'm helping, that makes me feel good about myself." – Volunteer Leader Francis

Agency Partners and botanical gardens staff generally expressed a desire to grow the program to increase its impact and a general sense of limited success in its current state.

"I was concerned that with my limited time and then knowing we were imploding [referring to the loss of several key staff] that we probably would not be able to meet the needs of a small group of volunteers . . . So this project, even though we failed miserably, this project is exactly what we want to be involved in. I mean because we feel that this is the conduit,

one of the many conduits through which [we can] bring people up that continuum in taking care of these resources.” – Agency Partner Jamie

“I think PNP hasn’t been successful in the part of the title that’s “partners” and that was the original goal, was to make it a diverse group of people who were all coming together . . . hopefully that could be changed in the future where we could be more successful.” – Botanical Organization Staff Casey

#### *Proposition 4. Benefits Lead to Continued Engagement*

Volunteer Leaders clearly express benefits that keep them engaged.

“I was learning to appreciate and have an interest in [the site]. Um, so yeah, I think that its been even more so over the years when you put, when you develop relationships with the people who work there and other people who have the similar interest, so I think it kind of intensifies and makes, uh, makes you feel a little bit better about your participation in things. You’re just getting to know more people with similar interests and similar goals I guess. I guess, at a personal level, it makes a big difference.” – Volunteer Leader Dee

One leader simply put it:

“I believe that people bending over and pulling the weed will prevent so much, if they would just do it, and so, I do it. And I benefit.” – Volunteer Leader Lou

As with the other propositions, Volunteer Participants express the opposite outlook. Though some individual benefits were described as mentioned previously, overall the Volunteer Participants express a desire for deeper personal satisfaction in the project. This lack of benefits experienced has led to curtailing involvement and the drop out of some participants.

“I actually have to admit that I curtailed some of my volunteer experience because I wasn’t getting that. What JAM first told the group, ‘I got involved in it for personal interest and wanting to learn’, but then I got to the point where wouldn’t it be nice to meet more people and talk to more people with my same interest, and it wasn’t really happening.” – Participant Chris

“There are actually professional people who want to feel that their volunteer activities are well spent, that they can see something for the hours they’ve put in. And those things are not true by any margin, so we’ve lost so many people.” – Participant Riley

Another Volunteer Participant described this through her experiences with one of her other volunteer groups.

“I mean, it was not much, but they showed a real interest, they were happy to see me, and they kept me posted . . . I felt a real benefit and [because of it] I kept the connection going.” – Participant Alex

The evidence strongly supports Proposition 4. Just as those who experienced direct benefits continued their engagement with the PNP project, those who did not lessened or completely ended their involvement.

#### Implications

This study applied a conceptual model of social capital as a cyclical process to the analysis of an urban community-based ecological restoration project. Following Rohe’s (2004) model of the social capital cycle, I proposed that engagement with PNP would lead to enhanced social networks, which would lead to the belief that collective efforts were successful, resulting in individual and societal benefits which encourage continued involvement.

Though strong support was not found for all of the propositions, it does appear that the four components examined, engagement, social networks, collective action, and individual and societal benefits, follow a cyclical process. However, the experiences of Volunteer Leaders and Volunteer Participants were clearly different and social network development through the project was not the same for all. This split had an influence on the entire social capital cycle. Because Volunteer Leaders felt that they were able to build



social networks through participation in PNP, it encouraged their collective behavior and enhanced their feeling of receiving individual benefits and ultimately leading to continued engagement. Volunteer Participants, on the other hand, described how the lack of social network building led some to end their action as part of the collective and others to discontinue engagement all together due to a sense that their efforts were not well rewarded. These differences highlight the importance of social network building, including shared values, a sense of trust and reciprocity, and community identity, in the social capital process. If one piece is missing, it ripples through, influencing the entire cycle. If organizers of urban community-based projects are interested in the benefits that may arise from these projects, such as effective collective action and enhanced environmental ethic, it is essential to pay particular attention to the experiences of all participants regardless of their role. It is important to understand how or why the experiences of Volunteer Leaders differ from those of Volunteer Participants. Even though not all participants expressed a motivation to build social networks, when networks are not present in the project, participants feel discouraged to take collective action and even consider leaving the project in search of a more meaningful experience. Project organizers should therefore pay particular attention to building social networks within community-based ecological restoration initiatives.

It appears, as Clary and Snyder (2002) have projected, that long-term commitments are more likely when service is “grounded in a broader, more abstract and value-based framework” (p. 586). The most important factor in bringing participant interest to the project was the link to environmental issues. In addition, the PNP project provided opportunities to participants to achieve a variety of additional motivations. By

providing for both of these opportunities and in locations that the participants could see the benefit to their own communities, volunteers and agency partners alike initiated involvement. To be most successful, project managers should tailor outdoor projects to explain their environmental significance (Bruyere & Rappe, 2007).

In the future, PNP may be able to address some of the constraining factors to participation to encourage additional involvement. There is certainly an opportunity for the PNP project to better engage volunteers and the possibility to more strongly develop the sense of community necessary to engage participants in the process of social capital with the ultimate goal of societal benefits. A stronger sense of community within the project could be developed among all participants building upon the shared foundational belief that environmental work is needed and important. If the project hopes to involve a broader spectrum of urban residents, including those not currently interested in environmental issues, alternative forms of engagement should also be considered. Currently the project ‘preaches to the choir’ as all participants expressed the importance of environmental work.

Returning to the initial research question, whether the PNP project can build an urban environmental ethic, the answer is . . . maybe. Participants did not report a change in environmental stewardship behaviors or beliefs as a result of their participation. However, they did articulate increased knowledge that in turn influenced their advocacy behavior. Further research is needed to determine whether this behavior influences the environmental ethic of the people with whom the PNP participants are sharing their knowledge and enthusiasm.

## Conclusion

If collaborative efforts, such as PNP, can help build social networks, they may be successful in engaging more community members in a collective action such as ecological restoration. Though PNP participants do not express increases in their personal environmental ethic, their advocacy behaviors do increase as a result of their engagement with the project. Members of the PNP group have demonstrated how they carry new knowledge and environmental practices outside the project, widening the potential influence of a small community-based ecological restoration project. Future projects similar to PNP may benefit by engaging a more diverse audience, especially those not already engaged with environmental issues or holding a strong environmental ethic. Future community-based projects can also learn from PNP by paying particular attention to the experiences of participants at all levels, as Volunteer Leaders and Volunteer Participants had markedly different experiences while engaged with PNP. There may be an opportunity to see increases in pro-environmental attitudes by providing more meaningful and fulfilling experiences that lead to enhanced social networks for all involved. As the world continues to urbanize, projects that are able to address these obstacles may be able to serve the dual purpose of supporting ecological function in urban natural areas as well as enhancing social networks among residents and therefore encouraging an environmental ethic.

## CHAPTER 5 – COMMUNICATION & COMMUNITY-BASED COLLABORATION: A CASE STUDY OF THE PARTNERS FOR NATIVE PLANTS

### Abstract

This study examined a small community-based conservation group, the Partners for Native Plants (PNP), through a multi-theoretical lens of collaboration based on the Bona Fide Group Collaboration Model (Walker, Craig, & Stohl, 1998) and the Structural Model of Collaboration developed by Keyton, Ford, and Smith (2008). This application tests these theoretical frameworks in a new context because PNP differs from traditional collaborating groups in several ways. Findings from this qualitative case study suggest that a combined model based on these theories is well suited to make sense of small community-based conservation collaborations. An understanding of the collaborative process through both the structural components and the communicative components including environmental exigency, collaborative partners, relational boundaries, negotiated temporary systems, and goals and outcomes yields best practice suggestions for organizations such as PNP.

Keywords: Bona Fide Group Collaboration Model, Structural Model of Collaboration, communication, ecological restoration, community-based collaboration, collaborative conservation

## Introduction

Small groups permeate every sector of society and are truly the fundamental unit by which a society organizes itself (Frey, 2002). One type of small group, the collaborative multi-organizational group, is becoming increasingly more common (Beckert, 2001; Teague, 2002). In fact, many praise their potential in addressing some of the nation's most pressing problems (Keyton & Stallworth, 2002). They have the ability to address complex projects in a timely fashion because they pool the resources of multiple entities and increase innovation by leveraging strengths, knowledge and skills of more than one organization (Stohl & Walker, 2002). This study examined a bona fide group, the Partners for Native Plants (PNP), a collaborative project of a western U.S. botanical organization involving several nonprofit and government organizations working toward plant restoration and preservation.

Collaborative work in natural resource and environmental issues is not new; in fact these participatory approaches are on the rise (Arnold & Fernandez-Gimenez, 2007). However few practitioners have approached such collaborations from a communicative lens. The studies that have used communicative collaboration models are often based on business sector, for-profit organizations collaborating to develop an innovative product (see Stohl & Walker, 2002; Walker & Stohl, 2004) or large-scale collaborations initiated by government entities to enhance community safety or economic development (see Keyton & Stallworth, 2002; Keyton, Ford, & Smith, 2008). PNP differs from more these types of collaborating groups in several ways. First, the project involves volunteers working with agencies and nonprofits rather than employees, who hold stronger ties to the organization they represent. Second, collaborating groups are often brought together

for short-term needs (Solberg, 1997); however plant restoration is a long-term issue. These models have also been applied most frequently to technology and community development issues; application to an environmental issue is a new approach. The goal of this study is to explore the communication dimensions of a community-based conservation project by applying the Structural Model of Collaboration and the Bona Fide Group Collaboration Model to PNP.

Based on the literature, I pose five research propositions to address our goal:

1. PNP participants will articulate a shared impetus for joining.
2. Participant experiences, previous or current, in similar organizations will shape their expectations of PNP and interactions with others in PNP.
3. A strong leadership and communication structure will be present in PNP if investment is high.
4. PNP participants will be more successful in negotiating group identity and decision making and knowledge management processes if a strong structure is in place.
5. If group negotiations are satisfactory, the outcomes of PNP will be innovative and participants will consider their efforts successful.

To address these propositions, I first provide an overview of the relevant literature. Next, I describe the study site, our qualitative methods, and data analysis techniques. Finally I will provide the results of our study followed by a discussion and concluding thoughts.

## Collaboration

When two or more organizations join forces to accomplish a common goal, collaboration is formed. Collaboration, such as PNP, can be placed within the bona fide group framework demonstrating permeable boundaries, shifting borders and the embeddedness of a group (Putnam & Stohl, 1990). These membership characteristics create unique challenges for the collaborating group and are likely to influence

participation, communication and ultimately the ability of group members to work effectively together. Collaborations involving environmental issues are often best understood from the bona fide perspective (Lange, 2002) because they demonstrate these characteristics.

