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Evaluating Collaboration Constructs: An Analysis of the Paradise Creek Restoration Plan

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EVALUATING COLLABORATION CONSTRUCTS:

AN ANALYSIS OF THE PARADISE CREEK RESTORATION PLAN

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ABSTRACT

EVALUATING COLLABORATION CONSTRUCTS:
AN ANALYSIS OF THE PARADISE CREEK RESTORATION PLAN

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This study examines collaboration constructs using Gray & Wood's framework of theoretical dimensions of collaboration and two conceptual models found in the literature in an effort to determine which constructs are present in the successful collaborative efforts of the Elizabeth River Project's Team Paradise as they developed the Paradise Creek Restoration Plan. The study used a mixed method approach involving both qualitative (interview and documents) and quantitative (survey) methods to gather data. The findings from this study support construct findings from three other studies on collaborative processes: Gray & Wood's framework of theoretical dimensions of collaboration; the Selin & Chavez Model of the Collaborative Process in Natural Resource Management used in the area of environmental management, and the Melaville & Blank's Five Stage Process for Change, used in the social services area. The findings from this research suggest that it might be possible to develop a generic model of collaboration using common constructs found in the literature that reflects the iterative and dynamic nature of the process of collaboration. Additionally, this study found two constructs not found in either of the conceptual models. This study indicates that collaboration does follow certain steps, or stages, consisting of a number of constructs,

and that practitioners considering collaboration as a way to solve policy problems can use either of these prescriptive models as a framework for their own process.

Co-Directors of Advisory Committee:	Dr. John C. Morris
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CHAPTER I

INTRODUCTION

American communities struggle to cope with complex policy issues that are critical to their economic, social, and environmental health. These issues are not necessarily constrained by municipal or bureaucratic boundaries and the stakeholders involved can represent all levels of government, a wide variety of industries, advocacy groups, the media, and individual citizens. This creates a complex web of relationships that can impede productive decision-making. Few agencies, whether public, private, or non-profit, have the resources, knowledge, or the power to solve the problems unilaterally. While there is an increase in the number of regional partnerships that have formed to address multi-jurisdictional issues, agreement on outcomes can be difficult to obtain due to political agendas, economic considerations, lack of consensus, inadequate funding, and the large number of stakeholders involved in the process (Bardach, 1998; Olberding, 2002).

Collaboration is one method communities, citizen groups, public agencies, and individuals are using as an alternative approach to resolving complex policy issues. Bardach (1998, p. 8) defines collaboration as any joint activity by two or more agencies, working together rather than separately, in an effort to increase public value. This activity involves individual stakeholders making decisions by using shared rules, norms, and organizational structures (Wood & Gray, 1991, p. 146). The organizational structures to support collaboration can be temporary, ad hoc, or permanent in design (Mandell, 1999).

Research, however, suggests that the process of collaboration is a very complex endeavor, and relies on concepts found in the disciplines of political theory, organizational theory, small group theory, leadership, administration, dispute resolution,

and program evaluation among others (O'Looney, 1994). Because of the complex and evolutionary process of collaboration there is little consensus on definitions, concepts or the methodological approach to adopt to study the process (Imperial, 2001). There are many studies that address environmental factors that affect the success of collaboratives and contextual factors that provide "advice" to those who enter into collaborative arrangements (Cestero, 1999; Chrislip & Larson, 1994; Kenney, McAllister, Caile, & Peckham, 2000; Mattessich, Murray-Close, & Monsey, 2001; Schuett, Selin, & Carr, 2001; Selin, Schuett, & Carr, 2000); however, research on collaboration models and their constructs is limited.

A construct is an abstract representation that has been created to account for observed regularities and relationships (Ary, Jacobs & Razavieh, 1996, p. 28). I use the term "construct" to identify a distinctive state, role, action, or element functioning as a unique component of a collaborative process. Process models are collections of relevant underlying constructs representing their designers' perceptions of sequences of observed structural and behavioral components of collaboration.

The constructs employed in this study are derived from empirical studies of the collaborative process. They are identified through the analysis (deconstruction) of collaborative processes described in the literature, specifying the selection, configuration, and utilization of their particular component elements. These constructs are organized and described following models developed by three research teams studying collaboration in different settings. They include 47 unique elements. It is this array of constructs that are the subject of this research.

This study will examine collaboration constructs using Gray & Wood's model of the theoretical dimensions of collaboration (see Figure 1), and two of the more prominent

conceptual models found in the literature. The Selin & Chavez (1995) model of environmental collaboration provides a basic framework for natural resource management (see Figure 2). The model proposes that collaboration emerges out of an environmental context categorized as antecedents and then proceeds sequentially through the stages of problem setting, direction setting, structuring, and outcomes. The feedback lines reflect the dynamic and cyclical nature of the process. While the literature indicates that researchers have attempted to validate the constructs contained in this model in studies conducted in western U.S. rural watersheds, there is no available research on its application in an urban environment.

The Melaville and Blank (1993) model presents a five-stage iterative framework for collaboration in the social services arena (see Figure 3). The first stage, getting together, begins the process followed by building trust, developing a strategic plan, taking action and going to scale. This model does not propose a definite sequential pattern but allows for a spiraling effect where collaboratives can loop back through various stages, or even work in two stages at once. Milestones in each stage reflect the progress made towards the achievement of long-term goals. Research exists on interorganizational collaborations in the education and social services arena that have utilized several of the model constructs, but none exists on its application in total.

While these conceptual frameworks are similar in structure, they differ in terms of the constructs and sequencing. Research on the specific use of these models has been limited in both scope and application with no research to date analyzing these together in a single study. In this study, the constructs within the Selin & Chavez and Melaville & Blank models of collaboration will be examined and assessed as frameworks for analyzing the processes used by Team Paradise. The purpose of this research is to

determine which constructs are present in the successful collaborative efforts of the Elizabeth River Project's Team Paradise, an urban, grass roots led, environmental collaboration, as they developed the Paradise Creek Restoration Plan. The Elizabeth River Project (ERP) is a distinctive case in environmental collaboration. Located in the Hampton Roads area of Virginia, it started as a small, grass-roots environmental group in 1992. Since that time, the ERP has grown to include local, state, and federal organizations, other non-profits, local businesses and concerned citizens in an effort to clean up the Elizabeth River. Of the four cities involved, two are older, overdeveloped core cities with declining population and economic bases. The area is home to the largest intermodal port facility on the east coast along with a major naval defense base and numerous other private businesses. The ERP has received special recognition for its use of collaboration by the Environmental Protection Agency (EPA), the State of Virginia, and the Chesapeake Bay Foundation, and has been cited as a national model of environmental collaboration by Christine Todd Whitman, former Administrator of the US Environmental Protection Agency (Harper, 2002; Paulsen, 2000). The ERP provides an exceptional opportunity to study the processes involved in successful collaboration in an urban environment.

Specific Purpose

The purpose of this research is to compare theory to practice in order to further the generalization of collaboration theory. This study will identify those constructs present in a successful collaboration project and compare them to the constructs identified in the literature using Gray & Wood's dimensions of collaboration, and, specifically to those found in the Selin & Chavez and Melaville & Blank models of

collaboration. The outcome is to determine if an alternative model is needed to explain the collaborative processes of the Elizabeth River Project.

Research Questions

The following research questions comprise the focus of this study:

1. What constructs of the collaborative process were present in the process used by Team Paradise as they developed the Paradise Creek Restoration Plan?
2. How does the set of constructs identified by the Team Paradise stakeholders relate or fit the collaboration process models developed by (a) Selin & Chavez, and (b) Melaville and Blank?
3. Can any additional constructs, not described in the Selin & Chavez and Melaville & Blank models, be identified based on the collaborative process developed in the Paradise Creek Restoration Plan?

This research will use a mixed methods approach, involving both qualitative (interview and documents) and quantitative (survey) methods to look in-depth at the ERPs development of the Paradise Creek Restoration Plan. The concurrent approach will involve collecting both types of data simultaneously to form a more complete picture of the ERPs process of collaboration.

Due to the dynamic and complex nature of collaboration, the use of the mixed-method design appears to be the best approach as it allows the researcher to use the benefits of both quantitative and qualitative methods. This follows from the pragmatic theoretical perspective that states the research problem is more important than the methods used and researchers should use all methods available to understand the problem (Cresswell, 2003). Previous research in this area has utilized a mixed methods approach

in an effort to gain as much insight as possible into the process of collaboration (Bardach, 1998; Chrislip & Larson, 1994; Mattessich et al., 2001). One of the most comprehensive studies in environmental collaboration, the *New Watershed Resource Book*, includes both short case studies (over 100) supplemented with survey research (Kenney et al., 2000). In this research, a survey will complement the qualitative methods and should provide an additional source of verification. Interviews, surveys, and documentation relating to the ERP form the primary sources of data. Qualitative techniques, such as pattern coding, will be used to analyze the interview and documentation data (Miles & Huberman, 1994).

Significance of the Study

This study of a collaborative effort, especially in a regional urban area involving multiple jurisdictions, is important, as it will contribute to scholarly research and organizational practices. This study contributes to scholarly research by examining current collaboration constructs in alternative settings. Studies in this area are instrumental in continuing the refinement of collaboration theory and models. Because these two models reflect separate professional disciplines (environmental management and social services), the results of this study may highlight generic constructs of collaboration that have potential for use by other professional disciplines. The results will have implications for collaboration theory and model building by subjecting these models to further testing.

While not statistically generalizabile to other initiatives or organizations, this study of a successful collaboration will provide information that will offer an important perspective to support other regional entities seeking to solve complex policy problems.

Study Overview

This study contains six chapters. Chapter I introduces the research and provides a general overview of the problem. Chapter II reviews the literature, which discusses collaboration theory and constructs, followed by a review of the two collaboration models providing the framework for this study. Chapter III contains the Research Design and Methodology and an overview of the case. This chapter begins with a review of the research questions, and then discusses the design of the study, the methodological considerations, the data analysis plan, and the limitations of the study. This is followed by the setting and description of the case. Chapter IV presents the results of the survey research and Chapter V presents the results of the qualitative inquiry. Chapter VI integrates and analyzes the results from the quantitative and qualitative chapters as it relates to the study's research questions, reports the major findings and implications, and suggests areas for further research.

CHAPTER II

REVIEW OF RELEVANT LITERATURE

This chapter provides an overview of the relevant literature on collaboration. It begins with a definition of collaboration and associated terms. The general concepts of collaboration theory will follow. Literature on collaboration constructs will be presented using Gray & Woods (1991) dimensions of collaboration as a framework. The last section will review the process models and associated constructs that are proposed for study.

Defining Collaboration

The term collaboration, in its Latin form (com laborare) means, "to work together." There are many definitions used to characterize collaboration, collaborative efforts, or a collaborative (Chrislip & Larson, 1994; Golich, 1991; Gray, 1989; Logsdon, 1991; Mattessich et al., 2001; Nathan & Mitroff, 1991; Pasquero, 1991; Roberts & Bradley, 1991; Selsky, 1991; Sharfman, Gray, & Yan, 1991; Westley & Vredenburg, 1991). The common elements of these definitions focus on (a) what collaboration is (an interactive process), (b) who is involved (stakeholders) and (c) the impetus to collaborate (search for solutions). The work of Barbara Gray, a preeminent scholar in the field of collaboration, provides the definition used in this study that collaboration is "(1) the pooling of appreciations and/or tangible resources, e.g., information, money, labor, etc., (2) by two or more stakeholders, (3) to solve a set of problems which neither can solve individually" (1985, p. 912).

The term collaboration usually refers to a set of activities or a process. Some researchers suggest that the term can define the organization itself as a complete entity or agency, as in "a collaborative" (Bardach, 1998; Melaville & Blank, 1993). For the

purpose of this study, the term collaboration will describe the process and the term collaborative will refer to a physical group or organization.

A stakeholder is either an individual or group affected by a particular problem or issue (Chrislip & Larson, 1994; Selin & Chavez, 1995). These can be not only people affected by the problem, but also those who are responsible for the problem, those that have the knowledge to correct the problem and those who can block suggested strategies (Chrislip & Larson, 1994, p. 65; Melaville & Blank, 1993).

In practice, the term collaboration is used interchangeably with cooperation and coordination; however, there is a distinct difference between these concepts. Mulford and Rogers (1982) use these terms to differentiate between patterns of interorganizational relations. Cooperation is the informal relationship that exists without commonly accepted rules while coordination is a more formal process; however, with both, authority still resides in each individual organization (Mattessich et al., 2001; Mulford & Rogers, 1982). Both cooperation and coordination may occur during the process of collaboration, but collaboration is the establishment of a new structure, with authority determined by the collaboration (Gray, 1989; Mattessich et al., 2001). Table 1 outlines the basic differences between cooperation, coordination, and collaboration.

Collaboration unites previously independent groups into a new formation to achieve a mutual objective. Stakeholders come together in search of a new, shared vision. Hopefully, solutions will go beyond what individuals can create, focusing on the future, not just the problem (Urwin & Haynes, 1998; Weick, 1995). While problems are the impetus for the creation of collaborations, the focus should change to one of visioning to

Table 1

Elements of Cooperation, Coordination, and Collaboration

Essential elements	Cooperation	Coordination	Collaboration
Vision and Relationships	• Basis for cooperation is usually between individuals but may be mandated by a third party • Organizational missions and goals are not taken into account • Interaction is often on an as needed basis, may last indefinitely	• Individual relationships are supported by the organizations they represent • Missions and goals of the individual organizations are reviewed for compatibility • Interaction is usually around one specific project or task of definable length	• Commitment of the organizations and their leaders is fully behind their representatives • Common, new mission and goals are created • One of more projects are undertaken for longer-term results
Structure, Responsibilities, and Communication	• Relationships are informal; each organization functions separately • No joint planning is required • Information is conveyed as needed	• Organizations involved take on needed roles, but function relatively independently of each other • Some project-specific planning is required • Communication roles are established and definite channels are created for interaction	• New organizational structure and/or clearly defined and interrelated roles that constitute a formal division of labor are created • More comprehensive planning is required that includes developing joint strategies and measuring success in terms of impact on the needs of those served • Beyond communication roles and channels for interaction, many "levels" of communication are created as clear information is a keystone of success
Authority and Accountability	• Authority rests solely with individual organizations • Leadership is unilateral and control is central • All authority and accountability rests with the individual organization which acts independently	• Authority rests with the individual organizations, but there is coordination among participants • Some sharing of leadership and control • There is some shared risk, but most of the authority and accountability falls to the individual organizations	• Authority is determined by the collaboration to balance ownership by the individual organizations with expediency to accomplish the purpose • Leadership is dispersed and control is shared and mutual • Equal risk is shared by all organizations in the collaboration
Resources and Rewards	• Resources (staff time, dollars, and capabilities) are separate, serving the individual organization's needs	• Resources are acknowledged and can be made available to others for a specific project • Rewards are mutually acknowledged	• Resources are pooled or jointly secured for a longer-term effort that is managed by the collaborative structure • Organizations share in the products; more is accomplished jointly than could have been individually

Note. From *Collaboration: What makes it work?* (Second ed.), p. 61, by P.Mattessich, M. Murray-Close & B. Monsey, 2001, Saint Paul, MN: Wilder Publishing Center.

maintain the dynamic over time (Urwin & Haynes, 1998, p. 34). The development and understanding of this shared vision is important to the eventual success of a collaborative effort (Han, 1998). A shared vision develops when all parties "have a similar picture and are committed to one another having it" (Senge, 1990, p. 206).

Collaboration Theory

Gray (1989) posits that a theory of collaboration is an "emergent interorganizational process" (p. 227) where relationshships among stakeholders are negotiated and renegotiated. This relates to negotiated order theory, which suggests interaction among stakeholders is socially constructed. This interaction evolves as the collaboration changes through outside events, internal negotiation, or the addition of new members (Nathan & Mitroff, 1991; Strauss, 1978). Negotiated order theorists, such as Day and Day (1977) focus on the social processes through which this interaction takes place:

> The negotiated order theory downplays the notion of organizations as fixed, rather rigid systems, which are highly constrained by strict rules, regulations, goals, and hierarchical chains of command. Instead it emphasizes the fluid, continuously emerging qualities of the organization, the changing web of interactions woven among its members, and it suggests that order is something at which the members of the organization must constantly work...Organizations are thus viewed as complex and highly fragile social constructions of reality which are subject to the numerous temporal, spatial, and situational events occurring both internally and externally (p. 132).

In a collaborative effort, negotiation is "the conversational interactions among collaborating parties as they try to define a problem, agree on recommendations, or design action steps" (Gray, 1989, p. 25).

Gray's Process Model of Collaboration

Gray's model of collaboration provides the framework for organizing the discussion and related review of research and literature on collaboration constructs.

Gray's (1989) model is a generic model that has three stages: (1) problem setting, (2) direction setting, and (3) implementation. Other models have three or more stages (Melaville & Blank, 1993; Reilly, 2001; Selin & Chavez, 1995), but the basic stages are similar, with certain steps subsumed or expanded under others. Table 2 reflects the stages and subsequent steps of this model.

Problem Setting

The first stage, problem setting, is concerned with getting the stakeholders to the table to begin the dialogue (Gray, 1989). This requires identifying the stakeholders, agreeing on the problem and the building of commitment to address the issues. As stakeholders begin to work together, they start to negotiate their relationships and establish the legitimacy of the process. Problem-setting efforts first confront the critical question of who can claim legitimate stakes in the situation. "Legitimacy is the perceived right and capacity of an actor to participate in a collaborative process" (McCann & Gray, 1986, p. 62).

Identifying the appropriate stakeholders is an important part of problem setting and can influence the outcome of the collaboration (Gray, 1989). Where there are multiple parties involved, there is a need for multiple sources of information to be able to fully understand and agree on the problem. A variety of sources should provide this information so that interdependence among the stakeholders is recognized and appreciated. Additionally, inclusion of stakeholders who can prevent any decisions will greatly influence the outcome. The stakeholders must also have the authority to implement the decisions reached (Gray, 1989). Bingham (1986) found that in a study of over 100 mediated environmental disputes, having participation by those with authority to implement the decision increased the likelihood that it eventually was implemented.

Determining who has a legitimate stake in the problem is important but can also be problematic (Gray, 1989). A legitimate stake means those who have a right to be

Table 2

The Collaborative Process

Phases	**Steps**
Problem setting	Common definition of the problem Commitment to collaborate Identification of stakeholders Convener characteristics Identification of resources
Direction setting	Establishing ground rules Agenda setting Organizing subgroups Joint information search Exploring options Reaching agreement and closing the deal
Implementation	Dealing with constituencies Building external support Structuring Monitoring the agreement and ensuring compliance

Note. Adapted From B. Gray, 1985, *Collaborating: Finding common ground for multiparty problems*. p. 57.

involved in the process and the capacity to do so, such as having the needed skills and resources. There may be perceptions of certain stakeholders influenced by previous relationships, especially when the collaboration is the result of conflict. In these situations, mediation may be required to bring the affected parties to the table (Gray, 1989).

Identifying and establishing the role of convener is another critical part of the problem-setting stage (Gray, 1989). Convener refers to either a stakeholder or an umbrella organization that create the forum for collaboration. The convener can use a variety of strategies to control the process and their power can stem from reputation, knowledge, experience, or formal office.

Resources are required to start the collaborative process effectively (Gray, 1989). While certain groups or agencies may sponsor deliberations, the cost in time and money may be too great for any one stakeholder. Uses of resources may include the cost of acquiring information and financial resources to make sure that every stakeholder can participate equally.

Defining the problem, identifying the stakeholders who have a commitment to collaborate, ensuring legitimacy of the stakeholders and convener, and identifying needed resources are important outcomes of the problem-setting stage. The next stage is direction setting (Gray, 1989).

Direction setting

During this stage, stakeholders begin by establishing ground rules, followed by setting the agenda for collaborating, organizing subgroups, conducting joint information searches, and reaching agreement (Gray, 1989, p. 57). The objective is to reach a common purpose and understand how other stakeholders view the issues. The stakeholders can then determine the applicability of proposed solutions (Gray, 1989).

Ground rules on how stakeholders interact with each other are an important part of direction setting. They can range from procedural issues, such as scheduling of meetings and use of alternates in the process, to those that outline acceptable and

unacceptable behavior. Use of ground rules acceptable to all stakeholders can have a positive influence on the process (Gray, 1989).

Setting the agenda requires the identification of the issues the group will address. Personal agendas, timetables, and special interests contribute to making agenda setting a delicate process (Gray, 1989). If legitimate stakeholders do not feel that their interests are being addressed they may withdraw from the process, possibly resulting in recommendations and agreements that may not last.

Organizing subgroups is an efficient way to address a large number of issues simultaneously (Gray, 1989). They can also be used when the stakeholder group exceeds an effective number for group functioning.

Undertaking a joint information search is critical when there is incomplete data or when stakeholders, working from different sources of data, cannot agree on the facts (Gray, 1989). This can provide for a common basis for discussion and increase trust among the stakeholders. This approach can also lead to arriving at a shared solution (Gricar & Brown, 1981).

Exploring multiple options is important, especially when multi-party interests are involved (Gray, 1989). Increasing the number of options available allows for trade-offs among interests and improves creativity. As the final step in the direction setting stage, reaching agreement and closing the deal requires commitment by all parties to the option or options selected (Gray, 1989).

Implementation

The third stage is implementation (Gray, 1989). Several steps at this stage are critical to ensure that agreements do not fall apart. The first is dealing with constituencies (Gray, 1989). It is important for stakeholders to persuade their constituencies that the

agreement reached is in the best interests of everyone. Without this feedback, certain parties may back out of the agreement later.

It is also necessary to obtain the external support needed to implement the agreement.

> A general problem, particularly for public agencies and corporations, is that often the individuals with decision-making authority who can speak for the organization are not the same as those with specific technical expertise on the issues. In addition, in large organizations, it is often not possible for the policy makers to spend their time to be present personally in all negotiations. Establishing clear and effective internal communications between meetings so that representatives can check with policy makers can be very helpful (Bingham, 1986, p. 115).

The external support may also require finding a sponsor for legislation or getting substantial public support.

Gray suggests that the effort needed for implementation depends on four factors: "(1) whether the collaboration was designed for information exchange or decision making, (2) how much organizational change is required (Cummings, 1984), (3) who has the resources to accomplish the change, and (4) whether the agreements reached are self-executing or not (Young, 1972)" (1989, p. 57).

