2014

Understanding Collaboration Among Political Subdivisions of State Government: Examining the Perceptions and Use of Collaboration by Virginia's Soil & Water Conservation Districts

Kendall Tyree
Virginia Commonwealth University

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UNDERSTANDING COLLABORATION AMONG POLITICAL SUBDIVISIONS OF STATE GOVERNMENT:
Examining the Perceptions and Use of Collaboration by Virginia’s Soil & Water Conservation Districts

A Dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy at Virginia Commonwealth University

by

KENDALL ELAINE TYREE
Master of Public Administration, Virginia Polytechnic Institute, 2008
Bachelor of Arts, Randolph-Macon College, 2005

Director: WILLIAM C. BOSHER, JR., ED.D.
Distinguished Professor of Public Policy & Education
L. Douglas Wilder School of Government & Public Affairs
Virginia Commonwealth University

Virginia Commonwealth University
Richmond, Virginia
April 2014
Acknowledgements

This work is dedicated to my family, who has always been my foundation and center in life. To my parents, Bobbie and Kenny Tyree, you have taught me the value of hard work, respect, and shown me the importance of values that could never be found in a classroom or textbook. I’m blessed to have your love and guidance. I strive to be the best person I can because of you. You each have served as much more than a parent but my closest friends and mentors. It’s your confidence in me and unending support that set me on this journey. Words can’t express how truly thankful I am. I love you both.

To my husband and love of my life, Josh Covington, it is your patience and support that gave me the motivation to keep going when things seemed difficult. Thank you for believing that I can accomplish anything and for providing unwavering support for all that I do. This path wouldn’t have been possible without you. I am so very fortunate to share this life with you and this accomplishment along the way.

I would like to thank the Virginia Association of Soil & Water Conservation Districts and its Executive Board leadership for the cooperation, understanding and flexibility allowed as I completed my studies and research. Your recognition of the importance of this research to me personally and to the field professionally is greatly appreciated.

A big thank you to all soil and water conservation district directors, associate directors and staff who participated in the survey research. I am inspired by your passion for district work and am privileged to work with each of you.

I express my deep appreciation and gratitude to Dr. William Bosher, Jr. who served as my committee chair and always a role model. Your words of encouragement and your commitment to
my success have meant so very much. Thank you for keeping me focused and helping make this experience both educational and enjoyable.

To my remaining committee members—Dr. Tom Huff, Dr. Meghan Gough, and Dr. Randy Barrack—thank you each for your direction and support in making my research the most valuable it can be to the field.
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ABSTRACT

UNDERSTANDING COLLABORATION AMONG POLITICAL SUBDIVISIONS OF STATE GOVERNMENT: EXAMINING THE PERCEPTIONS AND USE OF COLLABORATION BY VIRGINIA’S SOIL & WATER CONSERVATION DISTRICTS

By Kendall Elaine Tyree

A dissertation submitted in partial fulfillment of the requirements for degree of Doctor of Philosophy at Virginia Commonwealth University.

Virginia Commonwealth University, 2014.

Major Director: Dr. William C. Bosher, Jr., Ed.D.
Distinguished Professor of Public Policy and Education
L. Douglas Wilder School of Government and Public Affairs

The purpose of this study was to explore the definitions, benefits, challenges, methods and perceived levels of current collaboration of Virginia’s 47 Soil and Water Conservation Districts, each a political subdivision of state government. The study was guided by the following questions (1) What is collaboration and how is it used by political subdivisions of state government? (2) What collaborative strategies are used specifically by soil and water conservation districts? (3) At what level are districts currently collaborating? (4) At what level do districts prefer to collaborate?

A mixed methods research survey was used. The quantitative section measured current perceptions of collaboration based on six indicators of successful collaborations as determined and tested by the Amherst Wilder Foundation—environment, membership, process and structure, communication, purpose, and resources—through use of its Collaborative Factors Inventory. The qualitative portion allowed further exploration into how districts are utilizing collaboration at a grassroots level. Desired levels of collaboration were also captured.

The entire district population—district directors, associate directors, and staff—was surveyed and responses analyzed to better understand collaborative efforts. The results indicate that
collaborations occur because of both the resource benefits received and the support of a greater cause—or a mix of relational exchange and resource dependency theories. Of the six collaborative indicators, resources proved the greatest area of concern. The process and structure variable was found to be a second needed area of growth. Trust issues with key partners, a component of the membership variable, were also identified as hindering collaboration.

Overall, current perceived levels of collaboration occur between coordination and coalition, or a three to four on a five point scale. However, districts identified a desire to operate more often at the coalition level. By focusing on improvement to process and structure needs as well as resource issues, trust will improve and desired levels of collaboration can be reached.

This study will enrich the existing literature by expanding on the use of collaboration as it relates to political subdivisions. Findings will be of value to all conservation districts, with greatest value to Virginia. Partner agencies, policymakers, and public administrators will further benefit by gaining insights into the collaborative process.
CHAPTER I

INTRODUCTION TO THE STUDY

New combinations of state government agencies, corporations, nonprofits, and voluntary organizations are constantly forming to impact and tackle almost every major issue facing the Commonwealth of Virginia, the nation, and society. The need for and emergence of collaboration and partnership with government agencies is undoubtedly increasing; however, there is a gap in current research examining the importance of cross sector collaboration in general—and more specifically, collaboration organized among political subdivisions of state government. Even more disconcerting is that of the literature that does exist, there is no agreed upon understanding of collaboration — definition or theory. Further, current literature understates the importance and impact of government collaboration. “Public policymakers in the United States take an oversimplified view of the nonprofit sector and its relationship with government” (Boris, 2006, p.37). The gap in the literature that exists is not limited to the significant work of nonprofits and state government; it is far more lacking and understated in terms of understanding collaboration between government and the unique entity of political subdivisions of state government (Boris, 2006, p.37).

To define a political subdivision of state government, the Code of Virginia and supporting opinion of the Virginia Office of the Attorney General establishes the role of a political subdivision of state government as “created by the legislature to exercise some portion of the state's sovereignty in regard to one or more specific governmental functions. It is independent from other governmental bodies, in that it may act to exercise those powers conferred upon it by law without seeking the approval of a superior authority. It employs its own consultants, attorneys, accountants, and other employees whose salaries are fixed by the political subdivision, and it often incurs debts which are

Of most interest to this research is understanding collaboration among a specific set of political subdivisions of state government, Virginia’s 47 soil and water conservation districts. The manner, method, and techniques in which these political subdivisions collaborate have a bearing on the overall level of success in fulfilling their own mission as well as the overall goals of the Commonwealth as it relates to reducing non-point source pollution.

Soil and water conservation districts have their own unique structure separate from government and are similar in nature to a nonprofit (Department of Conservation & Recreation, 2013). Reviewing this type of collaborative relationship will prove beneficial to understanding strategies of organizational success and how those strategies can influence public policy.

Collaboration takes on many different forms and levels. According to Elizabeth Boris in *Nonprofits & Government: Collaboration and Conflict*, “Organizations interact with government in several different ways, and these patterns of interaction vary over time and among different fields of service” (Boris, 2006, p.38). Boris elaborates to define three types of interaction and collaboration among nonprofits and state government as supplementary, complementary, and adversarial. “In various contexts, nonprofits have served as supplementary providers of public goods, as complementary partners with government in public service provision, and as advocates and adversaries in the process of public policy formulation and implementation” (Boris, 2006, p.38). It is not uncommon that two or three of these interactions, or collaborative role types, manifest simultaneously.

Political subdivisions of state government, much like nonprofits, are organized to fulfill these three roles as necessary. Through district programs, targeted to landowners and homeowners,
soil and water conservation districts provide supplementary and complementary levels of collaboration as well as serve as advocacy leaders when developing public policy.

In addition to the three roles of collaboration that Boris addresses, collaboration can occur at varying levels. A number of researchers (Gregson, Cartlidge & Bond, 1992; Hallett & Birchall, 1992; Huxham & Macdonald, 1992; Miller & McNicholl, 2003; Roaf, 2002) agree that five levels of collaboration exist: communication, cooperation, coordination, coalition, and integration (Horwalth & Morrison, 2007). This approach ascertains that collaboration exists among a continuum and that higher levels of collaboration occur as an organization moves towards integration. Chapter II will further explore this collaboration framework and its benefit for measuring collaboration.

**Background for the Study**

“Cross sector collaboration is a function mechanism for providing assistance to communities with an array of social problems and community development issues” (Simo, 2009, p.368). Soil and water conservation districts are a classic example of providing grassroots assistance at the community level. The cross sector collaboration required of these political subdivisions of state government is a critical necessity for ensuring organizational success. Simo in the article, “Sustaining Cross-Sector Collaborations” agrees, stating that “In the current economic environment collaboration efforts should be examined from the perspective that many organizations do not have the economic resources or organizational capacity to resolve issues and crises without partnering and/or collaborating with other organizations” (Simo, 2009, p.368). Despite a need to collaborate in order to pool resources, collaboration in general is changing, migrating “toward deeper, strategic alliances” (Austin, 2000, p.1). According to Austin, a collaboration imperative is taking seed. “The imperative for collaboration,” at a macro-level, “stems from the rapid, structural and probably
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irreversible changes being generated by powerful political, economic and social forces” (Austin, 2000, p.7). And at the micro-level, organizations find a wealth of benefit from collaborating (Austin, 2000, p.7).

Districts with limited funding and staff are stretched thin, with little resources and a big mission. Soil and water conservation districts partner with state, local, and federal agencies among other organizations. Currently, 47 unique soil and water conservation district are pursuing similar goals but engaging in different forms and levels of collaboration. As a result, soil and water conservation districts across the state are experiencing varying levels of support from key partner organizations and achieving varying levels of success when it comes to nonpoint source pollution prevention.

A cross sector collaboration “arrangement is especially valuable when the issues to be ameliorated transcend the capabilities of single organizations and the programs designed to address these problems are provided by organizations that are lacking organizational stability and/or capacity” (Simo, 2009, p.368). The goal of reducing nonpoint source pollution is not a goal unique to soil and water conservation districts. Nor are soil and water conservation districts alone when it comes to improving water quality in the Chesapeake Bay watershed, as required per the Environmental Protection Agency (EPA) through the approved Chesapeake Bay Watershed Implementation Plan. While districts serve as the lead conservation delivery system in Virginia and are a unique mechanism for providing assistance on this issue, these issues are ones that state and local governments are also faced with solving. The need for soil and water conservation districts to then be at the table collaborating on issues that clearly “transcend the capabilities of a single organization” is a very real concern (Simo, 2009, p.368). Collaboration is therefore essential.
**Purpose of the Study**

In order to learn from each other the key to successful collaboration, we must understand what collaboration is to soil and water conservation districts, how and why it is being used, the level in which current collaboration is occurring, and what techniques or strategies are being utilized to foster collaboration. With a better understanding of the methods of cross sector collaborations that are currently underway among soil and water conservation districts we can better educate, inform, and strengthen all 47 soil and water conservation districts across the Commonwealth of Virginia. With a baseline understanding of collaboration among soil and water conservation districts, also known to be the most grassroots level of conservation implementation, we can ultimately improve environmental public policy.

Additionally, through a review of the literature, this study will define collaboration by delving into how and why collaboration is used to assist in achieving an organization’s mission. This research will review various strategies of collaboration and present several theoretical frameworks for understanding and measuring levels of collaboration.

One of the first steps that soil and water conservation districts, a political subdivision of state government in the Commonwealth, can take to improve strategic relationships and engage with other organizations is to understand what collaboration is and at what level it is currently occurring. The purpose of this study is to examine perceptions of collaboration among this specific type of political subdivision of state government in the Commonwealth of Virginia. The research will provide insight into how these 47 soil and water conservation districts use collaboration techniques in order to assist in fulfilling their strategic goals and organizational mission.
Collaboration Among Political Subdivisions, etc.  

Significance of the Study

Collaboration is a topic of interest to most professions, not only the field of natural resource management as studied here. Collaboration has been studied and implemented in educational settings to enhance the student learning environment and even utilized by Virginia libraries to enhance electronic library collections while providing a venue for more effective advocacy (Carmack, 2012). In turn, collaboration has been an effective tool for resolving a variety of controversies “involving transportation, housing, and mortgage lending” (Gray, 1989, p.7). Collaboration is critical when dealing with family and children services or health care (Wondolleck, 2000). There is no one sector where collaboration is deemed of greatest significance; its critical importance and ability to assist in furthering a common mission spans across all sectors. The organizational objectives of any agency cannot be achieved by working separately but can only be met through the use of collaboration (Chrislip & Larson, 1994, p.9).

While collaboration is not a new phenomenon, it is understood that “a new style of environmental problem solving and management is under development in the United States” (Wondolleck, 2000, p.3). Best stated by Julia Wondolleck in Making Collaboration Work: Lessons from Innovation in Natural Resource Management, “Government agencies, communities, and private groups are building bridges between one another that enable them to deal with common problems, work through conflicts, and develop forward-thinking strategies for regional protection and development” (Wondolleck, 2000, p.3). Collaboration has taken root. “From management partnerships and interagency cooperation to educational outreach and collaborative problem solving, this new style of management is developing organically in many places in response to shared problems and the simple need to move forward” (Wondolleck, 2000, p.3). This belief of a shift in management towards collaboration is agreed upon by many (Wondolleck; Alter; Bryson; Thomson). “People who want to tackle tough social problems and achieve beneficial community
outcomes are beginning to understand that multiple sectors of democratic society — business, nonprofits and philanthropies, the media, the community, and government — must collaborate to deal effectively and humanely with the challenges” (Bryson & Crosby, 2006, p.44). Collaboration may therefore be essential, yet it is not the goal of environmental management (Wondolleck, 2000). Rather collaboration should be viewed as a key component to more effective management (Wondolleck, 2000).

However, this emerging new management style with collaboration at the forefront is at a disadvantage. Currently, there is limited data that explains both the factors that lead organizations to collaborate and the achievable levels or forms of collaboration among organizations. “Moreover the current research neither offers a common language to describe collaboration nor provides consistent messages as to how to address the issues” (Horwalth & Morrison, 2007, p.57). In addition, there exists an even larger gap in the literature on how collaboration applies to political subdivisions of state government and natural resource management. Randy Barrack in the 2009 dissertation *The Use of Collaboration in Nongovernmental Organization Public Policy Advocacy* agrees that the literature falls short in explaining collaboration specifically with nonprofits but also in a broader sense (Barrack, 2009).

The objective of this study is to further contribute to the field of public administration research, providing greater explanation to understanding the impact of collaboration on environmental policy, with specific emphasis on soil and water conservation districts. The findings, conclusions, and recommendations will prove worthwhile to all Virginia stakeholders. Results will also allow others to gain insight into the collaborative strategies used by political subdivisions of state government.
Research Questions

A mixed methods research design will be used to examine current perceptions of collaboration as well as the collaborative strategies and techniques used by Virginia’s 47 soil and water conservation districts. A survey will quantitatively measure current perceptions of collaboration while also allowing for qualitative open ended questions that capture examples of specific collaborative strategies or techniques used by soil and water conservation districts. This exploratory research study is guided by the following research questions:

1. What is collaboration, and how is it used by political subdivisions of state government?
2. What collaborative strategies are used by political subdivisions of state government, specifically soil and water conservation districts?
3. At what level do soil and water conservation districts currently believe they are collaborating?
4. At what level do soil and water conservation districts prefer to collaborate—in other words what is the ideal level of collaboration?

Design and Method

In order to better understand the efforts and impact of a collaborative relationship, this paper will take a closer look at the sector of political subdivisions of state government—specifically Virginia’s soil and water conservation districts—reviewing the general role of collaboration. This paper and its research will measure current perceptions of collaboration among staff and directors of Virginia’s 47 soil and water conservation districts. The research will identify current levels of collaboration, the preferred level of collaboration and current collaborative methods via a mixed method approach. A mixed method survey will allow for both quantitative and qualitative research
efforts providing exploration into the broader reasons soil and water conservation districts

collaborate, the techniques used to collaborate with partners, and both the challenges and benefits of
collaboration according to soil and water conservation districts. This level of study will also provide
the opportunity to identify themes among soil and water conservation districts regarding efforts that
are providing for a highly collaborative environment.

A mixed method approach combines both the use of quantitative and qualitative data
gathering techniques. The mixed methods research approach is a newer phenomenon having
originated in 1959 and has been evolving since (Creswell, 2009, p.14). Researchers recognize that
limitations exist in all research but that providing for multiple research methods could “neutralize or
cancel the biases” of using any one single method (Creswell, 2009, p.14). As a result, mixed method
research, while a newer approach, is a widely accepted research design. This research will employ a
concurrent mixed method approach in which “the researcher converges or merges quantitative and
qualitative data in order to provide a comprehensive analysis of the research problem” (Creswell,
2009, p.14). In this type of mixed methods approach, both types of data are collected at the same
time. Data is then integrated and reviewed through multiple lenses in order to provide greater
interpretation of research results (Creswell, 2009, p.15).

This study will collect both quantitative and qualitative forms of data via a survey through
the use of both open and closed ended questions. The use of multiple forms of data will allow a
greater “overall composite assessment” of collaboration as it relates to soil and water conservation
districts (Creswell, 2009, p.214). A significant advantage to this research method is its allowance to
address different facets of the research questions. Perceptions of collaboration—or at what level soil
and water conservation districts are currently collaborating—will be captured on a quantitative scale
while a deeper understanding of how collaboration is used and the collaborative strategies employed
by soil and water conservation districts will be measured through qualitative questions. The intent is
that the qualitative data captured will enhance the quantitative research allowing the “researcher to
gain perspectives from the different type of data from different levels within the study” (Creswell,
2009, p.15).

Measuring collaboration is not an easy task, though. “From the perspective of evaluators,
assessing collaboration is often difficult. Models of collaboration among agencies, groups and
community stakeholders are notoriously difficult to translate into valid and reliable instruments that
can measure meaningful change in the level and pattern of collaboration” (Frey, 2006, p.384). This
study will therefore use an instrument for measuring collaboration that has been pretested and
previously used in the field, providing a degree of reliability and validity.

All of Virginia’s 333 soil and water conservation district directors will be surveyed. In
addition to directors, the estimated 150 staffers—estimated because of staff turnover—across
Virginia’s 47 soil and water conservation districts will be surveyed. Surveying both populations will
provide greater insight into collaborations. Analysis of the data will allow for perceptions of
collaboration as collected from constitutional officials, soil and water conservation district directors
serving as board members, to be compared with perceptions of district staffers.

Limitations of the Study

The political subdivision of state government examined for this study is that of the soil and
water conservation districts. The study therefore addresses only one segment of this unique form of
state government. As a result, applying the findings and generalizing conclusions to other
populations must be done with caution. The study also only explores perceptions of collaboration,
because only the opinion of soil and water conservation district directors and staff is being collected
and not other stakeholders in the organization’s collaborative process. This limitation is
understandable as the research questions are geared to learning more about the collaborative efforts
of soil and water conservation districts and it is made clear that it is only perceptions of collaboration that are being researched. The data from this study is also gathered by individuals self-reporting perceptions of collaboration via a survey and therefore it must also be understood that responses are influenced by personal insights and values.

Definitions of Key Terms

Certain terms that will be used frequently throughout the study require further explanation and definition in order to provide a common understanding. By defining keywords, those terms of significance are explained in order to provide a frame of reference and certainty that misrepresentation will not occur. The following terms are of significant importance to the study:

Collaboration - The term collaboration literally means “to work together” when analyzing its Latin roots ‘com’ and ‘laborare.’ In the context of this study, collaboration indicates a mutually beneficial relationship between two or more entities working together to achieve a common goal (Frey, Lohmeir & Lee, 2006; Chrislip & Larson, 1994). Often, this common goal is one that neither entity can achieve individually (Gray, 1989). “Collaboration is more than simply sharing knowledge and information (communication) and more than a relationship that helps each party achieve its own goals (cooperation and coordination)” (Chrislip & Larson, 1994, pg. 5).

Political Subdivision of State Government - “Created by the legislature to exercise some portion of the state's sovereignty in regard to one or more specific governmental functions. It is independent from other governmental bodies, in that it may act to exercise those powers conferred upon it by law without seeking the approval of a superior authority. It employs its own consultants, attorneys, accountants and other employees whose salaries are fixed by the political subdivision, and it often incurs debts which are not debts of the Commonwealth but are debts of the political subdivision” (II 2002 Op. Va. Att'y Gen. 281, 283). In other words, political subdivisions have only
the authority granted to them by the legislature and detailed in the Code of Virginia. Examples of political subdivisions of state government in Virginia include but are not limited to local government entities, soil and water conservation districts, transportation districts, planning district commissions, and sanitation districts (Virginia Government in Brief, 2010).

Soil and Water Conservation District (SWCD) - A soil and water conservation district may from this point forward be referred to as a “district” or “conservation district” and is described as a “political subdivision of state government that utilizes local, state, federal and private sector resources to solve today’s conservation problems” (Virginia Association of Soil & Water Conservation Districts, 2013). Conservation districts are established under state law to carry out a natural resource management program at the most grassroots, local level (National Association of Conservation Districts, 2013). A soil and water conservation district is responsible for conservation work within its boundaries. A district focuses attention on land, water, and related resource problems, develops programs for solving the problems, and coordinates assistance from public and private sources to most effectively address conservation needs (Virginia Association of Soil & Water Conservation Districts, 2013).

Soil and Water Conservation District Director - Members of soil and water conservation district boards are called "district directors" and are local citizens, landowners, and/or producers who are often familiar with and concerned about area environmental conditions. All directors serve without pay. Three directors from each locality in a single county soil and water conservation district or two if the district serves multiple jurisdictions are elected by citizens in their respective locality on the general ballot at the same time as the election of constitutional officers. Two additional directors are appointed to the local SWCD board, one being the local Virginia Cooperative Extension agent and the second an ‘at large’ member from the community. Directors
oversee the work of the district managing natural resource issues, financial matters, and personnel (Virginia Association of Soil & Water Conservation Districts, 2013).

Soil and Water Conservation District Area - Virginia’s 47 soil and water conservation districts are divided into six geographic regions: Western Virginia, Northern Piedmont, Central Virginia, Southwest Virginia, Southern Piedmont, and Southeast Virginia. These six regions are referred to as ‘Areas.’ Chapter II provides a breakdown of Virginia’s 47 soil and water conservation districts in relation to the associated Area.

**Organization of the Study**

Chapter I of this study reviewed briefly the background of soil and water conservation districts, the general concept of collaboration, the purpose and significance of the study, limitations of the research, and the definition of key terms used throughout the remainder of research. The organization of the remainder of this study is divided into four chapters. Chapter II will review related literature. Chapter III includes an explanation of the research methodology to be used. Procedures utilized for collecting and analyzing data are explained. Findings and results will be presented and analyzed in Chapter IV. The final chapter, Chapter V, will note closing comments, recommendations and present suggestions for further study.
CHAPTER II

A REVIEW OF THE LITERATURE

Introduction

This chapter provides a review of previous research and literature of importance to this study. Topics to be covered include a historical review of soil and water conservation districts, the mission and responsibilities of soil and water conservation districts, as well as the structure of districts. Collaboration literature will be reviewed with particular emphasis on clarifying what is collaboration and how and why it is used by organizations, particularly political subdivisions of state government. Attention will be given to current theoretical frameworks of collaboration and reviewing studies of relevance that measure collaboration. The remainder of Chapter II will focus on the use of collaboration among natural resource management organizations and community based entities, like soil and water conservation districts, to meet organizational goals and mission statements.

Understanding a Unique Sector - Soil and Water Conservation District History

The creation of soil and water conservation districts is steeped in history, having been a mission of President Franklin Roosevelt’s New Deal Program. Districts came to fruition in the 1930’s as a means of giving local citizens a voice in the conservation movement. More than 3,000 local soil and water conservation districts exist today across all 50 states and US territories (National Association of Conservation Districts, 2013). Within the Commonwealth of Virginia, 47 soil and water conservation districts represent every county in the Commonwealth, with the
exception of Arlington County which enters into a contract agreement from Northern Virginia SWCD for services (Virginia Association of Soil & Water Conservation Districts, 2013). Responsibilities and services vary by the conservation district; nevertheless, all SWCDs make considerable environmental contributions to their respective communities and all work to further a common mission—protecting our natural resources through conservation and education in order to yield improved soil and water quality (Virginia Association of Soil & Water Conservation Districts 2013).

Despite our continued reliance on agriculture, not until the dust bowls of the 1930’s did people recognize the need to implement conservation practices. Sustained drought conditions peaked in 1934, 1936 and 1939-1940, though in many regions drought stretched as long as eight years (National Oceanic & Atmospheric Agency [NOAA] NOAA.gov, 2013). Drought was not a condition of any one region but impacted more than 75% of the United States. Farmers not only struggled with an economic crisis but the devastation of our natural land base to the point where fear of irreversible damage to the land would prevent further cultivation (Steward, 2007).

Due to poor land management practices in the ‘Dirty Thirties,’ strong winds blew away “more than 480 tons of topsoil per acre, removing an average of five inches of topsoil from more than 10 million acres” (Property and Environmental Research Center, 2013). To provide perspective, it is estimated that an inch of soil takes 500-1,000 years to form (Natural Resource Conservation Services, 2013). The devastation was vast. Donald Worster, a leading historian of the Dust Bowl, in his book Dust Bowl: The Southern Plains in the 1930s, makes reference to the fact that at no other point in history has there been “greater or more sustained damage to the American land” (Worster 1979, p.24).

In essence, the 'dust bowl' effect was caused by sustained drought conditions compounded by years of land management practices that left topsoil susceptible to the forces of the wind. “The
soil, depleted of moisture, was lifted by the wind into great clouds of dust and sand which were so thick they concealed the sun for several days at a time” (NOAA.gov, 2013). As a result of these dust bowl natural disasters, the agricultural community suffered and in turn contributed to the economy’s high unemployment levels, business and bank closures, and extreme hardship of the Great Depression. Continued poor land management practices increased agricultural vulnerability and simply exacerbated the difficulties.

In May of 1934, the dust bowl was not just a concern to the Central and Great Plains. National leaders in Washington, D.C. and President Franklin Roosevelt recognized the need to address the growing problem (Egan, 2006, p.134). Leaders began to recognize that farmers struggling in a difficult economic climate increased crop yields in order to make ends meet. As a result, as supply and demand theory illustrates, high production drove prices down, yet farmers continued to increase production in an attempt to cover costs. Increased production lent itself to greater land management troubles and thus when the drought hit, both economic and land management problems were multiplied. Therefore, On April 27, 1935, the U. S. Congress pronounced that soil erosion was “a national menace” and declared soil and water conservation and wise land use a national policy. Thus, U. S. Public Law 46, the Soil Conservation Act of 1935 was passed (White, 2008, p.16-17).