Keyton & Stallworth (2002) identify four elements to a successful collaboration: (a) a shared goal, (b) member interdependence, (c) equal input of participants, and (d) shared decision making. These elements are rooted in the communication patterns developed by the collaborative group.

Recently, communication scholars have examined previous collaboration models. Most models, developed to elucidate the collaborative process, describe communication as a component of collaboration. Communication scholars argue that communication is the constitutive element of collaboration and not just a single component (Keyton et al., 2008; Walker & Stohl, 2004). Systems of meaning formed through conversation and other acts of communication create the social system within which collaborations function. In essence, reducing communication to a variable does not allow us to examine the collaboration as a holistic process that is emergent and changing over time (Walker & Stohl, 2004).

#### *Structural Model of Collaboration*

Keyton et al. (2008) propose a mesolevel communication model based on their research of a collaborative team process over a 9 month period. One of the components of this model looks at the structural elements of a multi-organizational collaboration. These elements show the overarching structure of the collaboration including the individuals involved, groups formed, and organizations participating. The model includes permeable

boundaries that characterize collaborative groups and represents the instability of participating members marked by the notation of  $n$ .

Because most collaborative groups involving multiple organizations demonstrate this structure, they essentially start as a zero-history group where processes must be put into place by those involved. These processes include structures for developing goals, sharing information, making decisions and developing overall systems for communication among group members.

### *Bona Fide Group Collaboration Model*

The Bona Fide Group Collaboration Model developed by Walker, Craig, and Stohl (1998) positions collaboration as a communicative process and provides a framework for understanding collaborating groups. Based on this model, Walker and Stohl (2004) define collaboration as “the process of creating and sustaining a negotiated temporary system which spans organizational boundaries involving autonomous stakeholders with varying capabilities including resources, knowledge, and expertise which is directed toward individual goals and mutually accountable and innovative ends” (p. 5). Participants manage boundaries, contexts, roles and tasks through communication (Stohl & Walker, 2002). The model includes environmental exigencies, collaborative partners, relational boundaries, negotiated temporary systems, and goals and outcomes.

### Methods

The in-depth case study approach allowed us to uncover the emergent themes and more deeply understand the collaborative processes occurring within PNP. Case study methodology is used when researchers seek unique description in a single phenomenon



(Shank, 2002) and when the research focuses on the investigation of contemporary phenomenon in real life (Yin, 2003).

### *The Partners for Native Plants Project*

The PNP project was established in early 2000 through discussions at various plant working groups throughout the western U.S. states. The staff of a Western U. S. botanical organization wanted to create a clearinghouse of volunteers and training initiatives to pool resources to work toward native plant threats. Upon receiving a grant in 2006 to widen the scope of the program, the botanical organization hired me to expand the restoration efforts of the collaborative group. I worked on the project from October 2006 to September 2007. During my time with PNP, I was immersed in the roles of PNP project member, participant-observer, botanical organization staff, Volunteer Leader, and Volunteer Participant.

PNP calls for collaboration through the development of a framework for interagency cooperation. During this study, four Agency Partners were involved. These Agency Partners contributed urban natural areas where Volunteer Leaders conducted restoration efforts. These areas are referred to as Sites A-D. Site A was the initial restoration work group of the PNP project. Each of the three new sites, Sites B-D, had varying levels of activity for their first season. The Volunteer Leaders at each site did not have associations or ties with the Agency Partners before joining the PNP project, however control of the projects and decisions about restoration work were purposely left to the Volunteer Leaders while botanical organization staff served as support. In addition, the initial site, Site A, has also garnered additional volunteer participation of others outside of the leaders. These Volunteer Participants attend restoration workdays

organized by the Volunteer Leaders. Therefore, the collaboration occurring within the PNP involves multiple organizations as well as individuals at multiple levels in the project from botanical organization staff, Agency Partners, Volunteer Leaders and Volunteer Participants.

### Data Collection & Analysis

I used qualitative data collection approaches including: (a) interviews with Volunteer Leaders, Agency Partners, and botanical organization staff; (b) a focus group with non-leader participants; (c) nonparticipant open-ended questionnaires; (d) emails; (e) my participant-observer notes and (f) other group documents.

Toward the end of the restoration season, the I conducted 10 interviews with the Volunteer Leaders, Agency Partners, and botanical organization staff. The interview script contained 12 open-ended questions. I also conducted a focus group of the Volunteer Participants from the initial site, Site A, which was the only site to have Volunteer Participants. A similar set of questions as those used in the interview were used. Six individuals participated in the focus group.

Additionally, an open-ended email questionnaire was sent to Nonparticipants, all individuals who showed initial interest but chose not to participate in the PNP program were contacted. Five nonparticipant questionnaires were received from the 21 sent.

Early steps in data analysis were derived from the suggestions of Miles and Huberman (1994) and followed a system of increasing complexity from descriptive to inferential. Propositions were analyzed and categorized using the suggested scale by Miles and Huberman (1994) and include: strong, qualified, neutral or contradictory.

Using the qualitative software developed by QSR International, NVivo 8.0, data was coded to elucidate the major themes, metaphors and vignettes that gave meaning to the data. The initial coding scheme was drawn from the propositions and was revised as new conclusions were drawn from the analysis process. The data were coded a total of four times as the coding scheme was revised and refined through each step.

## Results

The model shown in Figure 1 is a combined model based on the Structural Model of Collaboration and the Bona Fide Group Collaboration Model as it applied to the PNP project.

### *Structural Components*

The structural components of the Keyton, Ford, and Smith (2008) model shown in Figure 7 include the levels of participation (Convening Organization, Agency Partner, Volunteer Leader and Volunteer Participants) and the unique interactions occurring within the group. The structural display also reveals the embeddedness within the botanical organization. PNP was also embedded within the native plants community on a larger scale as other initiatives in the Western U.S. have the potential to influence and shape the PNP project as well as the perceptions and actions of the participants involved. The model also takes into account the fluctuations among members of the collaboration, represented by  $n$ .

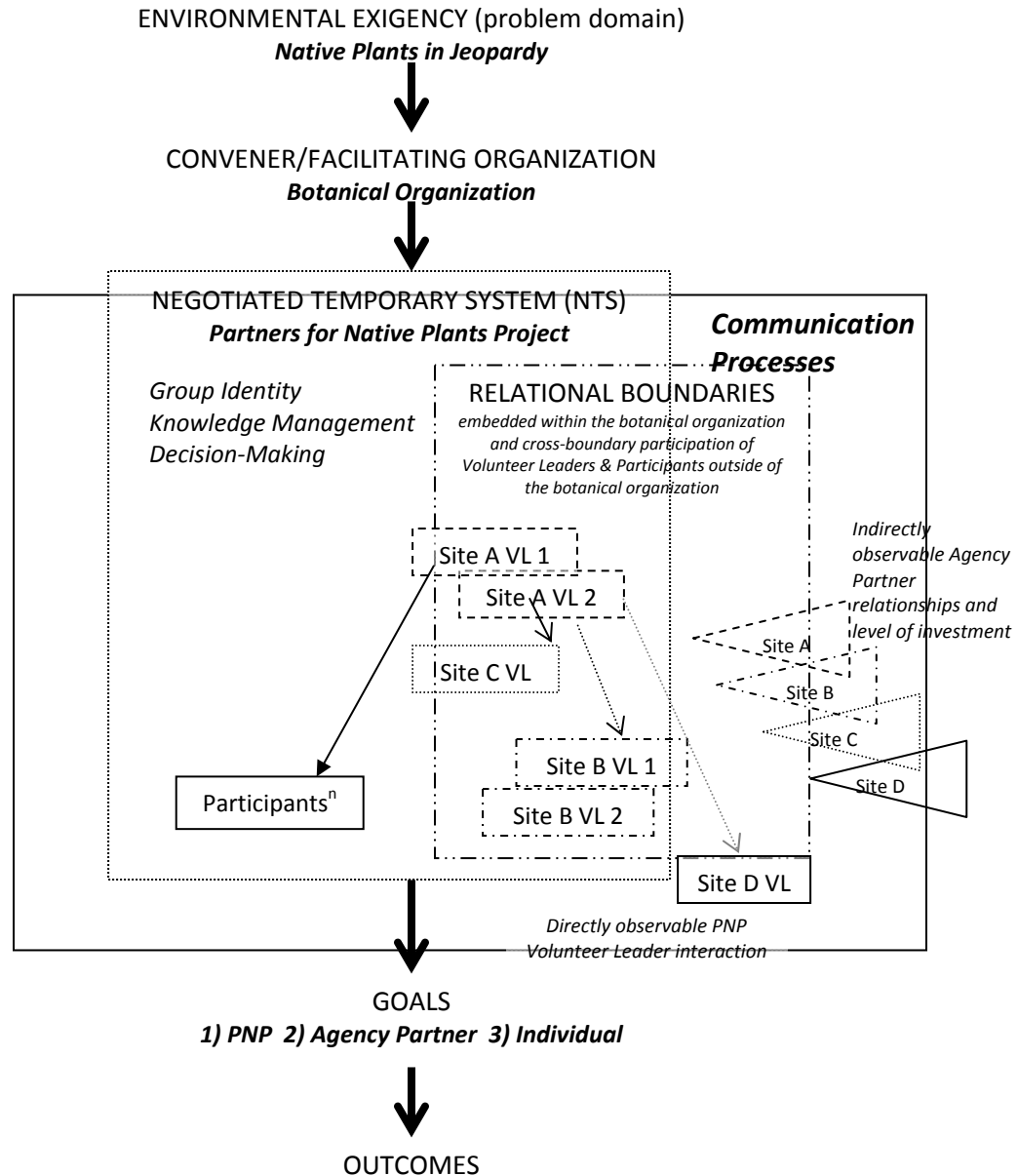


Figure 7. A combined collaboration model for the PNP project.

### *Communication Processes*

Keyton and Stallworth (2002) note that communication within collaboration is a complex process that requires group members to be thoughtful in developing the sense of connectedness required to be successful. No strong pattern of communication among the Volunteer Leaders occurred, though one of the primary goals of the PNP project was to

encourage the sharing of information. The communication processes of PNP are outlined in Table 11.

Table 11  
*Communication Processes Among PNP Participant Types*

	Participants	Volunteer Leaders	Agency Partners	Botanical Organization Staff
Participants	Weak two-way communication. No interaction encouraged or provided outside of appearance at restoration days	Moderate one way communication from Volunteer Leader to Participant via email and in-person during restoration days	No real communication between Agency Partners and general Participants	Weak one-way communication that only occurred when staff present at restoration work days
Volunteer Leaders		Weak two-way communication between different site's leaders, mostly at outset but not well maintained	Weak two-way communication likely due to resource constraints on Agency Partner and trust of Volunteer Leader actions	Good two-way communication
Agency Partners			No real existent communication	Weak two-way communication that primarily consisted of agreement at the outset
Botanical Organization Staff				Strong two-way communication among staff

A lack of communication may lead to fluctuations in membership as those whose needs are not met leave and new members join. Stable membership and consistent communications are required. Volunteer Participant comments voice how PNP lacks a solid communicative structure to facilitate the development of the collaboration and articulated a sense of confusion about the project because of this inadequate communication framework.