Collaboration Constructs

There are many aspects to the study of collaboration processes. These include numerous studies that address environmental factors affecting the success of collaboratives and contextual factors that provide "advice" to those who enter into collaborative arrangements (Cestero, 1999; Chrislip & Larson, 1994; Kenney, McAllister, Caile, & Peckham, 2000; Mattessich, Murray-Close, & Monsey, 2001; Schuett, Selin, & Carr, 2001; Selin, Schuett, & Carr, 2000). There is also research on collaborative capacity and core competencies (Bardach, 1998; Foster-Fishman, et.al, 2001). Frameworks have been proposed that attempt to integrate and manage the

multitude of findings from prior research (Foster-Fishman, et.al, 2001; Harbert, Finnegan & Tyler, 1997; Mattessich, Murray-Close & Monsey, 2001; Melaville & Blank, 1993; Selin & Chavez, 1995; Urwin & Haynes, 1998). The focus of this paper; however, is on constructs that are utilized in the *process* of collaboration.

Based on a review of theories on the process of collaboration, Wood and Gray (1991) suggest there are three theoretical dimensions to collaboration "(a) the preconditions that make a collaboration possible and that motivate stakeholders to participate, (b) the process through which collaboration occurs, and (c) the outcomes of the collaboration" (p. 13). These dimensions also align with the three stages of Gray's developmental model: problem-setting, direction-setting, and structuring. These three dimensions offer the framework for organizing common collaboration constructs found in empirical studies of the collaborative process (Figure 1).

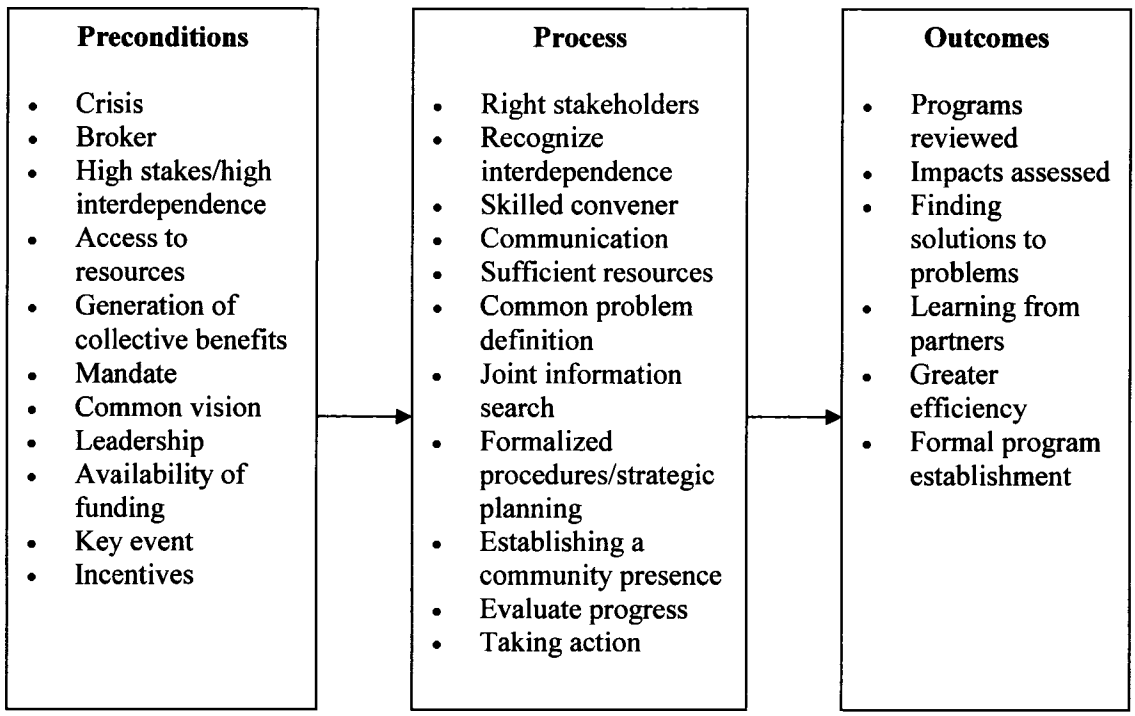
The constructs listed in Figure 1 have been drawn from studies of collaboration found through an intensive search of the relevant literature in the primary areas of education, public affairs, social science, and health. The studies had to address the process of collaboration, and not just success factors. The group under study (the collaborative effort) had to meet the definition of collaboration as utilized in this study; that is was not just a cooperative or coordinated effort. The study also had to include empirical evidence, or for case study research, those constructs reported in the findings that could be linked to evidence provided and not just generalizations or an "expert's" opinion. In cases where researchers identified the same construct using slightly different terms they were counted as being the same.

Preconditions

Preconditions to collaboration are those factors that influence whether or not collaboration will occur. These factors motivate and facilitate stakeholders to participate (Gray & Wood, 1991). A crisis can precipitate collaboration and be the result of conflict or a long-standing debate (Gray, 1985). A broker or mediator can initiate a collaborative venture in these instances. The broker may or may not be a stakeholder in the problem, but provides the impetus for stakeholders to reach consensus (Gray, 1989). High

Figure 1

Collaboration Constructs



stakes/high interdependence is a phenomenon of resource dependence. Organizations enter into relationships with other organizations that have needed, critical resources, which creates interdependence. Organizations try to manage these interdependencies, thus reducing the uncertainty of obtaining the resources (Logsdon, 1991). Sharfman et.al attributes an organization's motivation to collaborate to a combination of competitive and institutional forces (1991). The combination of these forces either enables or inhibits a collaborative venture. Strategic management theory suggests that organizations collaborate to ensure access to vital resources, and in turn, obtain competitive advantage (Selsky, 1991; Wood & Gray, 1991).

Gray & Wood suggest that for a collaboration to occur, stakeholders must satisfy each other's interests without sacrificing their own, thus generating a collective benefit (1991). In an effort to include public participation in environmental management decisions, government agencies will mandate collaborative activities (Selin & Chavez, 1995). Another precondition to collaboration occurs when stakeholders have a common or shared vision (Auluck & Iles, 1991; Mattessich & Monsey, 1991). Structured networks, such as civic organizations, accompany this shared vision, which facilitates communication (O'Looney, 1994; Westley & Vredenburg, 1991). A strong leader can also motivate others to collaborate. These leaders can "articulate a vision, inspire people to act, and focus on concrete problems and results" (Chrislip & Larson, 1994, p. 97). Some collaboratives form due to the availability of funding for demonstration projects or a key community event (Graham & Barter, 1999; Melaville & Blank, 1993). The final precondition presented is the use of incentives to gain potential partners who otherwise would not participate in collaboration. These could be in the form of grants or other financial contributions (Chrislip & Larson, 1994).

Process

There are a number of factors that facilitate the collaborative process. It is important to have the right stakeholders' involved (Mattessich et al., 2001). This group should include a broad spectrum of stakeholders that represent the entire community. Melaville and Blank (1993, p. 25) suggest looking for members that have influence and are committed to working toward a shared vision. A diverse membership will allow the collaborative to address the entire range of community needs and sets a standard of openness and mutual respect (Mattessich et al., 2001; Mintzberg et al., 1996).

After reaching consensus on appropriate stakeholders, the group will begin to appreciate the interdependencies that exist between them and realize that only through collective action will the problem be solved (Logsdon, 1991; Mintzberg, Jorgensen, Dougherty, & Westley, 1996; Wood & Gray, 1991). A skilled convener will be able to establish, legitimize, and guide the collaborative (Wood & Gray, 1991). Collaboration requires a well-developed communication system (Mattessich & Monsey, 1992; Wandersman et al., 1997). This system must be open and promote information sharing among its members. Collaborations need to secure the resources, both human and financial, to operate (Barton et al., 1997; McCann & Gray, 1986).

Another factor that facilitates the collaboration process is the identification of a common problem definition that stakeholders can agree with. If stakeholders believe the issue is important to them and that the benefits will outweigh the costs, they will participate (Gray, 1989; Logsdon, 1991; McCann & Gray, 1986; Selin & Chavez, 1995).

Information is jointly gathered and shared and operational processes established, such as identifying goals, setting ground rules and organizing subgroups, if necessary (Mattessich et al., 2001; McCann & Gray, 1986; Wood, 1989). By participating in a joint

information search, stakeholders will develop a common data set from which to work (Gray, 1989; Pasquero, 1991). This will level the field between varying interests represented in the group.

During the process of collaboration, the group takes action to create a long-term relationship with a more formal structure, especially when the problem requires a sustained commitment. This may result in assigning roles to stakeholders, and instituting formal agreements (Gray, 1985; Gray, 1989; Mattessich et al., 2001).

Stakeholders explore viable options for tackling a problem using elements of strategic planning. The group sets set the stage for change by conducting a community assessment, which leads to the creation of a shared vision (O'Looney, 1994). The overarching framework for the ensuing work of the collaborative is the development of a vision statement, a mission statement, and a set of goals. The group should also focus their initial efforts on a prototype service delivery system to ensure that it reflects their shared vision (Goodman, Wandersman, Chinman, Imm, & Morrissey, 1996). A neighborhood analysis aids in identification of targeted outcomes that will drive the service delivery design (Butterfoss, Goodman, & Wandersman, 1993; Melaville & Blank, 1993). Interagency relationships are formalized and technical tools developed to capture needed information (Butterfoss, Goodman, & Wandersman, 1996; Mintzberg et al., 1996).

The collaborative takes action by the development of a strategy for selecting, training, and supervising staff (Gray, 1985; Mattessich & Monsey, 1992). Service delivery requires "an aggressive, culturally sensitive outreach strategy" that will lay the foundation for a new set of relationships between the collaborative and the neighborhood (Melaville & Blank, 1993, p. 73). After implementation of the prototype, the group

designs an evaluation strategy that helps them identify systems-change requirements, make mid-course corrections, and measure results (Butterfoss et al., 1993; Gray, 1989; Harbert, Finnegan, & Tyler, 1997; Kagan, 1991)

Outcomes

This dimension concerns the expected outcomes of collaboration. Assessing the success of a collaborative involves reviewing programs, assessing impacts, and having stakeholders determine whether to continue the collaborative arrangement (Gray, 1989; Mattessich et al., 2001; Reilly, 2001). Other outcomes include finding solutions to problems and learning from partners (Butterfield, Reed & Lemak, 2004; Logsdon, 1991). Greater efficiency can also be a result of a collaborative arrangement (Austin, 2000).

A more lasting outcome is the expansion of the prototype, and the development of a permanent culture change. This includes developing collaborative leaders that will continue implementation, deepening the collaborative culture of partner organizations, devising a long-range financial plan, building a formal governance structure, and constructing a community constituency (Barton, Watkins, & Jarjoura, 1997; Bartunek, Foster-Fishman, & Keys, 1996; Butterfoss et al., 1993). To affect long-term change, the collaborative should address the pre-service education requirements offered at local colleges and universities. Reorienting courses to broader themes of collaboration better prepares students for entering the workplace (Melaville & Blank, 1993).

In an effort to identify the most significant constructs within the three dimensions of collaboration, researchers have proposed various models or frameworks of collaboration. Two of these models were selected as the basis for this study due to their relevance to the Paradise Creek Restoration Project: the Selin & Chavez model in the

area of environmental collaboration, and the Melaville & Blank model in the area of social services, due to its use in urban areas.

Collaboration Models

While some collaborative endeavors proceed through the three dimensions of preconditions, process and outcomes in a linear fashion, other models suggest an iterative or circular process. Selin and Chavez (1995) and Melaville and Blank (1993) developed models that expand Gray & Wood's three dimensions to five, but each takes a slightly different approach to the process and employs different sets of constructs. The Selin & Chavez model, developed for use in environmental management, builds upon the constructs of Gray's process model and provides for an iterative process. The Melaville & Blank model, initially developed for use in the education and human services area, incorporates elements of strategic planning and takes a long-term approach to collaborative endeavors.

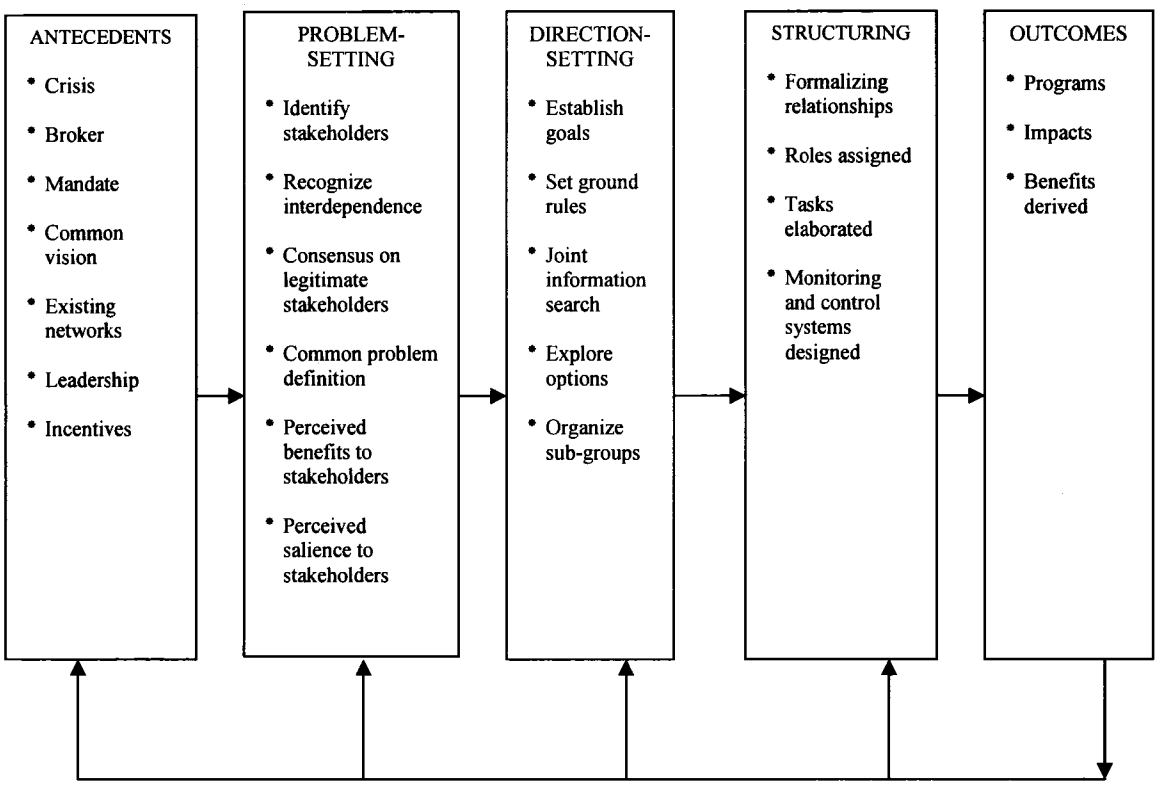
Selin & Chavez Model of the Collaborative Process in Natural Resources

The model proposed by Selin & Chavez (1995) in Figure 2 reflects current research on environmental collaborative processes. It shows an ideal process of collaboration that develops from the antecedents stage and proceeds through the problem-setting stage, the direction-setting and structuring stage sequentially. The use of the feedback arrows from the outcomes reflects the changing and iterative nature of environmental collaboration.

The model presented offers a framework for designing a collaborative effort; however it requires further validation, as proposed by the authors (1995, p. 194). One

Figure 2

The Collaborative Process in Natural Resource Management



Note. From "Developing a collaborative model for environmental planning and management," by S. Selin, & D. Chavez, 1995, *Environmental Management*, 19(2), p. 191.

study to date has tested the Selin & Chavez model. Bentrup's (2001) empirical study of the model in the rural, intermountain West suggests that the model realistically describes the fundamental constructs of collaboration, and offers a few adjustments. Based on three case studies of rural, watershed planning activities, his revised model identifies two additional antecedents, lack of data and threat of regulations; moves "formalizing relationships" from structuring to the direction-setting stage and adds "establishing baseline data"; and overlays an additional construct, "Acquiring or Redirecting of Resources," that affects all stages in the model. Bentrup acknowledges that the case

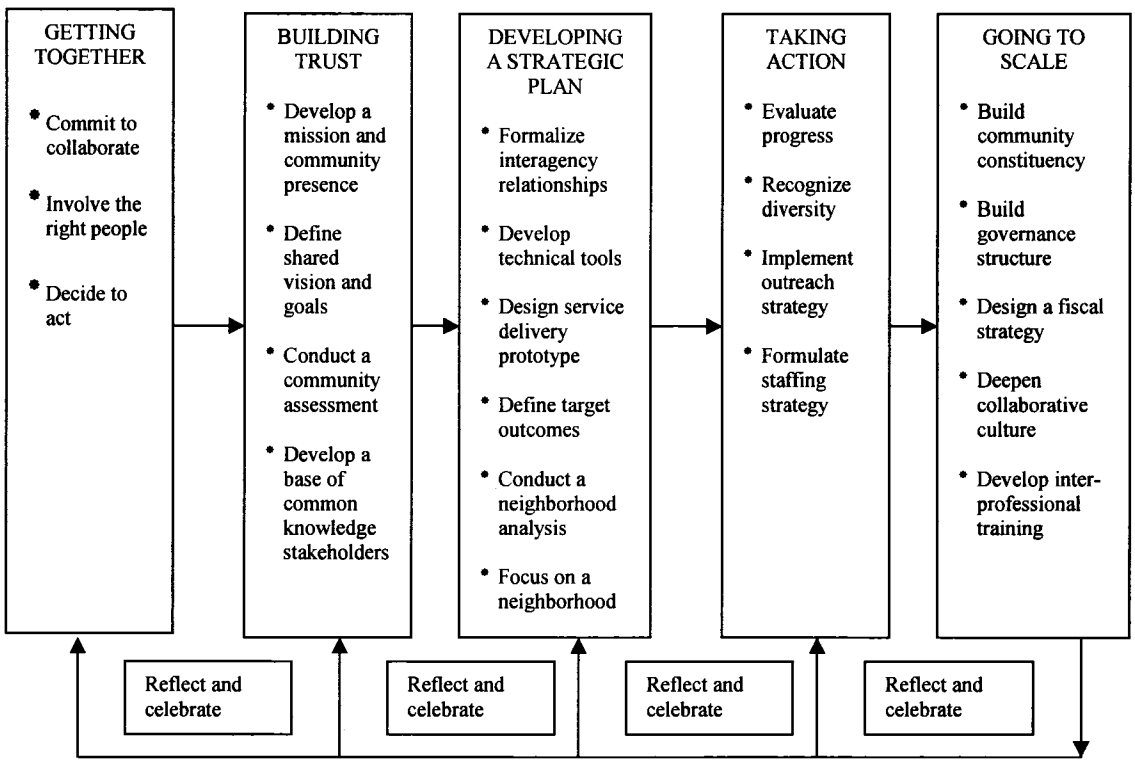
studies were restoration projects that likely influenced the results of the study as these types of projects attract public support (Williams, Wood, & Dombeck, 1997).

Melaville & Blank Five Stage Process for Change

The Melaville and Blank (1993) five-stage process model of collaboration (Figure 3) reflects the findings of the School-Linked Integrated Services Study Group, commissioned by The U.S. Departments of Education and Health and Human Services in

Figure 3

Melaville & Blank Five Stage Process for Change



Note. From *Together we can: A guide for crafting a profamily system of education and human services*, (p. 21) by A. Melaville & M. Blank, 1993, Washington, D.C.: U.S. Government Publishing Office.

an effort to build more service and support systems for children and families. The model focuses on long-term change while being flexible enough to respond to changing circumstances and conditions. The five stages proceed through getting together, building trust, developing a strategic plan, going to scale and going to scale. The processes are reflective of a spiraling process whereby collaboratives can move through one or more stages at the same time, and provides for an iterative process. At the end of each stage, the collaborative goes through reflection and celebration.

The Melaville and Blank model of collaboration provides the framework for several collaborative ventures in the social services area; however, empirical research on the model itself is not available. The model reflects information gained from urban communities, which lends itself to its application to the Paradise Creek Restoration Plan.

The collaboration models developed by Selin & Chavez and Melaville & Blank provide the framework for this study. Collaboration research findings support the constructs within these models as shown in Figure 4.

Figure 4

Research Supporting Collaboration Model Constructs

SELIN & CHAVEZ
STAGE #1 – ANTECEDENTS
1. Crisis (Gray, 1985) 2. Broker (Gray, 1989) 3. Mandate (Selin & Chavez, 1995) 4. Common vision (Auluck & Iles, 1991; Mattessich & Monsey, 1991) 5. Existing networks (O'Looney, 1994; Westley & Vrendenburg, 1991) 6. Leadership (Chrislip & Larson, 1991) 7. Incentives - (Chrislip & Larson, 1994)
STAGE #2 – PROBLEM-SETTING
1. Identify stakeholders - (Mattessich et al., 2001) 2. Recognize interdependence - (Logsdon, 1991) 3. Consensus on legitimate stakeholders - (Mintzberg et al., 1996) 4. Common problem definition - (Gray, 1989) 5. Perceived benefits to stakeholders - (McCann & Gray, 1986) 6. Perceived salience to stakeholders - (Logsdon, 1991)
STAGE #3 – DIRECTION-SETTING
1. Establish goals - (Wood, 1989) 2. Set ground rules - (Mattessich et al., 2001) 3. Joint information search – information is gathered and shared among stakeholders - (Gray, 1989; Pasquero, 1991) 4. Explore options – multiple options presented - (Mattessich et al., 2001) 5. Organize subgroups - (McCann & Gray, 1986)
STAGE #4 - STRUCTURING
1. Formalizing relationships – Long term relationships established - (Gray, 1989) 2. Roles assigned - (Gray, 1985) 3. Tasks elaborated - (Gray, 1985) 4. Monitoring and control systems designed - (Mattessich et al., 2001)
STAGE #5 - OUTCOMES
1. Programs - (Gray, 1989) 2. Impacts - (Mattessich et al., 2001) 3. Benefits derived - (Reilly, 2001)

Figure 4 – (Continued)

MELAVILLE & BLANK
STAGE #1 – GETTING TOGETHER
1. Commit to collaborate –(Graham & Barter, 1999) 2. Involve the right people - (Mattessich et al., 2001) 3. Decide to act - (Chrislip & Larson, 1994)
STAGE #2 – BUILDING TRUST
1. Develop a mission and community presence - (Auluck & Iles, 1991) 2. Define shared vision and goals - (O'Looney, 1994) 3. Conduct a community assessment - (Foster-Fishman et al., 2001) 4. Develop a base of common knowledge stakeholders - (Gray, 1989)
STAGE #3 – DEVELOPING A STRATEGIC PLAN
1. Formalize interagency relationships - (Butterfoss et al., 1996) 2. Develop technical tools - (Mintzberg et al., 1996) 3. Design service delivery prototype - (Goodman et al., 1996) 4. Define target outcomes - (Butterfoss et al., 1993) 5. Conduct a neighborhood analysis - (Butterfoss et al., 1993) 6. Focus on a neighborhood - (Melaville & Blank, 1993)
STAGE #4 – TAKING ACTION
1. Evaluate progress - (Harbert et al., 1997) 2. Recognize diversity - (Butterfoss et al., 1993) 3. Implement outreach strategy - (Kagan, 1991) 4. Formulate staffing strategy - (Gray, 1985)
STAGE #5 – GOING TO SCALE
1. Build community constituency - (Barton et al., 1997) 2. Build governance structure - (Butterfoss et al., 1993) 3. Design a fiscal strategy - (Mattessich et al., 2001) 4. Deepen collaborative culture - (Mattessich et al., 2001) 5. Develop interprofessional training - (Bartunek et al., 1996)
REFLECT & CELEBRATE
1. Reflect & celebrate cycle – (Chrislip & Larson, 1994; Mattessich et al., 2001)

CHAPTER III

RESEARCH DESIGN

This chapter begins with a discussion of the design of the study, the methodological considerations, the data analysis plan, and the limitations of the study. This will be followed by a description of the case and setting for the study, including the history of the Elizabeth River Project and brief profiles of the project participants.

