A Qualitative Assessment of the Stakeholder Engagement Process:
Development of the Falls Lake Nutrient Management Strategy Plan

by

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ABSTRACT

Natural resource managers have increasingly recognized the importance of involving stakeholders in decisions about how to deal with complex environmental problems. Stakeholder participation can improve the outcomes of potentially contentious decision processes, but effective stakeholder engagement has proven difficult for resource management agencies.

In this Master’s Project, I explore how the North Carolina Department of Environmental Quality (NC DEQ) has approached stakeholder engagement. The overarching goal of this study is to develop recommendations for how the agency can improve the outcomes of future stakeholder processes. The case selected for this qualitative, single-case study is a stakeholder process conducted by the Division of Water Quality (NC DWQ) as part of NC DEQ’s federally mandated development of a Nutrient Management Strategy for Falls Lake in central North Carolina.

The research design addressed six research questions related to how NC DWQ and its partner organization interacted with stakeholders during the Falls Lake Stakeholder Process:

1. What was the purpose of conducting the stakeholder process?

2. What did the North Carolina Department of Environmental Quality (NC DEQ) expect to achieve through the stakeholder process?

3. Why did the NC DEQ select the Triangle J Council of Governments to manage the stakeholder process instead of managing it internally as they have done for other projects?
4. How were stakeholders selected and engaged in the process?

5. Did the stakeholder process achieve what the NC DEQ expected or wanted it to do?

6. How could the stakeholder process have been improved?

Data was obtained through archival research and by interviews with 12 people who had been directly involved with the Falls Lake Stakeholder Project. Four of the interviewees were designated as internal stakeholders because they were involved with process planning and management, and the remaining interviewees were designated as external stakeholders because they attended meetings but were not involved with process planning and management. A standard theme-based content analysis approach was used to analyze the interviews. The framework for analysis centered on four steps identified in the literature as being especially useful for designing stakeholder involvement strategies, and four factors considered to be particularly important in determining the success of a stakeholder involvement process.

This study found that the Falls Lake stakeholder process was less successful than it could have been. Several factors contributing to this outcome were identified. NC DWQ’s main goal in conducting the process was to gain buy-in for implementing the nutrient management rules being developed rather than to build consensus. The process managers did not have sufficient training and experience to design and conduct an effective stakeholder engagement process, and no guidelines were available within NC DEQ. This meant that little consideration was given to what type, if any, stakeholder process was appropriate to the decision situation. The process did not focus sufficiently on building trust among NC DWQ and the stakeholders, and the process facilitator was a stakeholder in the process rather than a neutral third party. Lack of funding and
a hard deadline imposed by the legislature limited the scope and potential impact of the stakeholder process.

Among the most important findings from the interviews was that the internal and external stakeholders had different views about how successful the Falls Lake Stakeholder Process had been. Internal stakeholders were largely satisfied with the outcomes of the process, noting in particular that no letters of objection had been received during the public comment period. In contrast, the external stakeholders generally were dissatisfied with the process and did not believe that the resulting rules were reasonable or achievable. The primary reason cited for this dissatisfaction was lack of input into development of the Falls Lake nutrient model. Arguably the most significant contribution of this study is recognition that NC DEQ has not explored and assessed stakeholder participation methods, and has not developed a clear policy and guidelines for its staff to follow.

I make several recommendations for how future processes can be improved based on this study’s findings. The first step in designing a stakeholder process should be assessing the situation to determine what level of stakeholder involvement is appropriate. Sufficient time and funding needs to be allocated for stakeholder engagement; a neutral facilitator should be hired to set up and run this engagement process. Finally, greater agency-level support is required for improved stakeholder participation efforts; the metrics selected to assess success should emphasize specifically relevant determinative factors, and these metrics should be considered in performance reviews. I conclude that improved outcomes are possible given such agency-level support.
ACKNOWLEDGEMENTS

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Table of Contents

ABSTRACT ......................................................................................................................... 1
ACKNOWLEDGEMENTS .................................................................................................... 5

I. Introduction ...................................................................................................................... 7

II. Background: Stakeholder Participation Processes ......................................................... 10

III. Case Description: Falls Lake Stakeholder Process ...................................................... 20

IV. Methods ......................................................................................................................... 27

V. Results .......................................................................................................................... 31
   A. Themes ....................................................................................................................... 31
   B. Answers to Research Questions ................................................................................. 39

VI. Discussion .................................................................................................................... 43

VII. Study Limitations ....................................................................................................... 48

VIII. Recommendations and Conclusions ...................................................................... 49

References ....................................................................................................................... 52

APPENDEX A. Interview Guides ....................................................................................... 59
I. Introduction

In any environmental or natural resource decision, there will be people and groups who care about the outcome of that decision. Such people and groups are known as stakeholders, a term that is generally defined as those who are affected by or can affect a decision (Freeman, 1984; Reed, 2008). Engaging stakeholders in decision-making is a critical element of 

*collaborative adaptive management*, an approach that natural resource managers use to deal with the complexity and uncertainty of social-ecological systems (Holling et al., 2002; Armitage et al., 2008). A lake reservoir that provides communities with its drinking water with the support of local governments is an example of such a system. In theory, stakeholder participation can reduce conflict and produce better decisions through the consideration of a wide range of options and potential consequences (De Brunijn & Heuvelhof, 1999; Conley & Moote, 2003; Reed, 2008). However, in practice, resource managers have found it very difficult to effectively work with stakeholders (Reed, 2008), and a poorly managed engagement process can cause more problems than it solves (Imperial & Hennessey, 2000).

Much has been published on how to conduct a stakeholder participation process based on theories and research from a range of fields including organizational management, public administration, and alternative dispute resolution. Despite this extensive literature, there is still disagreement over the best methods to use in engaging stakeholders (Reed, 2008). Resource managers also run into difficulties when trying to apply recommended methods in their projects, and they generally get little guidance from their agencies on how to involve stakeholders in real decisions. In addition, most resource management personnel come from biophysical science
backgrounds, and few have the appropriate training or specialized management skills needed to adapt recommended approaches to local conditions and decision situations (Yaffee and Wondolleck 2003). Therefore, resource managers may find it difficult to work with large numbers of stakeholders who have competing viewpoints and interests and to integrate non-technical knowledge into the decision-making process (Carolan, 2006). Because the quality of decisions made using stakeholder input tends to depend on how effectively decision-makers engage the interested parties in the first place (Reed, 2008), it is extremely important for resource management agencies and organizations to learn how to improve their strategies and protocols for identifying and engaging key stakeholders in natural resource management decisions.

Like many other natural resource management agencies around the United States, the North Carolina Department of Environmental Quality (NC DEQ; formerly known as the Department of Environment and Natural Resources, DENR) has been trying to improve the results of its environmental projects and decisions by increasing stakeholder participation in resource management and rule-making processes. Initial efforts have run into problems and not been as successful as hoped. NC DEQ has a strong interest in learning from these efforts, but has not had the resources necessary to conduct systematic assessments of completed stakeholder participation efforts.

My goal in this study was to address that knowledge gap by evaluating a recent stakeholder involvement process conducted by the NC DEQ and identifying ‘lessons learned’ that can improve the outcomes of future stakeholder processes. The stakeholder process chosen for this qualitative case study occurred in 2008-2010 associated with development of the Falls
Lake Nutrient Management Rules. The overarching research questions addressed in this study include:

1. Was the stakeholder participation process used in this case effective?
2. How could that stakeholder participation process have been improved?
3. What broad lessons can be learned from this case that can help NC DEQ improve future stakeholder participation processes and achieve better outcomes?