“They don’t ever advertise. Like now, I don’t even, you know, I could go on Saturdays, and I have no way of finding out when the Saturdays are.” – Participant Alex

“If I wanted to go out there, is there a website, is there a way to find out?” – Participant Chris

“You have no idea what’s going on out there, or what their needs are, you know, you have no cohesive [communication]. . . I don’t even know, does [Site A] have a monthly volunteer group meeting or anything, does anybody know?” – Participant Pat

Joking in response, one of the Volunteer Participants said:

“They have a Christmas party [everyone laughs]!” – Participant Alex

Since our time with the project, one of the Volunteer Leaders has started a blog to keep folks in the loop.

“I had the crazy idea to start a blog to record what we do on Wednesday mornings. I am not, I repeat, not very experienced at this, so it may look a bit amateurish. But I thought it worth a try. You can . . . make comments and suggestions or sign up for updates. I would appreciate any feedback on how to make it better. In the future, I will try to take my camera along so that I can add some real-time photos.” – Volunteer Leader Dee

Only time will tell if the blog enhances the communication among individuals, as they are able to comment and respond to the postings of the Volunteer Leader, providing him feedback.

### *Environmental Exigency*

Participation in a collaborative effort usually only occurs if there is agreement regarding a common problem (Keyton & Stallworth, 2002). The benefit of participation is often the solution for some current or foreseen problem or the ability to capitalize on a new idea. This environmental exigency brings about participation in the collaborative

effort. Usually this external motivation is based on urgency and a need for innovative or new results or approaches.

Participants at all levels expressed a shared view of the environmental exigency prompting action. A desire to help the environment and in some instances a feeling of obligation to do so were articulated by participants. Specific comments in regard to the action of plant restoration work were also expressed showing a shared perception that if nothing was done, native plants would be in jeopardy.

“[Without] restoration and preservation . . . you’re not going to have any real story to tell the youngsters.” – Participant Sam

“I got involved because noxious weeds and habitat restoration have to be worked on by somebody. Um, or we end up being an example of the second law of thermodynamics, everything ends in decay. Well, I’d say on a scale from one to ten, an eleven. It’s not going to be there if we don’t take care of it.” – Volunteer Leader Lou

“It’s very important because if we don’t [take care of the environment] we won’t have anything eventually, and then, I mean that’s sort of the extreme broad . . . and then on a smaller level if you live in a neighborhood that has like a park and gardens a lot of greenery and nice smells and birds chirping and you can hear crickets in the night or whatever, it’s a more enjoyable place to live, so it makes sense that a community should [take care of the environment].” – Volunteer Leader Morgan

#### *Proposition 1. Shared Impetus*

Proposition one was strongly supported. All participants in the PNP project expressed a common desire to help the environment and therefore a shared impetus to join the PNP project.

#### *Relational Boundaries*

Small groups do not exist in a sterile environment but are situated in a larger context, embedded in multiple physical and social circumstances (Stohl & Walker, 2002). Boundaries are shaped and formed through the social contexts of members and this

characteristic of bona fide groups influences the communication patterns that emerge. Boundaries are flexible because they are dynamic and fluid as they are continuously negotiated, redefined and changed through the interaction of group members (Frey, 2002).

Participants describe the relationships in PNP as follows:

“[We just had to figure out] what goals we had and who was who and who was going to do what and just kind of feeling our way through that whole relationship thing.” – Volunteer Leader Dee

“There was some kind of loose relationship, that the gardens would provide technical support to that project.” – Participant Sam

A looseness therefore categorizes the relationships and processes within PNP. At many points Volunteer Participants expressed confusion about who was involved, why the sites were involved and on what level. Other group experiences and fluctuations in membership also influenced this lack of clarity about the group and its boundaries.

#### *Fluctuations in Membership*

The movement of members in and out of the group can be particularly challenging in developing a cohesive collaborative group. This instability can lead to uncertainty in who comprises the group, who leads the group, and what the group goals, norms, and structures are. Though the Volunteer Leaders remained stable over time, the membership of Agency Partners and Volunteer Participants fluctuated within PNP.

Volunteer Participant membership is constantly in flux:

“I’ve been there almost since the beginning . . . sometimes I miss, they never miss [referring to the Volunteer Leaders], but more often I go on Wednesdays than I don’t.” – Participant Riley

“I volunteered quite a bit, but then my job changed from part time to full time so I haven’t been out for a while.” – Participant Alex



“I still get the emails, it’s like, well who knows who’s gonna show up?” – Participant Parker

“And all those names that you never see, right!” – Participant Riley

“After a year or so we really had Shawn, Dee and there’s a woman Lisa and Riley, who were pretty strong and then Riley had some health issues so she sort of stopped coming as often. And then Lisa I think just got, she gets busy sometimes, she goes off to Brazil, but they [Shawn and Dee] ended up being the main people and they took over in the second year after sort of being stuck together.” – Botanical Organization Staff Sydney

Agency Partner membership fluctuated quite a bit as well. In particular, botanical organization staff commented:

“. . . it would be a whole bunch of organizations that would be sort of guiding and directing it . . . it’s a pretty informal group.” – Botanical Organization Staff Casey

“When we started out we regularly had, we had [a volunteer management organization], probably [a training organization] since their inception . . . a few individuals that do consulting, we’ve had the extension office from [from the local university], but they kind of backed out and weren’t interested, [Site D] was involved at the beginning . . . but they kind of never were very helpful. We had [Site A]. We sort of had [two federal agencies], but they kind of had a hard time, particular people, thinking about what level we were going to have volunteers do work . . . I’m missing some people, I have it written down, its kind of gotten narrowed down . . . there’s never been really a sort of official board we just sort of had whoever can come to meeting and be helpful.” – Botanical Organization Staff Sydney

These membership fluctuations led to instability and thus uncertainty about who encompassed the collaborative group or in some instances, even what the collaborative group was – several Volunteer Participants expressed not knowing that the volunteer work that they had been doing with Site A was part of a larger project.

“I didn’t even know it [PNP] existed, to tell you the truth.” – Participant Pat

“I’ll parrot what Pat is saying, I never knew it existed.” – Participant Sam

“I don’t know what they’re [PNP] doing. I don’t know anything about them. I didn’t even know until tonight what they were – what they are!” – Participant Chris

“Well I didn’t know it existed either!” – Participant Alex

### *Other Group Experiences*

The PNP project is embedded in the botanical organization. Many of the Volunteer Leaders and Volunteer Participants were either previous or current botanical organization volunteers. These experiences, as well as other volunteer or environmental group experiences influenced their participation in and expectations of the PNP group. Volunteer Participants mentioned many other organizations whom they had volunteered with including both nonprofit and government agencies. One of the Volunteer Participants even expressed how these overlapping group memberships influenced his decision to participate in the PNP project at Site A.

“I was volunteering here at the botanical organization . . . I was volunteering for [a botanical organization staff member], who recently quit and went out to [Site A] to become site manager. I enjoyed volunteering for [the staff member] so I continued to volunteer here but I followed him out to [Site A] and I work with a crew.” – Participant Sam

The most common reference to previous group experiences however was to point to faults in the current PNP structure or practices that the Volunteer Participants wished the Volunteer Leaders would embrace:

“At the Public Library, where I work with volunteers . . . they consider that they work at the library, and they’re treated as if the library couldn’t possibly work without them, and we certainly don’t have that sense, you know, that [Site A] couldn’t do without us.” – Participant Riley

“I can’t begin to tell you what I’ve learned about trees doing the tree tours, a whole, the opening of a whole world and of course [Site A] hasn’t, you know, begun to be near that kind of experience.” – Participant Riley

### *Proposition 2. Influence of Other Groups*

Proposition 2 was found to be strongly supported. Volunteer Participants in particular are strongly influenced by previous group experiences that they deem similar to PNP. These experiences shape their expectations of PNP.

### *Collaborative Partners*

Partners agreeing to participate in collaborative projects may vary in their level of involvement and commitment to the project and tasks at hand. Keyton, Ford, & Smith (2008) identify two characteristics that define and shape the interactions of collaborative partners: investment and impact. An organization's belief about how much they might gain as a result of the collaboration shapes the degree to which they participate. The quality and quantity of contributions is therefore tempered by the expected impact or results of participating in the collaborative effort. These characteristics shape the interaction among collaborators and can be described by four different scenarios (see Table 12).

### *Investment & Impact*

At the organizational level, a variety of beliefs about impact and therefore investment were expressed. Based on the Keyton, Ford, and Smith (2008) table showing the levels of interaction, the organizations involved in PNP can be described as follows:

*High investment, high impact.* Site A recognized the impact the PNP project might have. Staff at Site A did not have any expertise in restoration techniques or knowledge of native or non-native plant species as the staff positions revolved around the site's educational mission. Site A offered staff time as well as tools for participant use to support PNP efforts, demonstrating a high level of investment. Because Site A was in

transition during the period of this study, no Site A staff interview was conducted, however Volunteer Leader comments clearly highlight the need for their work at the site.

“[When PNP was getting started] we called Site A and they said ‘oh yeah we have no idea what we are doing, we have no idea with restoration or taking care of our land’, so we went out and looked at it a little bit and kind of got the picture that they really just had, they really had no clue as to what to do with their area . . .” – Botanical Organization Staff Sydney

“. . . the people at [Site A] had no idea how to do any of this . . .” – Volunteer Leader Shawn

Table 12  
*Dynamics of Collaborative Interaction Mediated by Investment of Resources and Perceived Impact.*

		Investment	
		High	Low
Impact	High	Full participation with the expectation or possibility for considerable return (impact) – the ideal state	Decision to invest little despite potential for high impact – can occur if competition exists among partners; leads to either less frequent participation or less substantive contributions
	Low	High investment of resources without the expectation or potential for profit or return for the organization or the individual; participation is likely aimed at public good rather than private	Unclear about impact but wishing to ‘stay connected’ at least loosely to the initiative – can occur for various reasons; often leads to either less frequent participation or less substantive contributions

*Note.* Adapted from “A Mesolevel Communicative Model of Collaboration,” by J. Keyton, D. J. Ford & F. I. Smith, 2008, *Communication Theory*, 18.

*High investment, low impact.* The botanical organization, as the convening organization, put significant effort in laying the foundation for the project. In addition to providing technical resources and staff time, the botanical organization also wrote the grant that provides for equipment and supplies, physical space in the greenhouse for propagation, and offers computer use in the research department. Because all of the actual restoration work sites are owned or managed by entities outside of the botanical organization, the impact is low. Staff put considerable investment into the project because they see it as a public good and a service a public botanic gardens should provide.