Following national recognition that wise soil and water conservation use serve as national policy, Hugh Hammond Bennett, known as the father of soil & water conservation districts, understood the need for assistance at the local level. Bennett advised Franklin Roosevelt on soil health and the fact “Americans in the nation’s midsection had farmed too much, too fast” (Egan, 2006, p.134). Bennett steadfastly educated leaders that the land could not withstand this type of assault, that the grasslands had been “hammered and left without cover” and that “dusters” were not an act of God but man and would continue to get worse (Egan, 2006, p.134). As a result of
Bennett’s steadfast effort and Roosevelt’s leadership, in 1936 a Standard State District Act, also referred to as “District Law,” was developed at the federal government level by the United States Department of Agriculture or USDA (previously called Soil Conservation Service) which encouraged the citizens of local governments to organize conservation districts as political subdivisions of state government.

According to the USDA handbook “The Preparation of the Standard State Conservation Districts Law,” a conservation district was to be established by a majority vote of the farmers within a district’s boundaries (USDA, 1990). No district was to be formed without farmer approval through a referendum process. To ensure buy-in, supervisors of the district, also known as directors, were to be elected by the farmers themselves. The intent was for districts to function as “local units of government, established by the people, governed by the people through their elected supervisors” and then given authority to develop and carry out local erosion control plans district wide (USDA, 1990). Today soil and water conservation district directors are elected on the general ballot directly by their constituents within the district boundaries they serve.

The “District Law” went further, even prescribing a level of collaboration at its very creation, stating that the Soil Conservation Service, now USDA, should work with every single district in the country lending engineering and technical assistance in order to together address erosion issues (USDA, 1990). Further, language stated that while both parties “have the common objective of assisting people in their efforts to utilize and manage natural resources” that they were also independent. Despite independence, the original agreement concluded by stating a recognition of “the need to coordinate and cooperate as a Federal, State, and local partnership for the successful delivery of conservation programs related to our soil, water, air, plant, animal, and human resources. Therefore the parties will collaborate to implement their respective long-range natural resource management conservation programs considering available resources, statutory authorities,
Collaboration among political subdivisions, etc.

Tyree, K.E.

and regulations” (USDA, 1990). Collaboration between organizations is embedded in the creation of soil and water conservation district and scripted as part of its foundation.

Then in 1937, President Roosevelt wrote to each state governor, urging every state to approve legislation that would authorize the creation of SWCDs. The new program led by local grassroots efforts recognized that new farming methods must be accepted and utilized by the farmers on the land, giving local citizens the opportunity to shape soil and water conservation and resource planning in their communities.

All 50 states have since passed what is known as “District Law” and established soil and water conservation districts. While all states passed similar legislation establishing conservation districts, they are not identical. For example, at the most basic level, the terminology used to identify and describe soil and water conservation districts is not uniform throughout the United States. While Virginia refers to these political subdivisions as SWCDs as noted in “District Law,” other states refer to these entities as merely conservation districts or natural resource districts. Also in Virginia, elected officials who govern soil and water conservation district operations are referred to as “directors,” while in North Carolina they are referred to as “supervisors,” and in South Carolina are recognized as “commissioners.” Despite differences of this nature, the mission of SWCDs is the same across the nation—to carry out a natural resource management program at the most grassroots, local level (National Association of Conservation Districts [NACD], 2013).

Although not the first state to adopt the District Law, North Carolina was the first state to organize a conservation district. Appropriately enough, the first district was the Brown Creek Soil Conservation District, organized on August 4, 1937, covering the area in which Hugh Hammond Bennett lived—the advocate of SWCDs (Heath, 2004, p.4). Since 1937 and the passage of “District Law,” more than 3,000 districts have been formed across the United States and its territories to address local conservation needs.
Virginia’s Soil and Water Conservation Districts

In Virginia, the legislature approved the federal government’s request to establish soil and water conservation districts in 1938 with the passage of the Soil Conservation District Law. Details and responsibilities of Virginia’s soil and water conservation districts are found under Title 10.1 Conservation, Chapter 5: Soil and Water Conservation Districts in the Code of Virginia (Code of Virginia). Code of Virginia directs that “The Department [of Conservation & Recreation] shall be assisted in performing its nonpoint source pollution management responsibilities by Virginia's soil and water conservation districts” (Code of Virginia). Virginia Code further states that “Assistance by the soil and water conservation districts in the delivery of local programs and services may include (i) the provision of technical assistance to advance adoption of conservation management services, (ii) delivery of educational initiatives targeted at youth and adult groups to further awareness and understanding of water quality issues and solutions, and (iii) promotion of incentives to encourage voluntary actions by landowners and land managers in order to minimize nonpoint source pollution contributions to state waters” (Code of Virginia).

Since the mid-1980s, the Virginia Department of Conservation, as outlined in code, has relied heavily on districts to help deliver many programs aimed at controlling and preventing nonpoint source (NPS) pollution (Department of Conservation & Recreation, 2013). “With their volunteer boards and more than 150 full and part-time technical and administrative employees, districts provide a valuable delivery system for Virginia's statewide nonpoint source pollution prevention programs” (Department of Conservation & Recreation, 2013). Currently there are 47 soil and water conservation districts serving as political subdivisions of state government in the Commonwealth of Virginia addressing local conservation needs with the assistance and support
of federal and state resources. This level of work is driving the need for collaboration at a variety of levels.

As previously noted, SWCDs are political subdivisions of state government that are entrusted with the responsibilities of performing and promoting conservation within the district boundaries. At time of establishment, many district boundaries followed watershed lines and therefore may have included multiple county jurisdictions (Heath, 2004). Time has shown that change was needed and today district boundaries are determined based on other factors, mostly local need. While in some states each county may have its own district to address conservation issues, this is not the case in Virginia.

For point of reference, Virginia is broken into 95 counties and 35 independent cities. The Commonwealth is also divided into 47 soil and water conservation districts providing services to all but one county and 22 cities. Districts are created by the community for the community and if a county or city is not served, it is because local community action has not established a soil and water conservation district within those boundaries (VASWCD). Of the Commonwealth’s 47 SWCDs, the boundaries of 31 districts cross county lines. In other words, 31 of 47 conservation districts in Virginia serve multiple counties. These 31 districts may serve two to five counties. The remaining 16 districts have boundary lines that are identical to single counties (VASWCD).

Each SWCD addresses local conservation needs, performing programs related to conservation planning and technical assistance, administration of cost share programs, environmental education to the K-12 and adult community, and erosion and sediment control. Districts may partake in other programs including but not limited to dam maintenance, equipment rental, and/or litter and recycling initiatives (White, 2008, p.18). Districts could not implement this variety of programming though without support from federal, state, and local partners. At the onset of district creation, the majority of SWCD financial and technical assistance was received through
collaborative efforts with partners at the federal level. Over time this has shifted, and state and local partners now offer greater assistance to districts (Heath, 2004). Primary funds for district operations and additional technical assistance dollars are provided by the Virginia General Assembly (VA Department of Conservation & Recreation, 2013). This increased state level assistance expanded in the late 1980’s and early 1990’s, and since districts have quickly evolved into small, nonprofit-like business organizations, officially recognized as political subdivisions (VA Department of Conservation & Recreation). Currently, districts are targeting millions of dollars annually to assist the state with nonpoint source pollution issues (VA Department of Conservation & Recreation).

Nonpoint source pollution refers to water and air pollution from diffuse sources such as agricultural or stormwater runoff (VA Department of Conservation & Recreation). Collaboration is more than funding, however; it is important to understand district structure, including financial partners, prior to assessing the perceptions of collaboration of districts with its key partners. Governments are key participants in the collaborative process and have a necessary role to play in funding collaboration and implementing collaborative agreements (Dukes, Firehock & Birkhoff, 2011, p.106).

Virginia’s districts are organized into six geographical regions as defined by the Virginia Association of Soil & Water Conservation Districts (VASWCD) bylaws. Each of the 47 districts is then a member of both an ‘Area’ and the Virginia Association of Soil and Water Conservation Districts, an umbrella organization that “coordinates conservation efforts statewide to focus effectively on issues identified by local member districts” (VASWCD). Figure 1 below identifies the six Virginia SWCD Areas. The accompanying map of districts organized by areas provides a visual that clearly illustrates the six soil and water conservation district geographic regions.
Area I: Western Virginia
(6 SWCDs): Natural Bridge, Shenandoah Valley, Lord Fairfax, Mountain, Headwaters, Mountain Castles

Area II: Northern Piedmont
(6 SWCDs): Thomas Jefferson, Culpeper, Northern Virginia, John Marshall, Prince William, Loudoun

Area III: Central-Tidewater
(8 SWCDs): Tidewater, Northern Neck, Tri-County/City, Colonial, Hanover-Caroline, Monacan, Henricopolis, Three Rivers

Area IV: Southwest Virginia
(11 SWCDs): New River, Skyline, Holston River, Daniel Boone, Clinch Valley, Scott County, Lonesome Pine, Evergreen, Tazewell, Big Walker, Big Sandy

Area V: Southern Piedmont
(10 SWCDs): Southside, Piedmont, Blue Ridge, Robert E. Lee, Pittsylvania, Halifax, Peaks of Otter, Peter Francisco, Patrick, Lake Country

Area VI: Southeast Virginia
(6 SWCDs): Peanut, Chowan Basin, Eastern Shore, Virginia Dare, Appomattox River, James River

Figure 1: Virginia’s Soil & Water Conservation Districts by Area of the Commonwealth
This soil and water conservation district regional structure, into six Areas, will prove important in Chapter IV when analyzing findings from the research.

As evident, the magnitude of the droughts during the 1930’s and the severity of the Depression led to unprecedented levels of government assistance. Ever since, the federal Natural Resource Conservation Service (NRCS) agency along with state and local governments in partnership with local Soil and Water Conservation Districts, have worked to educate landowners of water quality and conservation methods. While soil and water conservation districts are the most grassroots level of conservation, often the first face a producer comes to know when seeking technical assistance, the work of SWCDs would not be the resource they are today if the collaborative relationship between districts and partners had not been nurtured over time. This collaborative relationship is one that requires a deeper understanding, but first we must review the concept of collaboration as explained in previous literature.

A Review of Collaboration

This section will review the literature in order to define collaboration and understand how and why collaboration is used to assist in achieving an organization’s mission. This section will explain various strategies of collaboration and present a theoretical framework for understanding and measuring levels of collaboration. Additionally, through a review of the literature, the importance of collaboration in a natural resource management environment will be examined.

Collaboration is understood in a myriad of different ways with no commonly defined definition nor agreed upon understanding of its process. Collaboration has many different meanings to many different people (Linden, 2002). “Scholars and practitioners of public and nonprofit management share an interest in understanding the outcomes of the increasingly studied but little understood process called collaboration” (Thomson, Perry & Miller, 2007, p.97). And despite lack
of consistency, use of collaboration as a tool to “work together toward some common and mutually agreed upon end” is a phenomenon “increasing in frequency” (Alter, 1993, p.2).

If collaboration is not a new occurrence, it is perplexing that collaboration is now occurring with greater frequency. Perhaps the increasing interest in collaboration though stems from the “complexity of the major challenges facing our society, the blurring of many organizational boundaries, the networked nature of our organizational world as it moves from mechanistic models to more organic ones, the increasing diffusion of authority over the major issues we face, the rapid advances in technology, and a public unwilling to accept—and fund—poor performance” (Linden, 2002, p.9). Organizations now better understand that collaboration is worthwhile to achieving improved outcomes, not to be confused with outputs, that the agency or business exists to achieve.

In other words, based on this understanding, soil and water conservation districts are collaborating simply because by doing so they can better achieve their mission—clean soils and productive waters.

The concept of collaboration has evolved over time. No longer is the “brilliant CEO, the politician who keeps his own counsel, and the lone hero” the role model for this generation. Instead, the hero and role model is “men and women who know how to gather allies, build teams, and work together toward shared goals” (Tharp, 2009, p.7). Collaboration has taken on a new meaning and is “the buzzword of the new millennium” (Tharp, 2009, p7). Today society fully recognizes the importance of collaboration and that people who are practiced in collaboration will do better than those who insist on their individuality (Tharp, 2009).

Randy Barrack in the 2009 dissertation “The Use of Collaboration in Nongovernmental Organization Public Policy Advocacy” agrees that the literature falls short in explaining collaboration. While Barrack’s research specifically addresses nonprofits it recognizes this literature gap in a broader sense and thus through a case study approach Barrack examines collaboration—
“what it is, when, how, and why it is used by NGOs” (Barrack, 2009, p.7). Barrack makes further distinction than the three types of nonprofit roles—complementary, supplementary and adversary—as noted by Boris (2006) in the book *Nonprofits & Government: Collaboration & Conflict*, but explains that “forms of collaboration range from sharing of information, to joint ventures, to full partnerships and mergers” (Barrack, 2009, p.2). Barrack grounds his dissertation on nonprofit collaboration in economic theory in order to describe the “preconditions, processes, and outcomes of alliances and collaborations” (Barrack, 2009, p.40). The results from Barrack’s study of 12 nonprofit organizations involved in the Virginia Education Coalition show that the majority of interviewees believed that “if it were not for collaborative activities…they could not do all that they need to do” (Barrack, 2009, p.88). Collaboration is “a major tool for accomplishing the organizations’ established mission” (Barrack, 2009, p.89). Barrack’s study explored primarily the collaborative efforts among nonprofits but the findings one would believe could be applied to collaborations involving political subdivisions of state government. Further research would need to be done to test this assumption, but Barrack’s research still provides significant insight into collaboration in general and existing motives for collaborating.

Study results from Barrack’s work, based on both a review of the literature and the study participants, define “collaboration as the sharing of information, skills and talents for better decision making and the common good” (Barrack, 2009, p.132). The greatest motivation for collaboration based on the data analysis, is when it is “mutually beneficial” and “in support of a greater cause” (Barrack, 2009, p.132). Barrack’s study disproves the argument that collaboration occurs to lower cost. Instead, collaboration occurs more often to achieve goals and make better decisions (Barrack, 2009). Interestingly, this idea that collaboration occurs for personal gain or self interest was not found to be the primary reason for collaborating among Barrack’s study participants. Instead support for a greater good was the key driver in collaborative developments (Barrack, 2009).
Barrack’s research provides a good overview of the topic but additional detail is needed to understand the concept of collaboration. According to Barbara Gray, “Collaboration is a process through which parties who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible” (Gray, 1989, p.5). Collaboration in this sense occurs when stakeholders work together to advance their individual interests. Collaboration is not considered a new concept but has been used in varying manners over time to resolve conflict and advance shared visions (Gray, 1989, p.7).

Collaboration can also mean “a process in which autonomous or semi-autonomous actors interact through formal and informal negotiation, jointly creating rules and structures governing their relationships and ways to act or decide on the issues that brought them together; it is a process involving shared norms and mutually beneficial interactions” (Thomson, Perry & Miller, 2007, p.3). Collaboration in general is the way “two or more entities work together toward a shared goal” (Frey, Lohmeier, Lee & Tollefson, 2006, p.384).

At a more simplistic level, Russell Linden frames collaboration as an activity that occurs when different organizations through joint effort, resources, and decision making produce something and then ultimately share ownership (Linden, 2002). Each definition, though slightly different, highlights the fact that collaboration is multidimensional (Thomson, Perry & Miller, 2007). Collaboration, across all definitions and uses, is about co-labor, joint effort and ownership (Kamensky, Burlin & Abramson, 2004).

The term collaboration literally means “to work together” when analyzing its Latin roots ‘com’ and ‘laborare.’ As defined in Chapter I, collaboration, for purposes of this study, combines many of these scholarly definitions. Collaboration, in the context of this research, indicates a mutually beneficial relationship between two or more entities working together to achieve a common goal (Frey, Lohmeier & Lee, 2006; Chrislip & Larson, 1994). Often this common goal is
one that neither entity can achieve individually (Gray, 1989). “Collaboration is more than simply sharing knowledge and information (communication) and more than a relationship that helps each party achieve its own goals (cooperation and coordination)” (Chrislip & Larson, 1994, p.5). Collaboration per Chrislip & Larson acknowledges that the art of collaboration is to be held to a higher regard than simply communicating and cooperating with partners. Many scholars indicate that collaboration happens at various levels (Chrislip & Larson, 1994; Frey, 2006; Kamensy, Burlin & Abramson, 2004). Collaboration is ultimately the use of many tools on a continuum that spans from the traditional approaches of coordination and cooperation to the creation of new networks and partnership agreements (Kamensy, Burlin & Abramson, 2004). An understanding of this framework explaining the various levels of collaboration on a scale will be explained in greater detail later in Chapter II.

There is also the concept of community based collaboration which takes the general definition of collaboration a step further, defining community based as “(1) A group that has been convened voluntarily from within the local community to focus on a resource management issue…(2) was brought together by a shared desire to influence the protection and use of natural resources through recommendations or direct action…(3) has membership that includes a broad array of interests…and (4) utilizes a decision-making process that requires participation by local stakeholders” (Dukes, Firehock & Birkhoff, 2011, p.3). Soil and water conservation districts not only engage in varied levels of collaboration with stakeholders at the state and federal level but embody the idea of community based collaboration. The grassroots approach to conservation and the structure of an SWCD lends itself to being a key example of the community based collaborative movement. A district, according to the definition of community-based collaboration by Firehock, provides the unique forum necessary for “addressing complex environmental problems, a forum that is likely to become increasingly important in the future” (Dukes, Firehock & Birkhoff, 2011, p.1).
Collaboration has been reviewed and defined in many ways. All in all, the literature defining collaboration has been positive noting it is an appropriate action for tackling public management problems.

**Why Organizations Collaborate: The Benefits of Collaboration and the Challenges**

Simply defining collaboration is not enough. It is important to understand the underlying reasons why organizations venture into collaborative arrangements. Too often, groups take it for granted that collaboration is a good endeavor that provides the participants organizational advantages (Genefke & Taillieu, 2001). Collaboration comes with a cost and collaborative arrangements must fully focus on the possible benefits while keeping in mind any inconveniences that may occur (Genefke & Taillieu, 2001). The reasons organizations collaborate are wide and varied—to assist in resolving disputes, providing efficiency, building alliances and networks, or reducing costs, among other reasons (Dukes, Firehock & Birkoff, 2011; Gray, 1989; Bergquist, Betwee & Meuel, 1995; Katz & Martin, 1997).

While collaboration is a proven powerful tool and its benefits are unquestionable, collaboration does not work in all circumstances. In order for collaboration to take root and yield success, a number of preconditions are necessary. “Successful collaborative ventures are premised on the existence of trust, a mutual obligation to succeed, and the ability to build consensus” (Kamensky, Burlin & Abramson, 2004, p.12). Both parties entering a collaborative arrangement must be committed to a common outcome and when agreement on how to achieve that shared outcome breaks down, collaboration becomes increasingly more difficult. According to the authors of *Collaboration: Using Networks and Partnerships*, the following four operational perquisites are necessary to forming a successful collaborative agreement. First “the political climate has to be right, (2) there must be a champion dedicated to providing the necessary leadership, (3) the leader
must engender trust among participants, and (4) the network members have to be able to forge a shared vision of what they collectively want to achieve” (Kamensky, Burlin, & Abramson, 2004, p.12). If these fundamentals exist then collaboration has the potential to be of great value.

Collaboration at its best provides for greater efficiency. Stakeholders are able to pool resources and better divide labor. Organizations often engage in collaborative arrangements to improve effectiveness, “leveraging greater amounts and a wider variety of skills and resources than can be achieved by acting alone” (Kamensky, Burlin & Abramson, 2004, p.42). Naturally, collaboration accommodates broader perspectives and provides for joint goal setting. As a result of joint goal setting opportunities, there is greater buy in or ownership, a term used frequently when defining the term collaboration, and therefore greater sustainability of outcomes (Kamensky, Burlin, & Abramson, 2004, p.42).

A significant and often forgotten benefit to collaboration is the inevitability that it serves as a catalyst for policy innovation (Kamensky & Burlin, 2004, p.42). Organizations choose to engage in collaboration in order to be proactive, adaptive, and find new ways of doing business. Collaboration that brings government and another entity together taps into this benefit at greater levels as innovation and efficiency are not generally areas of strength for bureaucracies (Dukes, Firehock & Birkhoff, 2011, p.105). Soil and water conservation districts, serving as community based collaboratives as discussed earlier in Chapter II, bring a “localness” or local focus to collaborative issues. They then serve as “key catalytic roles in creative problem solving and practical action to address certain environmental problems” (Dukes, Firehock, & Birkhoff, 2011, p.105). The benefits of “local knowledge, monitoring data, and new science” that community based collaborations like soil and water conservation districts bring to the table when collaborating with other stakeholders is significant and valuable (Dukes, Firehock & Birkhoff, 2011, p.105).

Collaboration scholar Barbara Gray agrees with the community based collaboration advantage
stating that “collaboration is positively enhanced by the physical proximity of the stakeholders” (Gray, 1985, p.930). This sharing of resources and knowledge alone is an instrumental reason why stakeholders engage in collaboration.

When trying to understand why organizations collaborate, especially in the field of natural resource management, Wondolleck argues that the answer to the question is fairly simple, “Collaboration can lead to better decisions that are more likely to be implemented, and at the same time better prepare agencies and communities for future challenges” (Wondolleck, 2000, p.23). Collaboration can’t be viewed as simply connecting with other agencies or organizations. “Building bridges between agencies, organizations and individuals in environmental management is not an end in itself” (Wondolleck, 2000, p.23). Rather, the collaborative ventures from building those bridges should be seen as a “means to several ends: building understanding, building support, and building capacity” (Wondolleck, 2000, p.23).

The explanations of why organizations engage in collaborative arrangements and the benefits participants receive from doing so are as vast as the scholarly definitions of collaboration. However, by recognizing why organizations value collaboration and what they expect to receive as a benefit from collaborating allows the collaborative process to be more meaningful and successful. Likewise, recognizing the cost and challenges of collaborating is critical to the process. Much like we were able to find a common theme of multi-dimensionality, co-ownership and co-labor when defining collaboration, it is possible to infer that organizations, in the most general sense, collaborate in order to provide for progress, often in fulfillment of a common mission or problem and while doing so are able to take advantage of additional resources collaborative partners bring to the table.
A Theoretical Framework to Understanding the Stages of Collaboration

Theory is essential for guiding empirical research and placing its findings in the context of previous literature. “Without theory, we cannot demonstrate how a study contributes to the accumulation of knowledge in a particular field” (Dukes, Firehock & Birkhoff, 2011, p.145). Theory is essential to allowing us to respond effectively and efficiently to new circumstances by comparing them to prior similar situations (Dukes, Firehock & Birkhoff, 2011). According to scholars Wood and Gray, when it comes to collaboration, a “general theory must begin with a definition of the phenomena” (Wood & Gray, 1991, p.143). The previous review of collaboration and its many varied definitions is thus critical to the forthcoming discussion on collaboration theory. The definition of collaboration provides the basis for the theoretical frameworks that exist for understanding collaboration. These theoretical stage frameworks, meant to understand the levels of collaboration, are important as they provide the means for conceptualizing and measuring collaboration.

Many frameworks exist, providing further explanation to understanding collaboration but also for providing a manner to measure collaboration. Five key elements of collaboration exist according to Thomson, Perry & Miller: governance, administration, mutuality, norms, and organizational autonomy (Thomson, Perry & Miller, 2007). Based on this framework, governance focuses on the ability of participants to jointly make decisions about rules that govern their work. Administration takes this further as an administrative structure must be in place that provides for the collaboration to move from governance to action. (Thomson, Perry & Miller, 2007). The third concept of this framework developed by Thomson & Perry is organizational autonomy. Organizational autonomy represents the trouble around identity within a collaboration and realization that despite collaborating, organizations maintain their own identity separate from the identity established from a collaborative agreement. A need to balance individual and collective
interests is required. Without this balance of interests, an accountability dilemma can exist within the collaborative arrangement (Thomson, Perry & Miller, 2007). The final elements to Thomson & Perry’s framework go hand in hand: mutuality and norms. “Organizations that collaborate must experience mutually beneficial interdependencies based on differing interests or on shared interests” (Thomson, Perry & Miller, 2007, p.6). Norms of reciprocity and trust are then necessary to sustain collaboration. Each of these dimensions involves process-related activities such as: making joint decisions about rules to govern the collaborative effort (governance); getting things done through an effective operating system that supports clarity of roles and effective communication channels (administration); addressing the implicit tension exhibited in collaborations between organizational self-interests and the collective interests of the group (organizational autonomy); working through differences to arrive at mutually beneficial relationships (mutuality); and finally, developing trust and modes of reciprocity (norms); all of which take commitment to process over time (Thomson Perry & Miller, 2007, p.98).

Thomson, Perry & Miller’s framework is one of many. Most others, however, present collaboration on a continuum or a scale. In this approach, there are identified stages of collaboration through which interagency initiatives might move, and as groups pass from lower to higher stages of collaboration they become more effective. “These stage theories describe levels of collaboration, with the lowest level being little or no collaboration and the highest level being full collaboration or, ultimately, complete unification” (Frey, Lohmeier, Lee & Tollefson, 2006, p.384). More than one scale of this nature exists and while each presents a slightly different approach—primarily a varied number of stages and slightly differing definitions of various stages—these theoretical frameworks to conceptualizing and measuring collaboration have much in common.

In addition to the Thomson, Perry & Miller breakdown, Peterson (1991) presents a scale with three distinct phases: cooperation, coordination, and collaboration. Hogue (1993) suggested
five levels: networking, cooperation or alliance, coordination or partnership, coalition, and collaboration. Bailey and Koney (2000) presents a similar scale, with four steps, the final level demonstrating a literal merging of two organizations into one: cooperation, coordination, collaboration, and coadunation. Coadunation the final stage in Bailey in Koney’s work is ultimately the state or condition of being united, in the example of collaboration literally being a union among partners.

The theoretical framework by Horwath and Morrison is also widely accepted by scholars and takes into account five agreed upon levels of collaboration. This scale presented by Horwath and Morrison in the article “Collaboration, Integration and Change: Critical Issues and Key Ingredients” is grounded by the work of many others (Gregson, Cartlidge, & Bond, 1992; Hallet & Birchall, 1992; Huxham & Macdonald, 1992; Marrett, 1971; Miller & McNicholl, 2003; Roaf, 2003) and exemplifies that “collaborative partnerships exist along a continuum from informal and local collaboration to formal and whole agency collaboration” (Horwath & Morrison, 2007, p.56). This scale provides a strong theoretical framework for the research study proposed.