This report begins with a review of the literature that summarizes proposed benefits of and barriers to stakeholder participation in natural resource decision making. I describe key determinative factors and an analytic framework for this study derived from that literature. I then describe the case studied, the Falls Lake Stakeholder Process and present the findings from my interviews. Finally, I assess the case using the analytic framework and identified determinative factors and then develop recommendations for how the design of future stakeholder processes could be adjusted so as to produce better outcomes.
II. Background: Stakeholder Participation Processes

Natural resource management and other environmental problems tend to be complex, multi-scale, and uncertain (Reed, 2008). This creates major challenges for efforts to achieve specific goals, such as improving water quality in a reservoir lake, since success requires action by many organizations, groups, and individuals. State-level environmental regulation agencies typically seek to get these organizations, groups, and individuals to act appropriately through the development of regulatory instruments, such as nutrient management rules to reduce non-point source pollution. However, such top-down regulatory instruments have proven to be only partially successful in achieving government-mandated resource management objectives (e.g. Smith & Porter, 2010; Beratan, 2013).

The complexity of environmental problem situations has led to the inclusion of some form of public participation in most environmental and natural resource management decision-making processes (Duram & Brown, 1999; Leach et al., 2002; Hartley & Robertson, 2006; Reed, 2009). The term “public participation” refers to a group of procedures for informing and involving the public concerning a decision that may impact their lives; it also provides stakeholders with the opportunity to provide input on that decision. The level of public participation can range from simple, unidirectional delivery of information from decision-makers to the public to two-way collaborative exchange of knowledge (Rowe & Frewer, 2000). This greater level of involvement required for the collaborative exchange of knowledge is referred to as stakeholder engagement.

Stakeholder engagement is thought to improve decision making processes in complex problem situations (de Bruijn & ten Heuvelhof, 1999; Fischer, 2000; Beierle, 2002; Conley &
Proposed benefits of stakeholder engagement include inclusion of a broader range of relevant information about local socio-cultural and environmental conditions, reduced conflict among stakeholders, increased public trust in decisions, and thereby an increased likelihood that the resulting decision will be implemented (see literature review in Reed, 2008).

Despite the potential of the stakeholder involvement approach for improving environmental decisions, natural resource managers have found it difficult to design and conduct effective stakeholder engagement. Many environmental projects fall short of their stated objectives because of non-cooperation or opposition from stakeholders who believe they would be harmed by the proposed decision (Grimble, 1998). Recommendations for improving practices and more effectively encourage positive stakeholder involvement in resource management decisions are being developed through studies of past engagement efforts (Dougill et al., 2006; Reed, 2008). These studies suggest that the ability of stakeholder participation to improve the quality of decision making is strongly dependent on the quality of the process that leads to it (Reed, 2008). Researchers have therefore concluded that the design of the participation process has a particularly large impact on whether or not a decision process will lead to achievement of its stated goals (Chase et al. 2002).

**Steps for Designing an Effective Stakeholder Process**

Stakeholder participation processes must be carefully designed to match each specific situation since there is no single strategy that can work in all situations (Lawrence & Deagen, 2001; Chase et al., 2002). Chase et al. identified four steps as “especially useful in designing
situation-specific stakeholder involvement strategies: conducting a situation analysis; defining agency objectives for stakeholder involvement; selecting a general stakeholder involvement approach; and designing a context-specific strategy” (Chase et al., 2002, p. 937)

In the first step, conducting a situation analysis, the conveners of the stakeholder process seek to gain a broad understanding of the problem situation, and to clarify the objectives and identify relevant stakeholders (Grimble, 1998). In general, the convening agency will have some initial understanding of the context of the issue, such as the key stakeholders affected and some of their primary concerns, attitudes, and interests. In some cases, agency staff may feel that their understanding of a specific situation is adequate and no further investigation is necessary. It is important to note that agency staff may not recognize that they lack some critical information and think that they have an adequate understanding of the situation. In other cases, it may be clear that a better understanding of the situation is needed to productively engage with stakeholders (Chase et al., 2002).

Chase et al.’s (2002) second step is defining the agency’s objectives for conducting a stakeholder involvement process. Commonly, agencies’ primary objective for involving stakeholders is to comply with legislative requirements. In such cases, particular methods of public involvement (e.g., open public hearings) may be required; however, agencies are seldom restricted from doing more than the legal minimum to involve stakeholders (Chase et al., 2002). Agency leaders may consider the potential benefits of stakeholder engagement to be worth the effort involved with working more closely with stakeholders.

The third step is to select a stakeholder involvement approach based on the information
and understanding gained through the first two steps. Chase et al. (2002) note that the range of approaches forms a continuum that varies in the degree of influence stakeholders have on decision making compared to the management agency. On one end of the continuum, stakeholders have little to no involvement, and the locus of control remains with the management agency. At the other end, both stakeholders and managers have real influence in the choice of decisions and action. The selection of approach and methods should be determined largely by the agency’s objectives, such as gathering information or obtaining buy-in from stakeholders (Table 1). For example, the existence of non-negotiable positions or actors with veto power will limit the extent to which participants can influence decisions (Reed, 2008). A full stakeholder involvement process is also not appropriate in situations where the important decisions have already been made. Stakeholders are likely to get frustrated if it looks like their involvement has little influence on decisions they care about (Handley et al., 1998; Wondolleck & Yaffee, 2000; Burton et al., 2004; Reed, 2008). Chase et al. (2002) summarize this choice process in a decision tree linking stakeholder involvement approaches to agencies’ process objectives (Figure 1).

In the fourth and final step, the agency designs a context-specific stakeholder involvement strategy based on the findings of the first three steps. Understanding stakeholders and their individual preferences for involvement is particularly important for deciding which stakeholder involvement activities are appropriate for each particular situation (Chase et al., 2002).
Table 1. Range of Agency Objectives Tied to Stakeholder Involvement Methods (Adapted from Chase et al., 2002)

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Locus of control</th>
<th>Approach</th>
<th>Public involvement methods (examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve management climate</td>
<td>Agency</td>
<td>Authoritative</td>
<td>Information through press releases</td>
</tr>
<tr>
<td>Improve management climate, provide input</td>
<td>Agency</td>
<td>Passive-receptive or inquisitive</td>
<td>Unsolicited comments, surveys, public meetings, focus groups, listening sessions</td>
</tr>
<tr>
<td>Improve management climate, provide input, help make decisions</td>
<td>Shared by agency and stakeholders</td>
<td>Transactional</td>
<td>Task forces, mediation, citizen representatives on policy boards</td>
</tr>
<tr>
<td>Improve management climate, provide input, help make decisions, help implement actions</td>
<td>Shared by agency and stakeholders</td>
<td>Co-managerial</td>
<td>All of the above</td>
</tr>
</tbody>
</table>

Figure 1. Decision tree for connecting agency objectives with stakeholder involvement approaches. (Adapted from Chase et al., 2002)
Factors Contributing to Process Success

A number of characteristics that are determinants of success or failure for stakeholder processes. Of these, I have selected four factors as being particularly important to consider when designing a stakeholder involvement process. These four factors include: (1) all of the key stakeholders need to be present and engaged; (2) focused effort is needed to establish trust-based relationships and rules of engagement; (3) interactions should be guided by skilled facilitators; and (4) sufficient resources, including both time and money, need to be made available. These factors, with associated references, are presented in more detail in the rest of this section.

1. Engaging the right stakeholders: Ensuring that the most important stakeholders are involved in the decision-making process takes more thought and effort than is usually spent. One of the biggest issues that state environmental agencies have is inadvertently excluding important groups because of an insufficient or inappropriate method for recruiting stakeholder participants (Glicken, 2000). Typically, the convening agency posts public notifications of an upcoming meeting and sends notices to a short list of the local government departments and other organizations they are used to working with. Anyone who chooses to attend the meeting is then considered a stakeholder. This haphazard approach to recruiting stakeholder participants can result in omission of key stakeholders and a low level of engagement among those that do attend. Self-identification of stakeholders also tends to attract different participants than those that might have been identified by agency managers if they had studied the social context of the problem situation and identified relevant individuals to invite to participate in the decision-making process (Glicken, 2000).
Researchers are increasingly recommending *stakeholder analysis* as a systematic approach for identifying organizations, groups, and individuals who are relevant to a decision process (Grimble, 1998; Reed, 2008). Stakeholder analysis helps define the complex social interactions that affect and may be affected by a decision or action, and resource managers can use the analysis results to identify and prioritize groups and individuals who should be involved in decision making (Reed, 2008). This is particularly important in situations where the problem or resource in question crosses social, economic, administrative, and/or political boundaries, thereby impacting many different stakeholders who may have different agendas and interests (Grimble, 1998). A variety of methods have been described for conducting stakeholder analyses (e.g., Grimble, 1998; US EPA, 2001; Hjortzø, Christensen, & Tarp, 2005; Pomeroy & Douvere, 2008; Mainardes et al., 2012). All include ways to identify the key stakeholders that need to be involved in the process and ways to prioritize those stakeholders based on criteria such as their interest in the problem, their relationship to and dependency on the resource of interest, and the potential impact of their activities on that resource (Pomeroy & Douvere, 2008).