Justification for the Mixed-Methods Design

The research approach selected for this study is a mixed methods design, using a concurrent approach (Cresswell, 2003). While there are other terms for this type of design, such as multi-method and multi-trait, current research uses the term "mixed methods" (Tashakkori & Teddlie, 2003). Cresswell provides the following description of this method: The researcher combines both quantitative and qualitative methods in order to provide a complete analysis of the problem. The collection of data occurs at the same time and the results integrated into the interpretation of the results. One form of data is usually nested within the other in order to "analyze different questions or levels of units in an organization" (2003, p. 16).

While books and journals are beginning to include mixed-methods research as a separate research design, one can trace the beginnings back to Campbell & Fisk (1959). They used the terms convergent methodology and multi-method/multi-trait to describe the use of both quantitative and qualitative approaches as being complementary, not rival approaches (Jick, 1979). Webb et al. (1966) and Denzin (1978) use the term "triangulation" which Denzin describes as "the combination of methodologies in the study of the same phenomenon" (p. 291). Jick suggests that triangulation can capture a more "complete, holistic, and contextual portrayal of the unit(s) under study...the use of

multiple measures may also uncover some unique variance which otherwise may have been neglected by single methods" (1979, p. 603).

Greene, Caracelli & Graham, however, suggest that using the accepted definition of triangulation as proposed by Denzin and others muddles the concept of mixed-method designs (1989). They define mixed-method designs as "those that include at least one quantitative method (designed to collect numbers) and one qualitative method (designed to collect words), where neither type of method is inherently linked to any particular inquiry paradigm" (p. 256). In their research into mixed-method designs, they describe a *complementarity* mixed-method study whereby both quantitative and qualitative methods are used to "measure overlapping but also different facets of a phenomenon, yielding an enriched, elaborated understanding of that phenomenon" (p. 258), which differs from triangulation that uses different methods to asses the same phenomenon. They also point out that with this type of design, the interpretability of the data is improved when the methods are implemented simultaneously and interactively in a single study (p. 267), which is similar to the concurrent design described by Cresswell (2003).

There are many challenges in using this particular research design. These include the need for substantial data collection, the ability to analyze both types of data, and the required knowledge of both quantitative and qualitative methods (Cresswell, 2003). However, the resulting holistic account of the phenomenon, not obtainable by a pure quantitative or qualitative approach, outweighs these challenges.

Quantitative methods are appropriate for testing the constructs in the two collaboration models against the processes used by the ERP in developing the Paradise Creek Restoration Plan. However, a qualitative approach is more conducive to analyzing what constructs influence collaboration as perceived by the stakeholders. These reasons

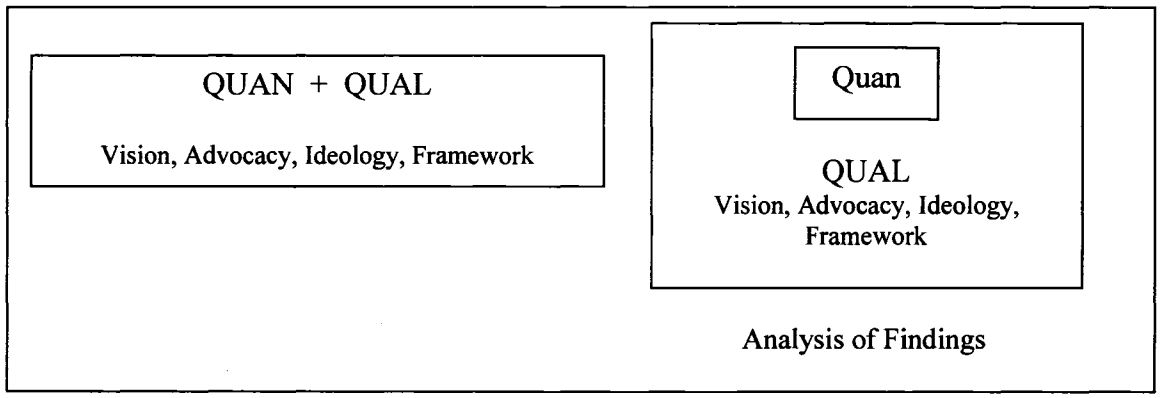
point to the use of a mixed-methods approach for this study. The type of strategy proposed for this research is the concurrent transformative strategy, as identified by Cresswell (2003). Figure 5 displays the framework of this strategy: the proposed implementation sequence, the priority of the data collected, and integration of the data in the study. Both quantitative (survey) and qualitative (interviews, document review) data will be collected in tandem, which is indicated by the "+" sign (implementation sequence). Capitalization of the terms "QUAN" and "QUAL" and use of the same number of letters is purposive to reflect how the data will be treated as equal in the study (priority). Examination of both types of data will take place during the analysis phase (integration) (Cresswell, 2003). The strengths of this strategy are: (1) collecting the data simultaneously reduces the time for data collection, (2) the study gains the advantage of having two types of data, and (3) the research can gain insight from the different types of data (Cresswell, 2003). The models of collaboration provide the framework for this study. Appendix A contains a proposed timeline.

The Issue of Generalizability

The literature on the processes of collaboration informs the research questions that guide this study. Constructs and models from collaboration research provide the framework for interpretation of the rich descriptions of actions and interactions collected through interviews, documents, and the survey instrument. The findings from this study will inform and expand on these constructs and models. Using the single site for examination of these frameworks will not allow for generalization of the results to other

Figure 5

Concurrent Transformative Strategy



Note. From *Research design: Qualitative, quantitative and mixed methods approaches*, (2nd ed.), (p. 214), by J. Cresswell, 2003, Thousand Oaks, CA: Sage Publications.

collaboratives but can provide a basis for discussion of successful collaborative endeavors in the same urban vicinity.

Selection of the Site

Because the goal of this research is not statistical generalizability, the selection of the site for this study is purposive, rather than a random sample. In purposive sampling, site selection is based on one or more criteria as deemed appropriate by the researcher (Merriam, 1988). A review of the literature pertaining to collaboration reveals acceptable criteria for identifying what would represent a typical site for selection. To test the collaboration models, the site would need to be representative of a group that utilizes elements of collaboration and where stakeholder participation was voluntary. Additionally, location, accessibility, and proactive participation by the group are essential. The site needs to be located near the Hampton Roads area of Virginia where the

researcher lives so that maximum time is available to spend with the group. Additionally, it was important that the group be willing to participate in the study.

Selection of the ERP for this study is due to its major characteristics, location, and access. The ERP represents an urban, grass roots, independent, non-profit organization comprised of a variety of stakeholder groups, including private business, various levels of government, other environmental groups, and private citizens. The ERP promotes a collaborative approach to environmental resource management. This researcher is within close proximity of the headquarters (Portsmouth, Virginia) and the ERP is a willing participant in the research.

Data Collection

Data was collected through multiple methods as shown in Table 3. These include qualitative interviews, review of pertinent documents, and use of a survey instrument. The following section will describe each type of data and appropriate collection procedures.

Qualitative Interviews

Interviews are "a universal mode of systematic inquiry" (Holstein & Gubrium, 1995, p. 1). They emphasize the researcher asking questions and listening, and the respondents answering (Rubin & Rubin, 1995). Interview subjects provide a context for meaning, and are not just a repository of answers, and the purpose is to derive interpretation, not facts, or laws (Warren, 2002, p. 83). The researcher is looking to understand the meaning of the respondents' experiences. In-depth interviewing seeks to understand the same level of knowledge and understanding as the respondent, with the researcher becoming the student and the respondent, the teacher (Warren, 2002).

Table 3

Data Collection Strategies

Data Collection Strategy	**Information to be Collected**
Interview (notes)	• ERP background (history, mission, goals) • ERP Team Paradise background (how it was formed and why) • Social and environmental context (demographics, history) • Personal and professional background of participants • Participants perceptions of group actions • Perceptions and attitudes relating to the models constructs
Document Analysis	• Meeting minutes and documents o Meeting attendance records o Topics of discussion o Meeting outcomes • Grant proposals o Background information on ERP and Paradise Creek Restoration Plan o Description of restoration issues o ERP Team Paradise priorities and strategies for addressing the issues • Grant reports o Background information on past activities • Newsletters/newspaper articles o Description of information shared with stakeholders and the public o Issues affecting the Paradise Creek Restoration Plan
Survey	• Perceptions and attitudes relating to the models constructs

The strengths of interviewing are that the researcher can control the line of questioning and it provides access to subjects who are not accessible to direct observation (Cresswell, 2003). The disadvantages are that the views of the respondent filter the information and that the researcher may bias the responses. Additionally, not all respondents will be equally articulate and perceptive (Cresswell, 2003, p. 186).

This study utilized a semi-structured approach, which provides a greater breadth and depth of data than the structured interview (Fontana & Frey, 2000). As Rubin & Rubin note, there are three types of questions used in qualitative interviewing: the main questions that begin and guide the conversation, probes that clarify answers or request other examples, and the follow-up questions (Rubin & Rubin, 1995). The researcher must be flexible and attentive to the answers provided by respondents, and be able to determine when previously designed questions may become irrelevant as the context of meanings change (Warren, 2002).

An interview format and guide provides the basis and framework for the interview process (Appendix B). The guide lists opening remarks of the interviewer, a list of questions, and concluding comments that finalize the interview. The interview questions elicit general information on the respondent and then focus on obtaining background information on the Paradise Creek Restoration Plan. Specific questions concentrate on the functioning of Team Paradise and follow the objectives of the study and the stages and constructs of both collaboration models (Table 4). The use of handwritten notes allows for notation of non-verbal cues and further comments or questions to revisit later in the interview.

The selection of interview subjects from Team Paradise participants was through purposeful sampling (Cresswell, 2003). Of the 47 members of Team Paradise, nine participants were eventually selected for interviews using a snowball process (Weiss, 1994). The respondents were representative of the mix of stakeholders involved in the collaborative process with the exception of local residents of Paradise Creek. The three local participants declined to be interviewed due to their minimal involvement in the process. Of the remaining team members, only two participants declined to be

Table 4

Matrix of Interview Questions to Constructs of the Models

Selin & Chavez stages/constructs	**Interview questions**
#1 – Antecedents	5
#2 - Problem-setting	7,8,11
#3 - Direction setting	7,10
#4 - Structuring	6,12
#5 - Outcomes	4,14
Melaville & Blank stages/constructs	**Interview questions**
#1 - Getting Together	5,7,8
#2 - Building Trust	6,12
#3 - Developing a Strategic Plan	9,10
#4 - Taking Action	14,17
#5 - Going to Scale	11,15,16

interviewed; one due to their limited involvement in the process and the other due to their position on the Elizabeth River Project staff. The interviews were conducted between April and June 2004 and lasted from forty-five minutes to two hours.

Documents Review

Analysis of documents and records concerning the ERP Paradise Creek Restoration Plan included both primary sources (from participants of Team Paradise) and secondary sources (second hand accounts written by others). While the term document review is used to reflect both documents and records, the difference between the two relates to the reason behind them: documents are normally personal writings such as field notes, diaries, memos, etc. while records are official recordings of some transaction, such as bank statements, contracts, etc. (Lincoln & Guba, 1985, p. 277). Document reviews are important because access is usually easy to obtain, the information provided may be different from or not available through other verbal methods, and as documents are enduring, they provide historical insight (Hodder, 2000). The downside of this is that the documents may not be available to the public, they may be incomplete, or inaccurate (Cresswell, 2003). Documents examined included meeting minutes, documents handed out at meetings, by-laws, reports (e.g. grant-related reports to funders), promotional brochures, newspaper articles, and emails. These documents provided information that related to the purpose of the group's existence, how it functioned, the context within which the group operated, and the outcome of the processes. Appendix D contains the list of documents reviewed.

Survey

The aim of survey research is to measure attitudes and behaviors of a population or a sample (Weisberg, Krosnick, & Bowen, 1996) and to generate information that is not obtainable from other sources (Fowler Jr., 1988). The survey in this research

complemented and provided validation of the qualitative findings and aided in analyzing different questions at different levels.

The survey instrument assessed the models constructs and factors that facilitated or impeded progress (Appendix C). Four previously developed surveys provided the basis for this survey. The OMNI Institute's "Working Together: A Profile of Collaboration (1992) assessed twenty-three collaborative groups on five dimensions of collaboration. The University of California Davis Watershed Partnerships Project surveyed 80 watershed-planning processes in California and Oregon (2002). Brush, Hance, Judd & Rettenmaier from the University of Michigan's School of Natural Resources and Environment developed a comprehensive survey to assess 84 ecosystem management projects (2000). The Community Group Member Survey, developed by the University of Wisconsin-Extension, assessed work done by community groups (Taylor-Powell, Rossing, & Geran, 1998). All four surveys have been pilot tested. Three additional questions were developed from the literature to augment the other surveys. The matrix at Table 5 links the individual survey questions, by source, to the constructs in each model. Assessment of the "reflect and celebrate" cycle that is a part of each of the five phases in the Melaville and Blank framework is accomplished using survey questions 39 and 60.

There are 70 items, grouped in seven categories in the instrument using a Likert-type scale. The survey used two separate subjective continuum scales with five possible choices:

a) strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4), and strongly agree (5); and

b) poor (1), fair (2), satisfactory (3), good (4), and excellent (5)

Table 5

Matrix of Survey Questions to Constructs of the Models

SELIN & CHAVEZ	**Survey questions**	**Source**
ANTECEDENTS		
1. Crisis	3	WT
2. Broker	45	CGMS
3. Mandate	9, 10	WPP, WPP
4. Common vision	1	WT
5. Existing networks	8	WPP
6. Leadership	2	WT
7. Incentives	6,7	WPP
PROBLEM-SETTING		
1. Identify stakeholders	11, 15	WT, WPP
2. Recognize interdependence	12, 46, 50	WT, CGMS, CGMS
3. Consensus on legitimate stakeholders	13, 16, 65	WT, WPP, CGMS
4. Common problem definition	18, 22	WPP, WT
5. Perceived benefits to stakeholders	5, 17	WPP, WPP
6. Perceived salience to stakeholders	38	WT
DIRECTION-SETTING		
1. Establish goals	27, 28	WT, WT
2. Set ground rules	26, 31, 32	WT, WT, WT
3. Joint information search – info is gathered and shared among stakeholders	19, 20, 29, 30, 33, 49	WPP, WPP, WT, WT, CGMS
4. Explore options – multiple options presented	25, 47	WT, CGMS
5. Organize subgroups	34, 48	WT, CGMS
STRUCTURING		
1. Formalizing relationships – Long term relationships established	62	CGMS
2. Roles assigned	35, 59	WT, CGMS
3. Tasks elaborated	55, 56	CGMS, CGMS
4. Monitoring and control systems designed	40	WT
OUTCOMES		
1. Programs	60	CGMS
2. Impacts	43, 66	SEM, CGMS
3. Benefits derived	41, 42	SEM, SEM

Note: WT = OMNI Institute, SEM = University of Michigan, WPP = UC Davis, CGMS = University of Wisconsin, LR = literature review

Table 5 - (Continued)

MELAVILLE & BLANK	Survey questions	Sources
GETTING TOGETHER		
1. Commit to collaborate	14, 31, 32, 51	WPP, WT, WT, CGMS
2. Involve the right people	11, 15	WT, WPP
3. Decide to act	24	LR
BUILDING TRUST		
1. Develop a mission and community presence	37, 47	LR, CGMS
2. Define shared vision and goals	27, 28	WT, WT
3. Conduct a community	52	CGMS
4. Develop a base of common knowledge stakeholders	22, 29	WT, WT
DEVELOPING A STRATEGIC PLAN		
1. Formalize interagency	55	CGMS
2. Develop technical	19, 30	WPP, WT
3. Design service delivery	54	CGMS
4. Define target outcomes	18	WPP
5. Conduct a neighborhood analysis	23	LR
6. Focus on a neighborhood	23	LR
TAKING ACTION		
1. Evaluate progress	40, 60	WT, CGMS
2. Recognize diversity	46	CGMS
3. Implement outreach strategy	56	CGMS
4. Formulate staffing strategy	59	CGMS
GOING TO SCALE		
1. Build community constituency	43, 44	SEM, CGMS
2. Build governance	36	WT
3. Design a fiscal strategy	51, 68, 69, 70	CGMS, CGMS, CGMS, CGMS
4. Deepen collaborative culture	62	CGMS
5. Develop interprofessional training	59	CGMS

Note: WT = OMNI Institute, SEM = University of Michigan, WPP = UC Davis, CGMS = University of Wisconsin, LR = literature review

Both continuums offered the opportunity to answer either N/A for not applicable or U for uncertain. The open-ended question at the end asked, "What are the most important factors for continued progress?" The six demographic questions cover gender, age, race, city/county of residence, education, and income.

The cover letter provided the respondents with information on the research to be accomplished, the survey instrument, and the guarantee of anonymity. It concluded with instructions on how to complete the survey, the requested period for mailing the response, use of the enclosed self-addressed stamped envelope and a contact point for further questions.

Data Collection

The survey was administered using a modified Dillman approach (1978). The initial mailing consisted of a cover letter, the survey instrument, and a preaddressed stamped envelope. Several methods to increase response rates were used as suggested by Miller (1991, p. 156): surveys were mailed via first-class mail; a follow-up postcard was mailed 14 days after the initial survey mailing; and, a personal letter, copy of the survey and preaddressed envelope was mailed to all non-respondents three weeks after the initial survey.

Research has shown that nonrespondents are similar to late respondents (Ary, Jacobs, & Razavieh, 1996). To determine if the completed surveys were representative of the total population, a return rate graph tracked all survey responses with the responses coded into early and late groups. Early respondents reflects those surveys returned prior to the reminder postcard and late respondents are those surveys returned after the second mailing. Chi-square tests were used to examine differences in the demographic variables

between early and late respondents. No significant differences between the two groups exist, therefore, the nonrespondents should be an unbiased sample.

Data Analysis

Qualitative analysis is the search for patterns and consistency (Stake, 1995) obtained while looking through documents, observing or interviewing, or through coding records and aggregating the frequencies. Stake (1995) emphasizes that the purpose of the analysis is to understand behavior, issues and contexts concerning the particular site being studied (p. 78). Miles & Huberman's (1994) description of qualitative analysis provides the structure for examination of the documents and interviews in this research. Their approach consists of three streams of activity: data reduction, data display, and conclusion drawing/verification. Data reduction is the process of focusing and transforming data, a "form of analysis that sharpens, sorts, focuses, discards, and organizes data in such a way that "final" conclusions can be drawn and verified" (Miles & Huberman, 1994, p, 11). Data display is the process of visually assembling the information to aid in drawing conclusions. Conclusion drawing/verification is the process of determining what things mean and verifying these conclusions during the analysis process (Miles & Huberman, 1994).

Data reduction

The interviews and margin notes were transcribed immediately following the interview. Quotes are identified to add context and support for observations noted (Miles & Huberman, 1994).Text from each interview and document reviewed were mapped to each stage of the models using a separate data table for each piece of documentation and the corresponding abbreviation (Table 6). Repetition and recurrence of phrases and words were highlighted and brought together as "themes." These themes reflected both the

constructs in the stages of the models and additional processes not identifiable to either of the models.

Data Display

The themes were then displayed in a table format to correlate with the constructs of the models. While these constructs provided the overarching framework for coding the data, several themes emerged that reflected alternative processes. A separate display was created, aligning these themes within the appropriate stages of the models.

Conclusion Drawing/Verification

Using Creswell's concurrent transformative strategy, the results of this analysis were used to confirm, cross-validate, or corroborate findings from the quantitative portion of the research as presented in Chapter VI (Cresswell, 2003).

The use of descriptive statistics allows the researcher to analyze and portray the survey data. Frequency tables were used to examine the extent that the constructs of the two models were present, as perceived by the stakeholders.

Table 6

Example of a Blank Data Table

Antecedents (A)	Problem Setting (PS)	Direction Setting (DS)	Structuring (S)	Outcomes (O)	Getting Together (GT)	Building Trust (BT)	Dev. Strategic Plan (SP)	Taking Action (TA)	Going to Scale (GS)

Limitations of the Data and Collection Methods

This proposed research used a mixed method design that consisted of interviews, a documents review, and a survey instrument administered to the participants of the project. There are several threats to validity in using these methods.

The main threat is the accuracy of data obtained from interviews, surveys, and documents. Biased data can result from inaccurate transcribing of the interviews. There is also the possibility of the respondents interviewed not telling the truth. To counteract this threat, interview data was collected as recommended in the literature (Yin, 1989). All interview collection procedures were documented as well as techniques used in the data analysis. Transcripts were sent to the respondents for verification of the facts.

A limitation to using a survey instrument lies in interpretation of the questions. Each respondent may interpret questions differently from others, which can cause skewed data due to user perceptions. There is the possibility of a low response rate, which can cause biased results (Fowler Jr., 1988). Additionally, the time that has elapsed between the event in question and administration of the survey may result in inaccurate data.

The use of a mixed method approach provides for triangulation as a means to improve validity. Triangulation involves using independent measures derived from different sources to determine the consistency of the data (Yin, 1989). Data retrieved from interviews and documents are contrasted with the survey data to reveal inconsistencies. To increase the response rate, multiple methods were utilized.