The collaboration scale presented and tested by Horwath and Morrison is divided into five stages: communication, cooperation, coordination, coalition, and integration. The lowest stage of collaboration, communication, is defined as merely individuals or stakeholders from different disciplines talking together. The communication stage of collaboration is viewed as simple interaction. Cooperation, the next level, is identified as “low key, joint working on a case-by-case basis” (Horwath & Morrison, 2007, p.56). This differs from coordination which is viewed as a more formalized effort of working together with “no sanctions for non-compliance” (Horwath & Morrison, 2007, p.56). The fourth stage, coalition, does note that the joint structures working together sacrifice some autonomy. Last, integration, defined as organizations merging together to create a joint identity, is viewed as the highest level of collaboration.
Horwath and Morrison in the article “Collaboration, Integration and Change: Critical Issues and Key Ingredients” present these five stages of collaboration graphically, which is shared in Figure 2.

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<th>Communication</th>
<th>Co-operation</th>
<th>Co-ordination</th>
<th>Coalition</th>
<th>Integration</th>
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<tbody>
<tr>
<td>Limited or no formal agreement</td>
<td>Agencies remain autonomous</td>
<td>Work towards different targets &amp; goals</td>
<td>Agency maintains control of resources &amp; funding</td>
<td>Staff managed by individual service</td>
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<tr>
<td>Focus on individual case</td>
<td>Decision-making responsibility of agency</td>
<td>Collaboration likely to be voluntary or within guidance</td>
<td>Variable practice dependent on individual</td>
<td>Affiliation to own agency/discipline</td>
</tr>
<tr>
<td>Accountable to agency</td>
<td>Formal agreements</td>
<td>Agencies sacrifice autonomy</td>
<td>Work to shared goals &amp; targets</td>
<td>Joint responsibility for resources &amp; funding</td>
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<td></td>
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<td></td>
<td>Staff managed by partnership</td>
<td>Focus on whole service</td>
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<td></td>
<td>Joint decision-making</td>
<td>Clear mandate for collaboration at government or state level</td>
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<td>Specific focus of activity outlined in strategic plans</td>
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<td>Affiliation to partnership</td>
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<td>Accountable to partnership</td>
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Figure 2: (Horwath & Morrison, 2007, p.56)—Collaboration Theory Scale

The chart not only identifies the continuum of collaboration from communication to integration but identifies characteristics and features of collaborative endeavors at both low and high levels. Low levels of collaboration are illustrated as organizations being internally or agency focused while high levels illustrate a commitment to focusing on collaboration as a joint effort (Horwath & Morrison, 2007).

Horwath and Morrison focus on the process of moving toward higher levels of collaboration and the theoretical framework to understanding such a transition. This theoretical framework, which
also provides a means of conceptually understanding collaboration, is one that is similar to that developed by the University of Kansas. This scale also views collaboration in five stages: networking, cooperation, coordination, coalition, and collaboration. Networking represents the lowest level and much like communication on Horwath and Morrison’s scale, provides for little communication and loosely defined roles. As one moves from networking to cooperation communication becomes more formal. Coordination, stage three, provides for some shared decision making while coalition, stage four, ensures all members have a vote in decision making and that ideas and resources are shared. The highest level, collaboration—or called integration in the Horwath and Morrison framework—recognizes that members belong to one system, frequent communication occurs, and collaboration is based on mutual trust. At this level, all decisions are made via consensus between collaborative partners. These two scales provide very similar, if not identical, structures to understanding collaboration and presenting a theoretical framework for examining the level of collaboration within an organization.

Figure 3 shows a graphic illustration of the many collaboration theory scales in existence. This diagram originally presented as part of the literature review in the article “Measuring Collaboration Among Grant Partners” presents each theoretical framework in a side-by-side comparison in order to demonstrate the many similarities that exist when conceptualizing collaboration.

The collaboration scale model shown in Figure 3 literally illustrates that scholars have added to the field of collaboration literature. However, the many varying theories of collaboration, despite their similarities, can amount to greater confusion when looking to apply this framework to current existing collaborative arrangements.
Overall, collaboration takes many forms but can be argued is “vital to developing and maintaining civil society” (Boris, 2006). The need for collaboration continues to increase, desire to do so is rising, yet it is clearly evident from the literature review thus far that collaboration may take on different appearances, develop from differing motivations with a varied number of stakeholders, and be measured on differing scales, but that overall, collaboration is beneficial and most importantly, provides for progress in fulfillment of a common mission. While collaboration may be a buzzword among governmental organizations, the context and process of successful collaboration is not one to be glossed over.
Theories Related to Collaboration: Resource Dependency & Relational Exchange

Related to the collaboration theoretical framework scales and to collaboration in general are two contradicting theories: resource dependency theory and relational exchange theory. Both theories provide explanation to why organizations collaborate and the rationale for entering into collaborative arrangements. While there is no widely accepted theory of collaboration, these two are identified as main theoretical perspectives on inter-organizational collaboration (Fyall & Garrod, 2005).

Resource dependency theory suggests that organizations engage in collaboration in order to ensure access to resources that allow for their continued existence. The theory claims that when looked at through a resource dependency lens, collaboration is about balancing loss of autonomy while gaining access to resources (Fyall & Garrod, 2005). When based on resource dependency theory, collaboration is a direct response to the uncertain environment in which these organizations exist and their desire to balance autonomy yet organizational stability. Resource dependency theory is focused on collaboration for personal benefit to the organization. This personal benefit to the organization, as it relates to resource dependency theory, can be both defensive and offensive in nature. For example, organizations may collaborate in order to gain access to resources but also ensure that resources are not lost. Resource dependency theory therefore articulates that working in cooperation with partners can be to ensure they are not in competition against one another.

On the other hand, relational exchange theory views collaboration as a venture for developing relationships that prove for mutual benefit. Fyall and Garrod concisely and accurately compare and contrast the two theories recognizing that “for resource dependency theory, the task for organizations is to enter into such relationships in order to make use of other parties’ resources which would otherwise be unavailable to them” (Fyall & Garrod, 2005, p.146-147). However, “for relational exchange theory, collaboration is the result of organizations recognizing the
interdependence of problems in their domain and the benefits of developing reciprocal relationships at solving them” (Fyall and Garrod, 2005, p.147). There is a stark difference between the two theoretical approaches to understanding why organizations collaborate.

The self interested motivations according to resource dependency theory versus the recognition of relational advantages and adoption of joint working strategies for mutual benefit to the shared mission according to relational exchange theory present different viewpoints to why organizations collaborate. While both theories are beneficial, why an organization chooses to collaborate may not be clear cut resource dependence or relational exchange. Gray and Wood (1991) argue no single theory of collaboration addresses the preconditions to collaborating, the process itself, or the outcome of its effort. And while the many theoretical scale frameworks presented earlier in Chapter II along with an explanation of resource dependency theory and relational exchange theory assist in providing an understanding of collaboration, they lack in articulating any theory of collaboration as a whole. Despite this, together the Horwath and Morrison framework and contextual theories for collaborating provide a structure to understanding collaboration which will prove instrumental to our research and its findings.

**Further Evaluation of Perceptions and Successful Collaboration**

The purpose of this section is to review mixed methods research studies conducted to assess the success of a local collaborative like the political subdivision of state government, soil and water conservation districts. Chapter II has thus far provided the needed background of soil and water conservation districts, the work of a local collaborative in general, and the components of collaboration and the related theories. Chapter III will detail the methodology to be used to examine the perceptions and use of collaboration by Virginia’s Soil and Water Conservation Districts with
Collaboration Among Political Subdivisions, etc.  Tyree, K.E.

government partners to ensure organizational success but first it is important to analyze existing research that measures the perception and success of collaborative alliances.

Empirical evidence demonstrating the effectiveness of collaborative partnerships is somewhat limited (Roussos & Fawcett, 2000). However, a handful of studies have been conducted to assess perception of collaboration by identifying successful collaboration factors that prove useful to our research.

Frey measures collaboration among grant partners using a level of collaboration scale from 1 to 5 based on the five steps of networking, cooperation, coordination, coalition, and collaboration, as previously explained. This evaluation collected research from stakeholders involved in the collaborative grant process. In addition to use of this quantitative scale, follow up interviews were conducted to also comprehend collaborative activities. Frey’s research was hindered by a significant validity concern as it was unclear whether individuals responding to the collaboration scale survey were responding on behalf of the organization or their own personal belief and experiences. This conflict in the collection of the data is of concern, is recognized by the author, and for future research it was recommended that “respondents be sampled from organizations and then instructed to respond as individuals” (Frey, 2006, p.391). Individual response, of which only half responded in this manner to the collaboration scale survey utilized by Frey, was determined to be a more important facet of information because the “core of collaborative relationships among groups is the collaborative relationships between individuals who are a part of those groups” (Frey, 2006, p.390-391). A second concern was whether the survey instrument itself measured collaboration effectively and over time was able to assess change.

While Frey’s research provided insight into the amount of collaboration between organizations, the issues with the validity of the measurement system are concerning. Additionally, since it was reported not all organizations within the collaborative were aiming to reach the highest
level of collaboration as represented on the scale, it proves that a target level of collaboration must be set by stakeholders prior to surveying partners on perceptions of collaboration (Frey, 2006). Frey provides a good foundation to the research but because his work needs future exploration of the validity of the instrument, we must explore collaborative research and assessment further.

Ferreyra and Beard’s article “Participatory Evaluation of Collaborative and Integrated Water Management: Insights from the Field,” assessed collaboration of the Maitland Watershed Partnerships, a multi-stakeholder forum organized in 1999 within an agricultural watershed in Ontario, Canada. This study was a participatory evaluation project. Participatory action research (PAR) methods are chosen over other options to encourage a reliance on engagement with all levels of the organization in order to “develop critical understandings of how collaborative programs and projects operate” (Ferreyra & Beard, 2005, p.278). Researchers first conducted interviews with 25 members, both current and past, of the collaborative venture. The interview, while structured, provided mostly qualitative data through use of open ended questions. Researchers followed this interview phase with an “outcome evaluation” (Ferreyra & Beard, 2005, p.279). The outcome evaluation included indicators for collaborative management inputs, outputs and perceived collaborative management outcomes as well as indicators of water-related outcomes. These indicators were developed based on guidance from literature (Ferreyra & Beard, 2005, p.280).

Lessons learned from this “thematic analysis” of qualitative data included a lack of a common understanding of science and the “stated meaning and role of the partnership” (Ferreyra & Beard, 2005, p.283). The quantitative portion of the data specifically tried to use indicators that operationalized the collaborative management goals of the watershed, though results found that there was a need to negotiate better indicators for evaluation among stakeholders in the collaborative (Ferreyra & Beard, 2005, p.289).
A different approach to measuring perceptions of collaboration is tackled in the article “Assessing Change in Successful Collaboration Factors Over Time” (Ziff, 2010). This article evaluated perceptions of collaboration over a span of time among members of the collaborative. Collaborative partners had a common mission to reduce local youth HIV rates by influencing change in the community at the policy and practice level. This time series method allowed for the ability to determine change in perceptions of collaboration. Assessment was based on the Wilder Collaboration Factors Inventory “which assesses the presence of twenty successful collaboration factors, organized into six domains” (Ziff, 2010, p.4). The six domains—purpose, member characteristics, communication, process/structure, environment, and resources—capture not only factors associated with successful collaboration, but provide information related to all phases or levels of collaboration per the Horwath and Morrison framework referenced earlier in Chapter II (Ziff, 2010, p.4). The findings of the “Assessing Change in Successful Collaboration Factors” study shed light on how collaboration factors evolve. Members of the collaborative were surveyed five times over the course of a year using the Wilder Collaboration Inventory Survey. A range of practitioners have used the Wilder inventory in applied settings to guide and improve collaboration (Mattessich, Murray-Close & Monsey, 2001). The inventory is applicable to the present study because it assesses our “variables of interest” (Ziff, 2010, p.4). The inventory focuses on factors associated with successful collaboration and relates to all phases of collaboration. Response rate averaged 71% over the year long study. As one would suspect, the findings suggested that indicators focused on decision-making opportunities, workload management, and understanding of roles and responsibilities improved over the course of the year and the five surveys. However, other indicators such as communication, member characteristics, and purpose were found to be insignificant and lacked change throughout the course of the study.
Unlike the Ziff study, the research study “Evaluation of Community Voices Miami” surveyed participants involved in the health care collaborative between 1998 and 2001 (Derose, Beatty & Jackson, 2004). Again, the Wilder Collaborative Inventory Survey was utilized, serving as the best method to capturing the stage and success of the collaboration. The survey captured data at one point in time only. Surveys were mailed and follow-ups occurred yielding a response rate of 52.2%. This collaborative venture showed indicators of trust and resources being of greater concern to the success and future of the collaboration. Researchers found this internal evaluation of collaboration a strong investment into understanding how to enhance opportunities to work together, build collaboration, and better influence public policy (Derose, Beatty & Jackson, 2004, p.63).

A wide variety of other research has utilized the Wilder Collaboration Factors Inventory leading to a full review of the research in the book *Collaboration: What Makes it Work*, featuring the inventory as the basis for understanding perceptions of collaboration and factors influencing successful collaboration. The Amherst Wilder Foundation and its Wilder Research Center, wanting to know the ingredients of successful collaboration and what makes collaboration work, conducted a review of case study literature that led to the development of the collaboration inventory based on six categories and twenty factors. The inventory survey is intended to help groups do a systematic, careful examination of where they stand on factors that influence the success of collaboration and ultimately measure the perceptions of collaboration among members of the collaborative (Matessich, Murray-Close & Monsey, 2001, p.35). The inventory provides a base level to understanding the phases of collaboration: from cooperation to coordination and collaboration (Matessich, Murray-Close & Monsey, 2001, p.34) as well as capturing the concept of resource dependency theory and an organization’s self-interest in the collaborative venture.
Collaboration is a wide concept but at its very basis offers the ability to address social issues in new ways, serves as a catalyst at the local level for improvement, and allows groups to tackle together a mission that lies beyond any one organization (Matessich, Murray-Close & Monsey, 2001). Collaboration has intensified during the last fifteen years of the twentieth century and continues to do so. It is important to therefore understand its application in various fields and ensure it provides benefit to the public policy process. In the case of soil and water conservation districts, political subdivisions of state government, we recognize that the quality of results, in terms of improving environmental quality, increases when our efforts include interagency collaboration. However, the current perceptions of collaboration and its success is unknown and in order to enhance water quality further we must first assess the level of current collaboration, its success, and even garner a better understanding of the collaboration strategies that are currently being utilized. “As a consequence of world trends, people will inevitably see joint efforts as a necessity for addressing economic, social, environmental, legal and other issues that transcend community and national boundaries” (Mattesich, Murray-Close & Monsey, 2001, p.56). Soil and water conservation districts since their establishment in the 1930’s have recognized this need for collaboration and were founded on those principles. Yet in the twenty-first century, changing economics are requiring us to assess these partnerships and ensure these ventures are evolving to meet current need and fulfill our common mission of improved natural resource management.
CHAPTER III

METHODOLOGY

Introduction

The concept of collaboration and how it is used by the specific political subdivision of state government, soil and water conservation districts is of significant importance to this study. In addition, the study desires to identify the strategies of collaboration currently being used and the overall success of collaboration according to local soil and water conservation districts. Chapter I provided a brief overview to collaboration and how it is a central function of local collaborative ventures such as soil and water conservation districts. Chapter I made clear that collaboration literature and collaboration theory is lacking. Chapter II addresses both the background of soil and water conservation districts, the concept of collaboration including its benefits, indicators of success, proposed frameworks and theories, as well as the previous research that exists measuring perceptions of collaboration. Chapter III will outline the methods, materials, and procedures used to obtain and analyze the necessary data for this exploratory research study regarding soil and water conservation district collaborative efforts. This chapter will address the research design and procedures, the study population, the development of the questionnaire and data collection procedures, and conclude by examining issues of validity and reliability.

Methodological Rationale

This study design utilizes an exploratory survey that measures both perceptions of collaboration of each local soil and water conservation district with its partners as well as gains insight into the strategies of collaboration that are currently being utilized among districts. In order
to capture both perceptions of collaboration and the district collaboration strategic process, a mixed methods research study was most appropriate. This mixed methods research approach will allow exploration into the broader reasons soil and water conservation districts collaborate, the techniques used to collaborate with partners, and the current perceived level of collaboration based on indicators of successful collaboration from the Amherst Wilder Collaborative Factors Inventory (Mattessich, Murray-Close & Monsey, 2001). By utilizing a mixed methods approach that allows for both the capture of quantitative and qualitative data, themes among soil and water conservation districts regarding collaborative efforts can also be identified.

Mixed methods studies provide a clear balance of both quantitative and qualitative methods. While quantitative methods provide for pre-determined methods, instrument based questions, and statistical analysis, qualitative methods provide the other extreme (Creswell, 2009, p.15). Qualitative methods allow for emerging methods, open ended questions, text and image analysis, and the ability to identify and interpret themes and patterns (Creswell, 2009, p.15). The mixed method approach provides for a mix of both by utilizing both open and closed-ended questions, multiple forms of data, statistical and text analysis, and the ability to interpret across databases (Creswell, 2009, p.15). In order to gain the insight desired of soil and water conservation district collaboration levels and activities, this mixed method approach provides the researcher the best ability “to gain perspectives from the different type of data from different levels within the study” (Creswell, 2009, p.215). Further, the “concurrent mixed methods procedures are those in which the researcher converges or merges qualitative and quantitative data in order to provide a comprehensive analysis of the research problem” (Creswell, 2009, p.14). Per the concurrent mixed methods approach, both forms of data will be collected at the same time and then integrated into the research to allow a more complete analysis.
The intent of the research is to both capture perceptions of collaboration and details of the collaborative process in order to identify successful collaborative strategies being employed. In order to determine perceptions of collaboration, a quantitative survey tool will be used to assess six factors influencing successful collaborations. In order to address the remaining research questions — what collaborative strategies are currently being used by soil and water conservation districts and how and why is collaboration used at this local collaborative level — qualitative open ended questions will be included in the survey tool.

Quantitative collection of perceptions of collaboration is recognized as correlational and descriptive research with a purpose to both “describe systematically a situation or area of interest factually and accurately” as well as “investigate the extent to which variations in one factor correspond with variations in one or more other factors based on correlation coefficients” (Isaac & Michael, 1997, p.46). This method will provide an understanding of the degree of relationship between attributes of a soil and water conservation districts and indicators of successful collaboration. With soil and water conservation districts becoming more and more recognized by state and local government as a key delivery system of conservation, there is an increasing need to understand the concept of collaboration, the level of current perceived collaboration, and examples of successful collaborative techniques. Such research and the resulting data will be instrumental to the direction of public policy development that is focused on improved water quality, especially that of the Chesapeake Bay.

**Research Design & Procedures**

The theoretical framework for this study is grounded in two sources of evidence. One is a review and analysis of a quantitative survey instrument measuring perceptions of collaboration. The
second is a thematic analysis of qualitative questioning that investigates the use of collaboration by organizations and how it is used to further public policy.

The study design is an exploratory, correlational, electronic survey introduced by email invitation to the target population as well as a separate letter sent both via mail and email to the chairman and District Manager of Virginia’s 47 soil and water conservation districts. Additional details on the data collection will be discussed later in Chapter III. First, it is important to understand the design and procedures.

A survey design was chosen as the most appropriate for the research. “The survey method is one of the most important data collection methods in the social sciences, and as such it is used extensively to collect information on numerous subjects of research” (Nachmias, 2000, p.225). A survey design is the preferred method for data collection because of its advantages of rapid turnaround time in data collection, and economic benefit of low cost to implement (Creswell, 2009, p.146). The study is cross-sectional, as data is collected at one point in time (Creswell, 2009, p.146). The research design was chosen to best address our research questions and our assumption that

H1: Perceptions of collaboration among directors and staff among local soil and water conservation districts is related to the environment, membership characteristics, process and structure, communication, purpose, and resources in which they embrace.

H2: Current levels of collaboration are occurring at stage three or the coordination level—based upon the five point scale of collaboration of Horwath and Morrison measured with the Wilder Collaborative Factors Inventory.
Target Population Used for Study Analysis

The target population, defined as “the specific group with which researchers would like to use their findings for educational purposes,” is comprised of all 330 soil and water conservation district directors (Hittleman & Simon, 2006, p.101). The entire director population will be sampled or surveyed.

In addition to directors, the target population of interest includes the approximate 150 staffers across Virginia’s soil and water conservation districts. This entire group will also be sampled or surveyed. Employee data was obtained from the Virginia Association of Soil & Water Conservation Districts. Per the 2013 Virginia Soil & Water Conservation District Directory, published by the VASWCD, an estimated 150 individuals are employed by a local district at the time of this research.

Sampling via means of a survey of both directors and staff, or the total target population, will provide greater insight and ability to compare perceptions of collaboration among constitutional officials, soil and water conservation district directors serving as board members, with the perceptions of district staffers.

Development of the Survey Instrument

The survey was developed by the researcher, though largely based on the Wilder Collaboration Factors Inventory with slight modification to ensure appropriateness to surveying the soil and water conservation district community. The survey was comprised of two sections. The first section is a modified version of the Wilder Collaboration Factors Inventory survey and captured quantitative data necessary to best assess perceptions of collaboration based on factors, grounded in the literature, that influence the level and success of a collaboration. The quantitative
portion of the survey was only modified in terms of ensuring questions were worded applicable to the soil and water conservation district audience.

In the earlier review of the literature, multiple data instruments were examined. One particular instrument for assessing perceptions of collaboration was found to be well tested and captured the intent of our quantitative portion of the survey. This survey, the Wilder Collaboration Factors Inventory, is the sole focus in the 2001 edition of *Collaboration: What Makes It Work*. Authors Mattessich, Murray-Close and Monsey review research on the indicators of successful collaboration and expand on their original research and analysis developed a decade earlier. In the most recent edition, an additional indicator, appropriate pace of development, was added as a critical indicator of success, bringing the number of collaboration indicators up to 20. In the 2001 edition, additional research is also reviewed, more than 300 articles, to further substantiate and validate the indicators used to measure collaboration. The authors additionally present the Wilder Collaboration Factors Inventory, as “a tool for assessing how a collaboration is doing on the twenty factors that influence success, along with instructions on interpretation” (Mattessich, Murray-Close & Monsey, 2001, p.xi).

The Wilder Collaborative Factors Inventory is a survey based instrument based on twenty factors grouped into six domains that influence the success of collaboration formed by nonprofits, government agencies, and other organizations. The twenty factors are grouped into the following six overall categories or variables: environment, membership characteristics, process and structure, communication, purpose, and resources. These twenty factors and six domain categories are based in the literature after significant research over the last two decades by the Amherst H. Wilder Foundation. Six questions in the forty question survey tackle the environment variable gathering data of relevance on the history of collaboration in the community, whether the collaborative group is seen as a legitimate leader in the community, and an assessment of how favorable the political or
social climate is to accept the collaborative and its mission. The second domain variable, membership characteristics, is measured by six questions on mutual respect and understanding, whether there is an appropriate group of members involved in the collaborative, if members view collaboration in their self-interest — an item directly tied to relational exchange and resource dependency theory — and a gauge of whether an ability to compromise exists (Mattessich, Murray-Close and Monsey, 2001, p.8). Process and structure is the third variable of the survey and thirteen questions in the survey are devoted to this domain. Questions within this category focus on the following factors: members sharing a stake in process and outcome, multiple layers of participation, flexibility, development of clear roles and policy guidelines, adaptability, and appropriate pace of development (Mattessich, Murray-Close & Monsey, 2001, p.9). Five questions are devoted to the communication domain, specifically the issues of open and frequent communication and whether information relationships and communication links are established. Across seven questions, the fifth category, purpose, addresses whether collaborative members perceive there to be concrete, attainable, goals and objectives as well as a shared vision and unique purpose. The final domain, resources, uses three questions to collect data on whether sufficient funds, staff, materials and time as well as skilled leadership are available to the collaborative (Mattessich, Murray-Close & Monsey, 2001, p.10).

The second section of this study’s data collection survey allowed for capture of desired qualitative information on examples of collaborative strategies. The following open ended questions were asked to capture data on collaborative strategies, how collaboration is used to enhance the organizational mission, and to gain examples of collaborative outreach.
1. Briefly explain any differences in collaborative arrangements with your locality vs. state agency vs. federal agency or other organizations you collaborate with. Are there differences of significance when working with your various collaborative partners?

2. How does your soil and water conservation district benefit from collaborating with other organizations or agencies?

3. How has the idea of collaboration changed with your partners over the last five years?

4. What are the challenges of collaborating with other organizations that your soil and water district faces?

5. How often does a county representative or a partner organization attend your local board meeting? If you serve multiple counties please indicate or explain your varying relationships.

6. What resources does your soil and water conservation district turn to for ideas and best practices on the use of collaboration? For example, do you look to other organizations, reference books, articles or other publications, consult a collaborative expert, or use other resources?

7. What collaboration strategies can you share? How have you built relationships to enhance collaboration? Are there examples of events that your SWCD has held or processes the SWCD has utilized that have fostered collaboration?

8. Collaboration occurs on a five level scale of low to high levels in the following order: (1) Communication, (2) Cooperation, (3) Coordination, (4) Coalition, and (5) Integration. If funding was not an issue at your local district, at what level would you like to see your SWCD collaborating with partners? Please choose one of the following: Communication, Cooperation, Coordination, Coalition, and Integration.

In addition to the survey questions, a number of control variables were collected from survey respondents. Control variables were determined by the researcher with input from the Virginia Association of Soil and Water Conservation Districts. Control variables collected include the following fields:
Table 1: Independent Control Variables

<table>
<thead>
<tr>
<th>Category</th>
<th>Independent Control Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demographics</td>
<td>Gender</td>
</tr>
<tr>
<td></td>
<td>Position - Operationalized as Elected Director, Appointed Director, Associate Director, SWCD Staffer</td>
</tr>
<tr>
<td></td>
<td>Tenure or Length of Service with the Organization</td>
</tr>
<tr>
<td></td>
<td>Past Experience of SWCD Directors in a Conservation Field</td>
</tr>
<tr>
<td>Geographic</td>
<td>SWCD Area of State per VASWCD Areas I-VI</td>
</tr>
</tbody>
</table>

These control variables, a special type of independent variable, may influence the quantitative portion of our research and the collaboration level being measured. Collaboration represents our dependent variable while our independent variables, what will affect the dependent variable, are those six domain factors as indicated in the Wilder Factors Inventory that influence the level of collaboration—environment, membership, process and structure, communication, purpose, and research. Themes regarding collaboration strategies and techniques will be indentified from our qualitative portion of the survey.