Engagement of stakeholders early in the decision-making process and then continually through the process is recommended (Grimble & Wellard, 1997; Mitchell et al., 1997; Frooman, 1999; Pomeroy & Douvere, 2008). However, it is more typical for resource managers to wait until the implementation phase of the project to engage with stakeholders (Reed, 2008).

2. **Focused effort is needed to establish trust-based relationships and rules of engagement:** A lack of trust is an important barrier to meaningful engagement, and so improvement of relationships between decision-makers and stakeholders would benefit most natural resource management projects (Reed, 2008). There typically is a long history of
interaction among the decision makers and stakeholders prior to any decision process; a common product of that history is a lack of trust, and in some cases even anger and litigation. A well-designed stakeholder participation process that is truly accessible, responsive, and interactive can help build trust and repair relationships (Krumpe & McCoy, 1995; Hjortsø et al., 2005). Through working together, stakeholders and decision makers can find common ground and establish the legitimacy of each other’s perspectives (Stringer et al., 2006).

Conversely, when resource managers do not adequately engage with stakeholders, stakeholders can feel that their perspectives and concerns are not taken seriously and that their input is requested only to fulfill government regulations. Many stakeholder participation processes fail because stakeholders think that decisions have already been made without public input and resource managers are only going through the motions (Glicken, 2000).

Researchers in the field of dispute resolution have shown that developing ground rules that participants agree to follow is important for trust-building in a decision-making process (Adler & Birkhoff, 2002). The process of developing such rules of engagement can provide participants with some assurance that their concerns and interests will be considered fairly. At the start of the decision process, the convening agency and participating stakeholders should establish how representation will occur, how group interactions will proceed, how disagreements and conflict will be addressed, and how decisions will ultimately be made to improve their chances for a successful outcome (Adler & Birkhoff, 2002).

3. Interactions should be guided by skilled facilitators: Simply bringing people together in a meeting is not enough to ensure that a productive discussion results. Instead, skilled
facilitation by people who are trusted or viewed as neutral by all parties is often necessary (Reed, 2008). The way facilitators handle group dynamics has been found to strongly influence the potential for success of participation processes (Chess & Purcell, 1999; Reed, 2008). In fact, a good facilitator can have a greater impact on the outcome of a stakeholder process than any specific tools or methods used to guide that process (Chess & Purcell, 1999; Richards et al., 2004).

For facilitation to be effective, both process managers and stakeholders must view the facilitator as impartial, open to multiple perspectives, and approachable. A skilled facilitator can ensure the group remains positive and respectful during discussions, and can manage both dominant personalities and quieter individuals who need encouragement to get involved. A good facilitator can establish conditions that encourage sharing of viewpoints, and can help participants turn potential conflicts into opportunities for innovation (Karl et al. 2007; Reed, 2008). A facilitator can also assist in translation between stakeholders and scientists and other technical specialists, something that is commonly necessary in natural resource management (Glicken, 2000). Effective facilitation requires skills that are hard to learn, a compassionate personality, and experience (Richards et al., 2004).

**4. Sufficient resources need to be made available:** Stakeholder participation requires both time and resources (Chase et al., 2002; Pomeroy & Douvere, 2008). Process managers need sufficient time to gain a clear and broad understanding of the problem situation and to identify the key stakeholders and objectives of the process. Participating stakeholders then need time to get to know one another and to establish sufficient trust for productive discussions about the problem and potential responses. Funding is needed to support the process manager and any
other support staff including a facilitator, to cover meeting and communication costs, and to collect any needed information. Unfortunately, participatory processes typically have little time or funding due to a lack of planning or support (Glicken, 2000); decision makers within the convening organization commonly are unaware of these resource requirements and impose unrealistic deadlines on project managers.
III. Case Description: Falls Lake Stakeholder Process

The Falls Lake Rules and the process through which they were developed are described in detail on NC DWR’s official public access portal (portal.ncdenr.org/web/fallslake/home). Unless otherwise indicated, the information presented in this section comes from that website.

Falls Lake, also known as Falls of the Neuse Reservoir, a 12,500-acre artificial reservoir located in the Upper Neuse River Basin of North Carolina (Figure 2). Falls Lake was “constructed by the U.S. Army Corps of Engineers in 1981 to provide “flood control, drinking water, protection for downstream water quality, fish and wildlife conservation, and recreation.” It provides drinking water to over 400,000 residents of the city of Raleigh and six other municipalities in Wake county (USACE, 2009).

Since construction of the lake, parts of the lake have experienced nutrient-driven excess algae growth, resulting in chlorophyll a levels that exceed the national regulatory standard (N.C. Division of Water Quality, 2009). Between 2004-2009, scientists at the North Carolina Division of Water Quality (NC DWQ; now the Division of Water Resources) monitored and modeled nutrient levels in the Falls Lake Reservoir (Figure 3). In 2005, the North Carolina General Assembly passed legislation (SL 2005-190 S981) requiring the North Carolina Environmental Management Commission, which has oversight over the NC DEQ’s regulatory rules, to develop a plan for reducing nutrient levels in Falls Lake.
Figure 2. Map of the Upper Neuse River Basin showing the location of the Falls Lake Reservoir. The heavy red line is NC Highway 50, which marks the southern terminus of Falls Lake.
(Adapted from Upper Neuse River Basin Association, https://www.unrba.org/about-unrb)
Figure 3. Timeline showing major events related to the Falls Lake Stakeholder Process.

(Information obtained from http://portal.ncdenr.org/web/fallslake/home)
Based on water quality data collected between 2002 and 2006, the U.S. Environmental Protection Agency included Falls Lake on its federal impaired waters list in 2008 for exceeding chlorophyll a and turbidity standards. Subsequent legislation in North Carolina, including Session Law 2009-486 established a hard deadline for the rule-making process by directing the Environmental Management Commission to adopt a strategy for restoring nutrient related water quality standards in Falls Lake by January 15, 2011.

From 2005 to 2007, the Technical Advisory Committee of the NC DWQ (Table 2)

**Table 2.** Members of the Falls Lake Technical Advisory Committee. (Information obtained from http://portal.ncdenr.org/web/fallslake/home)

