

Fishing Creek Local Watershed Planning Situation Assessment

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Introduction

WECO was contracted by the NC Ecosystem Enhancement Program (EEP) to facilitate the stakeholder involvement portion of the Fishing Creek local watershed planning initiative. WECO is Watershed Education for Communities and Officials, a NC Cooperative Extension program housed in the NC State University Department of Agricultural and Resource Economics. The Fishing Creek planning area, approximately 70 square miles, is located primarily in Granville County and includes the city of Oxford. Small amounts of drainage area occur in Vance (~3 sq. mi.) and Franklin (~1 sq. mi.) counties. For logistical reasons, EEP has set the planning area to include three 14-digit hydrologic units (HUs) or watersheds:

- HU#03020101020010 containing Fishing and Coon creeks and the smaller tributaries around Oxford,
- HU#03020101030020 containing Gibbs Creek and adjacent tributaries, and
- HU#03020101030010 containing Sand Creek and a significant stretch of the Tar River.

This watershed area will be known as the Fishing Creek local watershed planning area. (Fishing Creek LWPA)

These watersheds were chosen for multiple reasons. NC Department of Transportation's Transportation Improvement Program projects are planned for development around Oxford. Fishing Creek is the major tributary of the Tar River running through the study area and is considered by the NC Division of Water Quality to be impaired due to its poor benthic community. It is on the NC 303(d) list of impaired waters, due to both the wastewater treatment plant and urban runoff. The Oxford wastewater treatment plant (WWTP) is situated just south of the city in the headwaters of Fishing Creek. The 2004 Basinwide Planning Report lists the entire length of Fishing Creek impaired. An additional unnamed tributary of Fishing Creek that runs through the city is designated as impaired but may not yet be included on the state's 303(d) list.

Most of the land surrounding Oxford is pastureland and low-density residential area interspersed with some cropland. The land adjacent to the length of Fishing Creek is similar in character with slightly more cropland as it approaches the Tar River in the south. One of the watersheds in the study area, Sand Creek, contains a section of the Tar River. Most of the Tar River running through the study area is designated a Significant Natural Heritage Area by the NC Natural

Heritage Program. Waters in this watershed provide important habitat for rare aquatic and wetland species. The Tar River Land Conservancy has been very active in this area.

NCEEP is sponsoring the watershed planning initiative to locate stream and wetland restoration projects that will provide mitigation credit, while improving watershed functions and meeting local goals. NCEEP is able to fund stream and wetland restoration projects that meet certain program criteria, and may also be able to fund stormwater best management practices (BMPs) with nutrient offset payments and buffer mitigation payments received through the Tar-Pamlico Rules. The study area should provide a balance of potential restoration and preservation opportunities, as well as opportunities for innovative projects to enhance watershed functions.

Purpose

This Situation Assessment is part of the Fishing Creek Local Watershed Planning project, sponsored by the NC Ecosystem Enhancement Program (EEP) of the NC Department of Environmental and Natural Resources (DENR). EEP, a non-regulatory agency, is charged with providing wetland and stream mitigation for the state of NC, much of which is required due to transportation projects.

The purpose of the Situation Assessment is to identify stakeholders and learn about the issues in the area. The results of this assessment will help determine a public involvement process for the EEP local watershed planning process in the Fishing Creek LWPA.

Involving the public is not only beneficial to the watershed project, but integral to successful implementation of a watershed plan. The cooperation and enthusiasm of affected parties is key to locating project sites, obtaining voluntary participation, and championing implementation of the watershed plan, including its recommendations to local decision making bodies.

Obtaining knowledge of the local interests in watershed planning helps the project team to determine if and how these interests may be met through the watershed planning process.

Methods

Stakeholders were identified through a snowball sampling method, which relies on referrals from initial subjects to generate additional subjects. Initial subjects included stakeholders who were known to have been actively involved in Fishing Creek issues. WECO interviewed 17 stakeholders including residents, government staff, and non-government organizations representing a cross-section of interests. The team did not speak to every resident identified, but tried to interview people from each interest group identified. Responses have not been attributed to specific individuals. Appendix A contains the questions used as guidance during the interviews.

The results of the interviews are summarized in this report, along with WECO's recommendations for moving forward.

This report intends to:

- Identify issues of importance to the local community;
- Identify organizations and individuals who can influence watershed decisions or are influenced by watershed decisions;
- Determine how best to bring diverse interested stakeholders together;
- Begin the process of learning about and understand the individuals' interests in the watershed; and
- Assist the technical team in addressing research questions that concern the stakeholders

The report does not intend to provide a quantitative, statistically accurate analysis of the issues.

Stakeholders

Stakeholders in this watershed include residents, non-profit, and government interests. Residents in the watershed have been concerned about the Oxford wastewater treatment plant (WWTP) and its sewage collection system. In addition, development has also been mentioned as a concern.