Protection of Human Subjects

The Human Subjects Reviews Committee of the College of Business and Public Administration and the Old Dominion University Institutional Review Board received this research proposal for review and approval prior to any research activity.

Description of the Case and Setting for the Study

The Elizabeth River Watershed

The Elizabeth River Watershed encompasses 200 square miles and contains the top two fastest growing cities in the state, Virginia Beach and Chesapeake (U.S. Census, 2000), and the urban cities of Norfolk and Portsmouth. At one time, the watershed was a wide, shallow estuary of the Chesapeake Bay. Three centuries of dredging and development have increased the river's depth to twice the original but has reduced its original width by two-thirds (Elizabeth River Project, 1996). The watershed is developed over almost 90 percent of its land area (Elizabeth River Project, 1997) and includes The Virginia Port Authority, one of the largest ports on the eastern seaboard; Naval Station Norfolk, the world's largest naval station; the entrance to the Atlantic Intracoastal Waterway (Chesapeake); and the Great Dismal Swamp National Wildlife Refuge.

Paradise Creek is located in the Southern Branch of the ERP Watershed and represents 2.9 square miles in the city of Portsmouth. On its shores stands the silo of Giant Cement which manufactures and sells masonry cement products in the Middle-Atlantic and South-Atlantic regions of the United States (Elizabeth River Project, 2003).

History of the Elizabeth River Project

In 1991, four concerned citizens sat around a kitchen table discussing how to clean up the Elizabeth River through collaboration, not litigation (Mayfield, 2001). In 1993, they formed the Elizabeth River Project, a non-profit organization created to build community involvement in restoring the environmental quality of the Elizabeth River. Real estate mogul Harvey Lindsay provided their first offices rent-free in downtown Norfolk. Since that time, they have moved three times to accommodate their eight-

member full time staff. They currently have 18 members on their Board of Directors and a six-member administrative committee. The members are representative of the community at large, including state and local officials, members of the military, university personnel, and local business leaders.

The ERPs mission is to "restore the Elizabeth River to the highest practical level of environmental quality through government, business, and community partnerships" (Elizabeth River Project, 1996). In 2002, the U.S. Environmental Protection Agency awarded a $100,000 Community Legacy Grant to the ERP to develop a model for improving the Chesapeake Bay (Elizabeth River Project, 2003). The grant provided the means to create "Team Paradise" to develop and implement a plan for the restoration of Paradise Creek. Team Paradise "envisions a restoration of Paradise Creek that: ...Demonstrates such powerful results in restoration and conservation that the creek enjoys national recognition as *the model* for watershed management that safeguards ecological and human health..." (Elizabeth River Project, 2003).

The primary goals of Team Paradise are:

1. Develop a plan to clean up creek sediments determined to pose a serious risk to humans or the eco-system and begin implementation by 2008.
2. Achieve a habitat corridor of restored and conserved open land, including wetlands, forests, and meadows, for 100 feet inland on the north shore of the creek and on the southern shore as practical, with areas set aside as parks or nature preserves as practical.
3. Implement innovative solutions to storm water pollution to address those sub-watersheds with highest impact on the eco-system, and provide maximum practical storm water treatment for new developments.

4. Restore Navy landfill sites on Paradise Creek
5. Return at least three Superfund and/or "brownfield" upland sites to productive use through elimination of the risks to human and ecological health.
6. Implement a comprehensive public relations and outreach plan to educate the citizens about creek restoration, history and stewardship opportunities (Project, 2003).

Team Process

The U.S. Navy provided the impetus for the ERP's selection of Paradise Creek as their next environmental project. The Navy had completed a multi-million dollar cleanup of sandblast from creek headwaters at the former New Gosport navy housing area, on the shores of Paradise Creek in 2001 and had decided to turn the area into wetlands (Project, 2003, pg. 2). The ERP selected Paradise Creek as an opportunity to "concentrate their entire 'toolbox' of restoration and conservation options on one small tributary of the Elizabeth River" (Project, 2003).

The ERP assembled a group of local city and community representatives and scientists to determine the feasibility of restoring Paradise Creek. The group concluded that it would be challenging, but possible. The ERP pulled together other groups that were interested in helping with the cleanup, including Peck Land Company, Newport News Shipyard, the Southeastern Public Service Authority (SPSA), four local civic leagues, and other interested persons – the outcome was the creation of Team Paradise.

Team Paradise consists of four separate teams assisted by a project manager and associated staff. The four teams are Team Sediment Quality, Team Living Resources, Team Water Quality and Team Quality of Life. The members of these teams represent volunteers from various governmental agencies, educational institutions, local businesses,

the ERP, and local community associations. A complete list of Teams and members are in Appendix D.

A steering committee, created from Team Paradise members, presented the proposed process for developing a plan to clean up the creek to the local community at a community forum in October 2002. From this meeting, the initial problems were recognized and teams were developed. Future meetings were scheduled with the community to obtain input on their vision of the creek. The individual teams developed discussion papers and explored the options available in detail. Team Paradise reached consensus on a draft plan during an overnight retreat at Port Isobel, an island owned by the Chesapeake Bay Foundation in March 2003 (Project, 2003). The formal plan "Paradise Found: Paradise Creek Restoration Plan" was published August 1, 2003.

In 2004, the White House Council on Environmental Quality presented the 2004 Coastal American Spirit Award to the ERP for its work on Paradise Creek. The ERP was recognized for "a unique partnership representing a collaborative approach to restoration that produced more results than would have been possible from any one agency alone" (ERP, 2004).

CHAPTER IV

SURVEY RESULTS

This chapter reports the results of the survey as outlined in Table 5 - Matrix of Survey Questions to Constructs of the Models, Chapter III. Analysis of the results of the survey to examine the extent that constructs contained in the Selin & Chavez and Melaville & Blank models were present in the collaborative efforts of Team Paradise will be combined with the qualitative results in Chapter VI.

Survey Response Rate

The Elizabeth River Project provided a list of Team Paradise participants. The list contained 104 contacts, 20 of which were listed as husband/wife. Individual surveys were mailed to both spouses (n=134). Reminder cards were mailed two weeks after the initial mailing, and a second round of surveys were mailed two weeks after the cards. Of the 134 mailed surveys, 10 were returned as undeliverable. The overall response rate was 46% (124/57). Nineteen respondents (15%) were deleted due to either being deceased (n=2), or not involved in the collaborative process (n=17). The net usable response rate was 54% (105/57).

Demographics

Fifty percent (50%) of the respondents live in the watershed. Seventy-one percent (71%) are males and 29% are female. Sixty-one percent (61%) were between the ages of 40-59 with 23% over 60 and 16% under 40. Eighty-eight percent (88%) described themselves as white and 11% described themselves as African American. Thirty-nine percent (39%) indicated they had graduate or professional degrees (Masters, PhD or MD), 34% undergraduate degrees. Fifty-six percent (56%) indicated incomes of over $75,000, and 22% indicated incomes between $50,000 and $75,000. Thirty-five percent

(35%) live in Portsmouth, 18% in Virginia Beach, 12% in Chesapeake, and 10% each in Gloucester and Norfolk. The group can be generally characterized as mainly white, middle-aged, highly educated, affluent males who live predominately in the local area.

Purpose of the Survey

The survey instrument assessed what constructs were present in the collaborative process used by Team Paradise. The survey used two separate subjective continuum scales with five possible choices:

a) strongly disagree (1), disagree (2), neither agree nor disagree (3), agree (4), and strongly agree (5); and

b) poor (1), fair (2), satisfactory (3), good (4), and excellent (5)

Both continuums offered the opportunity to answer either N/A for not applicable or U for uncertain. Where multiple survey items address the same construct, a composite score was created (Babbie *et al.*, 2003). Composite scores take into account that there are multiple indicators of a single construct. Items included in a composite score should have face validity, or a logical consistency (Israel, 1992). This means that each item included in a composite score should measure the construct. For this study, a simple composite score was created in SPSS for individual constructs by adding individual item scores together, ensuring that these items were coded in the same direction.

Selin & Chavez Model Constructs

The five stages in the Selin & Chavez model of collaboration contain 25 constructs. Table 7 relates the survey questions to these constructs.

Table 7

Matrix of Survey Questions to Selin & Chavez Model Constructs

Selin & Chavez Constructs	**Survey questions**
ANTECEDENTS	
1. Crisis	3
2. Broker	45
3. Mandate	9, 10
4. Common vision	1
5. Existing networks	8
6. Leadership	2
7. Incentives	6, 7
PROBLEM-SETTING	
1. Identify stakeholders	11, 15
2. Recognize interdependence	12, 46, 50
3. Consensus on legitimate stakeholders	13, 16, 65
4. Common problem definition	18, 22
5. Perceived benefits to stakeholders	5, 17
6. Perceived salience to stakeholders	38
DIRECTION-SETTING	
1. Establish goals	27, 28
2. Set ground rules	26, 31, 32
3. Joint information search – info is gathered and shared among stakeholders	19, 20, 29, 30, 33, 49
4. Explore options – multiple options presented	25, 47
5. Organize subgroups	34, 48
STRUCTURING	
1. Formalizing relationships – Long term relationships established	62
2. Roles assigned	35, 59
3. Tasks elaborated	55, 56
4. Monitoring and control systems designed	40
OUTCOMES	
1. Programs	60
2. Impacts	43, 66
3. Benefits derived	41, 42

Antecedents

Antecedents provide the stimulus for collaborative activities – a preliminary step that initiates the process. These are crisis, broker, mandate, common vision, existing networks, leadership, and incentives. Ten survey items address the reasons Team Paradise was formed. The results are displayed in Table 8. A section for comments was also included.

Table 8

Survey Results for Antecedent Constructs

Construct	Strongly agree	Agree	Neither agree/ disagree	Disagree	Strongly disagree	N/A
Common vision (n=56)	51.8%	39.3%	3.6%	1.8%	0%	3.6%
Leadership (n=55)	36.4%	49.1%	5.5%	0%	0%	9.1%
Existing networks (n=55)	32.7%	45.5%	9.1%	1.8%	3.6%	7.3%
Crisis (n=55)	32.7%	27.3%	23.6%	10.9%	0%	5.5%
Incentives (n=54)	13.0%	22.2%	42.6%	3.7%	9.3%	9.3%
Mandate (n=54)	5.6%	9.3%	18.5%	31.5%	24.1%	11.1%
	Excellent	**Good**	**Satisfactory**	**Fair**	**Poor**	**Uncertain**
Broker (n=51)	37.3%	51.0%	3.9%	2.0%	3.9%	2.0%

The questions relating to the first six constructs asked the respondents their opinion on what led to the establishment of Team Paradise. The results indicate that over half of the respondents agreed/strongly agreed that four of the constructs precipitated the formation of Team Paradise. Fifty-two percent strongly agreed that there was a common vision while 36% strongly agreed and 49% agreed that leadership was a motivator. Of the respondents, 33% strongly agreed and 46% agreed that the availability of an existing network was a factor and 33% strongly agreed and 28% agreed that a crisis contributed to the formation of Team Paradise.

Question 45 asked how well the group did in bringing together parties with an interest in the issue, relating to the construct of broker. Thirty-seven percent rated this construct as excellent and 51% rated it as good. Few respondents believed that either incentives or mandates let to the formation of Team Paradise. Written comments did not identify any additional antecedents.

Problem Setting

Problem setting is the first real developmental stage of collaboration, where relevant stakeholders are identified, a common definition is agreed upon, and the benefits of participation are realized. The survey contained thirteen items that address the constructs in this stage. The results are displayed in Table 9.

All of the constructs in this stage were present in the Paradise Creek process, according to respondents. Few respondents rated any of the questions disagree or strongly disagree. More than half the respondents agreed that relevant stakeholders were identified (53%) although 23% neither agreed nor disagreed. Forty-seven percent (47%) believed that consensus was reached on whom these stakeholders should represent and 40% rated the group as good in reaching that consensus. Over half agreed that the group

Table 9

Survey Results for Problem Setting Constructs

Constructs	Strongly agree	Agree	Neither agree/ disagree	Disagree	Strongly disagree	N/A
Identify stakeholders (n=55)	17.5%	54.5%	22.7%	0%	0.0%	5.3%
Recognize interdependence (n=55)	23.6%	63.6%	5.5%	3.6%	0.0%	3.6%
Consensus on legitimate stakeholders (n=55)	18.2%	47.3%	18.2%	5.5%	0.0%	10.9%
Common problem definition (n=55)	29.1%	54.5%	9.1%	1.8%	3.6%	1.8%
Perceived benefits (n=55)	45.5%	36.4%	12.7%	0.0%	0.0%	5.5%
Perceived salience (n=55)	25.5%	65.5%	3.6%	0.0%	1.8%	3.6%
	Excellent	**Good**	**Satisfactory**	**Fair**	**Poor**	**Uncertain**
Consensus on legitimate stakeholders (n=55)	7.7%	40.4%	28.8%	5.8%	1.9%	15.4%
Recognize interdependence (n=51)	35.3%	47.1%	11.8%	2.0%	0.0%	3.9%

members recognized their interdependence (64%) and 47% rated the group as good in its achieving this interdependence. Most of the respondents agreed (55%) or strongly agreed (29%) that the group arrived at a common problem definition. Sixty six percent (66%) agreed that the issue was important to them and 46% strongly agreed that they recognized the benefits of the process.

Direction Setting

The constructs in this stage deal with the establishment of operational processes – setting goals, identifying ground rules, and organizing sub-groups if necessary. The group members jointly collect and share information to assist in exploring various options. Fifteen survey items relate to these constructs. Table 10 contains the results.

Table 10

Survey Results for Direction Setting Constructs

Constructs	Strongly agree	Agree	Neither agree/ disagree	Disagree	Strongly disagree	N/A
Establish goals (n=55)	21.8%	58.2%	12.7%	3.6%	0.0%	3.6%
Set ground rules (n=55)	20.0%	56.4%	18.2%	1.8%	0.0%	3.6%
Joint info search (n=55)	12.7%	76.4%	3.6%	0.0%	0.0%	7.3%
Explore options (n=55)	20.0%	63.6%	10.9%	1.8%	0.0%	3.6%
Organize subgroups (n=55)	10.9%	67.3%	9.1%	3.6%	0.0%	9.1%
	Excellent	**Good**	**Satisfactory**	**Fair**	**Poor**	**Uncertain**
Joint info search (n=52)	11.5%	55.8%	17.3%	3.8%	3.8%	7.7%
Explore options (n=51)	21.6%	43.1%	19.6%	7.8%	3.9%	3.9%
Organize subgroups (n=51)	9.8%	39.2%	29.4%	7.8%	2.0%	11.8%

None of the respondents rated any of the survey items as strongly disagree and few disagreed. Of the respondents, 58% agreed that goals were established; 56% that ground rules were created. Seventy-six percent (76%) agreed that the information was jointly gathered and shared while 56% rated the group as good in accomplishing this. Respondents agreed that various options were explored (64%) with 43% responding that the effectiveness was good. Sixty-seven percent (67%) agreed that subgroups were developed while 39% rated the group's ability to organize subgroups as good.

Structuring

This stage refers to the action the group takes to create a more formal, long-term structure and to manage the interactions of the stakeholders. These constructs include assigning roles to stakeholders, instituting formal agreements, and establishing monitoring and control systems. Six survey items address these constructs. Table 11 contains the results.

Almost half of the respondents (46%) agreed that the group assigned roles. Twenty-nine percent (29%) rated the group as good in assigning roles while an almost equal amount (28%) could not answer or were uncertain. Over half the respondents (55%) agreed that monitoring and control systems were established. Forty percent (40%) rated the group good in formalizing relationships while 41% rated the group good in elaborating the tasks involved.

Table 11

Survey Results for Structuring Constructs

Constructs	Strongly agree	Agree	Neither agree/ disagree	Disagree	Strongly disagree	N/A
Roles assigned (n=55)	3.6%	45.5%	34.5%	10.9%	0.0%	5.5%
Monitoring/ control systems (n=55)	5.5%	54.5%	16.4%	9.1%	1.8%	12.7%
	Excellent	**Good**	**Satisfactory**	**Fair**	**Poor**	**Uncertain**
Formalizing relationships (n=52)	9.6%	40.4%	23.1%	11.5%	3.8%	11.5%
Roles assigned (n=51)	2.0%	29.4%	23.5%	15.7%	2.0%	27.5%
Tasks elaborated (n=51)	29.4%	41.2%	15.7%	2.0%	2.0%	9.8%

Outcomes

This stage represents the interactive nature of collaboration. Programs are reviewed, impacts and benefits are assessed, and a decision is made whether to continue the collaborative effort. Six survey items address these constructs. Table 12 contains the results.

Ratings from the respondents indicate the three constructs in this stage were present. Sixty-three percent (63%) of the respondents agreed that there were impacts from the efforts of the group with 51% rating their effectiveness as good. Fifty-three percent (53%) agreed or strongly agreed that there were benefits that resulted from their efforts. Over half the respondents (51%) rated the group as good in reviewing

Table 12

Survey Results for Outcomes Constructs

Constructs	Strongly agree	Agree	Neither agree/ disagree	Disagree	Strongly disagree	N/A
Impacts (n=54)	11.1%	63.0%	7.4%	3.7%	1.9%	13.0%
Benefits derived (n=55)	27.3%	52.7%	5.5%	1.8%	1.8%	10.9%
	Excellent	**Good**	**Satisfactory**	**Fair**	**Poor**	**Uncertain**
Programs (n=52)	7.8%	51.0%	19.6%	7.8%	3.9%	9.8%
Impacts (n=53)	20.8%	50.9%	11.3%	3.8%	1.9%	11.3%

and evaluating the results of the collaborative.

Summary of Results

The survey results suggest that only three of the Selin & Chavez model constructs were not present in the Paradise Creek collaborative. Table 13 displays each construct and the percentage of responses in either the agree/strongly agree or good/excellent categories which represent. Those over 50% are indicative of being part of the process used by Team Paradise, as perceived by the members of the group.

The model begins with antecedents and the results indicate that antecedents were identified that precipitated the formation of the Paradise Creek collaborative. Two of the constructs, incentives (35%) and mandates (15%), do not appear to be seen as involved in the forming the collaborative. More than 50% of the respondents indicated that all of the constructs in the problem-setting stage were present; however, identification (64%) and consensus on legitimate stakeholders (57%) were not rated as strongly.

Table 13

Summary of Selin & Chavez Constructs

ANTECEDENTS	%	DIRECTION-SETTING	%
1. Crisis	60.0	1. Establish goals	80.0
2. Broker	88.3	2. Set ground rules	76.4
3. Mandate	14.7	3. Joint information search	78.2
4. Common vision	91.1	4. Explore options - multiple options presented	74.2
5. Existing networks	78.2	5. Organize subgroups	63.6
6. Leadership	85.5	**STRUCTURING**	
7. Incentives	35.2	1. Formalizing relationships	50.0
PROBLEM-SETTING		2. Roles assigned	40.2
1. Identify stakeholders	63.6	3. Tasks elaborated	70.6
2. Recognize interdependence	84.8	4. Monitoring and control systems designed	60.0
3. Consensus on legitimate stakeholders	56.8	**OUTCOMES**	
4. Common problem definition	83.6	1. Programs	58.8
5. Perceived benefits to stakeholders	81.9	2. Impacts	72.4
6. Perceived salience to stakeholders	91.0	3. Benefits derived	80.0

Note: Percentages reflect ratings in either agree/strongly agree or good/excellent categories.

The constructs in the direction setting stage were evident in the Team Paradise collaborative. The group established the framework for the collaborative by establishing goals (80%), setting ground rules (76%), taking part in a joint information search (78%) and exploring options (74%). They also organized sub-groups (64%) where appropriate.

The constructs in the structuring stage were not rated as strongly as the other constructs. Tasks (71%) and monitoring and control systems (60%) were defined, but there was not a general agreement that relationships (50%) were delineated. Outcomes were evident with the respondents seeing the benefits (80%) and impacts (72%) of the process. Fifty-nine percent (59%) thought that programs were reviewed. Of these constructs, only 40% believed that roles were assigned, indicating that this construct was not readily apparent.

Melaville & Blank Model Constructs

There are five stages within the Melaville & Blank model of collaboration: getting together, building trust, developing a strategic plan, taking action, and going to scale. Table 14 relates the survey questions to the constructs in this model.

Table 14

Matrix of Survey Questions to Model

MELAVILLE & BLANK	**Survey questions**
GETTING TOGETHER	
1. Commit to collaborate	14, 31, 32
2. Involve the right people	11, 15
3. Decide to act	24
BUILDING TRUST	
1. Develop a mission and community presence	37, 47
2. Define shared vision and goals	27, 28
3. Conduct a community	52
4. Develop a base of common knowledge stakeholders	22, 29
DEVELOPING A STRATEGIC PLAN	
1. Formalize interagency	55
2. Develop technical	19, 30
3. Design service delivery	54
4. Define target outcomes	18
5. Conduct a neighborhood analysis	23
6. Focus on a neighborhood	23
TAKING ACTION	
1. Evaluate progress	40, 60
2. Recognize diversity	46
3. Implement outreach strategy	56
4. Formulate staffing strategy	59
GOING TO SCALE	
1. Build community constituency	43, 44
2. Build governance	36
3. Design a fiscal strategy	51, 68, 69, 70
4. Deepen collaborative culture	62
5. Develop interprofessional training	59
REFLECT AND CELEBRATE	39, 60

Getting Together

This stage deals with the decision to act, identifying the right stakeholders and making a commitment to collaborate. This commitment involves establishing shared leadership, setting ground rules and securing financial resources. Seven survey items address these constructs and are displayed in Table 15.

Over half of the respondents agreed that there was a definite decision to act (68%) and that the right stakeholders were involved (53%). Sixty-seven percent (67%) agreed that there was a commitment to collaborate among the group members by setting ground rules and establishing leadership. Forty-nine percent (49%) indicated that the group was good at securing adequate resources.

Table 15

Survey Results for Getting Together Constructs

Constructs	Strongly agree	Agree	Neither agree/ disagree	Disagree	Strongly disagree	N/A
Decide to act (n=55)	23.2%	67.9%	3.6%	1.8%	1.8%	1.8%
Involve the right people (n=55)	10.9%	52.7%	30.9%	1.8%	0.0%	3.6%
Commit to collaborate (n=56)	21.8%	67.3%	3.6%	1.8%	0.0%	5.5%
	Excellent	**Good**	**Satisfactory**	**Fair**	**Poor**	**Uncertain**
Commit to collaborate (n=51)	5.9%	49.0%	29.4%	7.8%	2.0%	5.9%

Building Trust

This stage deals with building trust and ownership by developing a base of common knowledge. Preliminary steps are taken towards creating change by conducting a community assessment and establishing a vision and mission statement and a set of goals. Seven survey items address these constructs as displayed in Table 16.