<table>
<thead>
<tr>
<th>Name</th>
<th>Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edward Buchan</td>
<td>City of Raleigh</td>
</tr>
<tr>
<td>Peter Caldwell</td>
<td>DWQ Intensive Survey</td>
</tr>
<tr>
<td>John Cox</td>
<td>City of Durham Stormwater Services</td>
</tr>
<tr>
<td>Nora Deamer</td>
<td>DWQ Basinwide Planning</td>
</tr>
<tr>
<td>Reginald Hicks</td>
<td>City of Durham</td>
</tr>
<tr>
<td>Tom Hill</td>
<td>Wake Couty</td>
</tr>
<tr>
<td>John Huisman</td>
<td>DWQ NonPoint Source Unit</td>
</tr>
<tr>
<td>Kelly Ibrahim</td>
<td>NC Div of Soil and Water Conservation</td>
</tr>
<tr>
<td>Bobby Louque</td>
<td>City of Durham Stormwater Services</td>
</tr>
<tr>
<td>Andy McDaniel</td>
<td>NC Dept of Transportation</td>
</tr>
<tr>
<td>Sydney Miller</td>
<td>Traingle J Council of Governments</td>
</tr>
<tr>
<td>Lindsay Mize</td>
<td>South Granville Water and Sewer Authority</td>
</tr>
<tr>
<td>Alissa Bierma</td>
<td>Neuse River Foundation</td>
</tr>
<tr>
<td>Chris Outlaw</td>
<td>City of Durham Stormwater Services</td>
</tr>
<tr>
<td>Joe Pearce</td>
<td>Durham County</td>
</tr>
<tr>
<td>Narayan Rajbhandari</td>
<td>DWQ Modeling and TMDL Unit</td>
</tr>
<tr>
<td>Katy Stecker</td>
<td>DWQ Modeling and TMDL Unit</td>
</tr>
<tr>
<td>Vicki Westbrook</td>
<td>City of Durham Water Management</td>
</tr>
<tr>
<td>Michelle Woolfolk</td>
<td>City of Durham Stormwater Services</td>
</tr>
</tbody>
</table>
directed water quality monitoring of Falls Lake. The agency used the collected data to develop watershed and lake models to determine the nutrient reduction needed in order to lower the chlorophyll a levels. NC DWQ staff completed watershed/lake modeling with input and review from the Technical Advisory Committee in November 2008 and February 2009. NC DWQ held a series of stakeholder and subcommittee meetings from 2008 to 2010 in order to develop the Falls Lake nutrient strategy. The stated purpose for including Falls Lake stakeholders in this process was to represent “a wide range of interests in developing a nutrient management strategy for the Falls Lake Watershed” (Falls Lake Stakeholder Project Online Wiki, 2010). NC DWQ is required by law to hold public hearings and solicit public comment after such rules are developed in draft form; there is no legal or departmental requirement to conduct a stakeholder process. NC DWQ partnered with TJCOG and the Upper Neuse River Basin Association (UNRBA) to design and conduct this process. TJCOG is one of 17 regional planning councils within North Carolina that the General Assembly established in 1972 to help local governments. TJCOG’s region includes Chatham, Durham, Johnston, Lee, Moore, Orange, and Wake Counties. UNRBA was formed in 1996 to provide “an ongoing forum for cooperation on water quality protection and water resource planning and management” for seven municipalities and six counties within the Neuse watershed (Upper Neuse River Basin Association, n.d.).

The design of the Falls Lake Stakeholder Process was intended to avoid problems encountered in the stakeholder process used to obtain input for development of the Jordan Lake nutrient management strategy. The Jordan Lake Stakeholder Process began in 2003 when the NC DEQ held a stakeholder process, with TJCOG as facilitator, to develop nutrient loading goals, methods for discharge allocation, and a nonpoint source strategy. NC DWQ held public meetings
in 2005 to solicit comments on a framework for nutrient management rules. NC DWQ then wrote a set of rules and then held technical stakeholder meetings to refine the guidelines. The final step, known as the *formal rule-making process*, began in June 2007 with publication of the guidelines in the North Carolina Register, followed by a 90-day public comment period (Robinson & Gannon, n.d.). In documents describing this process, NC DEQ refer to a “stakeholder meeting process,” rather than a stakeholder engagement or participatory process; ultimately the agency only conducted the minimum public involvement required by law, public hearings and a commenting period.

The public in general and key stakeholders did not accept the recommendations of the Jordan Lake nutrient management strategy, with a majority of the remarks submitted during the public commentary period expressing strong opposition to the Jordan Lake nutrient management strategy rules (“Summary of Jordan Lake Rules,” 2007). A major reason cited for this was their feeling that their input was not adequately considered by NC DWQ in determining the total maximum daily load of nitrogen and phosphorus (Wyman, 2008; Gray, 2010). NC DWQ convened a second stakeholder process in 2006 following impairment designations due to much nitrogen and phosphorus loads in parts of the lake. However, the North Carolina legislature has imposed a series of delays, and full implementation of the Jordan Lake nutrient management strategy rules has still not occurred.

One of the most important goals in setting up the Falls Lake Stakeholder Process was to avoid the types of negative outcomes resulting from the Jordan Lake Stakeholder Process (Gray, 2010). John Huisman, Environmental Senior Specialist for the NC DWQ and the lead convener of the Falls Lake nutrient management strategy, stated in 2009 that “We’ve sought a lot of input
from the beginning about how we are attacking this problem. Hopefully we can head off any kind of contention that could develop down the road" (Wise, 2009). The conveners did not aim to obtain consensus on the rules (Gray, 2010). Leaders in the three partner organizations worked together to develop the list of stakeholders to be invited to participate in the Falls Lake Stakeholder Process, beginning with those who participated in the Jordan Lake process. Public notification regarding meetings resulted in attendance of a few interested citizens. In total, there were 281 stakeholders, including local governments (24% of the participants), non-government organizations (43%), and state and federal agencies (33%) (Gray, 2010).

At the first meeting in 2003, the conveners introduced the stakeholders to the Technical Advisory Committee, considered a subset of the larger stakeholder group (Gray, 2010). This meeting was intended to provide stakeholders with the chance to have direct interaction with scientists studying and making recommendations for the Falls Lake nutrient management strategy. However, the Falls Lake Stakeholder Process was not intended to provide input into the model’s development. Meetings for the Falls Lake Stakeholder Process continued to be held in 2008 and 2009. Rules were laid out a staged nutrient management strategy to decrease nutrient discharge into the lake from different sources, such as storm water runoff from housing developments, agricultural sources, and wastewater from sewage treatment plants (Division of Water Resources, n.d.).

The final form of the Falls Lake Rules that the NC DWQ adopted in February 2010 was influenced by the 2009 “Consensus Principles to Guide Falls Lake Nutrient Management Strategy” (TJCOG, 2009). This document was not a product of the Falls Lake Stakeholder Process, although it had input from 13 of the 14 local governments who participated in the
Stakeholder Process. The Consensus Principles laid out the local governments’ response to the draft rules released by NC DEQ, and was used to successfully lobby for changes in those rules. Implementation was changed to a two-stage process and extended the deadline for achieving the nutrient targets to 2036. Stage 1 rules covered the entire lake and set the Nitrogen and Phosphorus percent reduction to 20% and 40% of 2006 levels. Stage 2 had the original nutrient reduction goals from the Falls Lake Stakeholder Project of 40% and 77%, though it was only to apply to the upper part of Falls Lake.

Gray (2010) concluded that the Falls Lake Stakeholder Process was overall less contentious than the Jordan Lake Stakeholder Process had been, particularly during its early stages. However, the fact that the local governments went outside of the stakeholder process to seek changes in the draft rules indicated that the stakeholder process had not gone as smoothly as hoped, and suggested that NC DEQ could benefit from a more in-depth study of that process.

IV. Methods

I employed a qualitative case study methodology for this research project. A qualitative approach was chosen because the stakeholders’ perceptions of the process is a critical variable. Baxter and Jack (2008) note that qualitative research has proven effective in studies aimed at analyzing a process. Qualitative research can capture the views and perspectives of participants and the contextual conditions (social, institutional, and environmental) in which the participants operated, and can provide insights into what led to particular events or outcomes (Yin, 2011).
Case studies are the standard approach to qualitative research, as "the case study method allows investigators to retain the holistic and meaningful characteristics of real-life events" (Yin, 2003). It is difficult to generalize from a single-case study, but such qualitative case studies are important in the social sciences, providing basic information used to generate testable hypotheses and build theories (Hartley & Robinson, 2004).

The primary data collection method that I used was semi-structured interviews with open-ended questions (see Appendix A). This interview format is particularly useful in exploratory studies as it encourages interviewees to volunteer previously unreported relevant information and to reveal nuances of interactions and reasons for actions and consequences. Different interviewees are likely to have observed and/or remembered different details based on their personal expertise and experiences; their observations can be validated through triangulation among multiple interviews and comparison with information obtained from public records (Yin, 2011).