“It was something a botanic gardens should do, especially if we’re trying to engage and interact with the community, both the people around us and also the areas around us.” – Botanical Organization Staff Casey

*Low investment, high impact.* Site B, operated by a city government, gave a small investment, participating in some recruitment efforts and part of one of the trainings. Investment was minimal, not by choice on the part of the city, but because of the circumstances occurring during the time of our study. Investment was curtailed due to staff turnover leading to additional duties required of the Agency Partner, who still believed that there was great potential for return, or impact in the PNP project.

“Because I was kind of new to the project, I just sort of was trying to stay on top of it and do what needed to be done . . . again, our fault we didn’t participate at the level I had hoped we’d be able to, but what I saw, I think it affirmed and if not affirmed even elevated my sense of ‘gosh this can really work’. . . even though we failed miserably, this project is exactly what we want to be involved in. I mean because we feel that this is the conduit . . . through which we can bring people up that continuum in taking care of these resources because obviously our department is too small to take care of all these acres on our own.” – Agency Partner Jamie

*Low investment, low impact.* Site C can be categorized with low investment and low impact. Site C was a city government owned site and the Agency Partner expressed the general sentiments that the PNP project would require too much out of them for what they would get in return, however still offered a site to the project and stayed loosely connected.

“I think its [the impact] probably been minimal . . . only having a few participants so overall my guess is that you would want a greater participation to make it worth your time and anyone else’s time especially a participating agency because working with volunteers is time consuming because you have to change your schedule to meet, get tools, you know keep them involved.” – Agency Partner Avery

Site D can also be described as a low investment, low impact organization. The Agency Partner expressed initial interest in the project, but the goals and expectations of

the partner, though she had been provided with the mission of PNP and other materials, seemed misaligned with the project. Though the Agency Partner was not available for interview, one of the initially interested Volunteer Leaders who later chose not to participate stated:

“I think that there are too many unknowns on this project. I don’t know who’s in charge of this area, I don’t know what needs to be done, and I don’t know what resources are available.” – Nonparticipant Devin

Devin’s concerns highlight the disorganization that Site D showed and though it is not clear what level of impact they believe PNP might have been able to make, it is clear that the goals of the impact they expected were not the same as those for PNP.

### *Leadership*

The leadership on the part of the botanical organization and the Agency Partners was very loose. For the botanical organization, it was not a matter of the staff initiating the project, but rather the lack of support from upper management, which restricted what the staff was able to do. One of the staff stated:

“I think the botanical organization was nervous about being in charge of something that was sort of a collaboration of a lot of different groups or I guess driven by [the botanical organization] but a collaboration of a lot of different groups.” – Botanical Organization Casey

In addition, Agency Partners also played limited leadership roles within the framework of their interactions with Volunteer Leaders. This restricted role seemed to stem most commonly from a lack of time or resources to commit to the project. Botanical organization staff, including myself, noted these difficulties and Agency Partners also articulated their trouble with committing the resources and time truly needed for the project:

“I think one thing that happens to everyone, you know, everyone’s busy, I don’t know anyone who’s not busy so the idea of something more, something else that’s going to take people’s time is daunting. So it needed strong leadership.” – Botanical Organization Casey

“ . . . we can’t do it by ourselves, our department is too small.” – Agency Partner Jamie

The style approach to leadership by White and Lippit (1968) provides a good framework for understanding the leadership of the Volunteer Leaders. White and Lippit (1968) describe three styles: authoritarian, democratic and laissez-faire. Authoritarian leaders are very direct about the division of work. Decisions regarding outcomes are often left to the leader, whereas democratic leaders believe all issues are matters to be discussed by the group as a whole and decisions are made by either majority, consensus or participative discussion (Infante, Rancer & Womack, 2003). The laissez-faire form of leadership typically displays a low level of involvement of the leader who provides basic information and leaves decisions up to the group.

The Volunteer Leaders at Site A made decisions about the work ahead of time with little information provided or incentive for participation in the decision process given to the Volunteer Participants, but they were also quite laid back in their approach. This would suggest that they demonstrated a mix of authoritarian and laissez-faire approaches. This is captured in both Volunteer Leaders interviews and the communication, mostly via email and mostly one way, from them to Volunteer Participants.

“I’m one of the sort of team leaders . . . and so they come to me a lot with questions . . . as the two like lead volunteers we are pretty much in charge and we come and ask Sydney questions when we’ve got questions or talk to Casey when he was here.” – Volunteer Leader Shawn

“I get all of my hours out there and [all I’m told is] “go here” [participant points].” – Participant Sam

Email messages that were directive in nature were also the norm. It was very rare that input was solicited or explanation for requested actions was given. A few examples:

“We will gather again on December 5 to continue our work at Bluff Lake and set a record for how long into December we are able to do work. There are more Russian olive trees along the creek that will be the focus of the day’s efforts. Join us if you can at 12:30 p.m.” – Volunteer Leader Dee

“We will get back to work on July 11 at 9:00. Depending on conditions, we may either begin teasel deadheading or continue pulling Russian knapweed. We discovered a large patch of knapweed as we were working the area on June 27. Sturdy gloves will be essential for either of these efforts. There may be mosquitoes.” – Volunteer Leader Dee

Volunteer Leaders invested in their own learning, but did not demonstrate an investment in sharing this with participants.

“[The structure] is very, very loose. We’ve lost many, many volunteers that might have been really, really good.” – Participant Jamie

And in response another Participant stated:

“I think they are really laid back people . . . and it’s not their personality [to be structured] and they really run the volunteer piece of it.” – Participant Alex

“Well, somebody needs to be in charge, as it were, which is what is coming out of all of our talk, who has a core leadership plan . . . they have to have a clearly articulated plan of what to do . . . and then be able to identify the people you want to hit for just that project – that hasn’t been done.” – Participant Riley

### *Proposition 3. Investment Leads to Structure*

Proposition 3 was found to be qualified as PNP demonstrated the inverse.

Investment varied at the Agency Partner level as contributions and expected impact were found across the continuum from low to high. Volunteer Leaders spent little effort investing in the Volunteer Participants. This lack of a firm investment from all involved led to a weak structure.



### *Negotiated Temporary System*

Stohl & Walker (2002) define a negotiated temporary system (NTS) as “the finite system enacted by the representatives of the collaborative partners specifically for the completion of a collaborative project and is the collaborating group” (p. 243). The PNP project itself can be considered the NTS because it is where the collaborative work occurs and is both separate from and a part of the participants in the collaboration themselves (Walker & Stohl, 2004). Through the NTS, decision making and knowledge management structures need to be developed and handled in addition to the creation of the group’s identity.

#### *Group Identity*

Communication allows the collaborating group to develop their own unique culture (Keyton & Stallworth, 2002), which in turn helps establish an effective social environment and provides norms for accomplishing the task at hand. The extent to which a collaborating group can create a shared identity will have a direct effect on the group’s success. Conversations and other forms of group dialogue are necessary to build the collaborative collective identity (Hardy, Lawrence, & Grant, 2005).

In general, Volunteer Participants expressed a different sense of groupness than did the Volunteer Leaders. Group identity was not formed among the participants and was described as being in part due to the lack of structure in communication and leadership.

“Just to tell you the difference [in one of my other volunteer projects], she and the other gal really created a sense of community . . . when I showed up, they were so happy to see me . . . it was more like, ‘we’re glad to see you, we’re glad you’re here’. She would email me maybe once in a while . . . like in between times, so you felt like [a group] . . . we would take some time, when I was first coming, to maybe have a cup of coffee together. It’s, that’s what’s missing as far as

community [at PNP]. I really part of a community – I know they really wanted me to be there! It's not like [with PNP] I got out of the car and they're like, 'well we're gonna plant these today, (laughs) get over here in this corner'." – Participant Alex

And in response another participant remarked:

"What kind of shovel do you want?" – Participant Riley

"Yeah, what kind of shovel to do you want [everyone laughs]". – Participant Alex

Participants also expressed the influence of fluctuations of membership in creating a sense of identity.

"There's no sense of a group or a team right now – cause just like you said, you just drift in or drift out whenever you want." – Participant Pat

Contrary to the beliefs of Volunteer Participants, Volunteer Leaders expressed a sense of group identity, one Volunteer Leader simply put it:

"It's a great group!" – Volunteer Leader Dee

One of the Volunteer Leaders tried to create a sense of group identity by testing different names for the group addressing some of his emails with "To the Wednesday Work Crew", "To the [Site A] Crew", "[Site A] Restoration Crew", "Hello Weed Management Team" and finally approached the group with a name:

"To Weekly Weeders: Yes, I am trying out a new name for our group. Any feedback on this one?" – Volunteer Leader Dee

### *Knowledge Management*

Knowledge management is typified by a complex system of acquiring information from a variety of sources as no one individual typically holds all the information necessary to accomplish the task at hand (Stohl & Walker, 2002). Collaborative groups need to know what information is needed, as well as who knows said information (Stohl & Walker, 2002). One of the main goals of PNP was to bring knowledge and information

together, specifically so native plant and non-native plant management in the Western U.S. could become more effective and that organizations, especially those with limited resources, could have access to a well trained group of folks capable of assisting them.

The recruitment flyer and the orientation informed volunteers that previous plant knowledge was not necessary, as PNP would train them and provide the information they would need to know.

“No experience is necessary, as training and education are the perks of volunteering. You’ll learn as you go while working with experts from the Gardens and other partner agencies.” – Document: Recruitment Flyer

Trainings were held to provide Volunteer Leaders with the information necessary to be successful; this information was then compiled into a volunteer manual. Trainings were remotely successful, mostly because the number of attendees was small and often unattended by the Volunteer Leaders, sometimes due to interest, but often due to time conflicts on the part of interested individuals. Because each of the three trainings were only offered once, it was difficult to reach a critical mass of trained individuals though all of the materials were provided to Volunteer Leaders in their manual.

After these initial trainings, there was no concerted effort on the part of the Volunteer Leaders, once designing restoration projects, to figure out who in the group knew what information. Instead, the Volunteer Leaders took on ‘a learn as they went’ attitude in plant identification and management and seemed to only share the pertinent information for each days work with Volunteer Participants.

“[We] were feeling our way through, trying to figure out what it is we wanted to do . . . I’ve been doing at home, some research and that kind of thing.” – Volunteer Leader Dee

“I was coming here [Botanical Organization] and doing research on how to do it and who to call and that kind of stuff and then that first year we only went out

every other Wednesday but we were also doing lots of planning.” – Volunteer Leader Shawn

“They come to me with a lot of questions, I’m one of the first ones to learn the new plant and so then I teach everyone else what I’ve learned so far and that we bring people, there are people that join us that know the natives plants, I know the weeds really well . . . so that’s a nice exchange.” – Volunteer Leader Shawn

The Volunteer Leaders never really solicited any information or suggestions from the Volunteer Participants. A concerted effort to share information and knowledge was not made by the Volunteer Leaders. Participants also expressed that the leadership did not adequately develop knowledge management processes that fully used participant skills.