No respondents rated any of these constructs as strongly disagree and there were few at disagree. Over half of the respondents agreed that a base of common knowledge was established (56%). Fifty-eight percent (58%) agreed that both a shared vision and goals were developed and 56% agreed that a mission statement was developed. Of the respondents, 52% rated the group as good in conducting a community assessment and 43% rated the group as good in developing a mission statement and presence in the community.

Table 16

Survey Results for Building Trust Constructs

Constructs	Strongly agree	Agree	Neither agree/ disagree	Disagree	Strongly disagree	N/A
Develop mission/presence (n=55)	29.1%	56.4%	3.6%	3.6%	0.0%	7.3%
Develop shared vision/goals (n=55)	21.8%	58.2%	12.7%	3.6%	0.0%	3.6%
Base of common knowledge (n=55)	23.6%	52.7%	16.4%	3.6%	0.0%	3.6%
	Excellent	**Good**	**Satisfactory**	**Fair**	**Poor**	**Uncertain**
Develop mission/presence (n=51)	21.6%	43.1%	19.6%	7.8%	3.9%	3.9%
Conduct Community assessment (n=52)	21.2%	51.9%	13.5%	5.8%	3.8%	3.8%

Developing a Strategic Plan

This stage outlines the action steps of the collaborative. Stakeholders design a service delivery prototype, aided by a neighborhood analysis, to define target outcomes. Interagency relationships are formed and technical tools are developed to capture needed information. The survey contained six items that address these constructs. The results are displayed in Table 17.

Of the respondents, 49% strongly agreed and 44% agreed that technical tools were developed; 55% that target outcomes were defined and 48% stated that the group focused on a neighborhood and conducted a neighborhood analysis. Thirty-seven percent (37%) rated the group as good in formalizing interagency relationships. In their ability to generate a service delivery prototype, 56% rated the group as good.

Table 17

Survey Results for Developing a Strategic Plan Constructs

Constructs	Strongly agree	Agree	Neither agree/ disagree	Disagree	Strongly disagree	N/A
Develop technical tools (n=55)	49.1%	43.6%	1.8%	1.8%	0.0%	3.6%
Define target outcomes (n=55)	18.2%	54.5%	14.5%	3.6%	7.3%	1.8%
Focus on a neighborhood/conduct analysis (n=54)	11.1%	48.1%	**20.4%**	7.4%	3.7%	9.3%
	Excellent	**Good**	**Satisfactory**	**Fair**	**Poor**	**Uncertain**
Formalize interagency relationships (n=55)	19.6%	37.3%	17.6%	7.8%	2.0%	15.7%
Design service delivery prototype (n=52)	13.5%	55.8%	13.5%	5.8%	3.8%	7.7%

Taking Action

This stage of collaboration deals with the selecting, training and supervising of staff. An outreach strategy is implemented to create a new relationship between the collaborative and the community while recognizing the diversity among the two groups. After the prototype is implemented, the group evaluates their progress and measures their results. Five survey items address these constructs as detailed in Table 18.

Table 18

Survey Results for Taking Action Constructs

Constructs	Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree	N/A
Evaluate progress (n=55)	5.5%	54.5%	16.4%	9.1%	1.8%	12.7%
	Excellent	**Good**	**Satisfactory**	**Fair**	**Poor**	**Uncertain**
Evaluate progress (n=51)	7.8%	51.0%	19.6%	7.8%	3.9%	9.8%
Recognize diversity (n=51)	21.6%	37.3%	21.6%	5.9%	2.0%	11.8%
Implement outreach strategy (n=52)	17.3%	53.8%	17.3%	5.8%	1.9%	3.8%
Formulate staffing strategy (n=51)	2.0%	29.4%	23.5%	15.7%	2.0%	27.5%

Of the respondents, 55% agreed that there was an established method for monitoring performance and providing feedback on goal attainment and 51% rated the group as good in reviewing, reflecting, and evaluating the process to assure progress and

results. Thirty-seven percent (37%) of the respondents rated the group as good in recognizing diversity and 54% in implementing an outreach strategy. When asked to rate the groups' ability to formulate a staffing strategy, the results were mixed: 29% rated the group as good, 24% satisfactory and 28% were uncertain.

Going to Scale

This stage reflects the formalization of the collaborative process by expanding the prototype, building a community constituency, and developing a culture change. A governance structure is devised, a long-range financial plan is developed, and interprofessional training is created. Nine survey items address these constructs. The results are displayed in Table 19.

A majority of the respondents agreed that the group built a community constituency (57%) and 51% that a governance structure was developed. Of the respondents, 41% rated the group as excellent in designing a long-term fiscal strategy and influencing budget/funding decisions; 40% rated the group as good in deepening the collaborative culture. As with the previous construct on formulating a staffing strategy, there were mixed results in the groups' ability to develop interprofessional training with 29% rating the group good, 24% satisfactory and 28% uncertain.

Reflect and Celebrate

Assessment of the "reflect and celebrate" cycle that is a part of each of the five stages in the Melaville and Blank framework was accomplished using two survey questions. Question 39 asked the respondents how well they agreed/disagreed with the statement "We celebrate our group's successes as we move toward achieving the final goal" and question 60 asked the respondents how effective they were in "Reviewing, reflecting, and evaluating to assure progress and results." As Table 20

Table 19

Survey Results for Going to Scale Constructs

Constructs	Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree	N/A
Build community constituency (n=54)	24.1%	57.4%	9.3%	0.0%	0.0%	9.3%
Build governance structure (n=55)	10.9%	50.9%	15.5%	12.7%	0.0%	10.9%
	Excellent	**Good**	**Satisfactory**	**Fair**	**Poor**	**Uncertain**
Design fiscal strategy (n=51)	41.2%	37.3%	5.9%	2.0%	0.0%	13.7%
Deepen collaborative culture (n=62)	9.6%	40.4%	23.1%	11.5%	3.8%	11.5%
Develop interprofessional training (n=51)	2.0%	29.4%	23.5%	15.7%	2.0%	27.5%

Table 20

Reflect and Celebrate Cycle Constructs

Constructs	Strongly Agree	Agree	Neither Agree/ Disagree	Disagree	Strongly Disagree	N/A
Reflect	7.8%	51.0%	19.6%	7.8%	3.9%	9.8%
	Excellent	**Good**	**Satisfactory**	**Fair**	**Poor**	**Uncertain**
Celebrate	20.0%	67.3%	3.6%	3.6%	0.0%	5.5%

reveals, 67% of the respondents agreed the group celebrated their successes throughout the process and 51% rated the group as good in reflecting and evaluating the process.

Summary of Results

The survey results suggest that all but two of the Melaville & Blank model constructs were present in the Paradise Creek collaborative. The constructs dealing with personnel staffing and training (formulate staffing strategy and develop interprofessional training) were inconclusive. Table 21 displays each construct and the percentage of responses in either the agree/strongly agree or good/excellent categories.

Table 21

Summary of Melaville & Blank Model Constructs

GETTING TOGETHER	**%**	**TAKING ACTION**	**%**
1. Commit to collaborate	71.5	1. Evaluate progress	64.4
2. Involve the right people	63.6	2. Recognize diversity	58.9
3. Decide to act	91.9	3. Implement outreach strategy	71.1
BUILDING TRUST		4. Formulate staffing strategy	31.4
1. Develop a mission and community presence	75.1		
2. Define shared vision and goals	80.0	**GOING TO SCALE**	
3. Conduct a community assessment	73.1	1. Build community constituency	81.5
4. Develop a base of common knowledge stakeholders	76.3	2. Build governance structure	61.8
DEVELOPING A STRATEGIC PLAN		3. Design a fiscal strategy	78.5
1. Formalize interagency relationships	56.9	4. Deepen collaborative culture	50.0
2. Develop technical tools	92.7	5. Develop interprofessional training	31.4
3. Design service delivery prototype	69.3	**REFLECT & CELEBRATE**	
4. Define target outcomes	72.7	1. Reflect	58.8
5. Focus on a neighborhood/conduct an analysis	59.2	2. Celebrate	87.3

Note: Percentages reflect responses in either the agree/strongly agree or good/excellent categories.

The constructs in the getting together stage were present with almost all the respondents agreeing that there was a decision to act (92%), there was a commitment to collaborate (72%) and more than half believed the right people were involved (64%). The

constructs in building trust were similarly rated from 74% (conducting a community assessment) to 80% (defining a shared vision and goals).

The construct results of the third stage, developing a strategic plan, were not as homogenous. A little more than half of the respondents agreed that interagency relationships were formalized (57%) and focus and analysis of a particular neighborhood were evident (59%). The group agreed that a service delivery prototype was designed (69%) and target outcomes were defined (73%) and almost all respondents agreed that technical tools were developed to assist in the collaborative effort (93%).

The results in the taking action stage not as strong as the other stages. While over half of the respondents agreed that the group evaluated their progress (64%), recognized the diversity of the constituents (59%) and implemented an outreach strategy (71%), only 31% believed a staffing strategy was present. The results of the stage going to scale were similar to taking action. The respondents agreed that a community constituency was built (82%), a fiscal strategy was present (79%), and a governance structure was built (62%). Only half the respondents agreed that a collaborative culture was strengthened (50%) and 31% agreed that interprofessional training was developed.

The two constructs of the reflect and celebrate stage were both apparent based on the survey results with 59% of the members indicating that the group reflected on the process and 87% indicating that they celebrated their successes.

Factors for Success

One open-ended question asked the respondents "What are the most important factors for continued progress?" Forty-four comments were provided that were categorized into five main themes:

1. funding: both increased grant funding and increased financial backing from government resources;
2. communication: more frequent and clear communication among group members, more stakeholder meetings;
3. process results: setting achievable goals to measure success/failure, demonstrating small successes, achieving visible results, keeping the momentum;
4. community outreach: continue community involvement, support and vision, increase community participation; and
5. stakeholders: increasing participation by municipalities, community members, corporations and other government agencies. See Appendix E for a complete list of survey comments.

CHAPTER V

QUALITATIVE RESULTS

The purpose of this study is to determine which collaborative constructs were present in the successful collaborative efforts of the Elizabeth River Project planning group as they developed the Paradise Creek Restoration Plan. This chapter reports the results of the data analysis of the document review and interview process as outlined in Table 4 - Matrix of Interview Questions to Constructs of the Models, Chapter III. The results of this analysis are used to confirm, cross-validate, or corroborate findings from the quantitative portion of the research as presented in Chapter VI.

Framework for Analysis

Gray & Wood's three theoretical dimensions to collaboration - preconditions, process, and outcomes - was used as the framework for organizing common collaboration constructs found in the literature. Two models of collaboration were selected to provide the framework for analysis of the processes used by the Paradise Creek Restoration Project, the Selin & Chavez Model of the Collaborative Process in Natural Resource Management and the Melaville & Blank Five Stage Process for Change.

The researcher conducted individual in-depth interviews with nine participants from Team Paradise with several participants interviewed multiple times (See Appendix B for a list of interview questions). In addition, a review of pertinent documents was accomplished. A list of documents reviewed is in Appendix E. Data reduction and coding was accomplished through the use of data tables. Repetition and recurrence of phrases and words were highlighted and brought together as "themes". The constructs and corresponding themes for each model are displayed in Table 22.

Table 22

Model Stages/Constructs and Themes From the Data

Selin & Chavez Model Constructs	Themes from the Data	Melaville & Blank Model Constructs	Themes From the Data
Antecedents • Crisis • Broker • Mandate • Common vision • Existing networks • Leadership • Incentives	• Common vision of environmental need • Existing networks facilitated startup • Strong leadership throughout the process	**Getting together** • Commit to collaborate • Involve the right people • Decide to act	• Receipt of grant money • Strong leadership throughout the process • Need to seek broader participation of state/local individuals • Process/ground rules established
Problem setting • Identify stakeholders • Recognize interdependence • Consensus on legitimate stakeholders • Common problem definition • Perceived benefits to stakeholders • Perceived salience to stakeholders	• Need to seek broader participation • Strength of diversity/interdependence recognized • Ability to find common ground • Perceived benefits/salience to stakeholders recognized	**Building trust** • Develop a mission and community presence • Define shared vision and goals • Conduct a community assessment • Develop a base of common knowledge stakeholders	• Strong guidance in developing vision/goals • Community assessment not driving force • Use of ERP members • Confrontation was manageable
Direction setting • Establish goals • Set ground rules • Joint information search • Explore options • Organize subgroups	• Process/ground rules established • Guidance in developing goals • Use of subgroups facilitated development of options • Information base shared	**Developing a strategic plan** • Formalize interagency relationships • Develop technical tools • Design service delivery prototype • Define target outcomes • Conduct a neighborhood analysis • Focus on a neighborhood	• Demonstration projects identified • Plan development a plus • Neighborhood approach appropriate
Structuring • Formalizing relationships • Roles assigned • Tasks elaborated • Monitoring and control systems designed	• Confrontation was manageable	**Taking action** • Evaluate progress • Recognize diversity • Implement outreach strategy • Formulate staffing strategy	• Neighborhood strategy identified/ diversity recognized • Indicators selected
Outcomes • Programs • Impacts • Benefits derived	• Sustainability of projects • No formal evaluation process	**Going to scale** • Build community constituency • Build governance structure • Design a fiscal strategy • Deepen collaborative culture • Develop interprofessional training	• ERP already a force in the community • Structures in place to continue collaboration • Need to develop secure funding sources

While the collaboration models provided the overarching framework for coding the data, several themes emerged that reflected alternative processes. The following section discusses themes from the data that relate to each of the model's stages and constructs. In addition, the themes not found in the model constructs will be discussed.

Selin & Chavez Constructs and Themes

Antecedents

Antecedents deal with the circumstances that lead to collaboration. Three themes were evident from the data: there was a common vision of environmental need, the existing network facilitated the start up of Team Paradise, and there was evidence of strong leadership through out the process. There was no general consensus that the collaborative effort was the result of the other constructs in the model: crisis, broker, mandate, or incentives. Table 23 displays the themes from the data in this area.

Table 23

Antecedents: Themes From the Data

Antecedent constructs	**Themes from the data**
• Crisis • Broker • Mandate • Common vision • Existing networks • Leadership • Incentives	• Common vision of environmental need • Existing network facilitated startup • Strong leadership throughout the process

Common vision of environmental need

All of the team members indicated that the stakeholders involved had a common vision as it related to the cleanup of Paradise Creek. Some of the members of Team

Paradise had participated in environmental actions through the ERP prior to the focus on Paradise Creek; however, for others, this was a new experience. It was their vision of a cleaner river that brought them into the collaborative venture.

Existing Network

The ERP played a role in organizing the various interests involved. Their established network of business, government, and neighborhood contacts facilitated the startup of Team Paradise. Many of the members interviewed praised the ERP for their ability to utilize these contacts in the development of the restoration plan and resultant actions. It was not apparent whether the existing network contributed to the establishment of a common vision, or coexisted with this vision; there were mixed views. One member stated:

The ERP has a whole group of folks that had helped on other projects...these people really helped get this project off the ground. Then we found that there were others in the area that wanted to help, some because they lived in the area, some because they really believe in cleaning up the river.

Another member commented on the fact that:

The Navy really jump started this process. There were a lot of us that felt that Paradise Creek could be turned into something, and we looked to the ERP to take it on. They've done this type of thing before and knew how to go about it.

Strong Leadership Throughout The Process

Team Paradise members recognized the importance of effective leadership. The project staff consisted of four members of the ERP. Their role was to provide strong direction throughout the process and facilitate the actions of the four sub-teams. Many of these members participated in other collaborative projects with the ERP and were

familiar with facilitating groups. These individuals were able to keep the teams on track and minimize conflict. The team members pointed to this strong leadership as the catalyst for reaching consensus among the various groups. The local community at the stakeholders' forum also recognized the ERP for the leadership they were providing for the restoration effort.

Problem Setting

This is the first developmental stage of collaboration. Relevant stakeholders are identified and begin to appreciate the interdependencies that exist between them; a common definition of the problem is identified and the participants begin to see the salience and benefits of collaboration. Five main themes were evident from the data: the group identified the need to seek broader participation of state and local elected and community individuals; the diversity of the membership was a strength and the group members recognized their interdependencies; the ability of the ERP to find common ground among the stakeholders; and that the benefits and salience to the stakeholders was recognized. Table 24 identifies themes from the data.

Table 24

Problem Setting: Themes From the Data

Problem setting constructs	**Themes from the data**
• Identify stakeholders • Recognize interdependence • Consensus on legitimate stakeholders • Common problem definition • Perceived benefits to stakeholders • Perceived salience to stakeholders	• Need to seek broader participation • Strength of diversity/interdependencies recognized • Ability to find common ground • Perceived benefits/salience to stakeholders recognized

Need To Seek Broader Participation

The ERP was praised by the City of Portsmouth for assembling a "group of technical experts and community volunteers to help form a watershed management plan for Paradise Creek." However, several team members mentioned their desire to see greater involvement by individuals in the neighborhood. During an initial steering committee meeting, an activity was specifically organized to involve private citizens and local area businesses. A stakeholders forum was scheduled at the local Cradock Recreation Center from noon to 3:00 p.m. Invitations were sent to individuals who had expressed an interest in restoring the creek, all current business and government partners, and residents and businesses in the Cradock community. A public notice was placed in the newspaper and in the newsletter of the Cradock Civic League. The forum was well attended; however, out of 49 members of Team Paradise, only three private citizens opted to participate.

Participants also remarked on the lack of participation from local and state elected officials. They did not believe that their absence affected the outcome of the process but that their participation would have sent a message to the area as a whole.

Strength of Diversity/Interdependence Recognized

All members interviewed generally saw themselves as a diverse group. Participants remarked on the wide range of representation of city planning personnel, local businesses, universities, state conservation agencies, and federal organizations (e.g. the Navy, National Oceanic and Atmospheric Administration, US Army Corp of Engineers). They indicated that the ERP "does a good job" on getting the right people together and promoting a vision of what can happen when all parties participate.

They did a pretty good job on getting the right mix of people. Some people were moved around to make sure the right people were on the right team. It was a diverse, well-grounded group.

Diversity was the greatest strength – differing interests and outcomes, from both business, government and citizens. The ERP does a good job of pulling the right people together to see if they wanted to fix it [Paradise Creek]. The real challenge is getting people to do something about it. Where the ERP is so good is they're local and they reach out locally so that everyone who works with them has a stake in the process.

Ability to Find Common Ground

At a meeting of the Paradise Creek Steering Committee, the director stated that the purpose of the meeting was to: "...get a common understanding of the most serious problems concerning Paradise Creek and to assign teams to develop the best solutions to tackle these problems." Participants remarked on the ERP's ability to bring together diverse views and interests into a common focus among the stakeholders.

One of the favorable aspects of this group is their ability to find the common thread – the ERP was not looking to do the extreme perspective. They were looking for common ground.

During the stakeholders' forum held in the neighborhood recreation center, the ERP worked with the participants to determine the core areas of interest concerning Paradise Creek. They distilled these interests into three major areas that became the subgroups within Team Paradise: sediment quality, living resources, and water quality. One area of interest that fell outside of environmental issues was the community's concern with crime, drugs and trash. Although initially reluctant to address quality of life

issues, to incorporate the citizen concerns the ERP added a quality of life team, and selected the head of the Cradock Civic League as the chair.

Perceived Benefits/Salience to Stakeholders Recognized

The members of Team Paradise were, in most cases, volunteers. A few agencies, such as representatives from the City of Portsmouth and the Virginia Department of Conservation and Recreation, selected certain representatives due to their position and expertise. During the Stakeholders Forum and resulting team meetings, all of the stakeholders were able to see why this collaborative effort was important, and how either they, as individuals, or their organizations, would benefit from their participation.

Direction Setting

During this stage, the stakeholders begin to identify the various interests that bring them together and develop a common sense of purpose. Information is jointly gathered and shared, goals are set, ground rules are established, and subgroups are organized. There were four themes identified from the data: the process and ground rules were established, the group received guidance in developing goals, use of subgroups facilitated the development of options, and the information base was shared among stakeholders. Table 25 identifies the themes from the data.

Table 25

Direction Setting – Themes From the Data

Direction setting constructs	**Themes from the data**
• Establish goals • Set ground rules • Joint information search • Explore options • Organize subgroups	• Process/ground rules established • Guidance in developing goals • Use of subgroups facilitated development of options • Information base shared

Process/Ground Rules Established

Members reported that the ERP, as a well-established organization, was able to clearly lay out the process to be used in the development of the restoration plan. The initial steering committee meeting focused on five topic areas: the nature and purpose of the Paradise Creek Restoration Plan; building an information base to support the plan; a planning process and schedule to produce the plan; possible funding sources for plan implementation; and, the Fall 2002 agenda (October 7, 2002). The outcome of this meeting was "A Five Year Plan to Restore Paradise Creek, Proposed Planning Process."

Several members were appreciative of the way the ERP was able to focus the group on developing a plan of action. They believed this was due to the ERP's success in organizing other activities, such as developing the Watershed Action Plan for the Elizabeth River.

Guidance in Developing Goals

The expertise of ERP members contributed to the creation of goals for the restoration of Paradise Creek. During the stakeholder's forum, participants shared their thoughts on a vision and goals for the future for inclusion in the development of a vision statement, goals, and opportunities for action. Team Paradise members took action to develop these initial thoughts into a draft plan document. One member indicated that some of the initial goals were "too far reaching, however, a couple of the individuals acted as moderator's or spokesmen and they provided direction."

Use of Subgroups Facilitated Development of Options

The ERP created four separate subgroups within Team Paradise around the four major areas of concern. Each team was tasked "to develop a draft plan of the best solutions to solve the most pressing problems on Paradise Creek." As one member stated:

There was a facilitator and the group was separated into teams. Which was a good thing as decision-making could have taken weeks.

Information Base Shared

The ERP developed a common database of information that was shared among the stakeholders. During the Steering Committee Meeting, the group identified information that already existed or was being developed, identified additional information needs, and agreed on the steps needed to collect this information. The information required ranged from scientific data, such as levels of contaminants and sediment and water quality data, to information concerning recreational spaces and uses in the watershed.