I developed six specific research questions from my overarching research goals (see Introduction) to guide the interviews and subsequent analyses. They are:

1. What was the purpose of conducting the stakeholder process?
2. What did NC DEQ expect to achieve through the stakeholder process?
3) Why did the NC DEQ select TJCOG to manage the stakeholder process instead of managing it internally as they have done on other projects?
4) How were stakeholders selected and engaged in the process?
5) Did the stakeholder process achieve what the NC DEQ expected or wanted it to do?
6) How could the stakeholder process have been improved?
Information needed to answer these questions was collected through interviews with 12 subjects, selected based on their degree of involvement with the Falls Lake Stakeholder Process between August 2008 and January 2010. Three types of project participants were included: (1) two NC DEQ personnel who were directly involved in planning the Falls Lake Stakeholder Process; (2) two TJCOG staff who facilitated the stakeholder process; and (3) eight representatives of organizations that were active participants in the process, including local municipalities, non-profit organizations, and relevant private companies that operate within the Falls Lake watershed. The third group of stakeholders was selected using a snowball sampling method, starting with three people identified from project records as having been important in process management. I developed separate interview guides for each of the three groups (Appendix A) consisting of questions and prompts aimed at establishing simple facts about the process, such as who organized meetings, the designated purpose of those meetings, who the attendees were, and what the results of those meetings were. Questions focused on verifiable information rather than subjective feelings.

For the purpose of analysis, I designated the four individuals in the first two groups (i.e., NC DEQ and TJCOG personnel) as *internal stakeholders* because they planned and ran the process under investigation. I labeled the third group as *external stakeholders* since they attended meetings but had little to no control over process design or implementation.

I used a standard theme-based content analysis approach to analyze the interview results. This is a widely used method through which research-relevant phrases within spoken or written responses are systematically grouped into meaningful categories in order to help the researcher find patterns in their data. Due to inherent subjectivity, content analysis is an iterative method in
which the analyst does repeated close readings of transcripts to identify and list recurrent ideas and key issues. Reduction of the text into a limited number of groups assists the analyst to organize unstructured data, compare among separate interviews, and develop meaningful and credible inferences (Weber, 1990; Hsieh & Shannon, 2005; Vaismoradi et al., 2016).

For this study, I transcribed the recorded interviews then carefully read and reread each transcript, highlighting key phrases or statements that provided specific information relevant to one or more of the research questions. Related phrases and statements were grouped, and each group of concepts was considered to be a theme. Phrases and concepts expressed by more than one stakeholder were considered validated and were included in the analysis, with all of the validated phrases and concepts sorted into thematic groups according to similarity. The significance of the themes was assessed based on the frequency and intensity of their expression, and by comparison with case information obtained from unpublished reports and preliminary background discussions with NC DEQ staff. Any information gaps that I found during this analysis were subsequently addressed through follow-up conversations with the relevant informants.
V. Results

A. Themes

I identified 12 main themes from my interviews with the selected internal and external stakeholders associated with the Falls Lake Stakeholder Process, which included:

1. Natural Resources Leadership Institute (NRLI) training received by internal stakeholders influenced the views and approaches of the stakeholder process.
2. Past experiences of the NC DEQ and TJCOG staff influenced the views and approaches of the stakeholder process.
3. The stakeholder process was suggested/convened by [individual or group] for [reasons].
4. Participation by stakeholders in the process was motivated by [reasons].
5. The stakeholder process rules were/were not established and explained.
6. There was satisfaction with the stakeholder process for [reasons].
7. There was dissatisfaction with the stakeholder process for [reasons].
8. [Conditions, actions, events] contributed to process problems.
9. Development of the nutrient model was not part of this stakeholder process.
10. The NC DEQ staff were making science-dependent decisions without sufficient scientific information.
11. The process ended up being successful because of [outcomes].
12. The process ended up being unsuccessful because of [outcomes].

**Theme 1: Views and approaches to the stakeholder process were influenced by Natural Resource Leadership Institute (NRLI) training.** Several of the interviewees stated
that their approach to the Falls Lake Stakeholder Process was influenced by a leadership
development course they took from the NRLI at North Carolina State University. This was
particularly important to the internal stakeholders:

“I used my experience from the NRLI training in choosing to hold a stakeholder process
for rule development.”

This six-session course at the NRLI was designed to introduce practitioners to conflict resolution
methods, multi-party negotiation, critical thinking, and collaborative problem solving in efforts
to develop integrative solutions to complex environmental problems. Interviewees noted that
working with stakeholders was one of the topics covered in this course, including guidance on
identifying and engaging with stakeholders.

Theme 2: Views and approaches to the stakeholder process were influenced by past
experience. Many of the interviewees described their past experiences with other stakeholder
processes, and said that these experiences influenced their thinking about their role in Falls Lake.
The internal stakeholders particularly talked about what had happened in the Jordan Lake
Stakeholder Process, and that they had tried to improve the Falls Lake experience to avoid some
of the problems they had previously encountered. Both internal and external stakeholders
mentioned that it was by working on past stakeholder processes that they developed contacts
with many of the other stakeholders involved with the Falls Lake nutrient management strategy
rules:

“They drew from past experience of managing other stakeholder processes for managing the
[Falls Lake Stakeholder Process].”

“I’ve experience managing and facilitating other stakeholder processes.”
Theme 3: The stakeholder process was suggested/convened by [individual or group] for [reasons]. When it became known that the NC DWQ (as part of the NC DEQ) would be conducting a rule-making process for Falls Lake, UNRBA approached the NC DWQ staff with funding and suggested holding a stakeholder involvement project. Since funding was available, the NC DWQ decided to adopt that approach. The reasons cited for conducting a stakeholder process associated with developing the Falls Lake nutrient management strategy varied among the interviewees. Internal departmental staff stated that using a stakeholder process was typical of how they managed other rule development projects. Reasons cited by the internal stakeholders included: (a) to obtain buy-in from stakeholders; (b) to avoid litigation; (c) to get input from stakeholders on the development of the rules; and (d) to keep the completed rules from going to the Rules Review Commission of the North Carolina state legislature.

“We felt if we could get buy-in from the stakeholders and there has been some negotiations, stakeholders would not go outside of the stakeholder process straight to the North Carolina Legislature.”

Most of the external stakeholders stated that they had been contacted by TJCOG about the Falls Lake Stakeholder Process. The external stakeholders mostly framed the reason for the process as to provide feedback and input into the rules that NC DWQ was charged with developing.

Theme 4: Participation by stakeholders in the process was motivated by [reasons]. Stakeholder organizations were notified of the meetings through mass e-mails and public announcements. There was no indication from the interviewees of efforts to actively engage individuals in the process. Most stakeholders said that they participated because water-related
issues were a part of their job responsibility or because their supervisor requested they be
involved in the Falls Lake Stakeholder Process. Other reasons cited were that local watershed
management issues were related to their expertise. Some said that they attended the Project to be
informed about how the Falls Lake nutrient rules might impact their own organization.

**Theme 5: The stakeholder process rules were/were not established and explained.**

One internal stakeholder remarked that rules for the stakeholder involvement process had been
developed before the first Falls Lake meeting:

“A decision was made not to have a charter to save time.”

Meanwhile, some of the external stakeholders interviewed said that they could not recall what
the Falls Lake Stakeholder Process rules were. Yet, other external stakeholders said that the
rules had been discussed at the meetings.

The NC DWQ staff explained to the stakeholder group at the start of the process that it
would be more of an information-sharing than a decision-making process. While they wanted
input from stakeholders, the department staff emphasized that they would limit the focus of input
from external stakeholders to feedback related to the nutrient reduction goals. As noted by one
of the insiders interviewed for this study,

“We weren’t doing a consensus-building stakeholder process.”
Theme 6: There was satisfaction with the stakeholder process for *reasons*. The internal stakeholders and a few of the external stakeholders expressed satisfaction with the stakeholder process:

“We got buy-in from the stakeholders.”


“The stakeholder process allowed smaller pieces of the rules or pre-draft language to be discussed by stakeholders so by the time draft rules came out there were no surprises to the rules.”

Theme 7: There was dissatisfaction with the stakeholder process for *reasons*. Several of the external stakeholders expressed dissatisfaction with the stakeholder process. The most common complaint was the limited level of input they had in making the key decisions. They were not allowed to question the nutrient reduction goals derived from the Falls Lake water model, and they felt they had only limited input into how the nutrient reduction goals were to be met.

“Our input was limited to what we could address within the stakeholder process.”