The survey method being a questionnaire eliminates any potential for interviewer bias that can be evident in pure qualitative studies. By utilizing a survey format, personal contact is minimized and therefore questions more sensitive in nature may be answered more accurately. Because the survey also provides for anonymity, as individuals will not be asked their individual name or district name, answers may reflect a more truthful representation of the individual’s perception of collaboration.
As preparation for data collection, the researcher conducted a pilot study to help strengthen the rationale and methodology of the study and improve upon the research instrument. Members of the Virginia Association of Soil & Water Conservation Districts Executive Board, a nonprofit arm of Virginia’s local soil and water conservation districts, tested the survey and provided valuable feedback. As a result, minor modifications were made to the research questionnaire and changes were only made to the qualitative question portion of the survey instrument.

**Data Collection Procedures**

A presentation about this study was first made to the Virginia Association of Soil & Water Conservation Districts executive board with a request to obtain the Association’s endorsement. The VASWCD President sent a letter of endorsement to the researcher noting support of the project [Appendix A]. A letter was then sent via email by the VASWCD President to the entire target population. This letter served as an introduction to the research. Further, it informed individuals that within the following week they would receive an electronic survey to be completed [Appendix B]. Following this initial letter from the VASWCD President, the researcher provided greater detail on the study via email contact and released the survey tool. The electronic survey was introduced by email invitation to the target population. The electronic survey sent to participants was prefaced with an email introduction that re-emphasized details from the initial correspondence. This letter explained the purpose of the study, the survey instrument, the survey benefit to soil and water conservation districts, and encouraged each soil and water conservation district director and staffer to participate [Appendix C]. The cover letters followed protocol as established by Nachmias in that it identified the sponsoring organization and individual conducting the research, explained the purpose of the study, explained “why it is important that the respondent answer the questionnaire,”
and assured the individual that information was to be held in strict confidence (Nachmias, 2000, p.243).

Following these initial letters sent by the Association President and researcher, the researcher sent via email and mail to all district chairs and district managers a follow up cover letter outlining the goals of the research project [Appendix D]. This separate correspondence sent to each district manager and district chairman, leaders among the target population by nature of their position, served a different purpose than the general introduction of the study to the target population. This introduction letter also described the research and emphasized the importance of the study but also asked that the survey be discussed amongst their board members and staff. Specifically, each district manager and chair was requested that the research and survey be made an item for discussion purposes on their upcoming board meeting agenda. The researcher additionally agreed to be available to answer any questions about the research prior to and following discussion at the local soil and water conservation district board meeting. It was explicitly requested that during the local district board meeting information be shared about the purpose of the research and the electronic survey sent via email to all directors and SWCD staffers. As both directors and staff are in attendance at these monthly board meetings, it provided an ideal format for the survey to be discussed and to encourage completion by all members of the district. Furthermore, as personal computer access can vary among district directors, the introduction and discussion of the survey during a regularly scheduled board meeting provided an opportunity for those with limited computer access to use district office resources to complete the survey. It is hoped that this tactic provides a convenience to some individuals and offers an enhanced ability to capture responses and ultimately yield a greater response rate.

Districts were provided an appropriate amount of time to complete the electronic survey measuring perceptions of collaboration. Exactly four weeks were provided for response. The survey
was left open for this period of time intentionally allowing every district across the Commonwealth to hold a monthly board meeting and have the survey as an agenda item for discussion. During the period in which the survey was open, two reminders were sent as a follow-up to participants in an attempt to increase response rate. The researcher used the Tailored Design Method outlined by Dillman to collect data (Dillman, 2007). “Under this approach, social exchange theory is used to identify ways to improve the quantity and quality of survey response by organizing the data collection process in a way that increases trust that the rewards of responding will be seen by the respondents as outweighing the costs of doing so” (Dillman, 2007).

To incentivize individuals to participate, the researcher agreed to prepare an executive summary of the survey results and share with district participants. Findings would also be presented to members of the Virginia Association of Soil & Water Conservation Districts Executive Board. As research results will prove beneficial to enhancing district collaborations and to public policy decisions, all participants were promised access to the research findings. Results would be made available through the Virginia Association of Soil and Water Conservation Districts.

**IRB and Informed Consent Protocol**

All universities, per federal regulation, have established policies that ensure research activities do no harm to study participants and overall foster ethical treatment of human subjects. These policies are enforced by the university Institution Review Board. The researcher followed the protocol of the Virginia Commonwealth University Institutional Review Board (VCU-IRB) for this study. The target population of this research is comprised of adults; however, all correspondence—research introduction letters, survey reminders and the introduction to the survey itself—sent to participants outlined that consent would be implied with the completion of the electronic survey. “Ensuring informed consent is the most general solution to the problem of how to promote social
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science research without encroaching on the participants’ rights and welfare” (Nachmias, 2000, p.77). The aforementioned correspondence by the researcher and the introduction to the survey tool stated that consent is implied with a returned questionnaire.

On October 15, 2013, this research qualified for exemption per the conditions of Virginia Commonwealth University’s Institutional Review Board [Appendix E]. Likewise, the Conflict of Interests Committee reviewed the research and found that there is appearance of a competing financial interest (CFI) with regards to the research project. The primary researcher in the study is the Executive Director of the Virginia Association of Soil & Water Conservation Districts; however in no way is the VASWCD sponsoring the study, though the organization is interested in the findings. However, because of the researcher’s leadership role and employment with the Association managing the appearance of any competing financial interest is appropriate. As a result, the researcher’s position as Executive Director is noted for full disclosure and will be noted in all manuscripts and presentations of the research to best manage the appearance of any competing financial interest. This Review Management Plan was found acceptable by the researcher and additionally recognized as an important fact to disclose to ensure credibility of the research [Appendix F].

**Data Analysis**

The research questions guiding the study, previously presented in Chapter I, are reiterated below. These questions direct the forthcoming data analysis procedures.

1. What is collaboration, and how is it used by political subdivisions of state government?

2. What collaborative strategies are used by political subdivisions of state government, specifically soil and water conservation districts?
3. At what level do soil and water conservation districts believe they are currently collaborating?

4. At what level do soil and water conservation districts prefer to collaborate—in other words, what is the ideal level of collaboration?

These questions focus on the perceptions of soil and water conservation directors and staff related to the collaborative ventures of the local soil and water conservation district. The questions used to survey individuals were crafted to expand on the general research questions above, guiding the study at large. To review the full survey provided to participants see Appendix G.

Limitations

As the researcher and analyst, it is important that all assumptions and biases be placed aside for the benefit of the study. While every effort was made to remain objective, it must be made clear that the study population is one the researcher works with closely as a result the background and perceptions the researcher brings to the study may have shaped how the researcher interpreted and analyzed results.

The political subdivision of state government examined here is the soil and water conservation district. Results must be generalized with caution as they may not be applicable outside of the context of Virginia’s soil and water conservation districts.

The survey captures perceptions of collaboration as only the opinion of soil and water conservation district board members and district staff members are collected. No other stakeholder in the organization’s collaborative process is surveyed. The limitation is understandable as it is the primary intent of the research to learn more about the collaborative efforts and strategies of solely local soil and water conservation districts. Nonetheless, this must be made clear as it impacts data
analysis and may be considered a study limitation. Perceptions of collaboration are being collected and measured via self-reported data. Answers to survey questions are therefore understood to be influenced by personal insights and values.

Validity & Reliability

Overall, other issues of validity and reliability need to be addressed as it relates to our research questions. Validity is in essence determining if there is truth in our measurement and reliability that consistency exists given that nothing else changes and the analysis is repeated (Nachmias, 2000, p.154). To ensure increased validity and reliability, a mixed methods approach is being utilized. This multi-method approach will assist with validity concerns also.

By working with the Virginia Association of Soil & Water Conservation Districts, we are able to vet or test pilot the survey instrument which adds an extra step in ensuring all questions are both understandable and relevant to our research. Henning even stated that reliability can be improved by conducting exploratory studies in the area of interest and/or by acquiring assistance from technical experts in developing study needs (Henning, 2004, p.59). Assistance from the Virginia Association of Soil & Water Conservation Districts board of directors addresses these reliability issues and enhances the exploratory research at hand. Further, their participation can also address face validity, content validity, and construct validity concerns if evident.

Internal and external validity issues must also be addressed. Researchers Campbell and Stanley note eight variables that if not taken into account and controlled can jeopardize the research on the basis of internal validity. These variables of concern, if not controlled for, include history, maturation, testing, instrumentation, regression artifacts, selection, experimental mortality, and selection maturation (Nachmias, 2000, p.96). The history effect is concerned with change that may occur between pre and post tests. History issues are of little concern in this proposed research as data is being collected at one single point in time. Maturation, testing, instrumentation issues, and
selection bias are of little concern in this study because of the use of tested measurement scales and the care taken in surveying the entire population (Nachmias, 2000, p.97). Mortality or the issue of individuals dropping out of the survey is also not a concern as this is a one-time cross sectional exploratory research design measuring perceptions of collaboration.

External validity troubles refer to generalizations of the research data (Nachmias, 2000, p.517). Research must be understood in the context it was conducted. This issue of external validity is addressed also as a limitation of the study, recognizing that findings should not be generalized broader than the political subdivision of local soil and water conservation districts in the Commonwealth of Virginia.

With an understanding of the methodology, the next chapter will provide analysis of the survey findings including descriptive analysis, mean and standard deviation of collaboration variables, and statistical significance.
CHAPTER IV

PRESENTATION AND ANALYSIS OF THE FINDINGS

Introduction

Building off of the literature review and research methodology presented in Chapter II and Chapter III, Chapter IV will present the data findings and provide an analysis of the data generated from the Soil & Water Conservation Districts Collaborative Inventory Survey used for this research. All quantitative data gathered will be presented first, followed by an analysis and review of themes from qualitative open-ended questions within the survey. Among the quantitative review, the population response rate will be discussed followed by analyzing respondent data demographically for position, gender, tenure, and SWCD area. Frequency data will be shared to contextualize analysis. Next, descriptive statistics, including mean and standard deviation will be presented for dependent variables of collaboration—environment, membership, process and structure, communication, purpose, and resource. In terms of a qualitative data review, each of the eight open-ended survey questions will be reviewed and prevalent themes recognized among respondent’s answers will be presented. Each qualitative open-ended survey question focused on a different aspect of collaboration and thematic findings—and outlier responses—will be important to understanding perceptions of collaboration among Virginia’s soil and water conservation districts. Data from both the quantitative and qualitative portions of the survey allow insight into the research questions:

1. What is collaboration, and how is it used by political subdivisions of state government?
2. What collaborative strategies are used by political subdivisions of state government, specifically soil and water conservation districts?

3. At what level do soil and water conservation districts believe they are currently collaborating?

4. At what level do soil and water conservation districts prefer to collaborate—in other words, what is the ideal level of collaboration?

Finally, this chapter concludes with an analysis of current perceived SWCD collaboration levels, based on the collaboration framework scale, as compared to the preferred or desired level of collaboration as identified by respondents.

Presenting the data results and demonstrating findings will be the focus of Chapter IV. This chapter will only begin to provide explanation and conclusions to findings, relate findings to previous research as possible, and touch on implications of results. However, this level of analysis will be elaborated on and the primary focus of Chapter V.

Understanding the Survey Population: Overall Response Rate

All SWCD staff and directors received the electronic collaboration survey. With a total of 330 directors statewide and an estimated 150 staff across all 47 soil and water conservation districts at the time of the research, 480 surveys were possible. After releasing the electronic survey and providing a four week response time, 146 responses were received from directors and 107 from staff, providing for a 44.2% response rate among directors and a much higher rate of 71.3% among district staffers. Overall, the response rate, or the “percentage of individuals who respond to a given questionnaire” reached over half of the population at 52.7% (Nachmias, 2000, p.524). It is important to take into account, however, that the total director population accounts for the actual
number of director positions available among all soil and water conservation districts. In reality, while this number provides a clear picture of the director population, it is critical to recognize that the number of directors serving during the time of the survey was in fact lower than the number of director positions available across the state due to transitions in positions and the lengthy appointment process that follows. The chart below provides frequency, population and response rate percentages in detail.

**Table 2: Descriptive Data on Survey Response Rate vs. Total Population**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Total Population</th>
<th>% Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director</td>
<td>146</td>
<td>330</td>
<td>44.2%</td>
</tr>
<tr>
<td>Staff</td>
<td>107</td>
<td>150</td>
<td>71.3%</td>
</tr>
<tr>
<td>Total</td>
<td>253</td>
<td>480</td>
<td>52.7%</td>
</tr>
</tbody>
</table>

“The question of what constitutes an acceptable response rate cannot be answered easily because scientists do not agree on a standard minimum response rate” (Nachmias, 2000, p.213). However, the Instructional Assessment Resources Department at the University of Texas at Austin does take a position, noting that an electronic or email based survey meets an acceptable rate at 40% return, a strong response at 50% and very strong with a 60% response rate (Instructional Assessment Resources). With that said, the overall response rate for this research study exceeds a level of “strong response.” And based on a breakdown of the population, director response (44.2%) surpassed “acceptable” rates and staff participation (71.3%) greatly exceeded a “very strong” indicator. A response rate at this level will provide valuable findings related to perceptions and use of collaboration.
Demographic Profile & Descriptive Statistics of Respondents

In order to best understand the population and the results to follow related to the dependent variables, it is important to understand characteristics of our survey respondents. Part I of the survey instrument addressed this need. Descriptive statistics and demographic breakdowns for each of our independent control variables—position, director experience in the field, tenure, gender, and soil and water conservation district area—will be discussed.

**Descriptive Statistics: Position**

It is important to understand not only the full survey population response rate based on position, as noted above, but the breakdown and participant percentage based on the 253 submitted, completed surveys. This data is presented at a greater level breakdown based on position ─ staff vs. appointed director, elected director, and even an associate director. Of this level of analysis, 57.7% of the 253 submitted surveys reflect responses from the perspective of a director and 42.3% of district staff.

**Table 3: Descriptive Data on Respondents by Position**

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appointed Director</td>
<td>35</td>
<td>13.8%</td>
</tr>
<tr>
<td>Associate Director</td>
<td>23</td>
<td>9.1%</td>
</tr>
<tr>
<td>Elected Director</td>
<td>88</td>
<td>34.8%</td>
</tr>
<tr>
<td>Staff</td>
<td>107</td>
<td>42.3%</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>253</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

If a survey participant identified themselves as a director, they were prompted to answer a follow-up question as to whether they currently serve in or have retired from a career in conservation, natural resources or a related field. Sixty percent of director respondents identified as directors that held no prior experience in a conservation related profession while the remaining 40% of directors
indicated that he or she currently serves in or has retired from a career related to natural resource management.

**Descriptive Statistics: Tenure**

Tenure was classified as the length of service of an individual — be it a director or staffer. The total number of years serving the district was requested, meaning if an individual had served as an associate director and an elected director, the respondent was requested to combine their years of service for total tenure with the soil and water conservation district. This variable therefore explains the length of time an individual has been associated with a soil and water district. Two respondents of the 253 submitted chose not to answer this question.

**Table 4: Descriptive Data on Respondents by Tenure**

<table>
<thead>
<tr>
<th>Tenure</th>
<th>Frequency</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5 Years</td>
<td>76</td>
<td>30.0%</td>
</tr>
<tr>
<td>6-10 Years</td>
<td>70</td>
<td>27.7%</td>
</tr>
<tr>
<td>11-15 Years</td>
<td>40</td>
<td>15.8%</td>
</tr>
<tr>
<td>16-20 Years</td>
<td>20</td>
<td>7.9%</td>
</tr>
<tr>
<td>20+ Years</td>
<td>45</td>
<td>17.8%</td>
</tr>
<tr>
<td>No Answer</td>
<td>2</td>
<td>0.8%</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>253</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Responses show that nearly half of the respondents, (146 of 253) or 57.7%, have served the soil and water conservation district in the range of 1-10 years while, 41.5% have been serving the district over 11 years. Of interest is that roughly half of the respondents are fairly new to the position while the remainder are well experienced with district work. This can be explored further and explained by analyzing demographic data by tenure and position. By doing so, it becomes clear that staff respondents have a younger tenure compared to director respondents. In summary, 68% of directors
have served between 1-15 years while, 82.4% of staff respondents fell within this same tenure bracket. On the opposite end, 31.9% of directors have served 16+ years with a district while only 17.8% of staff survey respondents have served the district 16+ years. The chart below illustrates this pattern that staff are less tenured, visually showing that the highest percentage of staff respondents have spent 1-5 years in the position with decreasing percentages as the number of years serving increases.

**Table 5: Descriptive Data on Respondents by Position vs. Tenure**

<table>
<thead>
<tr>
<th></th>
<th>1-5 years</th>
<th></th>
<th>6-10 years</th>
<th></th>
<th>11-15 years</th>
<th></th>
<th>16-20 years</th>
<th></th>
<th>20+ years</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>% of Total</td>
<td>Frequency</td>
<td>%</td>
<td>Frequency</td>
<td>%</td>
<td>Frequency</td>
<td>% of total</td>
<td>Frequency</td>
<td>%</td>
</tr>
<tr>
<td>Director</td>
<td>40</td>
<td>27.8%</td>
<td>35</td>
<td>24.3%</td>
<td>23</td>
<td>16.0%</td>
<td>14</td>
<td>9.7%</td>
<td>32</td>
<td>22.2%</td>
</tr>
<tr>
<td>Staff</td>
<td>36</td>
<td>33.6%</td>
<td>35</td>
<td>32.7%</td>
<td>17</td>
<td>15.9%</td>
<td>6</td>
<td>5.6%</td>
<td>13</td>
<td>12.1%</td>
</tr>
<tr>
<td>Total</td>
<td>76</td>
<td>30.0%</td>
<td>70</td>
<td>27.7%</td>
<td>40</td>
<td>15.8%</td>
<td>20</td>
<td>7.9%</td>
<td>45</td>
<td>17.8%</td>
</tr>
</tbody>
</table>

Understanding that staff respondents overall are less seasoned than directors in general is important to know prior to analyzing mean and standard deviation data for collaboration variables.

**Descriptive Statistics: Gender**

Respondents were also asked to identify their gender. All participants provided this information. Of the 253 surveys submitted, the majority of participants were male. Specifically, 60.1% of respondents (152 participants) identified as male compared to 39.9% of respondents (101 participants) that identified as female.
Table 6: Descriptive Data on Respondents by Gender

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>101</td>
<td>39.9%</td>
</tr>
<tr>
<td>Male</td>
<td>152</td>
<td>60.1%</td>
</tr>
<tr>
<td>Grand Total</td>
<td>253</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Of interest is analyzing gender data by position to determine any differences among the two main populations—staff and directors.

Table 7: Descriptive Data on Respondents by Position and Gender

<table>
<thead>
<tr>
<th></th>
<th>Female</th>
<th>Male</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appointed Director</td>
<td>11</td>
<td>24</td>
<td>35</td>
</tr>
<tr>
<td>Associate Director</td>
<td>6</td>
<td>17</td>
<td>23</td>
</tr>
<tr>
<td>Elected Director</td>
<td>17</td>
<td>71</td>
<td>88</td>
</tr>
<tr>
<td>Staff</td>
<td>67</td>
<td>40</td>
<td>107</td>
</tr>
<tr>
<td>Grand Total</td>
<td>101</td>
<td>152</td>
<td>253</td>
</tr>
</tbody>
</table>

This level of data analysis provides information on soil and water conservation district make-up related to survey respondents and indicates that while director response is more male oriented, staff response leans more female driven.

**Descriptive Statistics: Soil & Water Conservation District Area**

Survey participants were asked to identify the VASWCD Area in which their SWCD is affiliated. As defined in Chapter I, the Virginia Association of Soil & Water Conservation Districts has a regional structure in place to work with soil and water conservation districts that have similar priorities that are natural resource oriented because of geographic location. Areas range from being comprised of six to eleven soil and water conservation districts.
Table 8: Descriptive Data on Respondents by SWCD Area

<table>
<thead>
<tr>
<th>Area</th>
<th>Frequency</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area I—Western VA</td>
<td>31</td>
<td>12.3%</td>
</tr>
<tr>
<td>Area II—Northern Piedmont</td>
<td>53</td>
<td>20.9%</td>
</tr>
<tr>
<td>Area III—Central-Tidewater</td>
<td>61</td>
<td>24.1%</td>
</tr>
<tr>
<td>Area IV—Southwest VA</td>
<td>47</td>
<td>18.6%</td>
</tr>
<tr>
<td>Area V—Southern Piedmont</td>
<td>40</td>
<td>15.8%</td>
</tr>
<tr>
<td>Area VI—Southeast VA</td>
<td>21</td>
<td>8.3%</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>253</strong></td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Area III, comprised of eight districts, had the highest response rate based on total submissions (24.1%) while Area VI, with six member districts, had the lowest response rate (8.3%). Further analysis by area shows a well distributed sample of directors and staff across areas with exception to Area VI where 71.4% of Area VI respondents were directors compared to 28.6% staff. Likewise, a well balanced distribution of respondents when reviewing gender of participants to Area is evident for Area I, Area II and Area III. A much greater discrepancy in male to female responses is apparent in Area IV, Area V and Area VI. Portrayal of area response as it relates to role and gender is shown in the chart below.

Table 9: Descriptive Data on Respondents by Area* Compared to Position and Gender

<table>
<thead>
<tr>
<th></th>
<th>Position</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Director</td>
<td>Staff</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
<td>Total</td>
</tr>
<tr>
<td>I</td>
<td>19</td>
<td>31</td>
</tr>
<tr>
<td>II</td>
<td>24</td>
<td>53</td>
</tr>
<tr>
<td>III</td>
<td>40</td>
<td>61</td>
</tr>
<tr>
<td>IV</td>
<td>26</td>
<td>47</td>
</tr>
<tr>
<td>V</td>
<td>22</td>
<td>40</td>
</tr>
<tr>
<td>VI</td>
<td>15</td>
<td>21</td>
</tr>
</tbody>
</table>

*Area I—Western Virginia, Area II—Northern Piedmont, Area III—Central/Tidewater, Area IV—Southwest Virginia, Area V—Southern Piedmont, Area VI—Southeast Virginia
In addition to reviewing area respondents by position and gender, information can be gleaned from reviewing this information in relation to tenure. There are a greater number of respondents that have served less than 11 years within Area I (61.3% less than 11 years to 38.7% greater than 11 years) and Area II (71.7% to 28.3%). The descriptive chart below demonstrates tenure or length of service with the district by area among survey respondents.

**Table 10: Descriptive Data on Respondents by Area* vs. Tenure**

<table>
<thead>
<tr>
<th>Area</th>
<th>1-5 years</th>
<th>6-10 years</th>
<th>11-15 years</th>
<th>16-20 years</th>
<th>20+ years</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Frequency: 12, % by area: 38.7%</td>
<td>Frequency: 7, % by area: 22.6%</td>
<td>Frequency: 4, % by area: 12.9%</td>
<td>Frequency: 3, % by area: 9.7%</td>
<td>Frequency: 5, % by area: 16.1%</td>
</tr>
<tr>
<td>II</td>
<td>Frequency: 18, % by area: 34.0%</td>
<td>Frequency: 20, % by area: 37.7%</td>
<td>Frequency: 5, % by area: 9.4%</td>
<td>Frequency: 2, % by area: 3.8%</td>
<td>Frequency: 8, % by area: 15.1%</td>
</tr>
<tr>
<td>III</td>
<td>Frequency: 21, % by area: 34.4%</td>
<td>Frequency: 14, % by area: 23.0%</td>
<td>Frequency: 10, % by area: 16.4%</td>
<td>Frequency: 3, % by area: 4.9%</td>
<td>Frequency: 12, % by area: 19.7%</td>
</tr>
<tr>
<td>IV</td>
<td>Frequency: 12, % by area: 25.5%</td>
<td>Frequency: 11, % by area: 23.4%</td>
<td>Frequency: 11, % by area: 23.4%</td>
<td>Frequency: 3, % by area: 6.4%</td>
<td>Frequency: 9, % by area: 19.1%</td>
</tr>
<tr>
<td>V</td>
<td>Frequency: 9, % by area: 22.5%</td>
<td>Frequency: 12, % by area: 30.0%</td>
<td>Frequency: 8, % by area: 20.0%</td>
<td>Frequency: 5, % by area: 12.5%</td>
<td>Frequency: 6, % by area: 15.0%</td>
</tr>
<tr>
<td>VI</td>
<td>Frequency: 4, % by area: 19.0%</td>
<td>Frequency: 6, % by area: 28.6%</td>
<td>Frequency: 2, % by area: 9.5%</td>
<td>Frequency: 4, % by area: 19.0%</td>
<td>Frequency: 5, % by area: 23.8%</td>
</tr>
</tbody>
</table>

*Area 1—Western Virginia, Area II—Northern Piedmont, Area III—Central/Tidewater, Area IV—Southwest Virginia, Area V—Southern Piedmont, Area VI—Southeast Virginia

This analysis of the characteristics of our respondents is important to understand prior to examining our variables of collaboration as each of the aforementioned variables may impact an individual’s perceived level of collaboration at the district.

**Quantitative Analysis: Examining Collaboration Variables**

The Wilder Collaborative Factors Inventory authored by the Amherst Wilder Foundation and described in Chapter III was used as the quantitative survey instrument. Six collaboration variables—environment, membership, process and structure, communication, purpose, and resources—are utilized to address the research question focused on determining at what level are soil and water conservation districts currently perceived to be collaborating. The chart below shows...
the overall mean and standard deviation scores for each of the six collaboration independent variables based on a review of all 253 respondents to the survey instrument.