“You find people with different abilities . . . and the thing that’s really important is having someone within the organization that knows how to tap into those skills and motivate the volunteer.” – Participant Sam

“I was thinking that maybe in the future, it would have been nice to know that they were part of a larger partnership. You know, I don’t know, it just kind of sets it more, uh a broader, how do I say, a broader vision. I knew it wasn’t just the one area, but I think I would have really appreciated knowing that. And nobody ever mentioned it that I remember.” – Participant Alex

“That might be a missing piece . . . we haven’t gotten, we really haven’t received any kind of education, whether we are given a booklet or anything. Basically I learned what was native and non-native by keeping harassing Shawn and Dee, rather than somebody saying, let’s get together for an hour, or here’s a little book I’ll loan you or something. So it’s kind of a void . . . I’m totally dependent on asking the questions ‘cause nobody tells me.” – Participant Riley

“. . . it’s more or less physical labor. For example, I am a research librarian, and there’s a lot I can do other than physical labor to help with these things, and you know, each of us had skills other than just chopping down the weeds that would be beneficial.” – Participant Riley

This lack of information sharing would seem antithesis to some of the goals for PNP as stated by one of the staff:

“I think one of the main goals [of PNP] was to have it be a learning experience, something to be doing something that they thought was beneficial for the land or for nature, for the organization, but also feel we could have them learning.” – Botanical Organization Staff Casey

## *Decision Making*

The Volunteer Leaders primarily made the decisions regarding restoration work to be conducted and were provided autonomy for several reasons. Agency Partners knew that this autonomy and decision making power were part of the goals of PNP and the technical support from the botanical organization coupled with the trainings would empower the leaders to make appropriate choices. The botanical organization's goal in convening the program was to "feed into the botanical research community" (Botanical Organization Staff Sydney).

One of the botanical organization staff members even described the reason for success with the first two Volunteer Leaders as follows:

"I think it was successful, mainly at that part because of who the volunteers were . . . they were pretty self-starters, and knew that they could just kind of figure it out and know how to do it. They were pretty brave . . . I think because of the way its been set up they're not just following orders but they're able to think critically and decide how to do things themselves and they're learning if its something we should do." – Botanical Organization Staff Sydney

Volunteer Participants recognized this decision making power:

"No matter what you say, they [Volunteer Leaders] really make the decisions." – Participant Alex

Participants described their frustration with the decision making process.

"You can't just show up every week and say, "well I think this week we'll weed that" – there's more to it than that." – Participant Alex

"I find that frustrating as a volunteer, you could speak up and say 'no, let's just cut to the chase here and get this done, why are we dinking around?' . . . that's one of the negative side that I find in volunteering. You just can't grab the bull by the horn and get it done." – Participant Sam

#### *Proposition 4. Structure Leads to Successful Negotiations*

Proposition four was found to be qualified. PNP demonstrated the converse however, that the lack of a solid structure lead to unsuccessful negotiation of group identity, knowledge management, and decision making.

#### *Goals & Outcomes*

Stohl & Walker (2002) see the results of collaboration as multi-fold involving both individual and organizational goals. Individual goals may include contributing to a project one believes in, the desire to see a successful end state, and having ones expectations and motivations for participating met. The organizational goal is the achievement of a solution to the initial problem or the development of a new idea or product.

The goals were tied in to the motivations and expectations for participating.

“It provides me a satisfaction of working in the outdoors, and being active, physically active, which I find very rewarding.” – Participant Sam

“I think its helped me to some degree because I did learn a lot about native plants.” – Participant Alex

Volunteer Participants and Volunteer Leaders generally felt like their expectations were met, particularly in the arena of success in their restoration efforts.

“I have seen the difference in my years time. I’ve definitely seen a diminishing amount of weeds” – Participant Sam

“My main expectation was to see some improvement in the environment at [Site A] . . . and those have been met.” – Volunteer Leader Dee

“I believe that people bending over and pulling the weed will prevent so much, if they would just do it, and so I do it. I benefit.” – Volunteer Leader Lou

Highlighting these accomplishments is the letter the Site A Volunteer Leaders have started sending to the Director at the end of their work season, outlining their accomplishments with such things as:

“All known teasel, numbering in the thousands, were deadheaded and seed heads bagged and disposed.” – Document: End of Season Letter

Volunteer Participants do however question the overall goals of the work they are completing.

“Rather than just go there and, ‘ok, we’re gonna pull these weeds over there’ and you have no real sense of what the goal is – are we trying to just work in this area and get it in shape first or . . . cause you bounce around from one area to another. . . It kind of seems like that garden on the top of the bluff has kind of gone to hell in a hand basket recently.” – Participant Pat

Another participant agrees:

“Yeah, you do one little thing here and . . . It has, it’s awful [the bluff].” – Participant Alex

Volunteer Leaders on the other hand express content with the current system and outcomes.

“They were looking for people to participate in this partnership so I made kind of a connection in my own brain that this is something I like to do, so I pursued it some and it kind of developed from there, but I saw some potential for positive things to happen on both sides . . . I guess my main expectation was to see some improvement in the environment . . . and those have been met.” – Volunteer Leader Dee

*Proposition 5. If Negotiations Are Successful, Innovation Will Follow.*

Proposition five was found to be neutral. Although, in general, participants believe their efforts have produced results, as was discussed in the previous section, negotiating the group identity, knowledge management, and decision making processes were not successful. Innovation was therefore present without successful negotiations

however it is possible that increased effectiveness and efficiency could be achieved with successful negotiations.

### Discussion

Though all participants, regardless of their role in PNP, shared a common reason for joining and a shared vision of how the group could create positive environmental change, some marked differences were seen. While Volunteer Leaders were generally content with the progress and structure of PNP, Volunteer Participants expressed frustration. PNP implemented an informal system, which was meant to give power and control to participants, yet this informal system felt too unorganized and participants desired more structure in the project. Volunteer Participants expressed a lack of group identity, a feeling of exclusion from the decision making and knowledge management processes, and a desire for more clear explanations for the tasks they were asked to perform and the specific benefits of those actions.

If leaders can address these frustrations, fluctuations in membership which led to dissatisfied volunteers who left the project, may be able to be curbed. Volunteer Participants believe stronger leadership and a clearer structure would help them feel more engaged with the project. As Walker and Stohl (2004) have stated:

. . . imposing linear workflow may inhibit the collaborative process itself. Collaboration is not simple; organizations cannot approach collaborations haphazardly, e.g. assign a few organizational members to “collaborate” with members of other organizations, allocate some resources for the collaborative project, stir it all up, so to speak, and expect an innovative result. Collaborations must be thoughtfully approached, carefully constructed, constantly attended, and periodically evaluated. Collaboration is not merely “working together”. Rather, collaboration is a particular form of communicating, requiring a unique framework and processes. (p. 25)



To encourage Volunteer Participation in decision making and knowledge management processes, leaders may be able to catalog the skills and knowledge of the participants enabling them to call upon individuals with expertise relevant to later decisions. Because one of the goals of the project was to help all those involved to think more critically about native plant issues, it seems that a clear understanding of why they were being asked to do what they were doing would help PNP not only reach this goal, but also better involve Volunteer Participants and alleviate some of their concerns.

Part of the leadership issue may stem from the varying levels of investment contributed by the Agency Partners. Though this was partly due to limited resources to contribute due to small agency size, staff turnover, and already overburdened staff, the irony was that the goal in participating was to increase the impact of organizations who indeed had limited staff or resources and could benefit by a group of well trained volunteers. This presented a sort of cyclical problem because Agency Partners had limited time to share but it was necessary to garner the additional help they needed.

It seems there may be a fine line between a system that is too structured and too informal. Keyton, Ford, and Smith (2008) note that many believe the collaborative structure should be constructed interactively and that participants should co-create the communication processes required to meet their needs, however this may be an idealized state rather than a best practice because setting up and facilitating the organizational structure may help teams reach their objectives rather than hinder them. By providing the PNP project with a more direct and concrete structure, the Volunteer Leaders may have then been able to better utilize Volunteer Participants and ensure their continued

participation in the project thus limiting fluctuations in membership and enhancing the potential outcomes of the group.

Without a solid structure that each level of PNP participant could buy into, it is hard to gauge the potential impact for the group to yield innovative outcomes. Members of the PNP group believe their efforts are worthwhile in restoring damaged ecosystems thus yielding a social benefit, but participants still question the big picture. If small collaborative conservation entities such as PNP can lay the foundation for a group built on solid communication then it may be possible to further enhance their environmental aims in such collaborations.

### Conclusion

Because little empirical data has been collected showing the role of communication in a collaborative context, studies such as these are important endeavors (Walker & Stohl, 2004). Returning to the goal of this study, I find that a combined model using the Bona Fide Group Collaboration Model and the Structural Model of Collaboration is well suited to use with PNP. This combined model demonstrates the usefulness of the communicative approach to collaboration and the theories appear to hold up when applied to a small community-based conservation collaboration. The PNP project confirmed the elements of both the Structural Model of Collaboration and the Bona Fide Group Collaboration Model. Collaborative partners at all levels were examined and showed the embeddedness of the project within larger contexts as well as the fluidity of the boundaries and relationships of members. Other group experiences shape the expectations of individual members as they define their roles within the group. I established that the development of a NTS, shown through group identity, knowledge

management, and decision making, is important in determining a collaboration's success. Without a successful system, membership fluctuations increase causing communication complexity and limiting the potential impact of the group. The findings show that these elements were indeed present within PNP, this study has therefore added to the body of knowledge about the role of communication in collaboration, especially in a unique volunteer led collaborative group tackling a long-term environmental issue.

PNP may benefit from a fresh look at the structure of the project that includes participant feedback from all levels: Agency Partners, Volunteer Leaders, and Volunteer Participants alike. Group identity is vital to the success of community-based collaborations as it “enables participants to construct themselves, the problem, and the solution as part of a collaborative framework in which the potential for joint action is both significant and beneficial” (Hardy, Lawrence, and Grant, 2005, p. 63). The shared development of a framework for approaching collaborative work in addition to a stronger emergence of leadership at all levels involved may help addresses projects such as this that involve long-term issues, aimed at providing a public good, and involving individuals of varying levels and with varying affiliations. Developing a stronger foundation may enable PNP to have a larger influence in the Western U.S. as it continues into the future.