“The stakeholder process seems to get political at some point…”

A few of the external stakeholders noted that several members who were dissatisfied with the process went outside of the project to seek changes to the rules. Internal NC DWQ staff did express concern about some external stakeholders going to senior department management or to legislators outside of the Falls Lake Stakeholder Process.
Theme 8: [Conditions, actions, events] contributed to process problems. Some of the external stakeholders observed that the process seemed to run out of time at the end, and this rush created issues.

“While there was flexibility in the stakeholder process, I still think it was perceived to be relatively rigid in order to meet the timeline.”

Theme 9: Development of the nutrient model was not part of this stakeholder process. Several of the external stakeholders said that they had wanted to play a bigger role in the development of the Fall Lake model that was used to determine the nutrient reduction goals. In fact, this was the most common and strongest complaint expressed about the Falls Lake Stakeholder Process.

“Not having input into the development of the Falls Lake model contributed negatively to the stakeholder process.”

“We’re asked to set nutrient reduction goals based off model data we can’t discuss.”

Theme 10: Science-dependent decisions were being made prior to receiving sufficient scientific information. The nutrient targets, determined by the model’s results, were a necessary starting point for rules development. However, the Technical Advisory Committee’s model development process was not complete before the start of the formal rules-making process.

“The Falls Lake model was not finished until after there had been a few stakeholder meetings.”
“They wish the Falls Lake model had been finished by the start of the [Falls Lake Stakeholder Process] meetings.”

As a result, the Falls Lake project was put on hold for a period of time until the model was ready to present.

External stakeholders expressed concern about how the model was developed and its importance for establishing the nutrient reduction goals. Other external stakeholders questioned the overall validity of the data that NC DWQ staff used to develop the Falls Lake model:

“The data was collected during a time when there was saver drought in this part of the state.”

“They had concerns about the reliability of taking limited samples from a single point.”

**Theme 11: The process ended up being successful because of [outcomes].** The internal stakeholders indicated that they considered the Falls Lake Stakeholder Process to have been a success because it achieved three key procedural outcomes:

1. No letters of objection were received during the public comment period.
2. Since there were no letters of objection, the draft rules did not need to go back to the Rules Review Commission.
3. The North Carolina state legislature adopted the Falls Lake nutrient management rules in full.

**Theme 12: The process ended up being unsuccessful because of [outcomes].** Most of the external stakeholders were not satisfied with the outcomes of the Falls Lake Stakeholder
Process. They did not feel that the rules were reasonable and achievable, and did not see their concerns adequately reflected in those rules.

“Meeting 70% phosphorus reduction is not attainable.”

“Department upper management were involved with helping to shape the final [Falls Lake Stakeholder Process] rules outside of the stakeholder process.”

Comparison of internal and external stakeholder responses. The interview responses show that there were important differences between external and internal stakeholder groups. The two groups differed considerably in their satisfaction with the Falls Lake Stakeholder Process and with the outcomes of the process (Table 3). All four of the internal stakeholders

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Table 3. The Number of Comments Made by each Interviewee for each of the Identified Theme.

The number values indicate how many times during the interview a stakeholder mentioned one of the theme topics.
were much more satisfied than the external stakeholders, as reflected in their responses categorized in themes 6, 7, 11, and 12. While the eight external stakeholders had different reasons for their dissatisfaction, they shared a general lack of satisfaction with the process.

Based on interview responses, I found that internal stakeholders had different goals for the success of the Falls Lake Stakeholder Process compared to the external stakeholders. For example, internal stakeholders wanted “buy-in” from external stakeholder participants. In contrast, many of the external stakeholders could not clearly identify what the stakeholder process goals were.

B. Answers to Research Questions

RQ1. What was the purpose for conducting the stakeholder process? The primary reason that the NC DEQ decided to conduct a stakeholder process was to get buy-in from key stakeholders, such as local municipalities, into the rule development process for managing nutrient levels in Falls Lake. The internal stakeholders also wanted to minimize litigation against the Falls Lake nutrient management rules, which had occurred with other past stakeholder processes, including the Jordan Lake nutrient rules process. The internal stakeholders needed the proposed Falls Lake nutrient management rules to be successfully passed by state legislators.

The external stakeholders wanted to participate in a stakeholder process that used their input to help develop the nutrient management rules that would be used to decrease the nutrient-load in Falls Lake. The external stakeholders also wanted financial cost to be considered as a
part of the rules development process, with portions of the nutrient rule requirements phasing in for local municipalities over a period of time. In this manner, they hoped that the Falls Lake water quality could be improved while also better managing the associated costs shared by local governments.

**RQ2. What did the NC DEQ expect to achieve through the stakeholder process?** NC DEQ staff expected to get buy-in from stakeholders participating in the Falls Lake Stakeholder Process. Department staff wanted to develop rules that would be accepted by stakeholders, and to have those rules passed by the North Carolina state legislature with the support of key stakeholders, such as local governments. NC DEQ also expected that the rules developed from the stakeholder process would be more robust and supported by more key stakeholders who were a part of the community surrounding Falls Lake. Another expectation for the stakeholder process that was mentioned by internal stakeholders during the research interviews was to limit legal action taken by other stakeholders against the finalized Falls Lake nutrient management rules.

**RQ3. Why did the NC DEQ select TJCOG to manage the stakeholder process instead of managing it internally as they have done on other projects?** There were two important factors that played a role as to why NC DEQ chose to select TJCOG as the facilitator for the Falls Lake Stakeholder Process. First, they had worked with TJCOG on past stakeholder processes, and therefore the selection was based in part on that prior working history. Second, and even more importantly, responses during the research interviews with NC DWQ staff and other key external stakeholders indicated that the offer to fund a stakeholder process came from UNRBA, which assisted the NC DEQ in selecting TJCOG as the facilitator for the Falls Lake
Stakeholder Process. UNRBA also had an ongoing working partnership with TJCOG, which may have affected this decision as well.

**RQ4. How were stakeholders selected and engaged in the process?** TJCOG and NC DEQ staff developed a list of potential stakeholders based on past working experience and relationships. Then the TJCOG staff contacted these parties, inviting them by email to attend the Falls Lake Stakeholder Process. At the stakeholder meetings, TJCOG staff also suggested to the attending stakeholders that they invite others individuals or groups who they felt should be a part of the Falls Lake Stakeholders Project.

**RQ5. Did the stakeholder process achieve what the NC DEQ expected or wanted it to do?** All of my interviews with the NC DEQ and TJCOG staff (i.e., the internal stakeholders) indicated that they felt they had achieved what they had expected from the Falls Lake Stakeholder Process. The NC DEQ wanted buy-in from participating stakeholders as well as input for drafting rules for the Falls Lake nutrient management strategy that would be accepted by them and other stakeholders. In addition, the department wanted to avoid the mistakes that had occurred with past stakeholder processes, such as Jordan Lake, in which the North Carolina state legislature ultimately did not adopt the proposed rules. In contrast to the view of the internal stakeholders, the external stakeholders expressed dissatisfaction with the stakeholder process. A lack of buy-in from participating stakeholders is evidenced by the fact that key stakeholders went outside of the process to get changes made to the proposed rules. This disagreement suggests that the metrics used by internal stakeholders to measure success were not adequate.
RQ6. How could the stakeholder process have been improved? Key informants in my interviews provided many important suggestions for improving the stakeholder process. These form the basis of the recommendations presented in the final section of this paper.
VI. Discussion

The three organizations that planned and convened the Falls Lake Stakeholder Process, NC DEQ, TJCOG, and UNRBA, decided to expand participation in the rule-making process because of problems encountered during and after the similar rule-making process for the Jordan Lake reservoir. Several of the relevant staff of these organizations were influenced in this decision by what they had learned about stakeholder processes when they attended an Natural Resource Leadership Institute short course at North Carolina State University. Although the short course served as a useful introduction to the subject, it did not and was not intended to provide sufficient information and training to prepare participants to design and conduct a stakeholder engagement process without the help of experienced facilitators. In fact, the process organizers did not follow the recommended stakeholder engagement process when conducting the Falls Lake Stakeholder Process.