Most of the stakeholders interviewed believed that there was sufficient information provided to accomplish their piece of the plan; however, two individuals believed that there was a lack of scientific data – "population counts, timing issues...more data would have helped make better informed decisions."

Structuring

During the structuring stage, long-term relationships are developed with a formal structure. The theme identified in the data was that confrontation was manageable. Table 26 displays the themes from the data.

Confrontation Was Manageable

The group reported no signs of confrontation either during Team Paradise general meetings or during the individual team meetings. There were disagreements about goal setting and the use of scientific data, but the members were able to reach agreement. One

Table 26

Structuring: Themes From the Data

Structuring constructs	Themes from the data
• Formalizing relationships • Roles assigned • Tasks elaborated • Monitoring and control systems designed	• Confrontation was manageable

member mentioned that there was some passive/aggressive behavior, but that the group handled it without complaint. Many of the members believed the lack of confrontation was due to the ability of the ERP to keep the group focused on their mission. They all had high praise for the mediating efforts of the ERP staff.

There were moments of disagreement. The issue was tabled if it was a critical element and then we would meet in smaller groups to resolve. The ERP staff worked to make everyone comfortable with the process. They are properly focused and results-driven.

Outcomes

Outcomes demonstrate the cyclical and interactive nature of collaboration. During this stage, programs are reviewed, impacts assessed and stakeholders determine whether to continue the collaborative arrangement. The theme identified from the data was the ability of the ERP to sustain projects over time. Table 27 identifies the themes from the data.

Sustainability of projects

The ERP entered its tenth year of operation with the development of the Paradise Creek Restoration Plan. Many of the group members believe the long-term success of the

Table 27

Outcomes: Themes From the Data

Outcomes constructs	Themes from the data
• Programs • Impacts • Benefits derived	• Sustainability of projects • No formal evaluation process

ERP is due to their ability to maintain a collaborative environment among diverse stakeholders. As one group member stated,

The ERP is the single leadership catalyst for bringing about positive environmental change. They work exceptionally well as a third party to motivate and inspire people to work together.

The Paradise Creek plan was an outgrowth of the Elizabeth River Watershed Action Plan (1996), a collaborative effort of more than 120 stakeholders to develop a plan to restore the Elizabeth River. The ERP continues to revise the plan to include significant stakeholder input and lessons learned since its implementation.

Since its inception, the ERP has "completed hundreds of environmental improvement projects" (Project, 2003) within the Elizabeth River watershed. Paradise Creek represents a concentrated approach of restoration and conservation on one small tributary with the "goal of achieving maximum results in the relatively short time of five years" (Project, 2003). The Paradise Creek plan will be used as a model for future efforts at river restoration, thus sustaining their commitment to restoring the Elizabeth River.

No Formal Evaluation Process

The Paradise Creek Restoration Plan documented "indicators of success" for the five actions identified. However, a few members believed that without a formal evaluation system built in to the plan, evaluating their progress would be a challenge. They also indicated that there was no economic evaluation of the entire plan, so it was hard to comment on whether there will be enough resources to achieve what Team Paradise has identified with this restoration.

Melaville & Blank Constructs and Themes

Getting Together

This stage deals with the decision to act. Some collaboratives form due to availability of funding or regulatory requirements. Players who have a stake in the issue and are committed to working towards a shared vision are identified. The group makes a commitment to act by establishing shared leadership, setting ground rules, and securing financial resources. Four themes were identified from the data: the availability of funding in the form of a grant; there was strong leadership throughout the process; the group needed to seek broader participation from state/local elected officials and community individuals, and the process and ground rules were established. Table 28 reflects themes from the data.

Receipt of Grant Money

The decision to act was prompted by the receipt of a significant amount of grant money. For the Paradise Creek Project, the impetus to begin collaboration was the receipt of a start-up grant of $12,500 from Portsmouth General Hospital, a $100,000 EPA Community Legacy Grant, a $50,000 pledge from Omega Protein, and a $10,000 grant from the Ocean Trust. These significant funding commitments provided the momentum

Table 28

Getting Together: Themes From the Data

Getting together constructs	Themes From the Data
• Commit to collaborate • Involve the right people • Decide to act	• Receipt of grant money • Strong leadership throughout the process • Need to seek broader participation of state/local individuals • Process/ground rules established

to produce a comprehensive plan to restore Paradise Creek.

Strong Leadership Throughout the Process

Team Paradise members recognized the importance of effective leadership. The project staff consisted of four members of the ERP. Their role was to provide strong direction throughout the process and facilitate the actions of the four sub-teams. Many of these members participated in other collaborative projects with the ERP and were familiar with facilitating groups. These individuals were able to keep the teams on track and minimize conflict. The team members pointed to this strong leadership as the catalyst for reaching consensus among the various groups. The local community at the stakeholders' forum also recognized the ERP for the leadership they were providing for the restoration effort.

Need to Seek Broader Participation of State/Local Individuals

Several team members mentioned their desire to see greater involvement by individuals in the neighborhood. During an initial steering committee meeting, an activity was specifically organized to involve private citizens and local area businesses. A stakeholders forum was scheduled at the local Cradock Recreation Center from noon to

3:00 p.m. Invitations were sent to individuals who had expressed an interest in restoring the creek, all current business and government partners, and residents and businesses in the Cradock community. A public notice was placed in the newspaper and in the newsletter of the Cradock Civic League. The forum was well attended; however, out of 49 members of Team Paradise, only three private citizens opted to participate.

Participants also remarked on the lack of participation from local and state elected officials. They did not believe that their absence affected the outcome of the process but that their participation would have sent a message to the area as a whole.

Process/Ground Rules Established

Members reported that the ERP, as a well-established organization, was able to clearly lay out the process to be used in the development of the restoration plan. The initial steering committee meeting focused on five topic areas: the nature and purpose of the Paradise Creek Restoration Plan; building an information base to support the plan; a planning process and schedule to produce the plan; possible funding sources for plan implementation; and, the Fall 2002 agenda (October 7, 2002). The outcome of this meeting was "A Five Year Plan to Restore Paradise Creek, Proposed Planning Process."

Several members were appreciative of the way the ERP was able to focus the group on developing a plan of action. They believed this was due to the ERP's success in organizing other activities, such as developing the Watershed Action Plan for the Elizabeth River.

Building Trust

In this stage, stakeholders develop a base of common knowledge; they conduct a community assessment, which leads to the creation of a shared vision. The overarching framework for the ensuing work is the development of a vision statement, mission

statement and goals. There were four themes that emerged from the data: the group received strong guidance in developing their vision and goals; the community assessment was not a driving force in setting the stage for change; use of ERP members assisted in developing a base of common knowledge stakeholders; and, confrontation was manageable. Table 29 reflects themes from the data.

Table 29

Building Trust: Themes From the data

Building Trust Constructs	Themes from the Data
• Develop a mission and community presence • Define shared vision and goals • Conduct a community assessment • Develop a base of common knowledge stakeholders	• Strong guidance in developing vision/goals • Community assessment not driving force • Use of ERP members • Confrontation was manageable

Strong Guidance in Developing Vision/Goals

The ERP solicited ideas on the vision for Paradise Creek during the stakeholders' forum in November 2002. From these ideas, they created "Draft Vision Statement" and a "Draft Goals for Paradise Creek" that were the starting point for discussion during the steering committee meeting in December 2002. The project manager guided this discussion stating that the solutions developed to reach the goals must be "affordable, acceptable and effective. Acceptable means the community will not oppose but rally

behind implementation." According to the members, strong guidance from the ERP staff in developing the vision/goal statements had a positive impact on the planning process and subsequent meetings.

Community Assessment Not a Driving Force

The impetus to select Paradise Creek was the "completion of the Navy's multi-million dollar cleanup of 'black beauty' sandblast from the creek headwaters" in 2001 along with the Southeastern Public Service Authority's stormwater improvements (Project, 2003). The ERP used the momentum created by the Navy to embark on this project with the goals of restoring a single, small watershed and creating a model for future collaborations.

The ERP did conduct a stakeholders' forum to gain the neighborhood perspective on the issues and opportunities that should be addressed in the Paradise Creek Restoration Plan; however, the members interviewed believed this community assessment was not a driving force in establishing Team Paradise.

Use of ERP members

Fifteen of the members of Team Paradise had worked together previously as part of the Watershed Action Team. Five of the members are ERP staff and four are either officers or on the Board of Directors for the ERP. Many of these individuals are experts in their area of interest, such as water quality, sediment, wetlands, and planning. This core group of people assisted in providing a common base of knowledgeable stakeholders. The interviewees indicated that these members helped with both the decision-making process and with facilitating among the members of the individual teams.

Confrontation Was Manageable

The group reported no signs of confrontation either during Team Paradise general meetings or during the individual team meetings. There were disagreements about goal setting and the use of scientific data, but the members were able to reach agreement. One member mentioned that there was some passive/aggressive behavior, but that the group handled it without complaint. Many of the members believed the lack of confrontation was due to the ability of the ERP to keep the group focused on their mission. They all had high praise for the mediating efforts of the ERP staff.

There were moments of disagreement. The issue was tabled if it was a critical element and then we would meet in smaller groups to resolve. The ERP staff worked to make everyone comfortable with the process. They are properly focused and results-driven.

Developing a Strategic Plan

In this stage, stakeholders explore viable options for tackling the issue. This includes focusing their initial efforts on a prototype service delivery system, conducting a neighborhood analysis, formalizing relationships and developing technical tools. There were three themes that emerged from the data: demonstration projects were identified, development of a strategic plan was a plus, and having a small success story was important. The themes from the data are reflected in Table 30.

Demonstration Projects Identified

The ERP selected Paradise Creek and its 2.9 square mile watershed as its demonstration project because "it presents a microcosm of the challenge and the promise of the rest of our home river" (Project, 2003). Their goal is to achieve maximum results in a short time frame (5 years) and then move on to achieve a 10 mile corridor along the Southern Branch of the Elizabeth River.

Table 30

Developing a Strategic Plan: Themes From the Data

Developing a Strategic Plan Constructs	**Themes from the Data**
• Formalize interagency relationships • Develop technical tools • Design service delivery prototype • Define target outcomes • Conduct a neighborhood analysis • Focus on a neighborhood	• Demonstration projects identified • Plan development a plus • Neighborhood approach appropriate

While developing the Paradise Creek Restoration Plan, the need to select demonstration projects for specific areas of Paradise Creek was identified in their Proposed Planning Process in October 2002. The subsequent restoration plan included steps already underway, additional projects identified, and indicators of success. Projects subsequently identified by Team Paradise members were restoring 6 acres of wetlands and forested buffer at former Peck Iron & Metal in 2003; adding a restored oyster reef and 40,000 oysters in 2004; creating a 40-acre "Eco Park by 2007; and, adding the area's largest "rain garden" as a way of reducing runoff pollution.

Plan Development a Plus

The purpose of Team Paradise was to create a strategic plan for restoring Paradise Creek. Members cited the draft development of vision and goal statements as having a positive impact on the creating the plan in the time allotted. The subgroups used various strategic planning processes in developing their portion of the overall restoration plan.

The Team Living Resources chair brought in some Navy strategic planning processes, as the work accomplished didn't fit the other models.

The output was a plan of action with an overarching vision, five actions with accompanying goals and indicators of success.

Neighborhood Approach Appropriate

Many of the members interviewed stated that it was important to select a small neighborhood project and see it through to completion. This would enable the ERP to maintain their momentum in their efforts to clean the entire Elizabeth River. The Steering Committee solicited neighborhood input to determine the most pressing issues to address with the restoration plan. From this input, the Quality of Life team was added to address crimes, drugs, and trash – not necessarily environmental issues, but a concern of the community.

Taking Action

At this stage, a strategy is developed for selecting, training, and supervising staff. After implementing a prototype, the group designs an evaluation strategy that will help them identify systems-change requirements, make mid-course corrections, and measure results. There were two themes that emerged from the data: a strategy to reflect the diverse interests of the neighborhood was identified and indicators of success were selected. Table 31 reflects the themes from the data.

Neighborhood Strategy Identified/Diversity Recognized

The ERP, in concert with Team Paradise, identified a number of strategies for incorporating the diverse interests of the neighborhood into the action plan for restoration. Steps identified in the Quality of Life Action #4 include "encouraging long-term community stewardship and volunteer involvement through activities including:

Table 31

Taking Action: Themes From the Data

Taking Action Constructs	Themes from the Data
• Evaluate progress • Recognize diversity • Implement outreach strategy • Formulate staffing strategy	• Neighborhood strategy identified/diversity recognized • Indicators selected

citizens participating in Adopt-A-Stream/Spot, oyster gardening, backyard sustainable landscapes with native plants, reducing fertilizers and pesticides in runoff, clean-ups, volunteers involved in community restoration plantings, and citizen water monitoring" (Project, 2003).

Indicators Selected

The Paradise Creek Restoration Plan documented "indicators of success" for the five actions identified. These indicators will allow the ERP to measure the success of the various plan components, and make mid-course corrections if necessary. However, a few members believed that without a formal evaluation system built in to the plan, evaluating their progress would be a challenge. They also indicated that there was no economic evaluation of the entire plan, so it was hard to comment on whether there will be enough resources to achieve what Team Paradise has identified with this restoration.

Going to Scale

This model focuses on long-term change as this stage indicates. At this stage, the milestones reflect expansion of the prototype, the development of collaborative leaders, developing a long-range financial plan, building a formal governance structure, and constructing a community constituency. Three themes emerged from the data: the ERP is

already a force in the community, structures are in place to continue their collaborative efforts, and there is a need to develop secure funding sources. The themes from the data are displayed in Table 32.

Table 32

Going To Scale: Themes From the Data

Going to Scale Constructs	**Themes from the Data**
• Build community constituency • Build governance structure • Design a fiscal strategy • Deepen collaborative culture • Develop interprofessional training	• ERP already a force in the community • Structures in place to continue collaboration • Need to develop secure funding sources

ERP Already a Force in the Community

The ERP has built a community constituency through their inclusion of pertinent stakeholders in their plan development. They created the "River Stars" program that motivates industry, government and other facilities in the Elizabeth River watershed to pursue voluntary pollution prevention and wildlife habitat goals. They have received widespread acclaim for their collaborative approach to environmental issues. Many of the members interviewed positively "glowed" when talking about the success of the ERP.

It's a very successful venture and its notoriety is surprising. It's become a piece that's well know. Everyone knows the Elizabeth River Project – they have caught the eye of politicians and government.

The Elizabeth River Project is the hardest working group I've been associated with. They are properly focused and results-driven. The result of that is implementation that has buy in. It goes to personal stewardship.

Structures in Place to Continue Collaboration

The ERP has been using a collaborative approach since their inception. They are an independent, non-profit organization governed by a board of directors. Their Executive Director was one of the original founding members and they have created a network of knowledgeable volunteers that assist them in their mission to clean up the Elizabeth River. This network enables them to maintain a collaborative approach, which is evident by their continued success.

Need to Develop Secure Funding Sources

The Paradise Creek Restoration Plan was funded for the period of one year through donations and a legacy grant from the ERP. Several members indicated that there was a need to identify funding for the next five years to accomplish many of the plan's goals. This lack of secure funding was the only resource identified by the group as a potential problem that could impede their progress.

Reflect and Celebrate

As the group goes through the process of collaboration, the Melaville & Blank model incorporates a "reflect & celebrate" component after each stage. The members of the Paradise Creek Steering Committee acknowledged that one of the straw man goals should include "celebrates and promotes public awareness" (Steering Minutes). This concept was included in the Team's vision statement of Paradise Creek, where they envision a restoration of Paradise Creek that: "Celebrates and promotes awareness of the creek's diverse partnerships..." (Project, 2003).

Additional Constructs Identified

During the interview process, two additional constructs became evident: the goal of cleaning up Paradise Creek was achievable, and the use of a straw man developed by the ERP to lay a foundation was important to the collaborative. Table 33 aligns these constructs within the appropriate stages of the two collaboration models.

Table 33

Additional Constructs Identified

Selin & Chavez Model Stages	**Themes from the Data**	**Melaville & Blank Model Stages**	**Themes From the Data**
Antecedents	• Achievable goal	Getting together	• Achievable goal
Recognize interdependence		Building trust	
Direction setting	• Use of a straw man plan by the ERP staff to lay a foundation	Developing a strategic plan	• Use of a straw man plan by the ERP staff to lay a foundation
Structuring		Taking action	
Outcomes		Going to scale	

Achievable Goal

The long-range vision of the ERP is to "restore the Elizabeth River system to the highest practical level of environmental quality" (Elizabeth River Project, 1996). The Paradise Creek project was seen as an opportunity to successfully clean up one of the

worst creeks in the Elizabeth River.

It was something new. Before this, the focus was on the big picture. This time we were looking at something small. Paradise Creek became a test case as it was doable – sort of a sub-watershed.

This construct differs from those identified as antecedents and getting together, more from a timing perspective. The ERP has been working towards cleaning up the Elizabeth River as set forth in their Watershed Action Plan of 1996. Collaborative projects in the past have focused on small projects across the entire watershed, to include stormwater innovations, public education, and wetlands restoration. Paradise Creek represents their first effort at restoring an entire section of the river. Many of the members interviewed believed that Team Paradise would not have been possible without the groundwork laid by the ERP. This construct is seen as a precursor to the collaborative process known as Team Paradise, and is listed in the initial stages of the collaborative models.

Use of a Strawman Plan

Several participants saw the ERP's development of a strawman plan to have contributed to the success of the collaboration process. During the second meeting of the Paradise Creek Steering Committee, the starting point for discussions was the strawman vision statements and goals developed by the ERP staff. Without the strawman, development of vision and goal statements for the project could have taken much longer and created more opportunities for disagreement. Several members commented that the groundwork laid by the ERP staff was instrumental in keeping the project on track and focused on results, especially with the ambitious timetable established for action.

This construct appears to be important to the process of collaboration and differs from those in the direction setting stage of the Selin & Chavez model and the strategic plan stage of the Melaville & Blank model. The ERP's construction of a strawman was the result of their long-term involvement in collaborative endeavors – they knew from experience that developing a restoration plan would take much longer without presenting a framework for discussion.

Summary of Results

The qualitative results suggest that of the 47 constructs between the two models, 13 constructs were not present in the collaborative process of Team Paradise. Table 34 summarizes the constructs that were present. The following discussion elaborates on those not present.

Selin & Chavez Model

Of the constructs in the Antecedents stage, four did not appear to be present for establishing the formation of the collaborative: crisis, broker, mandate, or incentives. In the Structuring Stage, three of the constructs were not present. None of the interviewees indicated that Team Paradise designed monitoring and control systems, assigned roles that are more formal for individuals, or elaborated the tasks of project completion. However, as this effort was part of a larger effort by the ERP, many of those processes were already in place. In the Outcomes Stage, two of the constructs were not present. The team members stated that the team realized the benefits of the process; however, as an established collaborative venture, it will be the job of the ERP to review and manage the outcomes of the process (assessing the program and evaluating the impacts), not Team Paradise.

Table 34

Summary of Qualitative Results

Selin & Chavez Model Constructs	Qualitative Results	Melaville & Blank Model Constructs	Qualitative Results
Antecedents • Crisis • Broker • Mandate • Common vision • Existing networks • Leadership • Incentives	• Common vision • Existing networks • Leadership	**Getting together** • Commit to collaborate • Involve the right people • Decide to act	• Commit to collaborate • Involve the right people • Commitment to act
Problem setting • Identify stakeholders • Recognize interdependence • Consensus on legitimate stakeholders • Common problem definition • Perceived benefits to stakeholders • Perceived salience to stakeholders	• Identify stakeholders • Recognize interdependence • Consensus on legitimate stakeholders • Common problem definitions • Perceived benefits to stakeholders • Perceived salience to stakeholders	**Building trust** • Develop a mission and community presence • Define shared vision and goals • Conduct a community assessment • Develop a base of common knowledge stakeholders	• Develop a mission and community presence • Define shared vision and goals • Conduct a community assessment • Develop a base of common knowledge stakeholders
Direction setting • Establish goals • Set ground rules • Joint information search • Explore options • Organize subgroups	• Establish goals • Set ground rules • Joint information search • Explore options • Organize subgroups	**Developing a strategic plan** • Formalize interagency relationships • Develop technical tools • Design service delivery prototype • Define target outcomes • Conduct a neighborhood analysis • Focus on a neighborhood	• Develop technical tools • Design service delivery prototype • Define target outcomes • Conduct a neighborhood analysis • Focus on a neighborhood
Structuring • Formalizing relationships • Roles assigned • Tasks elaborated • Monitoring and control systems designed	• Formalizing relationships	**Taking action** • Evaluate progress • Recognize diversity • Implement outreach strategy • Formulate staffing strategy	• Evaluate progress • Implement outreach strategy • Recognize diversity
Outcomes • Programs • Impacts • Benefits derived	• Benefits derived	**Going to scale** • Build community constituency • Build governance structure • Design a fiscal strategy • Deepen collaborative culture • Develop interprofessional training	• Build community constituency • Build governance structure • Deepen collaborative culture
		Reflect & celebrate	• Reflect & celebrate

Melaville & Blank Model

Four constructs within the Melaville and Blank model were not supported by the qualitative results. In the Develop a Strategic Plan Stage, Team Paradise members did not have to formalize interagency relationships; they were able to rely on those already established by the ERP. They did not formulate a staffing strategy, as proposed in the Taking Action stage. The two constructs not present in the Going to Scale stage were design a fiscal strategy and develop interprofessional training.

Summary

The qualitative portion of this study assessed the constructs in two models relating to collaboration by examining the processes used by Team Paradise in the development of the Paradise Creek Restoration Plan. Of the 47 constructs within the two models, 34 were found to be used by Team Paradise. Chapter VI will contain a discussion of the findings from the quantitative and qualitative chapters as they relate to the research questions.

Chapter VI

Findings and Discussion

Collaboration is one method that communities, citizen groups, public agencies, and individuals are using to solve complex policy problems. Research on collaboration constructs and models varies due to its complex and evolutionary process. The purpose of this research was to examine collaboration constructs using Gray & Wood's theoretical dimensions framework, and two conceptual models found in the literature. This chapter begins with a brief review of the research questions and design of the research. Following this is a presentation of the quantitative and qualitative findings as they address the research questions, implications for theory and practice, and recommendations for future research.