## CHAPTER 6 – CONCLUSIONS AND REFLECTION ON THE PROCESS

### Reflections on the Process

After having spent a year working with the PNP group, I am unsure of the extent to which I had a positive effect expanding the project. With so many challenges along the way, many of the goals I set out to accomplish seemed just out of reach. The addition of the three sites proved difficult. As mentioned previously, only one of them received any restoration work.

As cited in the previous two chapters, a combination of factors contributed to the limited success. Though the project is built on the idea that Volunteer Leaders can function autonomously, those I worked with during our push to expand seemed hesitant, worried about their ability to ‘know what to do’ and expressed a desire to be given more direction. In addition, the support for these volunteers was likely not what they expected. Though I was always willing to help and was the primary motivator in the absence of Agency Partners, I do not have a strong background in botany or restoration techniques. As a social scientist, my ability to assist the volunteers was limited; I was hired to aid in the development of the program and the communication and rapport with volunteers, not to provide technical expertise. I learned along the way as I researched, developed and wrote most of the volunteer manual however. I was provided technical guidance from the research staff and it was my task to translate this material into a form understandable by our participants. I did feel successful in this regard; when I provided this information to

volunteers, they seemed delighted by the amount of information and the ease with which they could understand it. Still, quite often they would know more about the subject matter than I. They seemed to hold me in high regard, but at times I felt myself doubting my ability to be of benefit to them.

I am however still glad for the opportunity. The experience certainly provided a depth of information that may have the ability to create the positive change PNP needs. I have found along the way, when questioned about my research, that most people see the value in studying the social and communicative processes of a group like PNP. I believe that my findings can assist the PNP project, should the organization decide to continue with expansion efforts. I worry that Site A was a unique case, where the right people fell into the right place at the right time, and that replicating those elements at future sites may be difficult. Site A is far from perfect however, and many of the suggested best practices that follow have particularly strong application for them.

Knowing what I know now, there are many things I might have changed, both for PNP and the approach I took in my study. I might have pushed harder to track down and interview the former director of Site A. I may have put more effort into getting the Site D partners on board with the project, or on the 'same' board as the project anyway. I would have found a way to offer additional trainings and better gauge participants' feelings earlier on. Though the push was for an open and loose structure, I would have encouraged the development of a more formalized but transparent system for decision making, especially in regard to leadership and communication. As social scientists, we carry out applied research to be able to make suggestions for the future and contribute to the body of knowledge we find most important. Our aim is often to improve the practices

of the phenomena we study. I believe that my study is able to provide such contributions, not only to PNP, but also to similar organizations wishing to collaborate around a conservation issue involving individuals at various levels and working toward a public good. Specifically, I have applied a cyclical model of social capital that demonstrates the importance of understanding the four components involved. I have also shown the applicability of a communicative model of collaboration to small, community-based natural resource groups such as PNP. These findings lead me to several best practice suggestions for PNP and similar groups which are covered later in this chapter.

### Review of the Results

The results presented in Chapters 4 and 5 can be placed in the framework presented in Chapter 1. This elucidates the components of both social capital and the Bona Fide Group Collaboration Model. In addition, it is evident that the two theories share common components (see Figure 8). The objectives of this study were not only to describe the components of each model, but to also make inferences as to the interrelatedness of these components.

One of the most interesting findings from this study was the marked differences in the experience of Volunteer Leaders from Volunteer Participants. Some of the components were expressed similarly between these two groups such as environmental values, a shared impetus to join PNP (help environment), expectations shaped by prior experience, sites were considered part of one's community, sense of trust and reciprocity among the group, and no change in stewardship behavior but increases in advocacy.

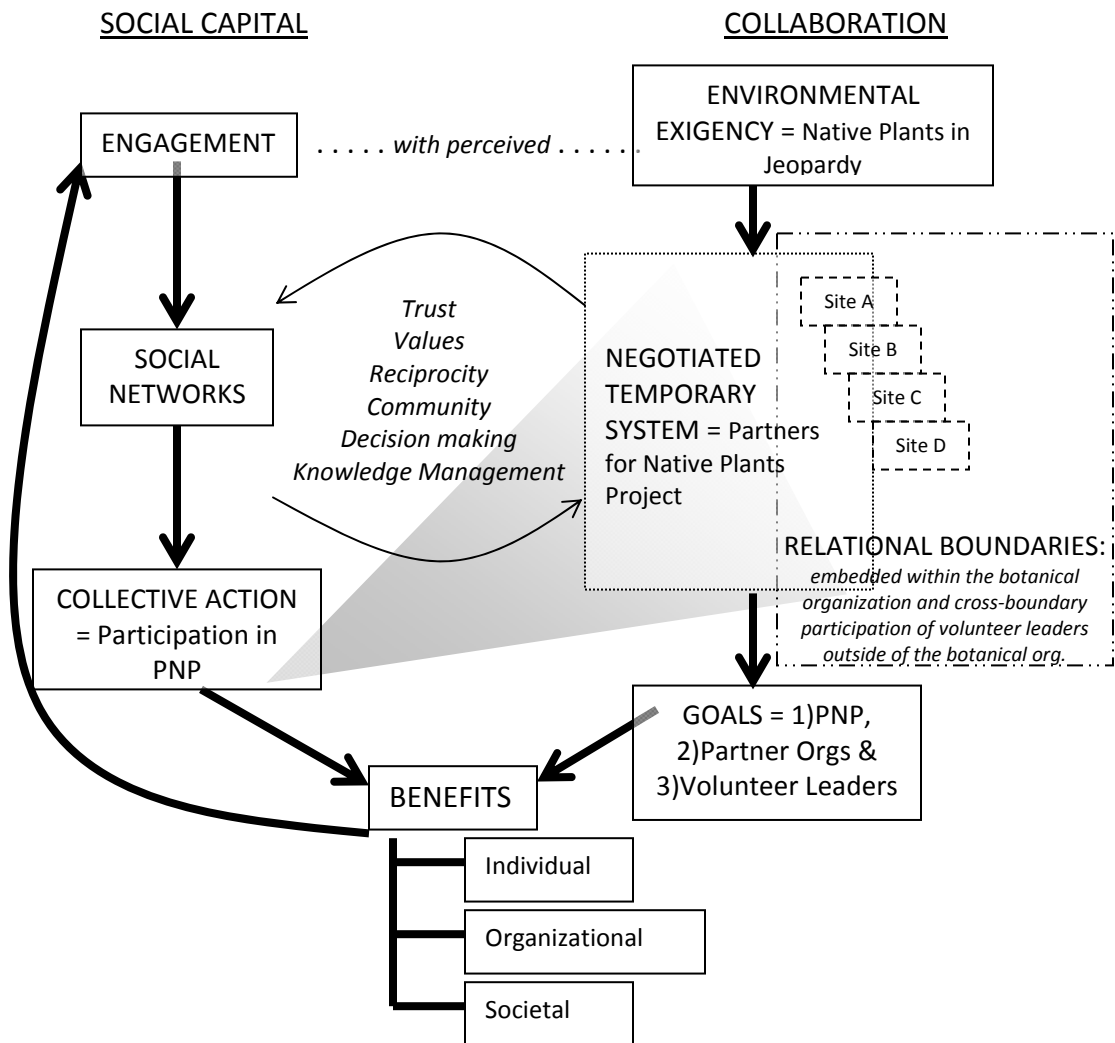


Figure 8. Study framework elucidating the components of the PNP project.

However a large divide in the experiences of leaders and participants appeared in components such as group identity, feeling like one's knowledge and skills were utilized, involvement in decision making, the building of social networks through PNP, and achievement of individual benefits which affected the continued involvement of some with PNP.

In addition, while leaders typically knew the history and organizational details of PNP, participants felt confused about who comprised the group and what PNP's goals were. Some of this confusion can be attributed to fluctuating membership. Volunteer Leaders maintained their membership with PNP, but fluctuation in Volunteer Participants was common. This was due in part to dissatisfaction with the PNP leadership and poor communication. Participants did not feel like they were kept in the loop, that their skills were being utilized, or that they were considered valuable members of the team.

Ultimately these results show me that the two theories, social capital and the Bona Fide Group Collaboration Model, are able to reveal interesting details about the PNP project. Taking a look at both the social and communication processes provided an in-depth understanding of the group, allowing me to make some best practice suggestions.

#### Best Practice Suggestions

As stated by Frey (1994), the end product of research should not only reside in useful outlets to academia (journal articles), but also exist in a form equally useful to the participants in the research project. This study was undertaken to have on-the-ground application for small community-based organizations, such as PNP, to understand how they may involve urban citizens in conservation based collaborative projects. A few lessons learned from this study, that may aid PNP as it continues to grow and may have applicability to other similar collaborative groups, are described in the following sections.

#### *Building Social Networks*

Most, but not all, participants express some desire to connect to those with whom they were volunteering. For others, even when social network building was not an



expressed motivating factor, the lack of it was still a hindrance to continued participation. Engaging volunteers in a process that helps create a sense of groupness would not only meet these motivations, but also encourage longevity in volunteering in two ways (a) the activity becomes an enjoyable activity, and (b) by creating a sense of accountability – a participant should know that if they are not present, they would be missed. This group identity can be formed through a variety of concrete actions that recognize the contribution participants are providing. This recognition could come in the following forms:

1. Greeting upon arrival – a concerted effort to greet each individual as s/he arrives making them feel welcomed and important to that days events.
2. Communication - updates between service about progress or upcoming events would help participants feel a part of the group even when unable to attend work days.
3. Events that allow introduction of and interaction between group members such as
  - a. Small tokens of appreciation – simple things like movie tickets, popsicles or other types of acknowledgment show participants how they are a valued member of the group. These items often provide an additional outlet to get to know the other participants. One of the participants stated, “And you know, that’s when you share with others too, when you’re eating your popsicle . . .” – Participant Chris
  - b. Celebratory events – to commemorate achievements made and encourage additional interaction beyond the restoration work.

4. A leader who is charismatic, engaging, and full of ‘pep’ – qualities identified by Volunteer Participants as important in being truly effective with them and making them feel like a valued member of the group.

#### *Leadership Structure and Communication Framework*

The foundation of any project rests with its level of leadership. In the case of PNP, a loose leadership structure at the convening organization level coupled with the fluctuating membership of Agency Partners trickled downward influencing the leadership provided to Volunteer Participants by the Volunteer Leaders. Though Agency Partners must commit a high investment at the outset, this strong leadership presence from the organization is vital in developing the positive relationships necessary for this kind of work. This can become a circular argument. For many, the incentive in partnering with PNP is to receive assistance in accomplishing organizational goals because they typically cannot achieve them fully on their own, yet committing staff time to work with volunteers can be difficult. If Agency Partners can make the initial investment, the ultimate goal of assistance with much needed projects could be achieved. Site A demonstrates how once a group is firmly established, the leadership presence of the organization can be curtailed as the Volunteer Leaders continue to intensify their role. Volunteer Leaders however, must maintain a strong leadership foundation and communication process in order to be successful.