NC DWQ staff members now commonly refer to the studied process as a "stakeholder process." However, at the time of the process occurred, the NC DWQ described it as a "stakeholder meeting process" and equated the "formal rule-making process" with the standard draft review public comment period. This is very different than the type of stakeholder engagement process described in the NRLI course cited as having been influential in the choice of approach and recommended in much of natural resource management literature.

The process organizers did not conduct a situation analysis better understand the issues that would be of concern to stakeholders, and did not clarify the objectives of the stakeholder process. They did not perform a stakeholder analysis to identify specific stakeholders that
needed to be actively involved, and did not work to fully engage representatives of these key stakeholders in the process. Instead, they contacted a large group of potential stakeholders and extended a general invitation to attend meetings. Although the people I interviewed did not identify any important stakeholders who did not attend meetings, but it is possible that one or more important groups were overlooked and excluded due to oversight. More importantly, the interviewees indicated that there was little focused effort by the process organizers to fully involve them in the decision process, and that the stakeholders’ interests and possible concerns were not adequately considered when the Falls Lake Stakeholder Process was designed.

The conveners’ lack of expert knowledge about stakeholder participation meant that little consideration was given to what type of stakeholder involvement approach was appropriate for the situation. This oversight may be reflective of the main reason why NC DWQ chose to conduct a stakeholder process, which was to get buy-in for the rules. In fact, the NC DEQ staff explained at the stakeholder meetings that the process was more about sharing information than it was about making a decision. External stakeholders were neither significantly consulted about the how the participation process was conducted, nor did they feel they were given a real opportunity to provide meaningful input to that discussion. Because the purpose of the Falls Lake Stakeholder Process was more about informing the stakeholders than on receiving input for decisions, the situation falls closer to the “limited stakeholder involvement” end of the continuum of stakeholder involvement. A passive-receptive approach was used rather than a transactional or co-management approach which include the methods commonly associated with stakeholder engagement (see Table 1 and Figure 1).
One lesson that NC DWQ staff said they had learned from the Jordan Lake rule-making process was that they should have engaged with stakeholders earlier. NC DWQ therefore made a deliberate effort to involve stakeholders earlier in the Falls Lake decision process. However, they still considered the stakeholder process to be part of the formal rule-making process which occurs towards the end of a rules development project.

Assessing the Falls Lake Stakeholder Process through the lens of the four critical factors that should be considered when designing a stakeholder process highlights some important issues with this project.

First, although it appears that all of the critical stakeholders were notified of the process and had representatives attend at least some meetings, the process organizers did not spend sufficient effort in actively engaging those representatives and their organizations. The stakeholder organizations participated because they wanted to be able to protect their interests. Yet organizers made no effort to shift the dynamic to a more collaborative mode. Many representatives of the different stakeholder organizations participated because they were ordered to by their supervisors. Review of the attendance logs for the stakeholder meetings indicate that some key stakeholder organizations did not make sure that the same individuals attended each meeting; this lack of continuity would limit the degree of engagement of their representatives. The interviews conducted for this study confirm that there were issues concerning stakeholder engagement during the Falls Lake project among both internal and external stakeholder groups.

Second, a lack of focus on developing good working relationships among the stakeholders, including the process organizers, further limited the degree of stakeholder
engagement. This was evidenced by lack of planning and discussion of objectives at the start of the project reported by the external stakeholders. The severity of this issue is indicated by the fact that several key stakeholders ended up going outside of the participation process to hold separate meetings with high-level NC DEQ personnel and members of the state legislature in order to get changes imposed on the draft rules. One of the major reasons for this dissatisfaction cited by the external stakeholders was a perceived lack of influence in critical decisions, particularly those associated with development of the nutrient model. The impact of the Falls Lake rules on stakeholders was largely determined by the final target nutrient values, which were established on the basis of the nutrient model. The development of this model was separate from the Falls Lake Stakeholder Process. In fact, model development began before the establishment of the stakeholder process, which meant that the stakeholder process had no role in setting the water quality sampling plan or the assumptions shaping the model. Glicken (2000) noted that such lack of meaningful input can be an important factor contributing to stakeholder dissatisfaction with the overall process.

Third, the process did not have a facilitator appropriate for stakeholder engagement. The TJCOG was selected to run the Falls Lake Stakeholder Process and serve as its facilitator because of the group’s prior established working relationship with NC DWQ and UNRBA, and also because they were familiar with the stakeholders identified during the Jordan Lake process. In fact, many of the key stakeholders, including the local governments of Wake, Durham, Chatham, Lee, Moore, and Johnson Counties, were also members of TJCOG. In addition, TJCOG was a member of the Technical Advisory Committee and thus had a say in the development of the model that would determine nutrient limits to be imposed on stakeholders.
TJCOG thus was not a neutral party in this process, but was itself a stakeholder and thus was arguably not suitable to serve in a facilitative role. The potential for controversy was clear from the outset, both because the rules to implement the Falls Lake nutrient management strategy would necessarily impose significantly greater costs on some stakeholders than others, and because the very similar Jordan Lake rules process had been controversial. Effective facilitation of potentially contentious decisions requires more than simply setting up meetings. A neutral third-party facilitator with experience in conflict resolution (Susskind & Ozawa, 1985) could have helped NC DWQ achieve its goal of gaining buy-in and avoiding delays caused by lawsuits and political battles among dissatisfied stakeholders.

Finally, the process managers for the Falls Lake Stakeholder Process were not provided with sufficient resources to more fully engage stakeholders in the decision process. The hard deadline imposed by state legislature seriously limited the potential for stakeholders to work in a collaborative way with NC DEQ and with each other since building the trust necessary for collaborative arrangements is difficult and can take considerable time to accomplish (O’Leary & Bingham, 2009; Alford & O’Flynn, 2012). Funding limitations contributed to the choice of TJCOG as the process facilitator and limited the amount of effort that NC DEQ staff could put into active engagement of stakeholders.

It is telling that the internal and external stakeholders different in their assessment of how successful the Falls Lake Stakeholder Process had been. This difference suggests that there was not a shared understanding of purpose and objectives. The internal stakeholders considered the Falls Lake project to be a success because it met certain procedural goals, including buy-in among external stakeholders and the development of rules that were adopted by the North
Carolina General Assembly. In contrast, many of the external stakeholders pointed out that some important stakeholders were unhappy enough with the Falls Lake project that they ended up bypassing the process altogether by meeting separately with senior management in the NC DEQ and members of the state legislature. Subsequent challenges to and delays in implementing the rules support the external stakeholders’ views that there were problems with the process. The internal stakeholders’ conclusion that the process had been successful suggests that the evaluation criteria they relied on were not sufficient to provide insights into how future projects could achieve better results.

VII. Study Limitations

A single-case study can provide useful insights; however, the general applicability of the findings is limited without comparison to other cases. The low number of stakeholders that I interviewed (12) also limits the nuance and definitiveness of the findings. The reliability of the interviewees’ responses to my questions could have been somewhat affected by the length of time that has passed since the Fall Lake Stakeholder Process ended in early 2010. However, the findings reported, validated by repeated mentions in multiple interviews, were sufficient to provide useful guidance for future stakeholder involvement projects and to serve as exploratory analysis to identify interesting questions for future research.
VIII. Recommendations and Conclusions

Given the NC DEQ’s mission to protect the environment, one important measure of success for any of their programs is whether or not it produces the desired improvements in the targeted environmental condition. Therefore, an assessment of the Falls Lake Stakeholder Process should include the question: did the project lead to actions by stakeholders that resulted in a reduced nutrient load in the Falls Lake reservoir? By that measure, the Falls Lake project was not particularly successful.

My assessment of the Falls Lake project suggests several things that could be done differently in future projects to improve the outcomes of this type of natural resource decision-making process. These recommendations are guided by the extensive literature on stakeholder participation from the fields of collaborative adaptive management and conflict resolution.

1. Time should be allocated to assess the situation and determine what level of stakeholder involvement is appropriate. If stakeholder input can have only very limited impact on the decision, then the type of stakeholder participation mechanisms selected should reflect that. Participating stakeholders should be given a clear and accurate explanation of the agency’s goals and constraints for the process from the very beginning.