**Table 11: Mean & Standard Deviation for Six Independent Collaboration Variables**

<table>
<thead>
<tr>
<th>Collaboration Variables</th>
<th>Environment</th>
<th>Membership</th>
<th>Process &amp; Structure</th>
<th>Communication</th>
<th>Purpose</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (1-5)</td>
<td>3.99</td>
<td>3.67</td>
<td>3.56</td>
<td>3.82</td>
<td>4.00</td>
<td>2.96</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.87</td>
<td>1.04</td>
<td>0.95</td>
<td>0.9</td>
<td>0.85</td>
<td>1.21</td>
</tr>
</tbody>
</table>

Each of the six collaborative factors—-independent variables—is measured by use of three to thirteen questions in the survey instrument. For example, the purpose variable is measured with seven survey questions focusing on three sub-factors. Sub-factor one focuses on concrete, attainable goals and objectives and does so by asking three questions. Purpose sub-factor two focuses on the importance of shared vision and uses two questions for measuring. The third sub-factor of the purpose independent variable is ‘unique purpose’ and two questions in the survey measure this understanding. All seven questions via three sub-factors measure purpose, an independent collaboration variable. A breakdown of all independent collaboration variables and the questions measuring these factors within the survey can be found in Appendix H. Review of this information may prove helpful prior to the following review of each individual independent collaborative variable.

In terms of analyzing data, the Wilder Factors Inventory as addressed in *Collaboration: What Makes It Work* measures collaboration levels by examining mean, mode and standard deviation. As this research was intended for exploratory study, this level of analysis for quantitative review provides the value needed and the research overall is strengthened by following the measurement protocol of our survey instrument (Mattessich, Murray-Close & Monsey, 2001). The
Wilder Collaborations Factors Inventory interprets that mean scores of 4.0 or higher show an area of collaborative strength. Scores of 3.0 to 3.9 are recognized as “borderline” scores and the collaborative under study should discuss these areas to determine if attention is needed. This designation “does not have normative standards that would enable you to construct definitive interpretation” but instead, those variables scoring in this range should be used as “a basis for constructive discussion and planning for your collaborative initiative” (Mattessich, Murray-Close & Monsey, 2001, p.47). Last, scores falling in the range of 2.9 or lower reveal significant concern to the effectiveness of the collaborative initiative and immediate action should be taken to address these items or re-evaluate the collaborative group effort. The bar graph below demonstrates visually the six independent variables and the scoring range in which they fall.

---

**Figure 4:** Collaboration Factor Inventory—Independent Variable by Mean Score
The six independent variables are measured in the Wilder Factors Inventory Survey by twenty sub-factors made up of forty questions. Appendix I shows in graph form the overall mean score for each of the twenty sub-factors that together measure the six independent variables.

**Collaboration Variable: Purpose**

Understanding these scoring parameters, the highest scoring independent variable impacting the dependent variable collaboration, based on mean — the arithmetic average for a group of data — among the entire soil and water conservation district community, is the purpose variable with a mean score of 4.0 and standard deviation of 0.85. The purpose variable proves to not only be the highest scoring variable but also yields the lowest standard deviation. This adds weight that purpose is a strength of SWCD collaborative efforts. Standard deviation demonstrates how much variance or dispersion from the average exists. The lower standard deviation of 0.85 indicates that the data points tend to be closer to the mean. Based on overall survey response, purpose or the “reasons for the development of a collaborative effort, the result or vision the collaborative group seeks, and the specific tasks or projects the group defines as necessary to accomplish” falls right on the scoring edge as a strength (Mattessich, Murray-Close & Monsey, 2001, p.27). There is agreement, per the standard deviation score, that there are clear, concrete, attainable goals and objectives, shared vision, and unique purpose among district perceptions of collaboration.

**Collaboration Variable: Resource**

On the opposite end of the spectrum, with a 2.96 mean score and 1.21 standard deviation, is the resource indicator—an independent variable of collaboration. The resource variable measured the level of “financial and human input necessary to develop and sustain a collaborative group” (Mattessich, Murray-Close & Monsey, 2001, p.27). With a mean score of 2.96, this hovers as an insufficient score for providing for successful collaboration.
It is important to note though that the survey uses three questions to test the resource variable. Two questions are specific to determining whether sufficient funds, staff, materials, and time exist and the third is closely tied to measuring the level of skilled leadership available. When looking at this variable closer and the responses to these three questions, there was significant discrepancy between answers to each question. Respondents felt funding was severely lacking, with a mean score of 2.36 (sd=1.07) related to the question that directly asked whether “our collaborative group has adequate funds to do what it wants to accomplish.” In terms of whether the collaborative has “adequate people power to do what it wants to accomplish” respondents felt slightly more favorable that this was true with a mean score of 2.68 (sd=1.07). These two questions measuring funding and staff resources each had a mode score of 2 on the five point scale. There was only one other question of the forty question survey that presented itself with a mode of 2 and average in this range and it was related to the membership variable which will be explained in forthcoming analysis. From this observation, it is clear that significant progress needs to occur in terms of resources available—most urgently funding, though great need exists for increased staffing—to SWCDs or the collaborative runs the risk of hindering its ability to reach goals and objectives.

And finally, the third question that rounded out the resource variable asked respondents whether “the people in leadership positions that are involved in your collaborative group have good skills for working with other people and organizations.” This question measuring leadership skills proved highest among this section with a mean score of 3.85 (sd= 0.95). To better understand the need for improvement among resources, it is imperative to hone further into the data as done here and recognize the discrepancies among sub-factors as shown between sufficient funds, staff, and leadership.

Having reviewed the highest scoring mean variable, with lowest standard deviation, as purpose and the lowest mean score variable as resources, the remaining discussion will focus on the
environment, communication, membership, and process and structure variables in this order—ranked from second to fifth in strength on the collaboration factors inventory by survey participants.

**Collaboration Variable: Environment**

Environmental characteristics consist of “geographic location and social context within which a collaborative group exists” (Mattessich, Murray-Close & Monsey, 2001, p.12). Six questions measured the environment variable focusing on whether a history of collaboration exists in the community, if the collaborative group is seen as a legitimate leader in the community, and if there is favorable political and social climate for the collaborative. There was proven consistency among all questions related to the environment (all questions had a mode answer of 4) and the overall variable received a mean score of 3.99, indicative of overall strength.

By looking at sub-factors—history of collaboration, collaborative group as legitimate leader, and favorable political/social climate—that together makeup the environment variable additional information becomes evident. Without doubt, when asked about whether a history of collaboration exists, the soil and water district community is in agreement that collaboration is a tradition. There is need for growth in order for the collaborative to be perceived as a legitimate leader as the mean score ranks slightly lower at 3.79 for this sub-factor. And last, when reviewing political and social climate or whether political leaders, opinion makers, “those who control resources” and the general public support district collaborative efforts, a mean score of 3.94 for the two questions measuring this sub-factor presents itself (Mattessich, Murray-Close & Monsey, 2001, p.12).

Of interest here is that the district community perceives that the political and social climate is poised and supportive of efforts yet earlier stated that resources available to the collaborative proved to be the weakest variable. There may be a disconnect between the political and social
climate supporting district efforts and providing the resources needed to execute the collaborative
goals most efficiently. More on this finding will be explored and analyzed in Chapter V.

**Collaboration Variable: Communication**

Per measurement parameters identified by the Factors Inventory, communication levels reach a mean score of 3.82 and standard deviation of 0.90. The communication variable, also a border-line score needing further discussion by the collaborative group, could use further examination to determine where specific issues of growth may be needed. Communication refers to “the channels used by collaborative partners to send and receive information, keep one another informed, and convey opinions to influence the group’s actions” (Mattessich, Murray-Close & Monsey, 2001, p.23). A series of five questions measured communication of perceived collaborative activities. The first three questions focused on the existence of open and frequent communications and the remaining two questions inquired as to whether there are established informal relationships and communication links.

The first three questions that focused on open and frequent communication were answered consistently and had a mean score of 3.62, slightly lower than the mean of the entire communication variable. In order to understand this difference, the final two questions of the survey measuring communication focused on determining the strength of informal relationships and communication among the collaborative. The mean score for each question focused on this sub-factor was over 4.0. And the average mean of these two questions together measuring informal relationships was 4.11.

Across the board, all six communication questions provided a mode answer of 4 with low standard deviations of 0.73 to 0.9. From an analysis of the communication variable, greater time specifically needs to be put towards ensuring open and frequent communication as opposed to establishing informal relationships and communication links among collaborative members.
Collaboration Variable: Membership

Membership characteristics per the Collaboration Factors Inventory consist of “skills, attitudes, and opinions of the individuals in a collaborative group” (Mattessich, Murray-Close & Monsey, 2001, p.14). Six questions measure membership and are comprised of sub-factors that focus on (1) mutual respect, understanding, and trust within two questions, (2) appropriate cross section of members within two questions, (3) whether members see collaboration as in their self-interest scored with one question, and (4) an ability to compromise measured by one question.

Before drilling into individual questions and sub-factors, overall the membership variable scored a mean of 3.67 with a standard deviation of 1.07. However, there are items to note of comparison among the membership questions. When asked the question specific to sub-factor three noted above, whether “my organization will benefit from being involved in collaboration,” respondents overwhelmingly agreed. To be even more specific, this question received the highest mean score of the entire survey with a 4.44, a standard deviation of 0.69, and mode response of 5 or strongly agree. Per resource dependency theory, organizations choose to collaborate to see personal or organizational benefit such as access to resources. This question is intended to address resource dependency theory and recognizes that motivation as being high. This is not to eliminate the importance relational exchange theory may also play as a motivating factor to collaborate which will be addressed further in the qualitative review.

Sub-factor one of membership focuses on mutual trust and respect. The two questions measuring this sub-factor show differences that must be noted. Question one asks whether “people involved in our collaboration always trust one another” versus question two which asks the participant to agree or disagree with the statement “I have a lot of respect for the other people in the collaborative project.” It is evident per survey response that trust is lacking within the collaborative arrangement having earned a mean score of 3.01 (sd=1.02) yet when asked about if he/she respects
fellow collaborative members, a much higher mean score of 4.19 (sd =0.73) was found. This deserves further exploration as perhaps trust issues are isolated to one key collaborative partner. Later review of qualitative data will further explore this topic.

**Collaboration Variable: Process and Structure**

The process and structure variable is indicative of the management, decision-making, and operational systems of collaborative efforts. The largest section of the survey, thirteen questions, is dedicated to measuring this variable by means of six sub-factors: (1) members share a stake in both the process and outcome, (2) multiple layers of participation, (3) flexibility, (4) development of clear roles and policy guidelines, (5) adaptability, and (6) appropriate pace of development. With an overall mean score of 3.56 and standard deviation of 0.95 for the process and structure variable as a whole, there is room for improvement and focus as it also is categorized as a “borderline” score needing immediate review (Mattessich, Murray-Close & Monsey, 2001).

While this section may be the largest section of questions dedicated to measuring an independent variable, it is also quite consistent in responses across sub-factors with exception for the two questions dedicated to multiple layers of participation. The first question in this sub-section asks “when the collaborative group makes major decisions, there is always enough time for members to take information back to their organizations to confer with colleagues about what the decision should be.” Though the standard deviation was 1.01 and the mean 3.26, this score demonstrates the second lowest mean score among process and structure questions and does hover low enough to cause concern and flag a needed discussion among the collaborative. Even more notable is the remaining question of this sub-factor which asks participants to determine if each of the people who participate in decisions for the soil and water district collaborative can speak for the entire collaborative group, not just their individual interests. With a mean score of 2.99 (sd=1.02),
this is also an issue of needed progress as “it is critically important that talented, key people in an organization be assigned to work on the collaborative project and that they be interested in its success” (Mattessich, Murray-Close & Monsey, 2001, p.19). As a result of this low indicator, “integrating efforts throughout all the members’ systems” is needed and will increase the likelihood of success. The collaborative group should also determine if not only key leaders are involved but key staff in each organization.

**Additional Findings: Collaboration through the Control Variable Lens**

Examining collaboration independent variables individually based on overall respondents is helpful but we can apply a deeper lens and investigate differences that may exist between collaboration variables and control variables—position, previous background/career in the field of natural resources, gender, tenure, and SWCD area. Analyzing the data with this strict scrutiny, which the Factors Inventory suggests, will provide even further insight into perceptions of collaboration among the soil and water conservation district community.

Mean and standard deviation data analyzing collaboration through the lens of each control variable is provided in Appendix J. To begin by reviewing statistical mean and standard deviation by position—staff vs. director—very little difference is evident based on response. It should be noted that overall directors had a slightly lower mean score and slightly higher standard deviation score for each of the six collaboration variables when compared to staff responses but variation was so minimal this does not lend itself to any significant finding.

Responses based on geographic area present a similar finding. Across the board, the mean and standard deviations for each collaboration variable remain consistent despite the geographic area. Area IV did demonstrate the highest mean score for three of the six independent variables measuring collaboration—environmental, membership, process and structure—though only slightly.
The greatest spread of difference among means was found related to the purpose variable with Area VI scoring highest with a mean of 4.21 (sd=.81) and Area I scoring lowest with a mean score of 3.90 (sd=.93). The closest mean scores among areas was found related to the resource variable with Area I scoring high with a 3.06 (sd=1.14) and Area V scoring lowest with 2.96 (sd=1.16). All other area mean scores fell in between this range. The largest standard deviations, however, were related to the resource variable with all areas having a standard deviation between 1.12 and 1.29 demonstrating greater dispersion or variance from the average exists. Though slight variation among areas may have occurred, as evident here, no outliers appeared.

Reviewing data by tenure presents interesting trends. There was slightly more variance among means when reviewed based on how long an individual has served with the soil and water conservation district. Both the resource and communication mean scores differed by more than 0.4 between the highest and lowest responses among tenure categories. Those having served between 16-20 years scored higher means for four out of six independent variables measuring collaboration—process and structure, communication, purpose, and resource. Additionally, as an individual increased tenure or length of service with the soil and water district, the mean average for environmental factors influencing collaboration increased. Though it increased by smaller margins with each tenure category, perceptions of environmental factors influencing collaboration did increase. Further, for five of the six variables—membership, process and structure, communication, purpose, and resource—all but environmental factors, perceptions of collaboration fell between the 16-20 year of service mark and the 20+years of service level. Having said that, perceptions of collaboration seem to hold steady or slightly increase overall as your tenure increases until the 20+ years of service mark in which at that time your perceptions likely decline. Without generalizing what this response may mean, it is important to recall that many of the staff respondents fell into the
lower tenure categories while directors overall proved longer service with the district. This will be discussed further in Chapter V.

In terms of male versus female responses, recall that staffers leaned more female while director participants leaned more male. Without deviation, males demonstrated higher perceptions of collaboration across the board when compared to female counterparts. Differences in mean scores were minimal, under .08, for all collaborative variables with the exception of purpose. The mean score of perceptions of collaboration related to the purpose variable was 4.08 for males (sd = 0.83) and 3.88 (sd = 0.87) for female respondents, a difference of .20.

Finally, responses from solely directors were reviewed based on their background in a conservation related profession to see if perceptions were impacted by their closeness to the field. Of the six collaboration variables, directors with a professional background in conservation scored higher perceptions scores for process and structure, communication and purpose. Directors who had no professional background or career in a conservation related field scored higher perception averages based on mean score for environmental, membership and resource variables. Minimal variance between responses though was noted with five of six variables having mean differences of less than 0.06. The only variable with a higher mean score difference was the communication variable where those directors with a background in conservation perceived a higher communication level with a mean score of 3.90 versus a mean score of 3.79 by those directors without a career or profession in conservation. This finding is not surprising as those directors who have a professional background in conservation may have a greater understanding of district work, partners and efforts underway simply because of their relationships with many key partners as a result of their profession.

The quantitative portion of the survey has provided valuable data in order to begin to answer the research question: At what level are current perceptions of collaboration among soil and water
conservation districts? Additionally, this data and the literature review from Chapter II has provided insight into what is collaboration, how it is used by political subdivisions of state government, and in understanding attributes that impact collaboration such as gender, position, tenure, and geographic area.

Current levels of perceived collaboration will also be addressed again later in Chapter IV when answering the research question focused on desired or ideal levels of collaboration. However, in order to provide the most well rounded response to the research question: at what level are soil and water conservation districts currently collaborating and what collaborative strategies are being used by soil and water conservation districts, a qualitative review of open ended questions focused on these topics must be also undertaken and this level of analysis will be reviewed next.

**Qualitative Analysis: A Descriptive Summary of Questions and Identifiable Themes**

The qualitative portion of the survey was comprised of seven open ended questions focused on learning more about the collaborative ventures of Virginia’s 47 soil and water conservation districts. Each question will be analyzed individually and identifiable themes from survey responses presented. Questions as a whole focused on themes, intending to learn more about the structure of collaborative arrangements, membership issues, motivations and challenges of collaborating, resources utilized, and collaborative strategies to be shared.

**Theme: Collaborative Structures**

The first three questions of the survey prompted participants to share information about the structure and membership of their collaborative arrangements. Questions probed participants on membership issues, specifically if there were differences among collaborations between partners.
And in order to assess current collaborations, participants were asked to indicate and explain how collaborative structures have changed over time.

**Question 1:** Briefly explain any differences in collaborative arrangements with your locality vs. state agency vs. federal agency or other organizations you collaborate with. Are there differences of significance when working with your various collaborative partners?

Respondents to this question focused answers on a number of key partners providing comment about relations and partnerships with soil and water conservation districts. The following state partners were referenced: Virginia Department of Conservation & Recreation (DCR), Virginia Department of Forestry (DOF), Virginia Cooperative Extension, and the Virginia Department of Agriculture and Consumer Services (VDACS). Federal partners identified and discussed included Farm Service Agency (FSA) and the Natural Resource Conservation Service (NRCS). The majority of respondents discussed relations between the local soil and water district and their local government entity or entities. A fewer number of participants recognized the importance of collaborative arrangements with non-governmental organizations (NGO). Those respondents that did highlight an NGO or nonprofit as a collaborative partner, emphasized the growing importance of this type of relationship.

Responses were varied regarding strength of relationships and collaborative ventures. The majority of respondents noted recent issues specifically with the Virginia Department of Conservation & Recreation that hindered collaboration. Further issues of diminished resources, funding, and support from the Natural Resource Conservation Service and the Department of Conservation & Recreation, were consistently noted. As a result, many indicated concern that these partners were beginning to operate in silos which would ultimately hinder collaborative efforts and
progress towards the shared mission among organizations. This would infer that collaborative efforts are moving away from an open system — based on open systems theory and the exchange of material, energy, people, capital, and information within its environment — and perhaps toward a isolated or closed system. Multiple respondents also indicated that state support of soil and water conservation districts in recent times was not due to collaborative ventures with the state agency, the Department of Conservation & Recreation, but rather recognized through direct legislative support which in turn forced collaborative arrangements upon the state agency.

Those that indicated collaborative arrangements with Virginia Cooperative Extension and the Virginia Department of Forestry indicated a need to improve and enhance these collaborative efforts as a whole. The partners were primarily noted as collaborative partners on specific projects. Repeatedly it was indicated that there was greater potential to collaborate with these partners at a higher level. Local level collaborations were varied, with many noting that efforts with local governments were more fruitful and personal yet often required constant and continuous effort in order to prove successful.

The following quotes, from survey question one which focused on collaborative partners, are reflective of descriptions often provided:

Each agency brings to the table a knowledge skill set and/or regulatory framework geared towards their own level of government. The district provides the non-regulatory bridge between the levels of government in a way that can be understood and/or adopted by the citizens. We are grassroots entities and trusted by our constituency in a way that other government organizations are not. This puts the district in a unique place amongst the government branches we collaborate with.
Because of the unique organizational set-up of soil and water conservation districts, we have the ability to bridge into many differing partnerships.

SWCDs have a go-getter attitude that is often limited by federal and state one-size-fits-all policies that are not flexible enough to meet local need. Higher up administrative staff at state and federal agencies need to have a better understanding of the direct impact of our work to an individual in the field and to conservation as a whole.

There are more day-to-day interactions with state partners, but there seems to be a higher commitment to goals and the best collaborative process when dealing specifically with NGO partners. This is an area of growth needed at the district level.

Many of the respondents, and reflective in the quotes above also, did more than recognize that the district resource capacity was low but articulated the value the district brings to its collaborative ventures as access. Districts have a close relationship in the community and have established trust with producers and homeowners. The access that districts have with local community members to discuss conservation was viewed by survey respondents as an advantage that no other collaborative partner could truly bring to the table.

**Question 2:** How often does a county representative/partner attend your local monthly board meeting? If you serve multiple counties please briefly explain or indicate if there are varying relationships between localities and why this may be the case?
Responses were extremely varied on this issue. While some participants indicated relationships with local partners where a local representative attends every district board meeting and likewise a district official attends local meetings regularly, others just as often indicated that representation by a county representative were infrequent if non-existent. Responses finding middle ground noted that written reports are often submitted by local partners to the soil and water conservation district to be shared at open board meetings. The chosen responses below indicate this varying level of response when asked about local representative membership:

A local representative usually attends quarterly unless otherwise requested. This does not mean a lack of support though as our district staff attends county meetings such as the monthly local Department Head Meetings and the quarterly County Conservation Roundtable.

Our county does on occasion attend district board meetings but we more often than not reach out to them in different ways than through board meeting action. The district holds a year end event in which local representatives make a point to attend. District board members take turns meeting with or connecting over lunch with local representatives. We have learned the value with our locality is much more enhanced with one-on-one connections and not having the county always at the monthly board meeting does not diminish efforts for collaboration.

Every month at our local board meeting we have a representative attend from our locality, DCR and NRCS. This ensures we as a collaborative group are on the same page.
Never do we have county representatives attend our local meetings. This has been an area of change. Many years ago representatives from localities as well as various partners regularly attended monthly meetings. It is my opinion that our current relationship with our localities is at an all-time low. It is our responsibility as a district to ensure our partners are aware of our efforts and without question this is a point of needed growth at our individual district and among many of our neighboring districts.

These responses would indicate many at the district level relying on informal interaction with county representatives. One-on-one communication is valuable according to many director respondents. This informal interaction proves important to collaboration but also in accordance with the literature can prove risky to sustain if collaboration is occurring more as a result of individuals and personalities rather than also be grounded in the organization. This may pose a problem when directors or staff, with longer tenure at the district, decide to step down and retire as these informal interactions may be lost.

**Question 3:** How has the idea of collaboration changed with your partners in the last five years?

This open-ended question, which focused on the changing dynamics of collaborative partnerships, yielded the most response from participants of all the open-ended questions in the survey. Responses indicated a declining relationship with the Virginia Department of Conservation & Recreation and barriers that have made collaborations difficult with the primary federal partner, the Natural Resource Conservation Service. While certain collaborations have experienced challenges, respondents noted an increase in collaborations with nonprofits and non-governmental organizations.
The issue of declining collaborations and overall relationship with the Department of Conservation & Recreation needs further exploration. Multiple survey answers indicated an unbalanced partnership noting feelings that the Department of Conservation & Recreation has an attitude of being the higher authority in partnerships and collaborations rather than an equal. As a result, many also indicated that overall water quality improvement success may have been impacted because of territorial issues among partners. Responses overwhelmingly shared this concern and the chosen quotes below summarize the feelings of the majority of respondents.

State and federal partnerships—and collaboration efforts—with local SWCDs is unbalanced. In recent years, the state, specifically DCR, has seen our partnership less as the collaborative it is intended to be and more of a top-down approach which has stifled our efforts, damaged our communication and trust which is core to our success. We have each become more guarded with our information which is disappointing when together we can do so much more. With political changes [at the state level], there is hope for better balance and better collaboration.

SWCDs have become less an equal partner and more dictated to by our federal and state partners. SWCDs have less resources, mainly funding, than our state and federal partners but that does not diminish the expertise we bring to our collaborative efforts. SWCDs have an expertise in the field and rapport with the community that no other member of our collaboration has. This imbalance has led to trust issues, specifically with state level partners and a tendency for each partner to go their own way.
Both federal and state partners seem to be moving away from collaboration and instead handling efforts otherwise in silos. This is a significant loss for our overall shared goal.

Collaborations themselves have morphed depending upon changes in laws, regulations or funding sources. For example, our efforts and collaboration with the Department of Environmental Quality have increased. Districts have always had limited resources but changing collaborations with state and federal partners and a recent decline in assistance has forced us to expand efforts and develop a new way of thinking.

Collaborations have been tense at times with state and federal partners. It is important to take politics and personalities out of the equation in order to ensure conservation is implemented.

Perhaps because of the issues experienced with state and federal changes, districts have started expanding their networks. A high number of respondents indicated efforts to enter collaborative projects with new, unreached organizations. This desire is indicated in a sample of responses below:

In the past two years collaboration with local and regional nonprofits has become a major focus for the district.

Over the past five years we have worked to increase relationships and collaborations with non-traditional partners in our community such as watershed organizations, garden clubs, master naturalists, etc.
A good summary of overall feelings about changes in collaboration was captured by this respondent in saying:

I think our local relationships have improved but need continued work. Districts need assistance helping show the worth of our work to our localities and board of supervisors. At the state, a breakdown of trust has affected every aspect of the relationship. This relationship needs to be rebuilt and involve districts in the day-to-day decisions concerning programs they will be administering. Some start to this is underway. In terms of a federal aspect, again many changes have been precipitated by politics, policy and economics. How can we start to rebuild our collaborative ventures when management levels from both the state agency (DCR) and NRCS are not working together? A heart to heart is needed to ensure the goals of our organizations remain the same.

This survey question provides the most insight into not only how the Association of Soil & Water Conservation Districts can be of help in improving local district efforts but the current perception of collaboration. Very intentional was the wording of this question to include a five year period, which covered the length of office of the past Governor of Virginia and the leadership strategies of the Department of Conservation and Recreation during this time. This study is being conducted in the early months of a new administration and these findings should prove beneficial to new leadership at the Governor’s Cabinet level and at the state Department of Conservation & Recreation, both of which have indicated a desire for heightened and enhanced collaborative efforts.
Theme: Benefits & Challenges

The following two questions in the qualitative portion of the survey focused on understanding the benefits and challenges SWCDs experience when collaborating. Many of the benefits were also noted as motivations to collaborate while challenges were often referenced as indicators to why collaboration may be stalled.

Question 4: How does your soil and water conservation district benefit from collaborating with other organizations or agencies?

Participants overwhelmingly identified numerous benefits to collaborating and reported that collaboration was very important to their local district. Common responses included citing the value of knowledge exchange from collaborative ventures and the ability to use shared staff resources and skills as well as other tangible resources. Further responses followed a theme of identifying the advantage of expanded outreach and an opportunity for increased funding. Responses also heeded that increased credibility of the organization was a significant benefit along with organizational efficiency. Most importantly, the most common response was that broader mission delivery was made possible, therefore conservation and water quality practices are implemented at greater levels that otherwise may not have occurred. This will be explored further in Chapter V, however, it is important to point out that this level of response indicates both resource dependency and relational exchange motivations for entering into collaborative ventures.