Research Questions and Design

The research began with an analysis of empirical studies to identify constructs of the process of collaboration. Those constructs were organized based on Gray & Wood's theoretical dimensions framework. The research questions that comprised the focus of the study were to a) determine what constructs were present in the processes used by Team Paradise as they developed the Paradise Creek Restoration Plan, b) how these constructs relate or fit the Selin & Chavez and Melaville & Blank process models of collaboration, and c) if additional constructs, not found in the two process models, can be identified based on the collaborative processes utilized in the development of the Paradise Creek Restoration Plan.

The research design was based on a mixed-methods approach with data collected through use of a survey instrument, qualitative interviews, and a review of pertinent documents. The quantitative and qualitative data was analyzed to determine the

constructs present in the collaborative process used by Team Paradise and how these constructs related to the collaborative models. The following discussion relates the findings to the research questions.

Research Findings

The first research question asks, "What constructs of collaborative processes were present in the process used by Team Paradise as they developed the Paradise Creek Restoration Plan?" Gray & Wood suggest there are three theoretical dimensions to collaboration, based on a review of theories on the process of collaboration. These three dimensions, preconditions, process and outcomes, offer the framework to organize common collaboration constructs found in the literature. The results of the data analysis utilize this framework to the answer the research question.

Dimensions of Collaboration

Results from the data indicate that many of the constructs identified in the literature were evident in the collaborative process used by Team Paradise. Table 35 summarizes the constructs by dimension, as suggested by Gray & Woods' framework. The construct was viewed to be supported by the quantitative data if a majority (above 50%) of the survey responses were either in the strongly agreed/agreed or good/excellent categories. Dark shaded boxes in the table indicate model constructs that were supported by both quantitative and qualitative data. Light shaded boxes indicate model constructs that were supported by **either** quantitative **or** qualitative data.

Preconditions are the factors that motivate and facilitate stakeholders to participate. The data suggests that seven of the constructs in the precondition dimension were identified as part of the Team Paradise process as discussed in Chapters 4 and 5. Three of these constructs were verified by more than one data source, "common vision,"

"existing networks," and, "leadership." The members of Team Paradise were motivated to collaborate by a common vision – that of environmental restoration. They recognized the importance of strong leadership and the usefulness of the ERP's established network of business, government, and neighborhood contacts.

Table 35

Matrix of Constructs to Theoretical Dimensions

Dimension	Constructs Supported By the Data	Constructs Not Supported By the Data
Preconditions	• **Broker** • **Generation of collective benefits** • **Crisis** • **Availability of funding**	• Mandate • Incentives • Key event • High stakes/high interdependence • Access to resources
Process	• **Joint information search** • **Evaluate progress** • **Skilled convener**	• Communication
Outcomes	• **Finding solutions to problems** • **Programs reviewed** • **Impacts assessed**	• Learning from partners • Greater efficiency

Note: Dark shaded boxes indicate model constructs that were supported by both quantitative and qualitative data. Light shaded boxes indicate model constructs that were supported by either quantitative **or** qualitative data.

The survey data suggests that two of the constructs were apparent in the processes used by Team Paradise. The ERP was the broker that brought the diverse stakeholder group together with a common vision. Some of the survey respondents believed that a crisis precipitated the formation of Team Paradise; the issue was so critical that they needed to act now.

The interview results supported two constructs. The stakeholders were able to see the collective benefits of participating in this process – that of a restored Paradise Creek. The availability of funding, through the receipt of the grant money, prompted the decision to act.

Five of the constructs could not be verified by the data collected. It was apparent from both the survey and interviews that the collaborative effort did not start as the result of a mandate by a government agency to include public participation. The group did not use financial contributions as incentives to engage potential partners. The Paradise Creek Restoration Plan stated that the selection of Paradise Creek was due to the ability to focus their efforts on a small microcosm of the Elizabeth River; it was not due to a key community event. High stakes/high interdependence refers to the strategic management concept of resource dependence. The organizations involved in Team Paradise did not enter into collaboration to obtain critical resources, or to obtain competitive advantage, indicative of resource dependence. This could be explained by the non-profit status of the ERP.

The process dimension refers to the process through which collaboration occurs. Eight of the constructs in this dimension were identified by the data as contributing to the collaborative process used by Team Paradise. Five of these constructs were supported by multiple data sources. The respondents believed that they had the right stakeholders

involved in the process. The survey comments and interview results did indicate that it would have been desirable to have increased participation from individuals in the neighborhood and elected officials, but that their absence did not affect the outcome of the process. The data revealed that the stakeholders had identified a common problem definition that they could agree with. The data identified aspects of strategic planning and more formal procedures to manage the collaborative effort and that a community presence was established. The results strongly suggest that the members acknowledged their interdependencies. That information was shared among the stakeholders was supported by survey results and several of the documents reviewed; however, two individuals indicated that more scientific data was needed. The stakeholders believed that an evaluation process was in place, although a few members were unsure of the eventual success of the project without a more formal evaluation system build in to the process. Research suggests that establishing the role of convener is a critical part of a collaborative effort (Gray, 1985). Convener refers to either a stakeholder or an umbrella organization that create the forum for collaboration. Most of the respondents commented that the ERP staff, as a whole, helped to guide the process and presented the team with a strawman plan to start the process.

There was only one construct that pertains to the process of collaboration that was not supported by the data. Collaboration requires a well-developed communication system. The survey results indicate that communication was a potential problem. Comments on the open-ended question that asked what were the important factors for continued progress included "establishing goals and good communication with the group and government agencies," "better information flow," and "frequent and clear

communication." These comments suggest that the Team did not adequately address communication needs.

The last dimension represents the expected outcomes of collaboration. The data suggests that four of the constructs were present in the processes used by Team Paradise. "Formal program establishment," one that will continue the implementation process, was verified through multiple data sources. One outcome of a collaborative endeavor is that of "finding solutions to problems." Interview data suggests that Team Paradise was successful in generating a restoration plan with workable solutions to clean up Paradise Creek. Documents reveal that many of the demonstration projects identified in the restoration plan have been completed, such as the restored oyster reef added in 2004 and the restoration of six acres of wetlands and forested buffer. Assessing the success of a collaborative involves reviewing programs, assessing the impacts, and having stakeholders determine whether to continue the collaborative arrangement. The survey data indicates that the over half of the respondents believed that this occurred; however, the interview respondents did not address these outcomes specifically. They realized that the results of the restoration plan would not be seen immediately and that the ERP would continue to work towards their goal of the environmental cleanup of the Elizabeth River.

It's a success in what it was trying to accomplish. It's a good plan – it may take five years but the plan is in place.

They'll be more of a success in 10 years when the trees grow – it's not a finished success yet.

Two of the constructs in the outcomes dimension could not be verified by the data collected. Interview data did not indicate that greater efficiency or learning from their

partners was a result of the collaborative process. Overall, 19 of the 27 constructs identified in the literature review as influencing the process of collaboration were found in the processes used by Team Paradise, as supported by the quantitative and qualitative findings.

Collaboration Models

In an effort to identify the most significant constructs within the three dimensions of collaboration, researchers have proposed various models or frameworks of collaboration. The second research question asks, "How does the set of constructs identified by the Team Paradise stakeholders relate or fit the collaboration process models developed by a) Selin & Chavez and b) Melaville & Blank?" Figure 6 – *The Collaborative Process in Resource Management as Assessed*, has been annotated to illustrate the constructs in the Selin & Chavez model that were present in the processes used by Team Paradise. The construct was viewed to be supported by the quantitative data if a majority (above 50%) of the survey responses were either in the strongly agreed/agreed or good/excellent categories. Dark shaded boxes in the table indicate model constructs that were supported by both quantitative and qualitative data. Light shaded boxes indicate model constructs that were supported by **either** quantitative **or** qualitative data.

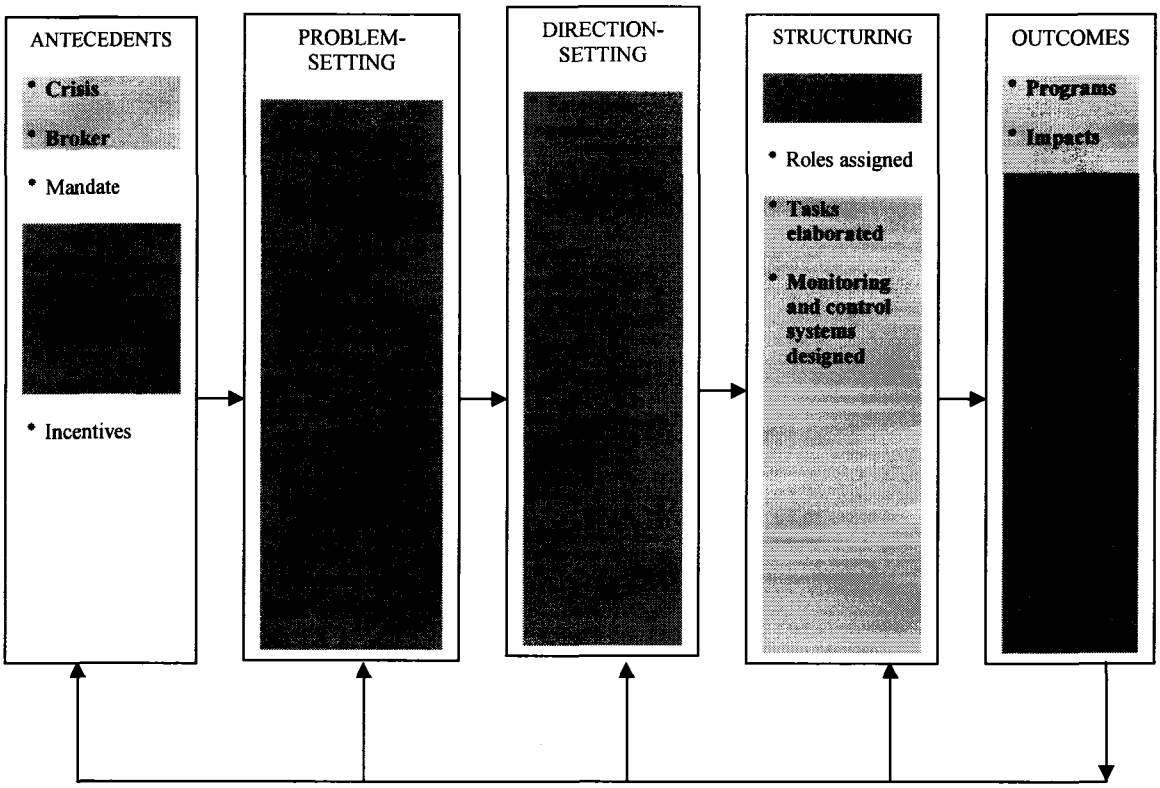
Selin & Chavez Model

As seen in Figure 6, the majority of the constructs in the Selin & Chavez model were present in the processes used by Team Paradise. Antecedents deal with the circumstances that lead to collaboration. Three of the antecedents, "common vision,"

"existing networks," and, "leadership" were verified by more than one data source. Not all of the antecedents are required to influence whether or not collaboration will occur. There was agreement that Team Paradise was not the result of a government mandate or incentives.

Figure 6

The Collaborative Process in Natural Resource Management as Assessed



Note: Dark shaded boxes indicate model constructs that were supported by both quantitative and qualitative data. Light shaded boxes indicate model constructs that were supported by either quantitative **or** qualitative data.

Problem setting is the first developmental stage of collaboration. The process begins with the identification of relevant stakeholders. After reaching consensus, the stakeholders begin to appreciate the interdependencies that exist between them and

realize that only through collective action will the problem be solved. The goal of problem setting is identification of a common definition that stakeholders can agree and act on. If they believe the issue is important to them and that the benefits will outweigh the costs, they will participate. Direction setting is where stakeholders begin to identify the values that bring them to the table and attempt to develop a common purpose. The constructs in the problem setting and direction setting stages were supported by both the qualitative and quantitative data.

The structuring stage reflects the need to manage stakeholders in a systematic way by institutionalizing the process, especially for problems that require a sustained commitment (Selin & Chavez, 1995). Only the construct of formalizing relationships was verified by multiple data sources. Two of the constructs, "tasks elaborated" and "monitoring and control systems designed", were identified by survey respondents as being part of the Team Paradise process, but these could not be validated through documents or interviews. Assigning roles as part of institutionalizing the process was not found to be part of the collaborative process. The ERP represents the institutionalization of the collaborative effort to environmentally restore the Elizabeth River; therefore, many of the structuring constructs have been in place since the development of their Watershed Action Plan of 1996.

Outcomes deal with the ability of the collaboration to finalize their actions, assess the results, and decide whether to continue the collaborative arrangement. Multiple data sources verified that Team Paradise was able to assess the benefits derived from their collaboration. Implementation of the programs and assessing the impacts were supported by the survey data only. The ERP generated the formation of Team Paradise to develop the restoration plan. Once the plan was completed, the actions identified in the

plan fell to the ERP to complete. As such, the constructs of "programs" and "impacts" appear to fall outside the role of Team Paradise.

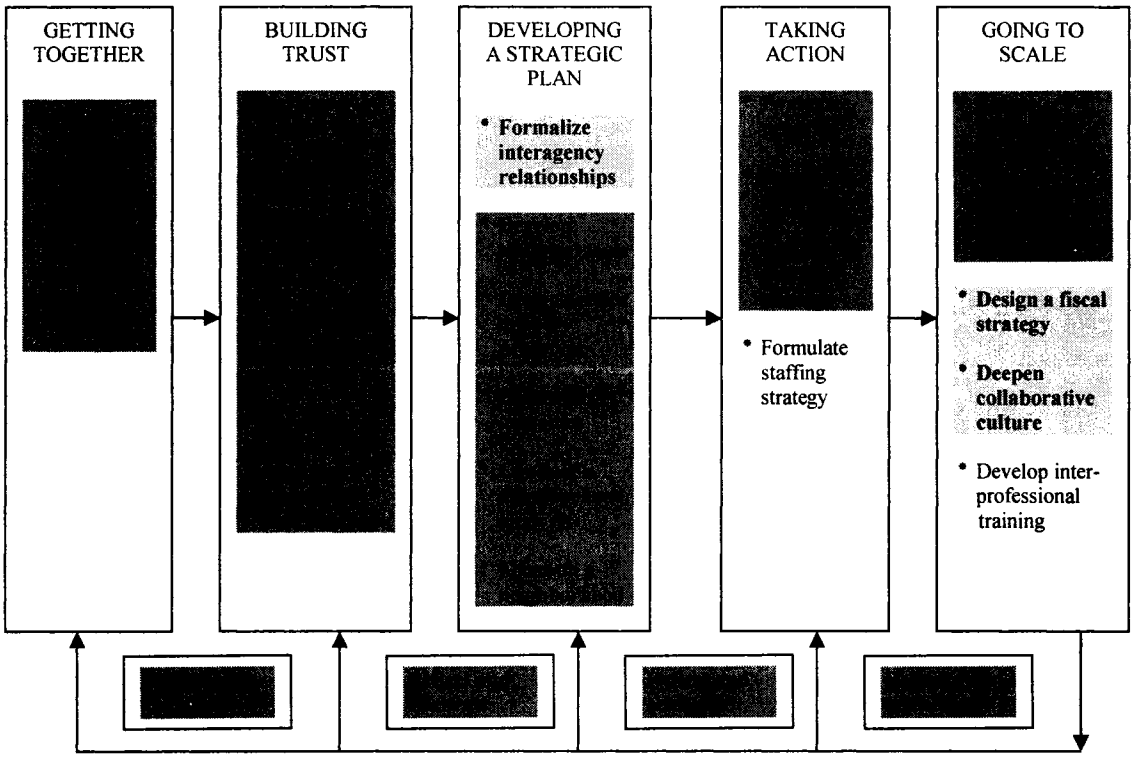
Melaville & Blank Model

Figure 7 –*Melaville & Blank Five Stage Process for Change as Assessed*, has been annotated to illustrate the constructs in the Melaville & Blank model that were present in the processes used by Team Paradise. The construct was viewed to be supported by the quantitative data if a majority above (above 50%) of the survey responses were either in the strongly agreed/agreed or good/excellent categories. Dark shaded boxes in the table indicate model constructs that were supported by both quantitative and qualitative data. Light shaded boxes indicate model constructs that were supported by **either** quantitative **or** qualitative data.

The stage "Getting Together" deals with the decision to act, identifying the stakeholders, followed by the group making a commitment to act. In "Building Trust and Ownership" the stakeholders develop a base of common knowledge. They set the stage for change by conducting a community assessment, which leads to the creation of a shared vision. The overarching framework for the ensuing work of the collaborative is the development of a vision statement, mission statement, and a set of goals. The constructs in these two stages were supported by multiple data sources. This compares with the results of the previous model. The construct "commit to collaborate" in the "Getting Together" stage concerns the factors that motivate the formation of a collaborative endeavor. While similar to the "Antecedents" stage in the Selin & Chavez model, they are not detailed as specifically.

Figure 7

Melaville & Blank Five Stage Process for Change as Assessed



Note: Dark shaded boxes indicate model constructs that were supported by both quantitative and qualitative data. Light shaded boxes indicate model constructs that were supported by either quantitative **or** qualitative data.

In "Developing a Strategic Plan" stage, the stakeholders explore options for tackling the issue by focusing their efforts on a prototype delivery service. They conduct a neighborhood analysis to identify targeted outcomes that will drive service delivery. Interagency relationships are formalized and technical tools developed to capture needed information. Four of the five constructs in this stage were supported by more than one data source. "Formalizing interagency relationships" was identified by 57% of the survey

respondents as part of the collaborative processes involved in the Paradise Creek plan development, but was not verified through other sources. The ERP has collaborated with most of the organizations surrounding the Elizabeth River. Through their River Stars program, which motivates industry, government, and other facilities in the Elizabeth River watershed to "pursue voluntary pollution prevention and wildlife habitat goals," they've already developed long-term relationships with other agencies (River Star, 2001, p.1). This could explain why the interview respondents did not indicate that this construct was part of their process of collaboration.

In the "Taking Action" stage, the development of a strategy for selecting, training, and supervising staff takes place. After implementation of a prototype, the group designs an evaluation strategy that helps them identify systems-change requirements, make mid-course corrections, and measure results. Three of the four constructs in this stage were validated by multiple sources. The construct "formulate staffing strategy" was not validated by any data collected. The Paradise Creek Restoration Plan did not require a staffing strategy, as the actions to support the plan will be managed by ERP employees. This would explain the lack of data supporting this construct.

In the stage "Going to Scale" the prototype is expanded and includes developing collaborative leaders that will continue implementation, deepening the collaborative culture of partner organizations, devising a long-range financial plan, building a formal governance structure and constructing a community constituency. Interprofessional training is developed to affect long-term change. Multiple data sources indicate that two of the five constructs in this stage, "build community constituency" and "build governance structure" were present in the Team Paradise collaborative process. Interview results indicated that the stakeholders believed that the ERP has shared their collaborative

culture with other organizations involved in the river restoration, but the survey results indicated 50% of the respondents agreed this was the case. Survey results (78.5%) indicated that Team Paradise had designed a fiscal strategy; however, a major theme identified in the survey research, which was supported by survey comments, was the lack of secure funding to accomplish the plan's goals. Of the 44 written comments to the question that addressed what the most important factors for continued success were, nine identified funding issues. As in the previous stage, personnel issues dealing with the construct "develop interprofessional training" could not be validated by any data collected. This could be a function of the management of the process by the ERP staff.

During each of these stages, the collaborative members pause to reflect on what has happened and celebrate success. Multiple data sources indicate the "reflect and celebrate" cycle was present in the processes used by Team Paradise.

Additional Constructs

The third research question asks, "Can any additional constructs, not described in the Selin & Chavez and Melaville & Blank models, be identified based on the collaborative process used to develop the Paradise Creek Restoration Plan ?" The survey data was designed to address the constructs in the two collaboration models proposed for study. However, the interview data and document review provided the opportunity to elicit other elements of collaboration that were not bounded by the two model's constructs. Based on that data, two additional constructs were identified by themes in the data. A motivation to create Team Paradise was that it was an "achievable goal," and "the use of a strawman plan by the ERP staff to lay a foundation" for the process.

When asked what prompted the start of Team Paradise, many of the interview respondents replied that focusing on a section of Paradise Creek was a good way to start

as it was an achievable goal, with results that could keep the momentum going for the eventual restoration of the entire Elizabeth River.

The ERP focused on Paradise Creek because it's a different direction, a smaller focus that what ERP normally does. It represents a small success.

The Elizabeth River, as a whole, has a high level of pollution. Paradise Creek is the worst creek in the river. It's easier to work with small chunks – we can set a goal we can get to.

It was something new – before this the focus was on the big picture. This time we were looking at something small. Paradise Creek became a test case as it was doable - sort of a sub-watershed.

This construct deals with the motivation of the stakeholders to participate in the collaborative endeavor, and differs from those found in both the "precondition" dimension, and the "antecedents" and "getting together" stages of the two models. The identification of this construct might be a process of the feedback loops indicated by the arrows in the two models. As the collaborative develops a more formal presence, the group revisits prior stages to address other "problems;" therefore, this would not necessarily be a precondition that motivates the group to initially form. Due to the limited number of interviews, further research would be necessary to determine if this represents a new construct.

A common theme found in the interview process, and substantiated by a number of documents, was that the use of a strawman plan by the ERP staff to lay the foundation for the collaborative effort contributed to the success of Team Paradise. In effect, the ERP acted as a convener organization. This construct was not found in the two models used for this study, although it relates to Gray's process model of collaboration and Gray & Wood's process dimension of collaboration. Gray identifies the identification and

establishment of a convener as an important part of the problem-setting stage. This convener can be either a stakeholder or an umbrella organization that creates the forum for collaboration. It was apparent that the ERP acted in this capacity. Neither collaboration model includes this construct in any stage.

Implications for Theory and Practice

The literature on collaboration has identified constructs that appear to be necessary to the process of collaboration. The purpose of this research was to determine what constructs were present in the process used by Team Paradise as they developed the Paradise Creek Restoration Plan, and how those constructs compared with the models proposed by Selin & Chavez and Melaville & Blank.

The identification and use of constructs and models in the field of collaboration contributes to the building and refinement of collaboration theory. This research makes three contributions to the literature on collaboration: a) the findings from this study supports construct findings from three other studies on collaborative processes; b) the comparison of models from separate professional disciplines suggest that the process of collaboration could be generic; and, c) this study found two additional constructs not identified in either model studies.