2. Organizers should conduct a stakeholder analysis to identify all of the potential stakeholders, and to better understand their interests and concerns.

3. A neutral third party with specific expertise in stakeholder engagement processes should be hired to facilitate the process. This facilitator should be fully involved in process planning and not just used to conduct meetings.

4. Joint development of “rules of engagement” should occur as soon as stakeholder participants are recruited. This charter should include a description of how the process
will be conducted, and how disagreements and conflicts will be addressed. This will encourage stakeholders to be fully engaged in the process and not attempt to go outside it in order to achieve their goals.

5. Adequate resources, including time, staff support, and funding, should be made available.

6. Stakeholders should be involved in all aspects of the project to encourage active engagement and allow for new ideas and “outside of the box” type solutions.

7. Agency-level support for improved stakeholder participation efforts is required in order for agency staff to effectively engage stakeholders. Lower-level staff members need more training in how to design and implement such processes properly, and they need institutional support in order to put this training to practice. The metrics selected to assess the success of both processes and personnel should emphasize determinative factors that are specifically relevant to such processes, and these metrics should be an important consideration in agency performance reviews.

Published stakeholder participation research and recommendations make a convincing case for the potential benefits of meaningful engagement of stakeholders in natural resource management decision processes. This previous work also makes it clear that it is very difficult for resource management agencies to shift established procedures and institutional norms enough to conduct effective stakeholder participation processes. My study confirms this cautionary assessment. Arguably the most significant contribution of this study is recognition that NC DEQ has not explored and assessed stakeholder participation methods, and has not developed a clear policy and guidelines for its staff to follow. As a long-time employee of NC DEQ, I have been aware for some time of an unwritten expectation that major decision processes will include a
stakeholder process, but that there is little guidance for how to conduct such a process. NC DEQ thus has adopted the term “stakeholder process” without establishing a clear understanding of what that term actually means, at either the institutional or individual level. This lack of clarity is not unique to NC DEQ; it is likely that similar issues have contributed to problems other natural resource management agencies have had implementing stakeholder engagement. My work suggests that improved outcomes are possible if such agencies could set aside some resources to improve staff knowledge of how and when to include stakeholders in decision making.
References


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APPENDIX A. Interview Guides

For DEQ (Internal Stakeholder)

This interview will be a part of my research conducting a qualitative assessment of the stakeholder engagement process used in the development of the Falls Lake nutrient management strategy. An important goal of this research is to gain insights into how DEQ (formerly DENR) can improve future rules processes. I am going to be asking you open-ended questions about the events that you took part in. I will be asking you to tell me about your experiences with this stakeholder process, how the meetings were organized and conducted, and what the goals of the meetings were.

I’d like you to focus on observations about the process that would qualify for placement in the public records. I will not ask about your opinions of people.

I want to make sure that I end up with an accurate record of your observations, so if you do not object I would like to record this interview. I will be the only one who will have access to the recording, so your anonymity will be preserved. I will take steps to insure that you remain anonymous; you will not be identified in my report, and all the interview notes and recordings will be kept secure.

[If the individual attended many meetings, I will ask them to describe just two meetings that they consider to have been representative or particularly important to discuss.]

I’d like to start off with some general questions about your participation in the process.

D1. In what ways were you personally involved or engaged in the stakeholder process?

D2. Why was a stakeholder process used in this case?
D3. How were the stakeholders selected and involved in the Falls Lake nutrient management process?

Prompt: Who made that decision?

Finally, I’d like to get your thoughts about how well the process worked, and how such processes could be improved.

D5. Why did DENR decide to use a stakeholder process for the Fall Lake nutrient management plan?

Prompt 1: Who or what said so?

Prompt 2: Did that change over time?

Prompt 3: Did you hear different things from different people?

D6. Were DEQ’s goals met using a stakeholder process?

Prompt: How or how not?

D7. Why did DENR choose TJCOG to manage the stakeholder process for the Falls Lake nutrient rules process instead of managing the process internally?

D8. What outcomes were looked for? Were they achieved?

D9. Do you have any suggestions for how the meeting/process could have been improved?

Prompt: What should DEQ do differently in future rules processes?
For TJC

This interview will be a part of my research conducting a qualitative assessment of the stakeholder engagement process used in the development of the Falls Lake Nutrient Management Strategy Plan. An important goal of this research is to gain insights into how DEQ (Formerly DENR) can improve future rules processes. I am going to be asking you open-ended questions about the events that you took part in. I will be asking you to tell me about your experiences with this stakeholder process, how the meetings were organized and conducted, and what the goals of the meetings were.

I’d like you to focus on observations about the process that would qualify for placement in the public records. I will not ask about your opinions of people.

I want to make sure that I end up with an accurate record of your observations, so if you do not object I would like to record this interview. I will be the only one who will have access to the recording, so your anonymity will be preserved. I will take steps to insure that you remain anonymous; you will not be identified in my report, and all the interview notes and recordings will be kept secure.

[If the individual attended many meetings, I will ask them to describe just two meetings that they consider to have been representative or particularly important to discuss.]

I’d like to start off with some general questions about your participation in the process.

T1. In what ways were you personally involved or engaged in the stakeholder process?

T2. Why was a stakeholder process used in this case?
T3. How were the stakeholders selected and involved in the Falls Lake nutrient management process?

   Prompt: Who made that decision?

T4. Why did TJCOG choose to get involved in this process?

Finally, I’d like to get your thoughts about how well the process worked, and how such processes could be improved.

T5. What was TJCOG understanding of what DENR’s goals were for having a stakeholder process and were DENR’s goals met using a stakeholder process?

   Prompt1: Who or What said so?

   Prompt2: If not why not?

T6. Why did TJCOG agree to manage the stakeholder process for the Falls Lake nutrient rules process?

T7. Please explain how this stakeholder process achieved DENR’s objectives or did not achieve DEQ’s objectives?

T8. Do you have any suggestions for how the meeting/process could have been improved?

   Prompt: What should DEQ do differently in future rules processes?
For External Stakeholders

This interview will be a part of my research conducting a qualitative assessment of the stakeholder engagement process used in the development of the Falls Lake nutrient management strategy plan. An important goal of this research is to gain insights into how DEQ (formerly DENR) can improve future rules processes. I am going to be asking you open-ended questions about the events that you took part in. I will be asking you to tell me about your experiences with this stakeholder process, how the meetings were organized and conducted, and what the goals of the meetings were.

I’d like you to focus on observations about the process that would qualify for placement in the public records. I will not ask about your opinions of people.

I want to make sure that I end up with an accurate record of your observations, so if you do not object I would like to record this interview. I will be the only one who will have access to the recording, so your anonymity will be preserved. I will take steps to insure that you remain anonymous; you will not be identified in my report, and all the interview notes and recordings will be kept secure.

[If the individual attended many meetings, I will ask them to describe just two meetings that they consider to have been representative or particularly important to discuss.]

I’d like to start off with some general questions about your participation in the process.

T1. What was your role in this stakeholder process?
Prompt1: Who invited you to participate in the process?

Prompt2: Were you representing an organization, or participating as an individual?

T2. Why did you personally choose to get involved in this process?

T3. In what ways were you personally involved or engaged in the stakeholder process?

Is there a meeting you attended that you consider particularly important or typical? I’d like to ask some questions about that meeting to get a better sense of how the process was managed.

T5. Meeting date, location

T6. Who organized the meeting?

T7. Who else attended the meeting?

T8. Was anyone not at the meeting who should have been there?

T9. Were the meeting’s goals explained? If so, what were they?

T10. Were these goals met? Was there discussion of this at the meeting?

Finally, I’d like to get your thoughts about how well the process worked, and how such processes could be improved.

T11. What was your understanding of the goals of this stakeholder process and the outcomes that were expected?

T12. Were the process goals that you described met?

Prompt: Were the stakeholders asked about this?

T12. Please explain how this stakeholder process either met your own objectives or did not meet your objectives?

T13. Do you personally have any suggestions for how the meeting/process could have been improved? What should DEQ do differently in future rules processes?