The following responses are examples of responses received and illustrate this multi-layered benefit to collaboration:
The ultimate benefit is improved water quality and therefore the reason we collaborate—to have collective impact. Staff and directors receive greater experience by collaborating. We benefit from pooled resources, greater marketing and outreach efforts and in the end allows for better future opportunities because the district is in the know.

We benefit from knowing and learning from each other and of the challenges we each individually face as organizations. We therefore can seek common ground on shared projects and do that much more to improve conservation on the ground.

Collaboration helps stretch resources (staff time and money). Also collaboration helps expand our knowledge base. If the district then doesn’t know how to do something we can then call on a partner to assist and support as needed. Increased expertise, increased outreach potential, increased credibility with both other partners and constituents, and increased funding are all benefits received.

Collaborating has often meant operating more efficiently and maximizing resources. Together we can leverage our efforts for greater benefit.

**Question 5:** What are the challenges your SWCD encounters when collaborating with other organizations?

When asked about challenges to collaborating there was no question that time, staff levels, and funding floated to the top as issues. These three items were repeatedly cited as challenges and reiterates the needed strengthening of the resource variable as demonstrated in the quantitative
portion of the research. The sample of responses below demonstrates key issues referenced as challenges to the collaboration process.

The biggest challenge that we face with expanding our collaborations is taking on more work with the same staff and funding. Though not a good reason, this is why we shy away from new collaborations.

Lack of funding and guidance from state agencies has proven challenging. Limited time and staff to pursue all desired efforts is a challenge. Politics and individual agendas from both fellow board members and collaborative partners has recently become an increasing concern.

There is some minimal turf battling of who will get credit for collaborative work. Multiple organizations have wanted full credit for successful outcomes.

It has more often seemed that certain partners want to be right more than they want to learn how to do a project better. Too many have too often come to the table with personal and political agendas. Personalities can then also prove challenging. This impedes collaboration.

Micromanagement has become a challenge of late as some partners want this level of control over the collaborative. With staff time, funding and other resources stretched to the max already this need for micromanagement further deteriorates our efforts.
Of interest is that this question provided the most discrepancy based on a review of responses to the research control variables. Significant numbers of staff noted that directors need to better assist in being proactive and assist in developing new collaborative ventures. Almost all citations of political and personal agendas being a challenge were cited by directors. Just as much as items mentioned are important findings, items not mentioned are also. The issue of commitment to conservation was not mentioned as a challenge. This leads one to believe that passion and energy to our cause is not a noticeable challenge. One respondent noted that a challenge was remaining autonomous while still participating in collaborative activities. This response is indicative of the level of collaboration in which they want to engage, clearly demonstrating that they desire not to be collaborating at the highest possible level of integration. Additional discussion on this issue is forthcoming with a review of both current perceived levels of collaboration and desired levels of collaboration by soil and water conservation districts.

The challenges to collaboration listed by survey participants are in accordance with those cited as challenges in the literature review. Challenges noted, it is important that an overwhelming majority of respondents indicated that the benefits far outweigh the challenges to collaborating.

**Theme: Resources & Strategies**

The final two questions in the survey were extremely open ended in an attempt to learn what types of resources districts currently use to enhance collaborations as well as provide for examples of collaborative strategies, events, or processes that districts currently engage in that may be meaningful to understanding collaboration efforts in general.
Question 6: What resources does your SWCD turn to for ideas and best practices on the use of collaboration? For example do you look to other organizations, reference books, articles or publications, consult a collaborative expert or use other resources?

Participants commonly noted a lack of using official resources such as reference books or a collaborative expert but frequently cited the value of networking and more specifically looking to other soil and water conservation districts for collaborative insight. Specific examples of networking venues that serve as a resource to learning about collaboration included the Virginia Association of Soil & Water Conservation Districts annual meeting and the Environment Virginia Symposium hosted by the Virginia Military Institute. These two events, both mentioned multiple times by respondents as a resource, bring together hundreds of individuals working on conservation and environmental efforts. Additionally, multiple individuals noted the Virginia Association of Soil & Water Conservation Districts serves as a resource to districts for learning best practices on the use of collaboration. These responses demonstrate an identifiable theme that district staff and officials are using conferences and key partners as a primary resource for collaboration. As critical a finding is that an overwhelming number of respondents noted not only a lack of utilizing resources other than networking, but noted that this may be a gap in their efforts in which training may be needed. The following quotes reflect the typical response received:

Networking at and attending meetings, workshops, forums, and training is our number one way of generating ideas and expanding collaborations. A good example and resource is the VASWCD Annual Meeting and Environment Virginia Conference.
Good question. I don’t know if our district has ever thought to look for resources to help with collaboration. Our district will need to address this topic.

Typically our SWCD utilizes conferences and workshops to garner new ideas. Programs through UVA and GMU—School of Conflict Analysis and Resolution are trusted sources. The VASWCD Annual Meeting is a good event for learning collaborative ideas. I also review journals such as “Planning” which have terrific case studies on the collaborative processes. Finally, word of mouth and direct contact with similar organizations are important outlets.

The VASWCD is a valuable resource as are other SWCDs and partner agencies. Both the VASWCD as well as other SWCDs have always been willing to offer support and assistance to our district when needed. They have shared information and resources freely. Districts often look to each other for information and resources. It is rare that our District, or I believe any district, has to hire an expert for consultation as what is needed can typically be found from within our collaborative group of partners.

We utilize resources from the VASWCD, other districts, and attend conferences such as the annual meeting. Unfortunately we do not seek out—formally at least—specific practices/techniques for collaboration. As a result this may be an item for needed growth and potential training in order to learn if there are collaborative processes we should be keeping in mind.
Question 7: What collaborative strategies can you share? Have you built relationships to enhance collaboration at your local SWCD? Are there examples of events or processes that your SWCD utilizes to foster collaboration?

Survey participants were also asked a very broad question related to types of collaboration strategies used and were requested to provide any examples of events or activities that may serve as good examples to fostering collaboration. Participants responded more generally to the question with only a few providing specific examples or model collaborative efforts. Like previous responses, a common trend is to rely on networking and relationship building to enhance collaborations. Across the board, noted by a significant majority of respondents, establishing strong communication outlets, building trust, and understanding partners was cited as critical to building collaborative efforts. Many also made note that providing recognition and thanks to collaborative partners when they achieved successful outcomes together was important. Directors and staff both cited repeatedly that great value and the district advantage is found in its personal outreach capabilities and that direct grassroots work with community members is a continued collaborative in and of itself that should not be overlooked. The following quotes provide a strong sampling of responses received and shed light on general collaboration strategies utilized:

Again, networking is the best way to develop relationships with other organizations and build collaborative efforts. When district staff are encouraged to attend workshops, seminars and to participate in local committees of their choosing that means that staff are constantly interacting with others and serving as a strong face of the district. Those interactions must be encouraged by all staff and even directors. However, as a director I find it important to allow
staff to pursue things of interest to their job, even if it does not exactly fit within their job description. Flexibility.

We do our best to know our members of the local Board of Supervisors, our state senator and representatives on a first name basis. We always go out of our way to connect with them.

Having a presence is important. Our district works to be visible and helpful to the community, partners, etc be it at local and state events, local celebrations, meetings with county officials or otherwise.

About four years ago our district staff went through an exercise to reign us back in from trying to be everything to everybody in our community. We listed everything we do and then put each item into one of the following columns: essential to exist, fulfills our goals, fulfills our mission. Anything that did not fall into one of those categories was stopped. Those items left led us to build strong relationships that support our goal and mission and enhance our most important collaborative ventures.

We collaborate with partners and through joint planning, leveraging of funds and continued efforts can improve conservation on the ground. Personal outreach—individual to individual—is the strong suit of the district. Our most important relationships are with the client—the individual constituent collaborating with the district for technical assistance should not be diminished in importance. This may be our most important collaboration.
More specifically, some respondents provided examples for improving collaborations. Various responses indicated certain activities such as simply exhibiting outside of a board of supervisors meeting room later allowed for initial conversations to begin about larger collaborative efforts. Three respondents made reference to the Falls Hill project, in their response, as a model collaborative project. The Falls Hill project was an effort of a local SWCD in partnership with Fairfax County and other key organizations which piloted a groundbreaking low impact development demonstration project in the Falls Hill neighborhood. Another district respondent noted outreach efforts had been expanded to a new audience and new partner by working with their local school superintendent and participating in Back to School Day, where students annually register and return to class in August. This venue was explained by the respondent as a way to open the door for future collaborations with the school system and through that event more directly with the community. Annual Farmer events such as cookouts and breakfasts, Farm Field Days for students, presentation of the SWCD annual report to county officials were also cited as examples of successful events and activities that have not only involved collaborations with partners, but built on local soil and water conservation district collaborative efforts.

SWCD Collaboration Stage Level: Current Versus Ideal

The Wilder Collaborative Factors Inventory through a series of questions captured collaboration scores indicative of current collaboration levels based on six established variables impacting collaboration. While each variable was earlier reviewed, the scale as a whole assessed the overall level of collaboration. The one to five scale as used in the survey was intentional, modeling the Horwath and Morrison five level scale of collaboration theory as discussed in Chapter II. By finding the mean score of all six independent variables from the Factors Inventory, survey responses showed a collaboration level of 3.67 overall for collaboration, the dependent variable. Based on
Horwath and Morrison and Mattessich, Murray-Close and Monsey, low levels of collaboration occur at a score of one and involves solely communication. Collaboration levels then increase from (1) communication to (2) cooperation, (3) co-ordination, (4) coalition, and (5) integration. Currently, soil and water conservation districts are demonstrating higher levels of collaboration venturing between co-ordination and coalition levels, leaning more towards coalition, indicative by finding a mean score of 3.67 overall. As collaboration increases to coalition, there is more joint decision making, work to shared goals and targets, which leads to higher sacrifices of autonomy and greater accountability to the partnership.

The final question of the survey explained that collaboration occurs on this five level scale of low to high levels and asked district directors and staff “if funding was not an issue at your local district, at what level would you like to see your SWCD collaborating with partners?” The question intentionally noted that funding needs not weigh into the response as this was foreseen as a critical need for districts that per the literature review will also drive collaborative ventures. The fact the resource variable in the quantitative review was the lowest scoring collaboration variable further proves that including this caveat to the question was important. While currently districts are collaborating in-between co-ordination and coalition stages (3.67 mean), survey participants preferred to see their district operating closer to stage level four—coalition—based on a mode response of four. Both current levels of collaboration and desired levels of collaboration demonstrated mean scores of 3.67. This demonstrates that districts do not desire to achieve integration, or stage level five on the collaboration scale but prefer to operate closer to stage four—coalition—and are currently operating near their desired levels.

Qualitative data shed light on reasoning that districts may prefer to operate at a stage level just lower than integration. Districts have a trust with community members and directors and staff noted a close collaborative connection with this group throughout responses. Many indicated issues
of late with government collaborative partners. The choice to operate below integration appears strategic and demonstrates a desire to collaborate with government partners also referred to as a “very bureaucratic and often regulatory partner” by one respondent but not to become ‘integrated’ with the collaborative so not to break a spirit of trust with community members relying on districts to voice a voluntary approach, as opposed to regulatory, for improving water quality.

While overall both mean scores for desired levels of collaboration and current levels of collaboration are near identical, there are differences based on an analysis of control variables that are worthy of review. For example, directors appeared to prefer to operate at lower levels of collaboration (3.57 mean, standard deviation 1.03), compared to staff (3.81 mean, standard deviation 0.98). However, the mode response was a four (4) by directors and a collaborative level of three (3) for staff. This gap is statistically insignificant.

We must then review female vs. male levels keeping in mind that staff levels are more female oriented and directors more male. Male desired levels of collaboration were statistically lower than female desired levels. The male mean score for desired collaboration fell at 3.49 with a mode of three and a standard deviation of 1.05. This compares with females desiring a collaborative level of 3.95 with a mode of four and standard deviation of 1.06. This finding corroborates that found in the literature. Irrespective of one’s cultural origin, women, more so than men, are more likely to collaborate and express a clear desire to collaborate even more than they already do—a desire that men don't appear to share (Bear & Woolley, 2011). Further there is great need to encourage this desired collaboration among females in the SWCD field as “Recent evidence strongly suggests that team collaboration is greatly improved by the presence of women in the group, and this effect is primarily explained by benefits to group processes. In light of the importance of collaboration in science, promoting the role of women in the field can have positive practical consequences for science and technology” (Bear & Woolley, 2011, p.146).
A final remaining finding recognizable when comparing current versus ideal levels of collaboration is rather noticeable and of most interest when analyzed by geographic soil and water conservation district area. Desired levels of collaboration for areas I-V fell between 3.62 and 3.83 based on mean scores, or a range of 0.21. Area VI, Southeast Virginia, however had a lower desired level of collaboration with a mean of 3.29 and a mode response of 2. The standard deviation score does provide insight that there was greater inconsistency in response at 1.15 but the fact still remains that Area VI desired collaborative levels trend lower than the other areas. Area VI responses were also primarily director driven. This item may need further exploration in further research to determine if this is a cultural perception of collaboration in the area or if there are other underlying reasons for desiring to collaborate with partners less. Current perceived levels of collaboration compared to desired levels of district collaboration is explained in chart form in Appendix K.

Summary

This Chapter presented findings as they related to the purpose of the study and the related research questions. In addition statistical data, including distribution frequencies, measures of central tendency and measures of variation were presented. The Collaborative Factors Inventory showed overall room to strengthen collaborative variables—most notably the resource variable as a whole—but provided further indicators or sub-factors to hone in on and strengthen such as funding, staffing levels, open communication, and trust.

The findings also showed that overall perceived levels of collaboration were occurring between level 3 and 4—coordination and coalition—on a five point Likert type scale. Overall, desired levels of collaboration are extremely close to current perceived levels but still provide and shed light on some specific areas of improvement. Both desired and current levels of
collaboration—as determined by analyzing both the quantitative portion of the survey for current levels and the qualitative portion of the survey for ideal levels—obtained mean scores of 3.67 though more frequently respondents chose coalition as their desired level based on mode response.

Data from both quantitative and qualitative portions of the survey revealed research participants’ perceptions about collaboration and allowed insight into four research questions: 1) What is collaboration and how is it used by political subdivisions of state government, 2) What collaborative strategies are used by political subdivisions of state government, specifically soil and water conservation districts, 3) At what level do soil and water conservation districts currently believe they are collaborating, and 4) At what level do soil and water conservation districts prefer to collaborate—in other words what is the ideal level of collaboration compared to current perceived levels of collaboration.

In Chapter V, the research results are revisited and major conclusions drawn. An interpretation of the findings is stated, conclusions are discussed, and recommendations for further research are presented.
CHAPTER V

SUMMARY, DISCUSSION & RECOMMENDATIONS

Introduction

Chapter I provided a framework for researching collaboration levels among political subdivisions of state government, specifically Virginia’s 47 soil and water conservation districts. It highlighted the critical importance of collaboration and the recognition that collaborative ventures are more often becoming the norm, yet also made evident the fact that existing research stops short of explaining collaboration among unique entities like soil and water conservation districts. Chapter II explored the history and need for the soil and water conservation movement, applicable existing research and addressed theoretical frameworks to collaboration as well as theory related to motivations of collaboration. The literature review in Chapter II further made evident the research gap in understanding the general use of collaboration among political subdivisions of state government. Recognizing this gap, Chapter III presented the methods, materials, and procedures to obtain and analyze the necessary data for the research and help shed light on existing gaps in literature. Chapter III provided detailed information on the survey tool that would measure perceptions of collaboration among soil and water conservation districts. In Chapter IV, the findings of the exploratory research study were presented and initial conclusions stated with additional indication that this would be the primary focus of Chapter V. This final chapter, Chapter V, presents a summary of the study, reviews the research purpose, design and method as well as synthesizes findings. Additionally, Chapter V focuses on the relevance of the analysis. Conclusions will be made, application of suggested efforts by soil and water conservation districts presented and recommendations for further research explored.
Purpose of the Study

Without having a baseline understanding of current levels of collaboration among soil and water conservation districts, it is difficult to truly move collaborative efforts forward. A mixed methods research study approach was used to examine the current levels of collaboration and the collaborative strategies, techniques, and relationships of Virginia’s 47 Soil and Water Conservation Districts. The direction of the research study was guided by the following questions:

1. What is collaboration, and how is it used by political subdivisions of state government?
2. What collaborative strategies are used by political subdivisions of state government specifically soil and water conservation districts?
3. At what level do soil and water conservation districts currently believe they are collaborating?
4. At what level do soil and water conservation districts prefer to collaborate—in other words what is the ideal level of collaboration?

The objective of the study is to further contribute to the field of public administration research, providing greater explanation to understanding the impact of collaboration on environmental policy, with specific emphasis on soil and water conservation districts. The findings, conclusions, and recommendations—driven by the above referenced questions—will prove worthwhile to all partners within the SWCD collaborative and allow others to gain insight into the collaborative strategies used by political subdivisions of state government.
Summary of the Research Approach

The study, exploratory in nature, utilized a mixed methods—both quantitative and qualitative—cross sectional research design. A survey instrument utilizing both closed and open-ended questions was developed. The quantitative portion of the survey—focused on measuring current levels of collaboration—utilized the Wilder Collaborative Factors Inventory, a proven survey instrument tool that captures perceived levels of collaboration. The survey instrument captures both collaboration levels overall at an organizational level using a Likert (one-five level) scale but breaks down collaboration into six equally important variables of success — environment, membership, process and structure, communication, purpose, and resources — and measures the current perceived levels of each independent variable and its sub-factors. Open-ended, more qualitative, questions focused on themes of collaborative structures, the benefits and challenges to collaboration, and the resources or strategies soil and water districts utilize when collaborating. A final question measured the desired level of collaborative efforts that the soil and water conservation district local collaborative would like to be involved. Qualitative questions were developed based on previous research and survey instruments identified in the literature review, and with guidance and direction directly from the President of the Virginia Association of Soil & Water Conservation Districts as well as other executive board members. Support from the VASWCD was provided for the study and a letter signifying this to the researcher can be found in Appendix A.

The study focused solely on the soil and water conservation district population in an attempt to learn how the organization itself views its collaborative ventures. Outside partners were not included in this research study. Rather, the study focused on perceptions of collaboration of soil and water conservation district officials and staff. As soil and water conservation district boards are comprised of appointed, elected and associate directors, each of these populations were included in
the research. All soil and water district staffers, approximately 150 based on information provided by the Virginia Association of Soil & Water Conservation Districts, were included in the research study, as well, in an attempt to learn if perceptions of collaboration differ between board members and staff implementing board action. The survey instrument was designed to help fill the research gap and better explain the collaborative strategies and variables impacting and influencing collaboration among political subdivisions of state government. The research was intended to be exploratory in nature and gain ground in understanding the concept of collaboration at a most grassroots level.

After IRB approval, both the VASWCD President in support of the research and the researcher reached out to the full population—all 330 directors and 150 staffers—and presented information on the research study, explained efforts underway, and encouraged participation in the online collaboration survey. All detailed correspondence sent to participants from both the President of the Virginia Association of Soil & Water Conservation Districts and the researcher can be found in Appendix B, Appendix C and Appendix D.

Survey participants were provided four weeks to respond to the Collaboration Factors Inventory Survey. Participants were clearly informed their responses were anonymous and confidential. Further, participants were notified that results would be shared with the full soil and water conservation district community in an effort to educate, inform and improve upon current collaborative efforts. A final copy of the survey including all questions asked of participants can be found in Appendix G.

A total of 253 surveys were returned completed out of a possible 480 yielding an overall response rate of 52.7% based on a total population of approximately 330 directors and 150 staff. Staff responses were significantly higher with 71.3% or 107 of 150 responses while directors demonstrated lower participation rates as 146 out of 330 surveys were returned completed or 44.2%
of the director population. While future research may want to focus on garnering a higher response rate, the findings here are still significant as a response rate over 50% is notably strong.

Additional demographic data showed 60% of actual survey respondents were directors, the remaining district staffers. Survey information showed that 57.7% of respondents have been serving a soil and water conservation district between 1-10 years. Director tenure with the district proved longer than soil and water conservation district staff informing the research that directors are more tenured in their role with the district while district staff tends to have served less time in their capacity with the district. Sixty percent of respondents were female, 40% male. However, staffers leaned more female than male (62.6% female, 37.4% male) while director responses were predominantly male driven. These demographics proved important to interpreting perceived levels of collaboration based on the six collaborative characteristics—environment, membership, process and structure, communication, purpose, and resource—measured via use of the survey tool.

**Major Findings & Discussion**

The findings presented in the previous chapter addressed in great detail via quantitative measures a relationship between respondents and the independent variables measuring collaboration. Additionally, qualitative review focused on identifying patterns, themes, common experiences, and insights as reported by participants. The following presents an overview of the major findings of the research and a descriptive analysis of the findings related to the research questions of the study:

**What is collaboration and how is it used by political subdivisions of state government?**

Based on a review of the literature and the open-ended comments from survey participants, collaboration is a mutually beneficial relationship between two or more entities working together to
achieve a common goal. Often this common goal is one that neither can achieve independently.

Collaboration can be measured on a scale determining whether organizational efforts occur at a low level of simply sharing knowledge and information, advance higher on the scale to where the group helps each party achieve its own goals, often shared goals, or reaches the highest of levels of collaboration by integrating efforts. Collaboration can be measured, when assessing an organization, by analyzing six critical variables to a successful collaboration as determined by Mattessich, Murray-Close and Monsey in *Collaboration: What Makes It Work*. These six variables—environment, membership, process and structure, communication, purpose, and resources—when assessed at high levels via the survey instrument are attributes or characteristics of a highly collaborative organization. As earlier stated in hypothesis one in Chapter III and found true, perceptions of collaboration among directors and staff among soil and water conservation districts is related to the environment, membership characteristics, process and structure, communication levels, purpose, and resources in which they embrace.

A major finding in this study was that soil and water conservation district collaborations exist for multiple reasons. Theory states, as highlighted in the literature review, that either relational exchange or resource dependency motivations drive organizations to collaborate. However, research findings showed that neither relational exchange nor resource dependency was the sole reason soil and water conservation districts collaborate with other organizations and partners. Rather, a true mix of the two theories of collaboration was identified by Virginia’s soil and water conservation district staff and directors as motivating reasons to collaborate. Soil and water conservation district staff and directors both recognized that collaborating can provide the resources, staffing and funding that resource dependency theory articulates but just as often soil and water district officials indicated a desire to collaborate for the greater good of conservation, per the parameters of relational exchange theory. When analyzing perceptions of collaboration among Virginia’s soil and
water conservation districts both motivational theories for collaboration played a significant role in
district collaborative decisions.

The literature made clear that not all collaborative efforts are worthwhile. As such,
participants also recognized that collaboration can be costly. While benefits of collaborating
outweighed the challenges according to soil and water conservation district participants,
respondents did recognize that it takes time and effort to nurture sustainable relationships.

Respondent comments also exhibited possible levels of tension between self-interest and the
collective interests of the collaboration—because of political and personal agendas brought forth by
district directors. This reiterates findings in Chapter IV that indicated districts are not collaborating
at the highest level of integration. By desiring to remain autonomous at some level rather than
dedicate all efforts to the interests and goals of the collaborative, the group fails to reach the highest
level of collaboration—integration. A difference between personal and collaborative agendas was
not only evident through qualitative review but measured in the quantitative portion of the Factors
Inventory by questioning if individuals felt a member of the collaborative could speak for the whole
group versus presenting individual opinion. Again, both quantitative and qualitative responses
showed hesitation to reach for the integration stage of collaboration when addressing issues of
autonomy and personal agendas. Directors are elected and appointed individuals and as a result it
should not seem uncommon that someone may come to the position with a personal agenda or
strong personal opinion. Open discussion may be called for to ensure all members of the
collaborative are supportive of shared goals and working towards that end when engaged in
collaborative activities. Having said that, it must be reminded that this research not only found
current perceived levels of collaboration among soil and water conservation districts but questioned
participants on the desired level of collaboration for the organization. This hesitancy, made clear
through qualitative questioning, to reach integrative levels of collaboration can be explained.
Districts actually desire to operate at a collaborative level just below integration and this may be intentional and strategic, not only because of political and personal agendas, but because of a deeply rooted understanding that districts represent the community and uphold that spirit of trust with landowners. Therefore, some level of separation is still desired by districts. By finding both current perceived levels of collaboration and desired levels, this exploratory research overcomes a significant hurdle Ziff, et al. (2010) encountered in his research “Assessing Change in Successful Collaboration Factors” as explained in Chapter II. Moving forward, having desired and current perceived levels of collaboration known will provide greater ability to focus efforts of collaborative growth. This target level of collaboration set by stakeholders through this research will prove beneficial to any future study on the topic. This will be further addressed when reviewing research questions number three and four—at what level are districts currently collaborating and at what level is collaboration desired—in this section.

This exploratory research conducted via survey instrument provided an in-depth explanation of what collaboration is to soil and water conservation districts. Findings support the definition presented in collaborative literature all while providing further explanation to how collaboration is understood on a day-to-day basis at the soil and water conservation district level.

**What collaborative strategies are used by political subdivisions of state government, specifically soil and water conservation districts?**

Collaboration strategies identified in the literature were also found to be used in practice by Virginia’s Soil and Water Conservation Districts. These strategies typically entailed relationship building via networking often done through conferences as well as one-on-one communication with key collaborative partners. Other strategies included disseminating information, initiating dialogues, and ensuring that organizational activities fall within organizational goals. Many districts provided
specific examples of events and activities that enhance collaborative opportunities which illustrated one of the above mentioned strategies.

Very few districts reported having referenced resources such as journals, publications or an outside trainer, though many commented this may be an item of needed growth and guidance. Looking forward, the Virginia Association of Soil & Water Conservation Districts may be in a position to offer training and discussion on this topic to benefit district staff and directors.

In order to build on collaboration, it was noted that one has to understand what may be holding back collaborative opportunities. This strategy is an important one noted by multiple respondents. Multiple respondents indicated that strategizing sessions are important to building collaborative synergy. By involving key partners—often political leaders and policy makers—in the dialogue process at the district level, collaborative innovation, and ultimately policy innovation, can be made possible.