During this study, there was lack of structure in the Site A leadership which was frustrating to Volunteer Participants who often felt ‘out of the loop’ in many ways. A majority of the Volunteer Participants during the focus group even expressed that they did not know the activities they had been participating in with the Site A weekly group

were part of the PNP larger partnership. One Volunteer Participant even remarked that if things did not change he could easily find another project with which to volunteer his time. A stronger leadership structure that may lead to more satisfaction among Volunteer Participants would emphasize a clear communicative framework and could include:

1. Information distribution – Participants could easily be provided simple information on their first visit such as a list of contacts, the mission statement for both the site they are performing work and the PNP project, and some information about native and non-native plants, such as a top 10 list, encouraging individuals to look into these plants further on their own.
2. Regular or semi-regular meetings outside the restoration work – Participants could be kept up to date on the actions and decisions of the group leaders with semi-regular meetings to discuss progress made, benchmarks set, and future goals. These meeting could be brief and could occur at the beginning or end of the regularly scheduled workdays.
3. The development of a plan, which is shared with participants – An understanding of the ‘big picture’ is important to participants. When plans are made or accomplishments are being reported, copies should be distributed to participants as well as Agency Partners and the botanical organization.

#### *Knowledge Sharing and Distribution*

Because one of the major goals of PNP was to share best practices and knowledge learned in an effort to streamline restoration information, a better system could be put in place to ensure this occurs at all levels. The trainings developed could be offered more

frequently and could be better advertised to Volunteer Participants as well as Volunteer Leaders. In addition several other practices could be pursued.

1. Regular meetings – of several kinds would encourage the exchange of information and the solicitation of ideas from those wanting to share. An annual meeting of all Agency Partners would ensure that each is on board with PNP and clear about its goals. Regular meetings of all Volunteer Leaders would encourage the sharing of lessons learned at each site, which might inform future decisions by leaders and would help PNP better reach its goal of facilitating the sharing of best practice information. Allowing interested participants to attend these meetings, should they be interested, would also foster inclusivity.
2. Catalog of Participant Skills – A simple fill in form could be provided to participants to learn what unique skills they may have to offer to PNP; these could be included on the contact list so all involved would be aware of the ways others might contribute.

### *Inclusivity and Decision Making*

Participants expressed a desire to feel included in the decision making process. Better communication as described above is one way to contribute to a sense of inclusivity, but Volunteer Leaders could also consider making other changes to encourage longevity in volunteering and limit fluctuations in members.

1. Enhanced Weekly Emails – The Site A group currently sends out weekly emails to participants describing the work that will be conducted and the start time for the project. These emails could contain additional information that explains the purpose of that work and how it fits into the plan for the site.

2. Utilization of Skills Catalog – If, as mentioned above, Volunteer Leaders collect information about the skills and knowledge of the Volunteer Participants involved, they could call upon these individuals when appropriate thus increasing their sense of importance in the project and contribution to the overall effort.
3. Additional Outlets for Input – Volunteer Leaders could provide additional avenues to solicit input from the Volunteer Participants about any topic related to the volunteer experience. This may help participants feel that their voice matters. The blog that was started by one of the leaders might be one way to do so.

In addition to the suggestions made for Social Networks, Leadership Structure and Communication Frameworks, Knowledge Sharing and Distribution, and Inclusivity and Decision Making, a PNP website may be a simple way to share all of the information suggested as the internet is a common place for individuals to seek information. These suggestions may help community-based organizations become more effective at involving urban citizens in collaborative initiatives.

#### Limitations of Study

The qualitative case study design of this project, coupled with my role as participant observer, had many benefits including my ability to more clearly understand the complex relationships and the differing perceptions of PNP partners at distinct levels of participation. My study was grounded in the lived experiences of the participants as they were occurring and allowed me to test the application of several theories to this small community-based collaboration. This case study was explanatory showing how the feelings and perceptions of participants of PNP had an effect on their involvement with

the project, the building of their social networks and collaborative processes, their satisfaction with their participation and end results of the project, and the likelihood that participant stewardship behavior would be affected by the collaborative group. However, the complexity examined was at times difficult to represent simply and the data do not lend themselves to numerical representations, which may have provided clarity. In addition, my short time with the project and the small size limited the ability to generalize the findings.

#### *Short Time with Project*

This study is based on one year of observation and data collection. In one year's time, the additional PNP sites were just beginning to get started. The contextual nature of this case study research could have benefited by more long-term participation and observation on my part, giving deeper insight to PNP as a collaborative phenomena. Additional time spent with the project may have elucidated deeper results showing how such a collaborative project forms and the time needed to establish a solid foundation upon which to build mutual understanding, best practices, and a truly effective project.

#### *Small Single Case Design*

Single case studies are already limited by the simple fact that they observe one phenomenon, albeit in depth, in this case PNP. In addition, this case may be considered small by some researchers, consisting of a total of 21 informants plus emails, documents, field notes and observations. All informants that were willing to allow me to interview them or participate in a focus group did. Though hard to determine, holding a second focus group may have been beneficial. However only one individual contacted me with

interest but an inability to attend the event, it may still have been worthwhile to advertise a second focus group.

### *Inability to Generalize*

For the reasons listed above, this case does not lead to generalizable results; the participants of PNP cannot be considered representatives of other community-based collaborations. However, the results of this study still add to the body of knowledge regarding these types of groups and allowed for some best practice suggestions that may apply to other community-based groups with similar goals or structures.

### *Areas for Future Exploration*

Throughout this study many additional avenues emerged for study, however I was not able to pursue them all. I make a few suggestions here for additional areas of exploration.

First, some additional characteristics of those involved beyond strong values toward the environment were evident. Participants who were retired or semi-retired articulated these. Participants stated how the importance of the environment and the size of your community grow as you get older. These participants emphasized that it is important to pay attention to our actions now, as we need to think about our children and future generations. In addition, they expressed a general disdain for consumer or materialistic behavior. These traits do not seem surprising, however if one of the goals of the PNP project is to encourage stewardship among a broader population (rather than “preaching to the choir”), then ways in which the project can draw the interest of those outside of this sphere should be thoroughly examined. Future areas of exploration may

study how individuals with more diverse backgrounds or less prior experience might be encouraged to participate in projects like PNP.

Second, there is danger in assuming that either (a) social capital is the cure all for any social problem or (b) collaboration is always the answer to a complex issue faced by multiple entities. Koniordos (2008) warns us to be cautious in our use of social capital and as it slowly gets co-opted into more disciplines there is a danger in losing clarity of its meaning, reasonable understanding of its application, and acceptable forms of its measure. Future areas of study may benefit by examining how and where individuals begin the process of developing such a capital. This study looked primarily at collective forms of social capital resulting in public good, however future research could examine the effect these social processes have on individuals and their standing within their communities.

Third, the social capital model presented makes it appear as if one must begin at the engagement stage in the process, however it is conceivable that one might begin elsewhere. For instance, an individual's social networks may lead him/her to participate in a project with a friend/family member from the network in hopes of building that relationship, which in turn may lead to knowledge and engagement about the issue at hand. An individual may also directly or indirectly reap the benefits of a collective action and awareness of this may encourage engagement with the issue. We are also familiar with mandated collective action, such as sentenced service duty, course requirements, or other directive measures that force individuals to participate in group activity. These may be the starting point for an individual to become engaged with the issue and thus continue the cycle of social capital. A closer examination of each of these as beginning points in



the cycle may yield a deeper understanding of social capital. Social capital may have the potential to both encourage engagement with environmental issues and the collective action necessary to solve them, as well as be built by collaborative activities (Wagner & Fernandez-Gimenez, 2008).

Fourth, the combined model of collaboration presented was uniquely applied to a volunteer run collaboration involving participants at various levels. Though these theories seemed applicable in this study, this is only one case and further research may be needed to confirm the usefulness of this combined model and its application to collaborations that vary from the traditional way they have previously been conceived.

And lastly, a study that combines both the social, communicative piece with the ecological results of these initiatives may provide a stronger, more holistic picture of the effectiveness of these collaborations on both the citizens within a community and their ecological counterparts. According to Harvey (1997), much of the literature recognizes that through sustainable practices, such as involvement in restoration projects, a true relationship to both nature and community can be built.

#### Closing Remarks

I undertook this study because I wanted to add to the field of environmental communication. I believe that nonprofits hold the key in encouraging a world where more of its residents see the value in nature and natural processes. I believe part of this is understanding the communication processes that will most ensure our success. Nonprofit organizations may be able to play a role in the formation and endurance of social capital by providing opportunities for citizens to get involved in collaborative projects that are more flexible and meet the needs of the individuals choosing to participate. Social

movements such as the environmental movement may also have the ability to provide opportunities for the creation of social capital. Therefore, collaborative environmental projects, those that get community members working together toward a common stewardship goal such as riparian plant restoration, may be one outlet for successfully building social capital and a citizenry capable of advocating for the environment.

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## APPENDIX A. REFLECTIVE SUMMARY SHEET

## Reflective Summary Sheet

*“Community-Based Urban Restoration in Riparian Corridors: An Examination of Social Capital and Communication Processes”*

Participant Name: \_\_\_\_\_

1. What was the relationship with the informant like? Before the interview? During the interview?
  
  
  
  
  
  
  
  
  
  
2. What were the underlying messages or tones from this participant?
  
  
  
  
  
  
  
  
  
  
3. What seemed to be the really important points for this person?
  
  
  
  
  
  
  
  
  
  
4. Any particular incidents or events that stood out?
  
  
  
  
  
  
  
  
  
  
5. How did this persons comments, reactions etc. compare to others?



## APPENDIX B. INTERVIEW SCRIPTS

## VOLUNTEER LEADER INTERVIEW SCRIPT

Hello, my name is Cara DiEnno. I am a research assistant and graduate student at Colorado State University. I am studying the influences on participation in community based conservation, such as the Partners for Native Plants project, and environmental stewardship. During the next 30-45 minutes, I will conduct an interview with you about your thoughts related to the Partners for Native Plants project including your involvement with the Botanical organization and other nonprofit organizations, your opinions about your culture and community and your beliefs and practices regarding environmental stewardship.

I will be asking you 7 primary questions and then some follow-up questions. Please take the time that you need to answer my questions. I will tell you if we are running out of time. Keep in mind that your participation in this study is voluntary and that all of your responses from the interview will remain confidential. In addition, please be aware that there are no known risks or direct personal benefits associated with your participation in this study. I am happy to answer any questions about the study. You can also contact the Principal Investigator of this study, Stuart Cottrell at (970)-491-7074 with any questions you may have about this study. If you have questions about your rights as a participant in this research, you may contact Janell Meldrum at the CSU Human Research Committee at (970)491-1655.

Now, would it be OK if I record our conversation? I will also be taking some notes.