The findings have added to theory building by providing additional validation of many of the constructs found in the literature. Of the 27 constructs contained in Gray & Wood's framework, nineteen were supported by this study. Many of the constructs not validated by the process used by Team Paradise can be explained by the institutionalization of collaboration by the ERP. Gray and Wood state that if collaborative groups can "transform their core objectives so that they can survive" then we should be able to study the process of transformation from "a temporary to a relatively permanent

structure" (p. 19). The ERP has evolved from a temporary group, started in 1991, to a more permanent structure, through their incorporation in 1993 and their subsequent collaborative activities.

The findings from this research have implications for future model and theory building in the area of collaboration. The constructs identified in Gray & Wood's three dimension framework and in the two process models were drawn from the literature in the primary areas of education, public affairs, social science, natural resources, and health. This study also utilized models from separate professional disciplines as theoretical frameworks for studying the process of collaboration used by Team Paradise, a non-profit environmental organization. The Selin & Chavez model was developed for use in natural resource management and therefore the constructs in that model can be expected to be similar to those found in the process used by Team Paradise. The Melaville & Blank model was developed for use in the social services area; however, Team Paradise also utilized many of the constructs in that model. The findings from this research suggests that it might be possible to develop a generic model of collaboration using common constructs found in the literature that reflect the iterative and dynamic nature of the process of collaboration.

This study found two constructs present in the Team Paradise process that were not in either model, a precondition of achievable goal, and the use of a strawman by the ERP staff. Preconditions to collaboration refer to the motivation for stakeholders to collaborate. For this study, the fact that the restoration of Paradise Creek was an achievable goal was a fairly important factor in establishing their collaborative, as found through the interview process. According to those interviewed, this construct not only contributed to the formation of Team Paradise, but also to its success. The small number

of interview subjects is a limitation of this finding; further research will be necessary to determine its efficacy as a collaboration construct.

This study found that the construct dealing with the ERP's use of a strawman to lay the foundation for the collaborative effort was an essential step in their collaborative process, and reduced the potential for confrontation. This construct aligns with the convener role identified in Gray's process model, but is not evident in either of the iterative models used as frameworks for this study. In the case of Team Paradise, this construct was the result of the institutionalization of a collaborative process within the ERP.

This research also has implications for practice. This study indicates that collaboration does follow certain steps, or stages, consisting of a number of constructs. Many of the constructs in the two models were present in the process used by Team Paradise. Practitioners considering collaboration as a way to solve policy problems can use either of these prescriptive models as the basis for their own process. As evidenced by this research, not all of the constructs identified in the literature are found in all collaborative ventures; however, these models provide a useful framework for organizations new to collaboration.

Recommendations for Further Research

The nature of this study contributes to future research pertaining to collaboration constructs. Recommendations for research will address the need to overcome some of the limitations of this study. The primary limitations deal with the selection of a single organization for observation, the type and size of the organization selected, and the longevity of the organization studied.

A single organization was used for this study due to its successful use of collaborative practices, its location in respect to the researcher, its accessibility, and the proactive participation of the group. While this proved to be expedient, it also presented some limitations. Future research should focus on the constructs present in multiple organizations to add validity and generalizability to the data.

Team Paradise represents the efforts of an established environmental collaboration within a geographical area that has supported other collaborative processes by this organization. Further research should attempt to identify those collaboration constructs present in collaborative projects that reflect other urban policy concerns, such as transportation, education, emergency management, and regional land use issues. Can a generic, interdisciplinary model be developed for use in urban areas?

Additionally, there is a limitation in the identification of the two additional constructs, due to the small number of interview respondents. While one of the constructs, the use of a strawman, was validated by previous research, the limited number of interview subjects that generated the additional precondition bears further research to determine whether it truly is a collaboration construct.

The ERP represents a successful, long-standing collaborative organization. They have been refining their collaborative approach to environmental restoration for over fifteen years. This research suggests that several of the constructs identified in the literature were not substantiated due to the formal organizational structure already in place. Further research should determine if the collaborative process changes as an organization matures, resulting in the addition of different constructs or a reorganization of the constructs reflected in the models studied.

Communities are facing complex policy problems that cannot be solved by a single agency. However, uniting organizations through collaborative practices can create the synergy needed to achieve the results that no one organization can achieve alone. Continued research on the practice of collaboration is crucial to understanding the process. The more we can understand how to create and implement successful collaborative arrangements, the closer we are to providing solutions to these problems.

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Appendix A

Proposed Research Timeline

February 2004	Dissertation proposal approved
March 2004	Approval by the Institutional Review Board
April 2004	Begin interviews/document review
April 2004	Survey administered
May 2004	Survey follow-up
December 2004	Start analyzing data
January 2005	Begin draft dissertation chapters
May 2006	Complete dissertation

Appendix B

Interview Format and Question Guide

Explain Purpose
"This interview is part of a study to understand collaboration, and more specifically, how it works within the development of the Paradise Creek Restoration Plan."

Obtain Consent
"As we discussed, your name and any other information about you will not be identified in any way without your express written consent. Is that still agreeable to you?"

Introduction

1. Tell me about yourself (both personal and professional)
2. Have you participated in any groups outside of the ERP?
3. How long have you been involved with the ERP?
4. Are you still involved with the ERP? If so, why?

Group Processes

5. What prompted formation of Team Paradise?
6. What was your role in the development of the restoration plan?
7. Can you describe how your individual group functioned?
8. Did you have the right mix of stakeholders involved in the process?
9. Were there elements of strategic planning involved?
10. Were there small advances made where you could evaluate "lessons learned?"
11. What do you see as favorable aspects of this group? Unfavorable aspects?
12. If there was confrontation, how did the group handle it?
13. Could you suggest any changes or improvements with regard to how the group functioned?
14. Were there certain individuals that helped or hindered decision-making?
15. Was there a lack of any resources that impeded your progress?
16. How do you view the ERP today?
17. Do you see Team Paradise as successful?

Conclusion

"'Thank you so much for both your time and expertise, this has been tremendously helpful. I will provide you with a copy of the transcript so that you can make sure I accurately interpreted your answers. This will also give you a chance to review what we discussed, and amend as needed. Thank you again, for your help."

Your Views on the Paradise Creek Restoration Plan Development

This survey is intended to study the planning process involved in the development of the Paradise Creek Restoration Plan of 2003. Your honest responses to the items in the survey will be extremely helpful. All responses will be statistically summarized and displayed, along with the responses of others, without identifying you individually. Under no circumstances will individual responses be reported.

Completing the survey should take approximately 15 minutes. A summary of the results will be provided to the Elizabeth River Project upon completion. If you have any questions, please contact Pam Dunning at 757-898-4960, or via email at: pamdunning@cox.net.

Instructions:

Items are arranged in 7 groups followed by a set of demographic questions. To the right of each item is a scale for recording your responses. Please circle the appropriate response.

Please circle the response that best reflects your opinion on a scale of 1 = strong disagreement to 5 = strong agreement. Circle N/A if you have no opinion or the question does not apply to you.

A. Initial Group Formation:	Strongly Disagree	Disagree	Neither Agree/ Disagree	Agree	Strongly Agree	N/A
1. Now is a good time to address the issue.	1	2	3	4	5	X
2. Our effort was started because certain individuals wanted to do something about the issue.	1	2	3	4	5	X
3. The situation is so critical, we must act now.	1	2	3	4	5	X
4. Other (optional):						

B. Reasons for Participation:	Strongly Disagree	Disagree	Neither Agree/ Disagree	Agree	Strongly Agree	N/A
Please identify your reason for participating in the group						
5. To improve my watershed	1	2	3	4	5	X
6. To protect my financial interests	1	2	3	4	5	X
7. To report back to my organization about what the group is doing	1	2	3	4	5	X
8. To help achieve my organization's goals and objectives	1	2	3	4	5	X
9. To prevent the group from achieving undesirable changes in law or policy	1	2	3	4	5	X
10. To head off state/federal legislation or regulation	1	2	3	4	5	X
Other (optional):						

C. About the Group	Strongly Disagree	Disagree	Neither Agree/ Disagree	Agree	Strongly Agree	N/A
11. The membership of our group includes those stakeholders affected by the issue.	1	2	3	4	5	X
12. Stakeholders have agreed to work together on this issue.	1	2	3	4	5	X
13. Our membership is not dominated by any one group or sector.	1	2	3	4	5	X
14. The group treats all parties fairly and consistently.	1	2	3	4	5	X
15. Some critical interests are not effectively represented in the group.	1	2	3	4	5	X
16. Government agencies have too much influence within the group.	1	2	3	4	5	X
17. The group represents the interests of most people in the local community.	1	2	3	4	5	X
18. It's essential to find solutions that are satisfactory to all members of the group.	1	2	3	4	5	X
19. The group enjoys good access to people with sufficient training to evaluate scientific and technical information relevant to the group.	1	2	3	4	5	X
20. The scientists and engineers frequently clash with non-technical stakeholders regarding the proper role of science and technology in managing our watershed.	1	2	3	4	5	X

D. About the Process	Strongly Disagree	Disagree	Neither Agree/ Disagree	Agree	Strongly Agree	N/A
21. Members of the collaboration balance task and social needs so that the group can work comfortably and productively.	1	2	3	4	5	X
22. Members trust each other sufficiently to honestly and accurately share information, perceptions, and feedback.	1	2	3	4	5	X
23. We start with small neighborhood projects to develop "lessons learned."	1	2	3	4	5	X
24. We have a unifying theme which describes our goals.	1	2	3	4	5	X
25. Divergent opinions are expressed and listened to.	1	2	3	4	5	X
26. We have an effective decision making process.	1	2	3	4	5	X
27. We have concrete measurable goals to judge the success of our group.	1	2	3	4	5	X
28. We have identified interim goals to maintain the group's momentum.	1	2	3	4	5	X
29. The data and information that exist on our watershed are easily accessible to all stakeholders.	1	2	3	4	5	X

D. About the Process (cont)	Strongly Disagree	Disagree	Neither Agree/ Disagree	Agree	Strongly Agree	N/A
30. Our group has access to credible information that supports problem solving and decision making.	1	2	3	4	5	X
31. Stakeholders have agreed on what decisions will be made by the group.	1	2	3	4	5	X
32. Our group has set ground rules and norms about how we will work together.	1	2	3	4	5	X
33. We have a method for communicating the activities and decisions of the groups to all members.	1	2	3	4	5	X
34. Our group is organized in working sub-groups when necessary to attend to key performance areas.	1	2	3	4	5	X
35. There are clearly defined roles for group members.	1	2	3	4	5	X
36. We have adequate staff assistance to plan and administer the collaborative efforts.	1	2	3	4	5	X
37. We have an articulated mission statement.	1	2	3	4	5	X

E. Results of the Process	Strongly Disagree	Disagree	Neither Agree/ Disagree	Agree	Strongly Agree	N/A
38. The process we are engaged in is likely to have a real impact on the problem.	1	2	3	4	5	X
39. We celebrate our group's successes as we move toward achieving the final goal.	1	2	3	4	5	X
40. There is an established method for monitoring performance and providing feedback on goal attainment.	1	2	3	4	5	X

To what extent do you agree that the following procedural and/or behavioral outcomes have resulted from the efforts of your project?

41. Communication and cooperation between stakeholders has improved.	1	2	3	4	5	X
42. There has been an increase in trust and respect among stakeholders.	1	2	3	4	5	X
43. New stakeholders have become involved in project activities.	1	2	3	4	5	X
44. Support has been gained from other organizations.	1	2	3	4	5	X

F. Group Functioning

What a group accomplishes is often dependent upon how the group functions. Think about the way your group works and how effective you think the group is in the following ways. Please rate each item from 1 [low] to 5 [high] by circling the number which *best* describes your position. Circle U if you are uncertain or can't answer.

	Poor	Fair	Satisfactory	Good	Excellent	Uncertain
45. Bringing together parties with an interest in the issue	1	2	3	4	5	U
46. Listening to minority views	1	2	3	4	5	U
47. Building a clear mission (members know where the group is headed)	1	2	3	4	5	U
48. Developing group operating procedures (setting up subcommittees, rules, structures)	1	2	3	4	5	U
49. Communicating the interests and views of all parties	1	2	3	4	5	U
50. Providing effective leadership	1	2	3	4	5	U
51. Securing adequate resources so group can do its work	1	2	3	4	5	U
52. Understanding community needs and assets.	1	2	3	4	5	U
53. Conducting a needs analysis.	1	2	3	4	5	U
54. Doing effective planning (assess needs/ assets, set goals, develop plan)	1	2	3	4	5	U
55. Making interorganizational linkages.	1	2	3	4	5	U
56. Carrying out planned actions	1	2	3	4	5	U
57. Making decisions accepted by all parties.	1	2	3	4	5	U
58. Facilitating compromise when needed to further progress	1	2	3	4	5	U
59. Providing for training of members as appropriate	1	2	3	4	5	U
60. Reviewing, reflecting, and evaluating to assure progress and results	1	2	3	4	5	U
61. Communicating progress and achievement	1	2	3	4	5	U
62. Developing capacity to sustain efforts	1	2	3	4	5	U

G. Impact of Group on Others

Listed below are various results that community groups achieve that affect individuals, families, agencies and the community in general. Please rate each item from 1 [low] to 5 [high] by circling the number which *best* describes your position. Circle U if you are uncertain or can't answer.

As a result of our group...	Poor	Fair	Satisfactory	Good	Excellent	Uncertain
63. People are now working together on this community issue.	1	2	3	4	5	U
64. More residents are actively involved in this issue.	1	2	3	4	5	U
65. All key stakeholders and interests are represented.	1	2	3	4	5	U
66. There is greater public support for this issue.	1	2	3	4	5	U
67. Existing resources have been realigned or modified.	1	2	3	4	5	U
68. Grants have been written.	1	2	3	4	5	U
69. There is increased funding/grants in the community.	1	2	3	4	5	U
70. We are able to influence budget/funding						

decisions. 1 2 3 4 5 U

What are the most important factors for continued progress?

Demographic questions

1. Do you live in the Elizabeth River watershed? ☐ yes ☐ no

2. Gender: ☐ Female ☐ Male

3. Age: _____ years

4. Race:
   - ☐ White
   - ☐ Black
   - ☐ American Indian, Eskimo, or Aleut
   - ☐ Hispanic
   - ☐ Asian or Pacific Islander
   - ☐ Other

5. Which city/county do you currently reside in? _____

6. Please circle the highest degree you have received:
   - ☐ No high school diploma
   - ☐ High school diploma
   - ☐ Associate degree
   - ☐ Bachelor's degree
   - ☐ Masters
   - ☐ JD
   - ☐ Ph.D. or MD

7. What is your annual household income?
   - ☐ Less than $15,000
   - ☐ $15,000 - $25,000
   - ☐ $25,000 – $50,000
   - ☐ $50,000 - $75,000
   - ☐ $75,000 - $100,000
   - ☐ over $100,000

THANK YOU FOR COMPLETEING AND RETURNING THE QUESTIONNAIRE!

Appendix D

List of Documents Reviewed

1. Chesapeake Bay Program Backgrounder: Small Watershed Grant Program
2. 2002 Chesapeake Bay Small Watershed Grants Program Proposal Narrative
3. Chesapeake Bay Program Press Release: Chesapeake Bay Program Announces 2002 Small Watershed Grant Recipients, July 29, 2002
4. Paradise Creek Restoration Plan Steering Committee Meeting at Southeastern Public Service Agency (SPSA) – Refuse Derived Fuel Plant Meeting Agenda, October 7, 2002
5. Paradise Creek Restoration Plan Steering Committee Meeting Summary, October 7, 2002
6. A Five-Year Plan to Restore Paradise Creek Proposed Planning Process, October 7, 2002
7. Elizabeth River Project Criteria for Selecting Actions
8. Paradise Creek Restoration Plan Stakeholders Forum Summary, November 19, 2002
9. Paradise Creek Restoration Plan Steering Committee Meeting Agenda, December 5, 2002
10. Talking Points, Elizabeth River Project, Paradise Creek Steering Committee "State of the Creek", December 5, 2002
11. Meeting Minutes: Paradise Creek Restoration Steering Committee, December 5, 2002
12. Mudflats: Newsletter of the Elizabeth River Project, Winter 2002
13. Mudflats: Newsletter of the Elizabeth River Project, Spring, 2004
14. The Pelican Press, The ERP Newsletter for Volunteers, Summer, 2004
15. Elizabeth River Archives: River Restoration Prompts White House Recognition, October 22, 2004
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20. Elizabeth River Archives: Celebrating 10 Years of Restoration Success (web document)
21. Elizabeth River Archives: RADVA Plants Paradise (web document)
22. Elizabeth River Archives: Cleaning Up Paradise (web document)
23. Elizabeth River Archives: More Sediment Cleanup Sites Added
24. Elizabeth River Archives: ERP Celebrates Twelve Years of Restoration (web document)

Appendix E

Team Paradise Project Staff

Lyle Jackson, Project Manager
Joe Rieger, Project Scientist
Alicia LoGalbo, Water Quality Scientist
Robin Dunbar, Outreach Coordinator

Team Sediment Quality

Chair, Dr. Morris H. Roberts, Jr., Retired VA Institute of Marine Science
Ed Corl, US Navy
Dr. Daniel Dauer, Old Dominion University

Dr. Carl Fisher, The Elizabeth River Project Board
Simeon Hahn, National Oceanic and Atmospheric Administration
Mike Host, Norfolk Naval Shipyard

Marjorie Mayfield Jackson, The Elizabeth River Project
Jan Nielsen, Norflk Naval Shipyard

John Ponton, Tetra-Tech (formerly Foster Wheeler Environmental)
Robert Pretlow, US Army Corps of Engineers

Craig Seltzer, US Army Corps of Engineers

Team Living Resources

Chair, Josh Priest, The Elizabeth River Project Board
Valerie Bliss, Community of Cradock
Dr. George W. Brown, The Elizabeth River Project Board
Noah Hill, VA Department of Conservation and Recreation
Mark Kalnins, VA Department of Environmental Quality
Michael Nickelsburg, Tidewater Community College
Christine Porter, US Navy
Walter Priest, VA Institute of Marine Science

Willie Reay, VA Institute of Marine Science
Jim Wesson, VA Marine Resources Commission

Team Water Quality

Chair, Tim Hare, CH2M Hill
Michael Barbachem, URS Corp.
Pam Boatwright, The Elizabeth River Project
Ernie Brown, VA Department of Conservation and Recreation
David Cotnoir, Naval Facilities Engineering Command
Roger Everton, VA Department of Environmental Quality
Shelly Frie, Woolpert LLP
Jeff Hancock, VA Department of Conservation and Recreation
Richard Hartman, City of Portsmouth
Dr. Roger F. Hatcher, Peck Land Co.

Noah Hill, VA Department of Conservation and Recreation
Bill Hunt, North Carolina State University

Cindy Linkenhoker, City of Portsmouth Engineering Department
Kathy Mooney, Norfolk Naval Shipyard

Hugo Valverde, Hampton Roads Planning District Commission
Landon Welford, City of Portsmouth

Team Quality of Life

Chair, Jeff Barba, Cradock Civic League

Mike Barnett, SPSA – Waste to Energy RDF Plant
Valerie Bliss, Community of Cradock

Richard Cheliras, SPSA

Noah Hill, VA Department of Conservation and Recreation
Ted Hinson, Giant Cement Virginia, Inc.

Lyle Jackson, The Elizabeth River Project
Glenn P. Markwith, Commander, Navy Mid-Atlantic Region
David Peck, Peck Land Co.
Nettie Seagraves, The Elizabeth River Project
Janet Whitley, Cradock Business Owners Association

Appendix F

Survey Comments

Initial Group Formation

- It was a good opportunity to build on other efforts that were already started on the creek

Reasons for Participation:

- My relationships with other members of the group are agreeable and personally satisfying
- I feel my contributions to the group are appreciated
- Professional development
- To serve in an advisory capacity (part of my job)

Most important factors for continued progress

- Persistence
- Increase unrestricted funding
- Demonstrable small successes
- Achieving visible physical results that can be readily seen by the community and others and which can serve as an inspiration/catalyst for further action
- Money
- National and local government concern/support/action
- Less meetings/talking/gatherings; more productive visible action. Something needs to be seen
- Too much waiting time – a plan or effort can die
- Establishing goals, and good communication with the group and government agencies
- Getting the word out and more widespread notices of volunteer opportunities, i.e. get the lower military people involved. Instead of a captain showing presence how about 50 military volunteers to help with the environment. Each base has a volunteer board but nothing is ever mentioned about the project.
- Corporate involvement
- Financial backing from government resources
- Continued outreach & communication with group members
- Funding!!
- Continued community involvement
- Positive results
- Securing the partnership of the municipality and getting the municipality to look beyond the obvious financial shortfalls and committing to reinvesting to take back part of the city and increase value to generate future revenue
- Being able to resolve technical issues in a manner that allows them to move forward
- Better information flow
- Acknowledgement that 5 years is not enough to fix the problem
- Adaptive management
- Resources

- Momentum
- Obtaining sufficient resources to achieve objective of the plan
- Keep the responsible agencies and stakeholders working together
- Specific projects seen to completion which have demonstrated environmental, social, and economic benefits
- Money for restoration work, increased stakeholder participation from all businesses, open communication between all players, including regulatory interface!
- ERP needs to have more stakeholder meetings
- Carry out the Paradise Creek Restoration Plan – keep the momentum going
- Setting and communicating interim goals
- Continue to expand participation by various stakeholders and looking for alternative funding
- Maintaining group interest and momentum
- Develop public access park on south shore
- Coordinate efforts with adjacent restoration activities
- Frequent and clear communication
- Setting achievable goals and metrics to measure success/failure
- Organization – lead effort
- Grant funding
- Citizen participation
- Successful political "buy-in"
- Maintain a public presence and continue to seek funding from a variety of sources
- Community support and commitment to the vision
- Commitment to good science
- The effort has gained considerable support

Other Comments

Question 20 bothered me. While there were frequent concerns and disagreements between scientists/engineers/and non-technical stakeholders is difficult to answer. "Frequently clash" seems to indicate an argument or fight. We disagreed but it was typically handled in a professional manner.

VITA

Pamela T. Dunning received a Bachelor of Science, Occupational Education in 1985 from Wayland Baptist University, Honolulu, Hawaii in 1985, a Masters of Public Administration in 1995 and a Masters of Urban Studies in 1999 from Old Dominion University, Norfolk, Virginia. She served on active duty in the U.S. Air Force from 1979 to 1987, and in the U.S. Civil Service from 1987 to 1998 where her primary areas of specialization were human resource management and budgeting. She is currently a faculty member of Christopher Newport University, Newport News, Virginia. She is a member of the Pi Alpha Alpha and Phi Kappa Phi national honor societies.