**At what level do soil and water conservation districts believe they are currently collaborating?**

Hypothesis two, as noted in Chapter III, stated that current overall levels of collaboration are occurring at stage three or the coordination level—based upon the five point scale of Horwath and Morrison measured by the Wilder Factors Collaborative Inventory. Per our findings in Chapter IV, we can conclude that current levels of collaboration are in fact occurring near, yet slightly higher than, the hypothesized level. Per analysis guidance from the Wilder Collaboration Factors Inventory, a calculation of mean score for each of the six variables that define collaborative success shows soil and water conservation districts currently operate at roughly a level of 3.67, higher than hypothesized yet still demonstrating room for improvement. Collaborative levels are occurring slightly higher than merely coordination efforts and slightly lower than coalition levels.
By providing further insight into collaboration indicators and reviewing at what level collaboration is occurring based on each of the six collaboration variables, there is greater ability to recognize where improvements can be made to strengthen collaborative efforts. When looking at the mean scores for each of the six collaboration variables—as a series of multiple questions may be involved in measuring one variable—the resource variable needed the greatest improvement with a mean score of 2.96. Scores below a 2.9, per the Wilder Collaboration Factors Inventory survey and its explanation of use in the second edition of *Collaboration: What Makes It Work*, are items of significant concern and potentially impeding success of the collaborative. On the other hand, the purpose variable was the strongest scoring collaboration variable, based on mean score, and demonstrates that there is agreement on the reason for existence of the collaborative and a commitment to the vision the collaborative group seeks.

The remaining collaboration variables measured—environment, membership, process and structure, and communication—all had mean scores of 3.56-3.99. Variables scoring in this range are border-line and show need for continued review. Recommendations will be offered later in Chapter V that include a training plan and targeted efforts by the Virginia Association of Soil & Water Conservation Districts to provide assistance with, facilitate discussions, and provide strategies for improving these variables. This may take the form of training based on area needs as identified in Chapter IV or may result in facilitating discussion between partners and districts to review research findings and address items of most importance. Together as a collaborative, the district can determine a plan to enhance efforts.

Findings make light of the fact that resources are lacking. From a public administration standpoint, this is a critically important item to note because without resources, meeting important shared objectives will be difficult. For example, the Commonwealth of Virginia is under direction by the Environmental Protection Agency to meet Chesapeake Bay watershed clean-up goals by
2025 and in the interim milestone goals by 2017. If districts continue to lack resources then meeting the shared goals of the collaborative—water quality improvement at the required levels—may prove impossible.

The environment variable measured the political and social climate and its support of collaborative efforts. The district community perceived that the political and social climate is poised and supportive of efforts. However, resource needs are perceived at low levels. Educating key government officials on district work appears to be more a strength than not for district directors and staff. This would therefore mean that “those who control the resources” are supporting district efforts but that this level of support has yet to be translated into increased resources within specifically the state budget.

Data showed that currently, based on quantitative data, trust levels are low with a mean score of 3.01 but respect, on the other hand, ranked significantly higher among respondents with a mean score of 4.19. Questions measuring the communication component variable of the survey identified this difference between trust and respect. While district staff and officials fail to trust members of the collaborative at high levels, it appears they do have a high level of respect for other’s opinions and the position they hold, potentially showing a level of high professionalism. However, the qualitative survey questions expanded on this level of detail and focused trust issue concerns towards one partner—the Department of Conservation & Recreation—at the state level. This is timely information as the Governor recently changed office and the new administration is aware of potential damaged relationships among collaborative members under past leadership that may have impacted trust levels. Trust levels among collaborative partners can be enhanced with efforts to improve the independent variable communication, based on low-scoring sub-factors such as informal communications.
An interesting number of other findings provide overall guidance on current perceived levels of collaboration. There appears to be some variance between current perceived levels of collaboration among staff and directors, with staff demonstrating higher levels of collaborative activity. This may simply be explained by the fact staff are more directly involved in district work and board action on a day-to-day basis. However, this variance may also provide insight on how to strengthen communication, which was previously demonstrated as a need. Soil and water conservation district staff must ensure that board members are aware of collaborative efforts made by staff. Open communication and continued dialogue will help improve any difference in perception of current collaborative levels by district directors and staff.

Last, perceptions of collaboration by tenure, or length of service with the district, are enlightening. The perceived level of collaboration falls for five of the six measures of collaboration when an individual has served twenty or more years. This may indicate soil and water districts are collaborating less than when these individuals began service with the district or it may be an underlying issue found when an individual has served such a great length of time. This could be indicative of why new, fresh faces are important to collaborative arrangements. Recognizing that directors with twenty years of service or more deem collaboration overall to be occurring at lower levels is worth further investigation in future research.

At what level do soil and water conservation districts prefer to collaborate—in other words what is the ideal level of collaboration?

The previous research question found that overall current perceived levels of collaboration were occurring at 3.67—between coordination and coalition stages. When district staff and directors were asked their ideal level of collaboration when funding was not an issue and were explained the stage level process of collaboration, the desired collaboration level was found to be 3.67. This
demonstrates current and desired levels are near identical, though the standard deviation at 1.02 did show responses had some variance from the mean. The mode response for desired collaborative levels being a four, on a five level scale, also demonstrates heightened collaboration levels are preferred by most. Therefore, as done here areas for growth must be explored.

Analyzing current and desired levels of collaboration show that staff desire to collaborate at higher levels than directors and that females prefer to collaborate at higher levels than males. There is some connectivity between these two items though as more staff are female. Nonetheless this does reiterate the findings of past literature. There was also difference of opinion among desired levels of collaboration based on geographic region. Five of six areas prefer to operate on the high end of the collaboration scale nearing levels of four to five based on mode response. However, Area VI respondents demonstrated a preference to collaborate at a lower level than all other areas. Area VI participants, more directors than staff, show a mode response of two and a mean of 3.29 compared to ideal collaboration scores of 3.62 to 3.82 in all other geographic areas. While more directors than staff in Area VI responded it may also be indicative of a culture of preferred less collaboration in the area. Additional research would be necessary to prove this.

The most important takeaway being that overall there is still a slight gap between current and desired levels of collaboration by the overall population. As a result, focus on improving lower scoring areas of the quantitative portion of the survey—that measured current perceived levels of collaboration—will help districts reach their desired potential.

**Recommendations & Conclusions**

As political subdivisions of state government, the collaborative efforts of soil and water conservation districts are of importance to public administration and public policy. As many of these collaborative arrangements are required via state standard district law, memorandum of
understanding or other memorandum of agreements government has already placed a weighted importance on these relationships. Very rarely though are these collaborative arrangements reviewed to understand how these partnerships are currently operating, what administration changes are needed to improve efforts, and what policy items must result to reach the shared goals of the collaborative.

The findings from this study are informative and exploratory in nature and yet still lend significantly to the limited research done in this area. Results should be helpful to soil and water conservation districts as well as collaborative partners. As results capture collaborative efforts at a current moment in time, this data provides a baseline for future development and growth. With the changing of Virginia’s Governor, cabinet level administration, and state agency oversight this survey lends itself to be a tool for incoming leadership. Having both the new Secretary of Natural Resources and Department of Conservation & Recreation director, which took office in January 2014, stated publicly a desire to improve efforts between the state and soil and water conservation districts, this research provides as an initial resource for doing so.

As a whole, soil and water conservation districts will recognize that, based on findings from the survey, collaborative improvement efforts need to first focus on enhancing open communication and improving resource needs. Identified issues of trust will improve with efforts to strengthen both of these needs first. Each local soil and water district can discuss these findings with their collaborative partners and begin to engage in the open dialogue that was found to be critically important to this type of collaborative arrangement. Moreover, the Virginia Association of Soil & Water Conservation Districts, a uniting voice for Virginia’s 47 soil and water districts, will continue to be an advocate for districts but can do so with focus tailored on the most critical of district needs—resources.
Likewise, training opportunities can be organized and provided by the Virginia Association of Soil & Water Conservation Districts with support from federal and state partners. These training opportunities should be dedicated to strengthening lower scoring aspects from the collaboration survey, for example open communication. Facilitated open discussions, reviewing collaborative efforts, and providing skills to enhance collaborative ventures can be items organized by soil and water conservation districts with their respective collaborative partners. A prime example of enhancing open communication, a variable of needed improvement, is to encourage organization of a conference call bringing together those in leadership roles at the state level to openly communicate their new vision for collaboration with partners and all involved with soil and water conservation districts.

The research findings and recommendations in general will be helpful to those who are interested in conducting further research regarding collaborations and political subdivisions of state government. Despite this study being limited to the collaborative efforts and perceptions of one population, Virginia’s soil and water conservation districts, the findings of the study are useful at the following multiple levels:

1. Political Subdivisions of State Government - The collaborative needs of state, federal, and other partners with political subdivisions of state government are not unique to the SWCD community. Local government entities, transportation districts, planning district commissions, among other types of political subdivisions of state government can find value in understanding how to cultivate collaboration, the benefits and challenges to collaborating, and the various strategies used to pursue shared goals of the collaborative all of which are addressed in this research.
2. Non-governmental Organizations - Soil and water conservation districts as explained in Chapter II have many similarities to non-governmental organizations or non-profits. Additionally, as soil and water conservation districts are collaborating with these types of partners at higher levels, NGO and non-profit leaders can find value to understanding current collaborations of the district. Likewise, the organizations can apply the factors of influence to collaboration as outlined by the Amherst Wilder Foundation to their own collaborative arrangements.

3. Soil and Water Conservation Districts - To better understand their own organizational perceptions, strengthen collaborative efforts, and further incite energy around a common shared mission, SWCDs across the nation will benefit from the findings of this research study. While the larger SWCD community will benefit, Virginia’s 47 soil and water conservation districts will find the greatest value.

4. SWCD Partners - While this study only focused on the perceived level of collaboration by members of the SWCD, the research should resonate with key collaborative partners. Federal, state, and local leadership along with other SWCD collaborative partners can learn more about their joint efforts with districts and recognize where improvement is possible from the perspective of the more grassroots, community-based partner. Another partner of note, the Virginia Association of Soil & Water Conservation Districts will gain insight into the work of the districts they represent and ultimately serve as a stronger voice for district needs. Similarly, the National Association of Conservation Districts will prove a stronger organization by understanding the efforts of its member districts and in turn strengthening the network of 3,000 districts across the United States.
While many can seek value in the findings, in particular, Virginia’s SWCDs along with its key collaborative partners can benefit from reviewing the quantitative analysis and the open-ended qualitative responses district directors and staff provided. This could improve both the collaborative efforts of the soil and water conservation districts as well as enhance partner relations by deepening the understanding of district collaborative concerns, issues, and organizational constraints.

As with most research studies, there are limitations. This research utilized a cross-sectional design capturing perceptions of collaboration at one point in time because of cost, time, and feasibility issues. Future research may involve reissuing the Wilder Factors Inventory Survey with soil and water conservation district directors and staff after various recommendations for training, and improved communication and resources are implemented to determine if perceptions of collaboration have improved in needed areas.

It may also be worthwhile, for future research, to involve and collect perceptions of collaboration of both the soil and water conservation district community and members of the local district collaborative—those federal, state, and local partners among others that were referenced in survey comments. This level of future research would provide an analysis of collaboration among all involved in the collaborative. This study was intended to focus on strengthening solely the soil and water district community, however, a larger focus on examining perceptions of all soil and water district collaborative partners would be a worthwhile next step in examining collaboration.

Likewise, current findings from this study can be expanded on by breaking down information on a more cultural level. In other words, analyzing findings further than the six geographic regions of the soil and water conservation districts but also taking into account data such as agricultural acreage, type of land use, etc. that is provided in census data could provide greater insight into discrepancies of perceived and desired levels of collaboration across the state.
A final recommendation for future research would be to extend efforts outside of Virginia and examine collaboration among soil and water conservation districts across the nation in order to identify collaboration strategies and even best practices of collaboration with the intention of using the findings to improve efforts in Virginia.

Final Comments

In short, Virginia’s soil and water conservation districts are generally perceived by district officials to be highly collaborative political subdivisions of state government. Both district directors and staff recognize room for improvement and the findings of this study provide guidance to both the soil and water conservation district community and its collaborative partners on where to focus efforts to further enhance collaborative arrangements. The ultimate goal of collaboration is to achieve better results. In this particular study, collaboration was found to not only assist the district community in gaining access to needed resources but more importantly, implement conservation methods at the community level for the betterment of the environment. Better articulated in the words of one respondent, “Collaboration is a result of the shared hope of the district and its partners in making our great outdoors one to enjoy for generations to come. That shared hope, that mutual goal and desire to preserve our natural resources will keep us forging ahead, working together, and collaborating for years to come.”
REFERENCES
REFERENCES


APPENDICES

Appendix A: VASWCD Letter of Support of Research

Virginia Association of Soil and Water Conservation Districts
7308 Hanover Green Drive, Suite 100, Mechanicsville, VA 23111-1793
(804) 559-0324 • Fax (804) 559-0325 • www.vaswcd.org

August 2, 2013

Letter of Support

RE: Dissertation Work on Understanding Collaboration among Political Subdivisions of State Government – Examining the Perceptions and Use of Collaboration by Virginia’s Soil & Water Conservation Districts

Ms. Tyree,

The purpose of this letter is to acknowledge that the Virginia Association of Soil & Water Conservation Districts supports your dissertation research project in which you will be assessing perceptions of collaboration among both SWCD directors and staff among the Commonwealth’s 47 soil and water conservation districts. I personally, as VASWCD President, agree to send correspondence to district directors and staff introducing your work, informing participants of the Association’s support, and encouraging participation. The VASWCD will assist you in your research efforts as needed.

The Virginia Association of Soil & Water Conservation Districts also grants you permission to use the 2013 directory and VASWCD email distribution lists to contact, inform and distribute information on your research as well as the survey instrument. Additionally, you are granted permission to use the VASWCD survey software package LimeSurvey hosted on our secure server to develop and implement the collaboration factors inventory survey.

The VASWCD asks that you share your findings at the conclusion of your research project so that it may enlighten district work, enhance our collaborative efforts, and provide information on any public policy impacts.

Sincerely,

Lou Ann Wallace
President, Virginia Association of Soil & Water Conservation Districts
Appendix B: Letter from VASWCD President to Membership Introducing Study

Virginia Association of Soil and Water Conservation Districts
7308 Hanover Green Drive, Suite 100, Mechanicsville, VA 23111-1793
(804) 559-0324 • Fax (804) 559-0325 • www.vaswcd.org

Directors, Associate Directors & SWCD Staff,

The VASWCD Executive Director, Kendall Tyree, is conducting a research project as part of her dissertation graduate work at Virginia Commonwealth University focused on better understanding the collaborative efforts of soil and water conservation districts. The VASWCD Board is aware of this research and is fully supportive.

Soil and water conservation districts achieve our work on the basis of being collaborative entities at a grassroots level. Ms. Tyree’s research will help districts as a whole by assessing our current perceived levels of collaboration, identifying factors that influence our collaborative processes, and will indicate themes and examples of successful methods of collaboration among our districts.

This research will allow us to gain perspective on our current activities as well as provide guidance to ensure SWCDs are poised for future success. All districts will have something to learn from this exercise and Ms. Tyree has promised to share her research with each of us for the betterment of districts.

In the coming days, you will receive an electronic survey on this matter and I strongly encourage you to take a few minutes to complete the survey and comply with her request. The more input and participation received the more valuable the research findings and our lessons learned.

In the meantime if you have any questions about this research please don’t hesitate to contact Kendall Tyree directly at Kendall.Tyree@vaswcd.org.

Sincerely,

Lou Ann Wallace
President, Virginia Association of Soil & Water Conservation Districts

CC: Kendall Elaine Tyree
    VASWCD Executive Director
    Student, VCU Wilder School of Government
    Email: kendall.tyree@vaswcd.org
    Phone: (804) 559-0324
Appendix C: Letter on Research Overview & Survey Information from Researcher

To: All District Directors, Associate Directors & Staff
Subject: Virginia SWCD Collaboration Factors Survey Research

The distribution of this email and the link to the attached survey was briefly explained in a previous email sent by VASWCD President, Lou Ann Wallace, dated October 24. As many of you know, I serve as the Executive Director for the Virginia Association of Soil & Water Conservation Districts. However, I am also pursuing my Ph.D. graduate degree through Virginia Commonwealth University. As my dissertation research, I am studying the collaborative efforts of soil and water conservation districts.

The questionnaire found at—http://vaswcd.org/lime/index.php/survey/index/sid/397883/newtest/Y/lang/en—is intended to help Virginia’s SWCDs assess its strengths on factors that research has shown are critical for the success of collaborative projects. In order to learn from each other the key to successful collaboration, we must understand what collaboration is to soil and water conservation districts, how and why it is being used, and what techniques or strategies are currently being utilized to successfully foster collaboration. With a better understanding of the methods of cross sector collaborations that are currently underway among soil and water conservation districts we can better educate, inform, and build all 47 soil and water conservation districts across the Commonwealth of Virginia. With this baseline understanding we can also ultimately improve public policy and our partnerships.

Your participation is voluntary. Completion of the electronic survey implies consent to participate in the research. In the interest of confidentiality, you will not be asked for your name, however, a number of demographic questions including your SWCD position, length of service, and gender will be requested of you. Despite this, information will not be used to disclose the identity of any individual and research findings will be reported in the aggregate.

Your VASWCD supports this research and encourages everyone—directors, associates, and staff from all districts—to participate in order for our research findings to be more robust and enhance the greater network of SWCDs. Your opinion is important even if it is different from others. I ask that you complete the survey recognizing that your local SWCD is a community based collaborative and that your perceptions of the SWCDs collaborative efforts with partners is important to our organizational success. Please submit your responses to the survey electronically no later than November 22, 2013.

Should you have any questions or concerns specific to the survey or the research in general please do not hesitate to contact me via e-mail or telephone. I look forward to sharing the results of my research and hope all 47 SWCDs will find this information beneficial to our shared work.

Sincerely,
Kendall Elaine Tyree
Email: kendall.tyree@vaswcd.org/Phone: (804) 559-0324
Appendix D: Letter on Research Information & Board Item Request to SWCD DM & Chairman

District Chairman & District Manager,

You should have previously received an email from VASWCD President Lou Ann Wallace as well as notice from myself regarding a research project underway assessing perceptions of collaboration among Virginia’s 47 SWCDs.

As a leader in your district I come to you seeking support of this study and request your assistance with ensuring our research proves valuable. I encourage you to participate in this voluntary survey and request that you encourage your fellow district directors, associate and SWCD staff do the same.

I request that you please also include this topic as an upcoming agenda item during your monthly board meeting and inform your fellow directors and staff that this information is to assist all districts and will provide real answers on how we can better collaborate with our partners.

Please share during your board meeting the following items about this research:

- Research focused on SWCD collaborative efforts is being conducted by the VASWCD Executive Director, Kendall Tyree as dissertation research for her PhD and is supported by the Virginia Association of Soil & Water Conservation Districts.
- The study is guided by the following research questions: What is collaboration and how is it used by SWCDs, what collaborative strategies/methods are being utilized successfully by SWCDs, at what level are SWCDs currently collaborating based on collaboration framework theory, and what attributes are characteristic of a highly collaborative SWCD.
- Surveys are confidential and your name will not be asked of you. Demographic information such as your SWCD position, length of service and gender are requested, however; this information will not be used to disclose the identity of any individual. Research results will be shared in the aggregate form.
- Research findings can be shared with and presented to your district on how to improve your collaborative efforts. All research findings will be presented to the VASWCD.
- The online survey is open until close of business **November 22, 2013**. All individuals should have received the survey electronically from Kendall Tyree. Please offer directors and associate directors the opportunity to complete the online survey at the SWCD office if access to a computer would inhibit his or her participation.

I greatly appreciate your assistance on this effort and am willing to address any questions you, your board or staff may have in regards to this research. Thank you for your leadership. Again the online survey is accessible at http://vaswcd.org/lime/index.php/survey/index/sid/397883/newtest/Y/lang/en.

Sincerely,
Kendall Elaine Tyree
VASWCD Executive Director/Student, VCU Wilder School of Government
Email: kendall.tyree@vaswcd.org/Phone: (804) 559-0324
Appendix E: VCU IRB Approval Letter

TO: William Bosher
CC: Kendall Tyree
FROM: VCU IRB Panel B

On October 15, 2013 the referenced research study qualified for exemption according to 45 CFR 46.101(b), categories 2 and 3.

The information found in the electronic version of this study’s smart form and uploaded documents now represents the currently approved study, documents, and HIPAA pathway (if applicable). You may access this information by clicking the Study Number above.

If you have any questions, please contact the Office of Research Subjects Protection (ORSP) or the IRB reviewer(s) assigned to this study. The reviewer(s) assigned to your study will be listed in the History tab and on the study workspace. Click on their name to see their contact information.

Attachment – Conditions of Exempt Approval

Conditions of Exempt Approval:

In order to comply with federal regulations, industry standards, and the terms of this approval, the investigator must (as applicable):

1. Conduct the research as described in and required by the Protocol.
2. Provide non-English speaking patients with a translation of the approved Consent Form in the research participant’s first language. The Panel must approve the translation.
3. The following changes to the protocol must be submitted to the IRB panel for review and approval before the changes are instituted. Changes that do not meet these criteria do not have to be submitted to
the IRB. If there is a question about whether a change must be sent to the IRB please call the ORSP for clarification.

**THESE CHANGES MUST BE SUBMITTED:**
- Change in principal investigator
- Any change that increases the risk to the participant
- Addition of children, wards of the state, or prisoner participants
- Changes in survey or interview questions (addition or deletion of questions or wording) that change the level of risk or adds questions related to sexual activity, abuse, past or present illicit drug use, illegal activities, questions reasonably expected to provoke psychological anxiety, or would make participants vulnerable, or subject them to financial, psychological or medical risk
- Changes that change the category of exemption or add additional exemption categories
- Changes that add procedures or activities not covered by the exempt category(ies) under which the study was originally determined to be exempt
- Changes requiring additional participant identifiers that could impact the exempt category or determination
- Change in inclusion dates for retrospective record reviews if the new date is after the original approval date for the exempt study. (ex: The approval date for the study is 9/24/10 and the original inclusion dates were 01/01/08-06/30/10. This could be changed to 01/01/06 to 09/24/10 but not to end on 09/25/10 or later.)
- Addition of a new recruitment strategy
- Increase in the planned compensation to participants

4. Monitor all problems (anticipated and unanticipated) associated with risk to research participants or others.
5. Report Unanticipated Problems (UPs), following the VCU IRB requirements and timelines detailed in **VCU IRB WPP VIII-D**.
6. Promptly report and/or respond to all inquiries by the VCU IRB concerning the conduct of the approved research when so requested.
7. The VCU IRBs operate under the regulatory authorities as described within:
   - U.S. Department of Health and Human Services Title 45 CFR 46, Subparts A, B, C, and D (for all research, regardless of source of funding) and related guidance documents.
   - U.S. Food and Drug Administration Chapter I of Title 21 CFR 30 and 56 (for FDA regulated research only) and related guidance documents.
   - Commonwealth of Virginia Code of Virginia 32.1 Chapter 5.1 Human Research (for all research).
Appendix F: VCU Approved Review Management Plan
Activities & Interest Reporting System (AIRS)

Date: October 22, 2013
To: Kendall Elaine Tyree, MPA
    Doctoral student – Public Policy and Administration
From: Monika S. Markowitz, PhD, Chair
    Conflict of Interests Committee

Subject: Finding of Competing Financial Interests (CFI)

HM20000149 Understanding Collaboration Among Political Subdivisions of State Government: Examining
Perceptions & Use of Collaboration by Virginia’s Soil & Water Conservation Districts

VCU IRB Panel B - Exempt review

On the basis of information you provided in your Financial Interests Report (FIR), the IRB protocol, and your statement
regarding conflict of interests in your IRB application for this protocol, expedited review by the Conflict of Interests
Committee (COIC) finds that there is the appearance of a competing financial interest (CFI) with regard to
the proposed research project. The Virginia Association of Soil and Water Conservation Districts (VASWCD) is not
sponsoring the research, but is interested in the findings. Because of your employment and leadership position with the
organization, managing the appearance of CFI is appropriate.

To manage the appearance of a competing financial interest, your role at VASWCD should be disclosed in manuscripts
and presentations of the research, including your dissertation, in a manner that is consistent with journal and
professional disclosure requirements. You have already included disclosure language in the survey information letter to
be sent to prospective participants.

This finding of a CFI is an internal designation: 1) it will be reported to the IRB and 2) is not otherwise reportable.

If this management plan is acceptable to you, execute the activity "Review Management Plan" in the AIRS. The
accepted version of this letter will be maintained in your AIRS record for this protocol. Note that CFI
Management is subject to monitoring.

Thank you in advance for your cooperation with our review and management process. Please contact me at 827-2157 or
mmarkow@vcu.edu if you have questions.

cc:
Dr. William Bosher
VCU IRB
Appendix G: Survey Tool Virginia’s Soil & Water Conservation Districts

Collaboration Factors Survey

This questionnaire is to help Virginia’s SWCDs assess its strengths on the factors that research has shown are important for the success of collaborative projects. Data will be analyzed as part of a larger study on collaboration being conducted as part of the dissertation work performed by Kendall Tyree, student of the VCU PhD program in Public Policy & Administration. There are no right or wrong answers. Your opinion is important, even if it is different from the opinion of others. Your answers will not be associated with your name and will be grouped with the answers of others. Your responses will remain anonymous.

The questionnaire should take no longer than 15 minutes to complete. Each person’s data in this study will be kept confidential. Your name will not be reported, nor asked for in the questionnaire. Demographic information including your geographic area, position with the district, and professional background will be collected but all results will be reported in the aggregate. Information will not be used to disclose the identity of any individual. There are no hazards or risks involved and your consent to participate is implied by submitting a completed survey. You do not have to respond to any items that you do not want to respond to. At any time during the electronic survey you may exit and discontinue participation. Your answers will not be recorded until you elect to submit them at the conclusion of the survey.

Complete the survey recognizing that your local soil and water conservation district is a community based collaborative. With a baseline understanding of collaboration among soil and water conservation districts, also known to be the most grassroots level of conservation implementation, we can ultimately improve district collaborative efforts and strengthen districts. Your data is important to this effort. Aggregate data will be shared with your Virginia Association of Soil & Water Conservation Districts in order to enhance districts and public policy.

Instructions: Please read each item, choose the number that indicates how much you agree or disagree with each item. Ensure you hit ‘submit’ once you have completed the survey to confirm your participation and record your answers.