[turn on voice recorder]

Please keep in mind that there are no right or wrong answers to any of the questions I ask you. I am interested in your personal thoughts. If you are uncomfortable with any of the questions, you may choose not to answer them. Also know that your name will not be linked to your responses nor will they be shared with other members of the group or agency staff.

1. Why did you decide to get involved in the Partners for Native Plants Project and do you have any expectations about your experience?
  - a. How long have you been involved with the project?  
Approximately how many hours of your time do you think you've donated?

2. Can you describe the community that you most strongly identify with to me?
3. Would you consider the site you've been doing restoration work as part of your community? If so, can you explain?  
If yes:
  - a. How would you describe your relationship with others in your community?
  - b. Generally speaking, does it seem that most people in your community share similar values with you?
  - c. Generally speaking, does it seem that most people in your community return acts of good will?
  - d. Generally speaking, would you say most people can be trusted?
4. How did your sense of connection to the community you just described influence your decision to participate in the project?
5. How important do you think it is for humans to take care of the natural environment in their communities?
6. What does it mean to you to be an environmental steward and at this stage in your life, how strongly do you identify with being an environmental steward?
7. Do you think your participation in the project will influence your perceptions of and actions toward the environment?

That's all I have for the interview questions. Would you like to add anything?

## AGENCY PARTNER INTERVIEW SCRIPT

Hello, my name is Cara DiEnno. I am a research assistant and graduate student at Colorado State University. I am studying the influences on participation in community based conservation, such as the Partners for Native Plants project, and environmental stewardship. During the next 30-45 minutes, I will conduct an interview with you about your thoughts related to the Partners for Native Plants project including your involvement with the botanical organization and other nonprofit organizations, your opinions about your culture and community and your beliefs and practices regarding environmental stewardship.

I will be asking you 7 primary questions and then some follow-up questions. Please take the time that you need to answer my questions. I will tell you if we are running out of time. Keep in mind that your participation in this study is voluntary and that all of your responses from the interview will remain confidential. In addition, please be aware that there are no known risks or direct personal benefits associated with your participation in this study. I am happy to answer any questions about the study. You can also contact the Principal Investigator of this study, Stuart Cottrell at (970)-491-7074 with any questions you may have about this study. If you have questions about your rights as a participant in this research, you may contact Janell Meldrum at the CSU Human Research Committee at (970)491-1655.

Now, would it be OK if I record our conversation? I will also be taking some notes.

[turn on voice recorder]

Please keep in mind that there are no right or wrong answers to any of the questions I ask you. I am interested in your personal thoughts. If you are uncomfortable with any of the questions, you may choose not to answer them. Also know that your name will not be linked to your responses nor will they be shared with other members of the group or agency staff.

1. How long would you say that (*organization name*) has been aware of and/or involved in the Partners for Native Plants Project?
  - a. Can you describe (*organization name*)'s level of participation and what that has been like?

2. What was the impetus in participating in the PNP project and were there any expectations about the outcomes or experiences individuals or your organization would have?
3. Can you describe the community that you most strongly identify with to me?
4. Would you consider the PNP sites as part of your community? If so, can you explain?
  - a. How would you describe your relationship with others in your community?
  - b. Generally speaking, does it seem that most people in your community share similar values with you?
  - c. Generally speaking, does it seem that most people in your community return acts of good will?
  - d. Generally speaking, would you say most people can be trusted?
5. How did your sense of connection to the community you just described influence your thoughts about the PNP project?
6. How important do you think it is for humans to take care of the natural environment in their communities?
7. What does it mean to you to be an environmental steward and at this stage in your life, how strongly do you identify with being an environmental steward?
8. Do you think your participation in PNP has influenced your perceptions of and actions toward the environment?

That's all I have for the interview questions. Would you like to add anything?

## BOTANICAL ORGANIZATION STAFF INTERVIEW SCRIPT

Hello, my name is Cara DiEnno. I am a research assistant and graduate student at Colorado State University. I am working studying the influences on participation in community based conservation, such as the Partners for Native Plants project, and environmental stewardship. During the next 30-45 minutes, I will conduct an interview with you about your thoughts related to the Partners for Native Plants project including your involvement with the Botanical organization and other nonprofit organizations, your opinions about your culture and community and your beliefs and practices regarding environmental stewardship.

I will be asking you 7 primary questions and then some follow-up questions. Please take the time that you need to answer my questions. I will tell you if we are running out of time. Keep in mind that your participation in this study is voluntary and that all of your responses from the interview will remain confidential. In addition, please be aware that there are no known risks or direct personal benefits associated with your participation in this study. I am happy to answer any questions about the study. You can also contact the Principal Investigator of this study, Stuart Cottrell at (970)-491-7074 with any questions you may have about this study. If you have questions about your rights as a participant in this research, you may contact Janell Meldrum at the CSU Human Research Committee at (970)491-1655.

Now, would it be OK if I record our conversation? I will also be taking some notes.

[turn on voice recorder]

Please keep in mind that there are no right or wrong answers to any of the questions I ask you. I am interested in your personal thoughts. If you are uncomfortable with any of the questions, you may choose not to answer them. Also know that your name will not be linked to your responses nor will they be shared with other members of the group or agency staff.

1. Can you tell me a little bit about the history and background of the PNP project?
  - a. Who initiated?
  - b. Why?
  - c. Goals?

2. What was the impetus to forming the PNP project and were there any expectations about the outcomes or experiences individuals would have?
  - d. How long have you been involved in the project? How many hours (or percentage of your time) has been dedicated to PNP as a DBG staff person?
3. Can you describe the community that you most strongly identify with to me?
4. Would you consider the PNP sites as part of your community? If so, can you explain?
  - e. How would you describe your relationship with others in your community?
  - f. Generally speaking, does it seem that most people in your community share similar values with you?
  - g. Generally speaking, does it seem that most people in your community return acts of good will?
  - h. Generally speaking, would you say most people can be trusted?
5. How did your sense of connection to the community you just described influence your thoughts about the PNP project?
6. How important do you think it is for humans to take care of the natural environment in their communities?
7. What does it mean to you to be an environmental steward and at this stage in your life, how strongly do you identify with being an environmental steward?
8. Do you think your participation in PNP has influenced your perceptions of and actions toward the environment?

That's all I have for the interview questions. Would you like to add anything?

## APPENDIX C. FOCUS GROUP SCRIPT



Hello, my name is Cara DiEnno. I am a research assistant and graduate student at Colorado State University. I am studying the influences on participation in river restorations and environmental stewardship. During the next 60-90 minutes, you will be involved in a focus group, a small group sampled about their opinions and beliefs by open discussion, regarding your thoughts related to the Partners for Native Plants project. This will include questions about your involvement with the Botanical organization and other nonprofit organizations, your opinions about your culture and community and your beliefs and practices regarding environmental stewardship.

I will be asking the group 8 primary questions and then some follow-up questions. Please take the time that you need to answer my questions. I will tell you if we are running out of time. Keep in mind that your participation in this study is voluntary and that all of your responses from this session will remain confidential. In addition, please be aware that there are no known risks or direct personal benefits associated with your participation in this study. I am happy to answer any questions about the study. You can also contact the Principal Investigator of this study, Stuart Cottrell at (970)-491-7074 with any questions you may have about this study. If you have questions about your rights as a participant in this research, you may contact Janell Meldrum at the CSU Human Research Committee at (970)491-1655.

Now, would it be OK if I record our discussion? I will also be taking some notes.

[turn on voice recorder]

Please keep in mind that there are no right or wrong answers to any of the questions I ask you. The purpose of the focus group is to have a free-flowing and interactive discussion among participants. Please also keep in mind to be considerate of others whose views may differ from your own. I am interested in your personal thoughts.

1. Why did you decide to get involved in the Partners for Native Plants Project?
2. How successful do you feel the efforts of the Partners for Native Plants have been? Why? (In what ways? Can you give examples?)
3. If you participate in conservation activities, can you describe some of these?

4. How has participation in the project affected your relationships with others? (new relationships, strengthened existing ties)?
  - a. Can you describe these and include any discussion about community.
5. Would you consider the Bluff Lake Nature Center as part of your community? If so, can you explain?
  - b. How would you describe your relationship with others in your community?
  - c. Generally speaking, does it seem that most people in your community share similar values with you?
  - d. Generally speaking, does it seem that most people in your community return acts of good will?
  - e. Generally speaking, would you say most people can be trusted?
6. How important do you think it is for humans to take care of the natural environment in their communities?
7. What does it mean to you to be an environmental steward and at this stage in your life, how strongly do you identify with being an environmental steward?
8. Looking into the future, where do you see yourself in relation to community based conservation initiatives such as the Partners for Native Plants project? What has influenced this view?
  - f. Has your participation in the project had an impact on any of the day-to-day choices you make at home or elsewhere outside the project?

That's all I have for our discussion. Would you like to add anything?  
Thank you for agreeing to participate with me today.

## APPENDIX D. NONPARTICIPANT QUESTIONNAIRE

Hi Folks – At one point you expressed interest in the Partners for Native Plants (PNP) project. I know how busy life can get and how competing priorities can take over. As many of you know, this project is part of my Doctoral research looking at community participation in restoration projects. I am very interested in your opinions and beliefs regarding your decisions with the PNP project.

I am attaching a brief questionnaire to this email and would greatly appreciate it if you would fill it out and email it back to me. Your name will not be linked with your responses. Regardless of the amount of time you spent with the PNP project, I am still interested in your personal thoughts and opinions. As a thank you, if you include your address, I will mail you a \$5 gift card to either Cold Stone Creamery or Einstein Bros. Bagels – just let me know what you'd prefer.

I want to extend the offer to participate in the project if you are still interested - just let me know.

To respond to the questionnaire, you can simply hit reply to this email and fill out the questions below or you may respond using the attached Microsoft Word document.

Please don't hesitate to contact me with any questions or concerns you may have. Thank you for your time.

Sincerely,

Cara DiEnno, Research Intern  
Partners for Native Plants project  
[cara@lamar.colostate.edu](mailto:cara@lamar.colostate.edu)  
#970-491-3802

1. What drove your initial interest in the Partners for Native Plants (PNP) Project and did you have any expectations about the experience?
2. Can you describe the community that you most strongly identify with (whether this is a physical place, a culture, a group of people, or other group you connect with)?
3. How did your sense of connection to the community you just described influence your decisions regarding the PNP project?
4. How important do you think it is for humans to take care of the natural environment in their communities?
5. What was the primary reason to end your participation with the Partners for Native Plants project?

6. Is there anything else you'd like to add or tell me about?

If you are interested in the gift, please let me know:

Gift Card Preference:

Address:

\*\*\*(please know that I will not use your address for anything else, once I send you your gift card, it will be erased from my records. As a reminder, your responses will remain confidential and will not be linked with any of your information.)