Scale:
1 = Strongly Disagree (SD)
2 = Disagree (D)
3 = Neutral, No Opinion
4 = Agree (A)
5 = Strongly Agree (SA)

General Information:
1. VASWCD Area in which your SWCD is affiliated: I II II IV V VI
2. Role in which you serve: Appointed Director/Elected Director/Associate Director/SWCD Staff
3. If you are an appointed, elected, or associate director, do you currently serve in or have retired from a career in conservation, natural resources or a related field? Yes/ No/ Not Applicable
4. Length of Service with SWCD: 1-5 years/ 6-10 years/11-15 years/16-20 years/20+years
5. Gender: Male/Female

Collaboration Factor Survey:

<table>
<thead>
<tr>
<th>Statements</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Agencies in our community have a history of working together.</td>
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<tr>
<td>2. Trying to solve problems through collaboration has been common in the soil and water district community. It’s been done a lot before.</td>
<td></td>
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<td>3. Leaders in this community who are not part of our collaborative group</td>
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</table>
seem hopeful about what we can accomplish.

4. There is general agreement that the organizations involved in collaborating with soil and water conservation districts are the “right” organizations to make this collaborative work.

5. The political and social climate seems to be right for the success of soil and water district collaborations.

6. The time is right organization soil and water conservation districts to be involved in collaborative projects.

7. People involved with soil and water conservation districts always trust one another.

8. I have a lot of respect for the other people involved in this collaborative.

9. The people involved in soil and water conservation district collaborative efforts represent a cross section of those who have a stake in what we are trying to accomplish.

10. All the organizations that we need working with soil and water conservation districts have become engaged and involved in efforts.

11. My soil and water conservation district benefits from collaborating with partners.

12. People involved in our collaboration are willing to compromise on important aspects of our project.

13. The organizations and members that belong to our collaborative group invest the right amount of time in our collaborative efforts.

14. Everyone who is a member of our collaborative group wants soil and water conservation districts to succeed.

15. The level of commitment among members and partners is high.

16. When the soil and water conservation district makes major decisions, there is always enough time for members and partner agencies to confer with colleagues about what the decision should be.

17. Each of the people who participate in decisions of the soil and water conservation district can speak for the entire organization, not just their individual interests.

18. There is a lot of flexibility when decisions are made; people are open to discussing different options.

19. People involved with our soil and water conservation district are open to different approaches to how we can do our work. They are willing to consider different ways of working.

20. People involved in this local grassroots collaborative have a clear sense of their roles and responsibilities.

21. There is a clear process for making decisions among partners and members at the soil and water conservation district.

22. This collaboration is able to adapt to changing conditions, such as fewer funds than expected, changing political climate, or change in leadership.

23. This group has the ability to survive even if it had to make major changes in its plan or work with new partners in order to reach its goals.

24. The soil and water conservation district has tried to take on the right amount of work at the right pace.

25. We are currently able to keep up with the work necessary to coordinate all the people, organizations, and activities related to your soil and water conservation district and its collaborative efforts.

26. People in this collaborative communicate openly with one another.

27. I am informed as often as I should be about what goes on in the
collaboration.

<table>
<thead>
<tr>
<th>Question</th>
<th>Rating</th>
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<tbody>
<tr>
<td>28. The people who lead the soil and water conservation district</td>
<td>1  2  3  4  5</td>
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<tr>
<td>collaborative efforts communicate well with other participants.</td>
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<tr>
<td>29. Communication among the people involved in your soil and water</td>
<td>1  2  3  4  5</td>
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<tr>
<td>conservation district collaborative group happens both at formal</td>
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<td>meetings and in informal ways.</td>
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<td>30. I personally have informal conversations about a project or decision</td>
<td>1  2  3  4  5</td>
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<tr>
<td>with others who are involved with our collaborative efforts.</td>
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<tr>
<td>31. I have a clear understanding of what our soil and water conservation</td>
<td>1  2  3  4  5</td>
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<tr>
<td>district as a local collaborative is trying to accomplish.</td>
<td></td>
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<tr>
<td>32. People in our collaborative group know and understand our goals.</td>
<td>1  2  3  4  5</td>
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<tr>
<td>33. People in our collaborative group at the soil and water conservation</td>
<td>1  2  3  4  5</td>
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<tr>
<td>district level have established reasonable goals.</td>
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<td>34. The people involved with the soil and water conservation districts</td>
<td>1  2  3  4  5</td>
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<tr>
<td>are dedicated to the idea that we can succeed.</td>
<td></td>
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<tr>
<td>35. My ideas about what we want to accomplish at the soil and water</td>
<td>1  2  3  4  5</td>
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<tr>
<td>conservation district seem to be the same as the ideas of others.</td>
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<tr>
<td>36. What we are trying to accomplish within our soil and water</td>
<td>1  2  3  4  5</td>
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<tr>
<td>conservation district would be difficult for any single organization to</td>
<td></td>
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<tr>
<td>accomplish by itself.</td>
<td></td>
</tr>
<tr>
<td>37. No other organization is the community is trying to do exactly what</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>we are trying to do.</td>
<td></td>
</tr>
<tr>
<td>38. Our collaborative group [your soil and water conservation district]</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>has adequate funds to do what it wants to accomplish.</td>
<td></td>
</tr>
<tr>
<td>39. Our collaborative group has adequate “people power” to do what it</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>wants to accomplish.</td>
<td></td>
</tr>
<tr>
<td>40. The people in leadership positions that are involved in our</td>
<td>1  2  3  4  5</td>
</tr>
<tr>
<td>collaborative have good skills for working with other people and</td>
<td></td>
</tr>
<tr>
<td>organizations.</td>
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</table>

Collaboration Strategies:

1. Briefly explain any differences in collaborative arrangements with your locality vs. state agency vs. federal agency or other organizations you collaborate with. Are there differences of significance when working with your various collaborative partners?

2. How does your soil and water conservation district benefit from collaborating with other organizations or agencies?

3. How has the idea of collaboration changed with your partners over the last five years?

4. What are the challenges of collaborating with other organizations that your soil and water district faces?

5. How often does a county representative or a partner organization attend your local board meeting? If you serve multiple counties please indicate or explain your varying relationships.
6. What resources does your soil and water conservation district turn to for ideas and best practices on
the use of collaboration? For example, do you look to other organizations, reference books, articles
or other publications, consult a collaborative expert, or use other resources?

7. What collaboration strategies can you share? How have you built relationships to enhance
collaboration? Are there examples of events that your SWCD has held or processes the SWCD has
utilized that have fostered collaboration with partners?

8. Collaboration occurs on a five level scale of low to high levels in the following order: (1)
Communication, (2) Cooperation, (3) Coordination, (4) Coalition, and (5) Integration.

If funding was not an issue at your local district, at what level would you like to see your SWCD
collaborating with partners? Please choose one of the following:

- Communication
- Cooperation
- Coordination
- Coalition
- Integration
Appendix H: Collaboration Factors Survey with Independent Variable and Sub-Factors Explained/Measured by Question

<table>
<thead>
<tr>
<th>Collaboration Factor Survey:</th>
<th>Survey Statements/Questions; Participants Respond on 1-5 Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV</td>
<td>Sub-Factors</td>
</tr>
<tr>
<td>ENVIRONMENT</td>
<td>History of collaboration or cooperation in the community</td>
</tr>
<tr>
<td></td>
<td>1. Agencies in our community have a history of working together.</td>
</tr>
<tr>
<td></td>
<td>2. Trying to solve problems through collaboration has been common in the soil and water district community. It’s been done a lot before.</td>
</tr>
<tr>
<td></td>
<td>Collaborative group seen as a legitimate leader in the community</td>
</tr>
<tr>
<td></td>
<td>3. Leaders in this community who are not part of our collaborative group seem hopeful about what we can accomplish.</td>
</tr>
<tr>
<td></td>
<td>4. There is general agreement that the organizations involved in collaborating with soil and water conservation districts are the “right” organizations to make this collaborative work.</td>
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<tr>
<td></td>
<td>Favorable political and social climate</td>
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<td></td>
<td>5. The political and social climate seems to be right for the success of soil and water district collaborations.</td>
</tr>
<tr>
<td></td>
<td>6. The time is right organization soil and water conservation districts to be involved in collaborative projects.</td>
</tr>
<tr>
<td>MEMBERSHIP CHARACTERISTICS</td>
<td>Mutual respect, understanding and trust</td>
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<tr>
<td></td>
<td>7. People involved with soil and water conservation districts always trust one another.</td>
</tr>
<tr>
<td></td>
<td>8. I have a lot of respect for the other people involved in this collaborative.</td>
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<tr>
<td></td>
<td>Appropriate cross section of members</td>
</tr>
<tr>
<td></td>
<td>9. The people involved in soil and water conservation district collaborative efforts represent a cross section of those who have a stake in what we are trying to accomplish.</td>
</tr>
<tr>
<td></td>
<td>10. All the organizations that we need working with soil and water conservation districts have become engaged and involved in efforts.</td>
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<tr>
<td></td>
<td>Member see collaboration as in self interest</td>
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<td></td>
<td>11. My soil and water conservation district benefits from collaborating with partners.</td>
</tr>
<tr>
<td></td>
<td>Ability to compromise</td>
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<tr>
<td></td>
<td>12. People involved in our collaboration are willing to compromise on important aspects of our project.</td>
</tr>
<tr>
<td></td>
<td>Members share a stake in both process and outcome</td>
</tr>
<tr>
<td></td>
<td>13. The organizations and members that belong to our collaborative group invest the right amount of time in our collaborative efforts.</td>
</tr>
<tr>
<td></td>
<td>14. Everyone who is a member of our collaborative group wants soil and water conservation districts to succeed.</td>
</tr>
<tr>
<td></td>
<td>15. The level of commitment among members and partners is high.</td>
</tr>
<tr>
<td></td>
<td>Multiple layers of participation</td>
</tr>
<tr>
<td></td>
<td>16. When the soil and water conservation district makes major decisions, there is always enough time for members and partner agencies to confer with colleagues about what the decision should be.</td>
</tr>
<tr>
<td></td>
<td>17. Each of the people who participate in decisions of the soil and water conservation district can speak for the entire organization, not just their individual interests.</td>
</tr>
<tr>
<td></td>
<td>Flexibility</td>
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<tr>
<td></td>
<td>18. There is a lot of flexibility when decisions are made; people are open to discussing different options.</td>
</tr>
<tr>
<td></td>
<td>19. People involved with our soil and water conservation district are open to different approaches to how we can do our work. They are willing to consider different ways of working.</td>
</tr>
<tr>
<td></td>
<td>Development of clear roles and policy guidelines</td>
</tr>
<tr>
<td></td>
<td>20. People involved in this local grassroots collaborative have a clear sense of their roles and responsibilities.</td>
</tr>
<tr>
<td>Feature</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| **Adaptability** | 21. There is a clear process for making decisions among partners and members at the soil and water conservation district.  
22. This collaboration is able to adapt to changing conditions, such as fewer funds than expected, changing political climate, or change in leadership.  
23. This group has the ability to survive even if it had to make major changes in its plan or work with new partners in order to reach its goals. |
| **Appropriate pace of development** | 24. The soil and water conservation district has tried to take on the right amount of work at the right pace.  
25. We are currently able to keep up with the work necessary to coordinate all the people, organizations, and activities related to your soil and water conservation district and its collaborative efforts. |
| **COMMUNICATION** | 26. People in this collaborative communicate openly with one another.  
27. I am informed as often as I should be about what goes on in the collaboration.  
28. The people who lead the soil and water conservation district collaborative efforts communicate well with other participants.  
29. Communication among the people involved in your soil and water conservation district collaborative group happens both at formal meetings and in informal ways.  
30. I personally have informal conversations about a project or decision with others who are involved with our collaborative efforts. |
| **Purpose** | 31. I have a clear understanding of what our soil and water conservation district as a local collaborative is trying to accomplish.  
32. People in our collaborative group know and understand our goals.  
33. People in our collaborative group at the soil and water conservation district level have established reasonable goals.  
34. The people involved with the soil and water conservation districts are dedicated to the idea that we can succeed.  
35. My ideas about what we want to accomplish at the soil and water conservation district seem to be the same as the ideas of others.  
36. What we are trying to accomplish within our soil and water conservation district would be difficult for any single organization to accomplish by itself.  
37. No other organization is the community is trying to do exactly what we are trying to do. |
| **Resources** | 38. Our collaborative group [your soil and water conservation district] has adequate funds to do what it wants to accomplish.  
39. Our collaborative group has adequate “people power” to do what it wants to accomplish.  
40. The people in leadership positions that are involved in our collaborative have good skills for working with other people and organizations. |
Appendix I: Chart Indicating Mean Score for the 20 sub-factors of the Wilder Collaborative Factor Inventory which Measure Six Independent Variables

<table>
<thead>
<tr>
<th>Collaboration Factors Inventory - 20 Sub-Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skilled leadership</td>
</tr>
<tr>
<td>Sufficient funds, staff, materials, and time</td>
</tr>
<tr>
<td>Unique purpose</td>
</tr>
<tr>
<td>Shared vision</td>
</tr>
<tr>
<td>Concrete, attainable goals and objectives</td>
</tr>
<tr>
<td>Established informal relationships and</td>
</tr>
<tr>
<td>communication links</td>
</tr>
<tr>
<td>Open and frequent communications</td>
</tr>
<tr>
<td>Appropriate pace of development</td>
</tr>
<tr>
<td>Adaptability</td>
</tr>
<tr>
<td>Development of clear roles and policy</td>
</tr>
<tr>
<td>guidelines</td>
</tr>
<tr>
<td>Flexibility</td>
</tr>
<tr>
<td>Multiple layers of participation</td>
</tr>
<tr>
<td>Members share stake in process and outcome</td>
</tr>
<tr>
<td>Ability to compromise</td>
</tr>
<tr>
<td>Members see collaboration as in self interest</td>
</tr>
<tr>
<td>Appropriate cross section of members</td>
</tr>
<tr>
<td>Mutual respect, understanding, and trust</td>
</tr>
<tr>
<td>Favorable political and social climate</td>
</tr>
<tr>
<td>Collaborative group seen as a legitimate</td>
</tr>
<tr>
<td>leader</td>
</tr>
<tr>
<td>History of collaboration or cooperation</td>
</tr>
</tbody>
</table>
Appendix J: Collaborative Variable Mean & Standard Deviation Data by Control Variable

**Collaboration Variable Mean & Standard Deviation by Position:**

<table>
<thead>
<tr>
<th></th>
<th>Environmental</th>
<th>Membership</th>
<th>Process &amp; Structure</th>
<th>Communication</th>
<th>Purpose</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Staff Mean</strong></td>
<td>3.98</td>
<td>3.65</td>
<td>3.52</td>
<td>3.80</td>
<td>3.91</td>
<td>2.96</td>
</tr>
<tr>
<td><strong>Staff SD</strong></td>
<td>0.82</td>
<td>0.99</td>
<td>0.90</td>
<td>0.84</td>
<td>0.82</td>
<td>1.20</td>
</tr>
<tr>
<td><strong>Director Mean</strong></td>
<td>3.93</td>
<td>3.59</td>
<td>3.47</td>
<td>3.76</td>
<td>3.88</td>
<td>2.91</td>
</tr>
<tr>
<td><strong>Director SD</strong></td>
<td>0.93</td>
<td>1.08</td>
<td>0.99</td>
<td>0.95</td>
<td>0.92</td>
<td>1.21</td>
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</table>

**Collaboration Variable Mean & Standard Deviation by Area:**

<table>
<thead>
<tr>
<th></th>
<th>Environmental</th>
<th>Membership</th>
<th>Process &amp; Structure</th>
<th>Communication</th>
<th>Purpose</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Area I Mean</strong></td>
<td>3.93</td>
<td>3.72</td>
<td>3.45</td>
<td>3.98</td>
<td>3.90</td>
<td>3.06</td>
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<tr>
<td><strong>Area I SD</strong></td>
<td>0.86</td>
<td>1.05</td>
<td>1.00</td>
<td>0.81</td>
<td>0.93</td>
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<tr>
<td><strong>Area II Mean</strong></td>
<td>4.04</td>
<td>3.66</td>
<td>3.51</td>
<td>3.73</td>
<td>3.94</td>
<td>3.04</td>
</tr>
<tr>
<td><strong>Area II SD</strong></td>
<td>0.89</td>
<td>1.07</td>
<td>1.04</td>
<td>0.72</td>
<td>0.96</td>
<td>1.24</td>
</tr>
<tr>
<td><strong>Area III Mean</strong></td>
<td>3.97</td>
<td>3.54</td>
<td>3.53</td>
<td>3.78</td>
<td>3.96</td>
<td>2.82</td>
</tr>
<tr>
<td><strong>Area III SD</strong></td>
<td>0.90</td>
<td>1.14</td>
<td>0.98</td>
<td>0.93</td>
<td>0.84</td>
<td>1.29</td>
</tr>
<tr>
<td><strong>Area IV Mean</strong></td>
<td>4.05</td>
<td>3.78</td>
<td>3.70</td>
<td>3.76</td>
<td>4.04</td>
<td>2.99</td>
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<tr>
<td><strong>Area IV SD</strong></td>
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<td>0.91</td>
<td>0.82</td>
<td>0.90</td>
<td>0.72</td>
<td>1.22</td>
</tr>
<tr>
<td><strong>Area V Mean</strong></td>
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<td>3.67</td>
<td>3.56</td>
<td>3.88</td>
<td>4.07</td>
<td>2.96</td>
</tr>
<tr>
<td><strong>Area V SD</strong></td>
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<td>0.97</td>
<td>0.89</td>
<td>0.77</td>
<td>0.80</td>
<td>1.16</td>
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<tr>
<td><strong>Area VI Mean</strong></td>
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<td>3.59</td>
<td>3.91</td>
<td>4.21</td>
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<tr>
<td><strong>Area VI SD</strong></td>
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<td>0.99</td>
<td>0.89</td>
<td>0.88</td>
<td>0.81</td>
<td>1.12</td>
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**Collaboration Variable Mean & Standard Deviation by Tenure:**

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<th>Process &amp; Structure</th>
<th>Communication</th>
<th>Purpose</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1-5 Yr Mean</strong></td>
<td>3.88</td>
<td>3.70</td>
<td>3.54</td>
<td>3.75</td>
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<tr>
<td><strong>1-5 Yr SD</strong></td>
<td>0.83</td>
<td>1.01</td>
<td>0.91</td>
<td>0.91</td>
<td>0.93</td>
<td>1.25</td>
</tr>
<tr>
<td><strong>6-10 Yr Mean</strong></td>
<td>4.01</td>
<td>3.63</td>
<td>3.56</td>
<td>3.74</td>
<td>3.92</td>
<td>2.99</td>
</tr>
<tr>
<td><strong>6-10 Yr SD</strong></td>
<td>0.84</td>
<td>1.00</td>
<td>0.98</td>
<td>0.94</td>
<td>0.85</td>
<td>1.17</td>
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<tr>
<td><strong>11-15 Yr Mean</strong></td>
<td>4.06</td>
<td>3.77</td>
<td>3.57</td>
<td>3.97</td>
<td>3.98</td>
<td>2.76</td>
</tr>
<tr>
<td><strong>11-15 Yr SD</strong></td>
<td>0.91</td>
<td>1.00</td>
<td>0.48</td>
<td>0.79</td>
<td>0.82</td>
<td>1.24</td>
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<tr>
<td><strong>16-20 Yr Mean</strong></td>
<td>4.08</td>
<td>3.71</td>
<td>3.71</td>
<td>4.15</td>
<td>4.29</td>
<td>3.20</td>
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<tr>
<td><strong>16-20 Yr SD</strong></td>
<td>1.00</td>
<td>1.23</td>
<td>0.92</td>
<td>0.81</td>
<td>0.71</td>
<td>1.19</td>
</tr>
<tr>
<td><strong>20+ Yr Mean</strong></td>
<td>4.09</td>
<td>3.57</td>
<td>3.53</td>
<td>3.78</td>
<td>4.18</td>
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</tr>
<tr>
<td><strong>20+ Yr SD</strong></td>
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<td>1.09</td>
<td>0.95</td>
<td>0.93</td>
<td>0.74</td>
<td>1.18</td>
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</table>
**Collaboration Variable Mean & Standard Deviation by Gender:**

<table>
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<th>Environmental</th>
<th>Membership</th>
<th>Process &amp; Structure</th>
<th>Communication</th>
<th>Purpose</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Mean</td>
<td>4.01</td>
<td>3.69</td>
<td>3.59</td>
<td>3.84</td>
<td>4.08</td>
<td>2.98</td>
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<tr>
<td>Male SD</td>
<td>0.85</td>
<td>1.03</td>
<td>0.97</td>
<td>0.91</td>
<td>0.83</td>
<td>1.21</td>
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<tr>
<td>Female Mean</td>
<td>3.98</td>
<td>3.64</td>
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<td>3.78</td>
<td>3.88</td>
<td>2.94</td>
</tr>
<tr>
<td>Female SD</td>
<td>0.89</td>
<td>1.06</td>
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<td>0.88</td>
<td>0.87</td>
<td>1.21</td>
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</table>

**Collaboration Variable Mean & Standard Deviation of Director Professional Background:**

<table>
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<tr>
<th>Director w/ Conservation Professional Background</th>
<th>Environmental</th>
<th>Membership</th>
<th>Process &amp; Structure</th>
<th>Communication</th>
<th>Purpose</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.98</td>
<td>3.64</td>
<td>3.60</td>
<td>3.90</td>
<td>4.10</td>
<td>2.96</td>
</tr>
<tr>
<td>SD</td>
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<td>1.11</td>
<td>0.92</td>
<td>0.85</td>
<td>0.80</td>
<td>1.23</td>
</tr>
<tr>
<td>Director w/out Conservation Professional Background</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>4.02</td>
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<td>3.79</td>
<td>4.06</td>
<td>2.98</td>
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<tr>
<td>SD</td>
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<td>1.04</td>
<td>1.02</td>
<td>0.99</td>
<td>0.91</td>
<td>1.22</td>
</tr>
</tbody>
</table>
Appendix K: Desired Level of Collaboration - Statistical Analysis

**Question 8:** Collaboration occurs on a five level scale of low to high levels in the following order: (1) Communication, (2) Cooperation, (3) Coordination, (4) Coalition, and (5) Integration. The diagram below shows the progression of collaboration on this five point scale. (Referenced Figure II)

If funding was not an issue at your local district, at what level would you like to see your SWCD collaborating with partners? Please choose an answer of 1-5 on the collaboration scale.

<table>
<thead>
<tr>
<th>Position</th>
<th>Desired Level Collaboration</th>
<th>Mean</th>
<th>Mode</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Director (Overall)</td>
<td></td>
<td>3.57</td>
<td>4</td>
<td>1.03</td>
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<tr>
<td>Staff</td>
<td></td>
<td>3.81</td>
<td>3</td>
<td>0.98</td>
</tr>
<tr>
<td><strong>Director Breakdown:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associate Dir</td>
<td></td>
<td>3.61</td>
<td>5</td>
<td>1.20</td>
</tr>
<tr>
<td>Appointed Director</td>
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<td>3.71</td>
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<tr>
<td>Elected Director</td>
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<td>3.50</td>
<td>4</td>
<td>1.06</td>
</tr>
<tr>
<td><strong>Gender:</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td></td>
<td>3.49</td>
<td>3</td>
<td>1.05</td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td>3.95</td>
<td>4</td>
<td>0.90</td>
</tr>
<tr>
<td><strong>Tenure:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-5 Years</td>
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<td>3.67</td>
<td>4</td>
<td>1.08</td>
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<tr>
<td>6-10 Years</td>
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<td>3.69</td>
<td>3</td>
<td>0.97</td>
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<tr>
<td>11-15 Years</td>
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<tr>
<td>16-20 Years</td>
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<tr>
<td>20+ Years</td>
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<td>5</td>
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</tr>
<tr>
<td><strong>Area:</strong></td>
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<td></td>
</tr>
<tr>
<td>Area I</td>
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<td>Area II</td>
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<td>0.96</td>
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<tr>
<td>Area III</td>
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<td>3.62</td>
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<td>1.05</td>
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<tr>
<td>Area IV</td>
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<td>3.66</td>
<td>3</td>
<td>0.92</td>
</tr>
<tr>
<td>Area V</td>
<td></td>
<td>3.65</td>
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<td>1.12</td>
</tr>
<tr>
<td>Area VI</td>
<td></td>
<td>3.29</td>
<td>2</td>
<td>1.15</td>
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<td><strong>Director Background:</strong></td>
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<td></td>
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<tr>
<td>W/out Professional Background</td>
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<td>1.07</td>
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<tr>
<td>W/ Professional Background</td>
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<td>3.61</td>
<td>4</td>
<td>0.96</td>
</tr>
<tr>
<td><strong>DESIRED Level - Overall - Full Population</strong></td>
<td></td>
<td>3.6719</td>
<td>4</td>
<td>1.02</td>
</tr>
<tr>
<td><strong>CURRENT Level Collaboration—Overall - Full</strong></td>
<td></td>
<td>3.67</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>
VITA

KENDALL ELAINE TYREE
1503 Derek Lane • Richmond, VA 23229

EDUCATION AND HONORS

  Dissertation Committee:
  Chair: Dr. William C. Bosher, Jr., L. Douglas Wilder School of Government & Public Affairs
  Dr. Meghan Gough, L. Douglas Wilder School of Government & Public Affairs
  Dr. Tom Huff, Vice Provost, VCU Life Sciences
  Dr. Randy Barrack, L. Douglas Wilder School of Government & Public Affairs
  Honors: Pi Alpha Alpha

• Masters in Public Administration, Virginia Polytechnic Institute, May 2008.

• Bachelor of Arts, Randolph-Macon College, Ashland, VA, May 2005. Major: Political Science; Minors: Spanish, Religious Studies, and Education. Honors: Magna Cum Laude, Phi Beta Kappa, Omicron Delta Kappa, Pi Sigma Alpha

WORK EXPERIENCE

• Virginia Association of Soil & Water Conservation Districts, November 2008–Present.
  VASWCD Executive Director, October 2011–Present.
  VASWCD Association Administrator, November 2008–September 2011.
Virginia Association of Soil & Water Conservation Districts Educational Foundation, November 2008–Present. VASWCDEF is the 501(c)(3) Foundation of the VASWCD.

  Special Assistant to the Secretary of Education - Governor Kaine, Jan. 2006–November 2008
  Special Assistant to the Secretary of Education - Governor Warner, June 2005–Jan. 2006
  Governor’s Fellow to Governor Warner, June-August 2005.

• Office Manager, Sovereign Paving, Inc., August 2000—Present.


OTHER SKILLS

• Licensed teacher in History & Social Science and Spanish PreK-12; Praxis I & Social Studies Content Knowledge Praxis II—Passing scores for Virginia Praxis standards
• Spanish Skills - Graduate from J.R. Tucker’s Foreign Language Immersion Program—Spanish; completed 22 hours of course work through undergraduate minor, enhanced through study abroad