Stakeholder interests represented include:

- City of Oxford
- Granville County
- Granville County Cooperative Extension
- Granville County Soil and Water Conservation District
- Residents of Oxford and Granville County, including the Antioch neighborhood
- NC Division of Water Quality
- NC Ecosystem Enhancement Program
- Non-profit organizations

Government agencies with the authority to make decisions to affect Fishing Creek or have resources to benefit Fishing Creek, include: NCDENR, DSWC, DWQ, EEP, Granville County Soil and Water Conservation District, Granville County Natural Resource Conservation Service, NC Cooperative Extension, City of Oxford, and Granville County.

Environmental organizations with interest in the Fishing Creek area include the Tar River Land Conservancy, the Pamlico-Tar River Foundation, and Clean Water for NC.

Issues Discussed by Respondents

WECO conducted a watershed situation assessment to identify the stakeholders who should participate in the watershed plan, and to identify the interests of local stakeholders in the watershed. The following issues were either raised during meetings with some of the stakeholders or were discussed by stakeholders in phone conversations.

Sewage (Oxford wastewater treatment plant and lift stations)

Almost everyone interviewed mentioned the wastewater treatment plant (WWTP) or sewage lift stations. The Oxford WWTP has recently undergone upgrades to solve problems relating to spills. Like many older communities, Oxford had a history of leaking sewer lines, failing lift stations, and WWTP problems. The NC Division of Water Quality became involved, requiring specific changes to be made. Oxford entered into a judicial order of consent and later a special order of consent, requiring improvements in its wastewater system. In addition to the WWTP, Oxford will need to continue to upgrade sewer lines in its system.

The wastewater lift station failures occurred mainly in the Coon Creek watershed of Fishing Creek. Likely due to changes in the floodplain, the lift station would flood when the creek rose, causing sewage spills locally, and increasing the amount of water pumped to the WWTP, thereby exacerbating the problem there. The Antioch community of this area has voiced its concerns with Oxford and Granville County. At one point, well testing was performed to determine if the sewage spills had contaminated drinking water wells. Bacterial contamination was found at some wells, but was traced to well head protection problems, as compared to groundwater contamination movement from other areas. One respondent is unsatisfied with how the situation was resolved, while others feel the lift station replacement will allow Coon Creek to return to its previous health.

Development

A number of respondents noted that development of the watershed and surrounding area is a growing concern. The watershed lies within an hour of Raleigh and closer to Durham, with Interstate 85 running through the middle of the study area. People feel it is close enough for

commuting to those cities. Residents and government officials are interested in preserving the rural character of the area, and are interested in economic development. Farmers and landowners with large tracts are entertaining ideas of selling their land, but concerned about rampant development taking place. Some respondents would like decision makers to more thoughtfully plan for development in this area. It is important for the local planning departments to be involved in this local watershed planning process and if there are specific developers who have plans for the area, they should also be invited.

Conservation Easements and Preservation

The Tar River Land Conservancy is very active in Granville County, both with local governments and landowners. They have noted good reception from landowners concerning conservation education. Many of the lands that are prime targets for conservation have been identified through a TRLC study over the past few years, as well as TRLC work with EEP. Landowners have expressed reluctance to long-term conservation easements, since they may not be willing to permanently remove their land (and their children's land if they intend to leave it to them) from development consideration and the money it would generate. This is an opportunity to educate landowners about the Tar-Pamlico rules and how they may affect landholdings adjacent to creeks and tributaries.

Plant and Animal species

Certain freshwater mussels and an herb called Harperella (*Ptilimnium nodosum*) are known to exist in the Fishing Creek watershed area. These are on the protected or endangered list. A mussel assessment has been completed, documenting occurrence and potential areas for mussel recruitment.

Agricultural Best Management Practices (BMPs)

Granville County farmers have been practicing and installing BMPs for many years now. Cooperative Extension, the Soil and Water Conservation District, and the Natural Resource Conservation Service have played an active role in protecting the area's natural resources. There is still opportunity for land that has not been stewarded as well to take advantage of these resources, as well as EEP resources.

Stormwater

Respondents brought up stormwater management as an important issue in this watershed area. It was noted that stormwater education is needed throughout the community to allow developers to take advantage of innovative stormwater management technology. Neither Oxford nor Granville County is subject to Phase 2 stormwater regulations.

Granville County Citizens Advisory Council on Environmental Affairs (GCCACEA)

The GCCACEA advises the Granville County Commissioners and has the support of Oxford as well. It has been active in the WWTP issues, and is interested in working on the Fishing Creek local watershed planning team. The GCCACEA has a subcommittee charged with looking into the WWTP issue.

Past and Potential Conflicts

The wastewater treatment plant and the Coon Creek lift station seem to be at the center of all conflict issues identified. Miscommunication has occurred among the many stakeholders about what exactly is happening between the NC Division of Water Quality, the City of Oxford, and Clean Water for NC. The City of Oxford has developed a website to help alleviate miscommunication: <http://cleanwateroxford.org>

The issue of potentially contaminated wells seems to have many sides to it. One respondent stated that Oxford would not pay for the well testing. Another respondent was not sure what the results of the testing indicated and didn't feel s/he was getting all the information. Several respondents noted there may be an environmental justice issue here, stating that historical and

socio-economic standing of the community needs to be taken into account. One Coon Creek resident noted how children used to play in the creek and people would fish in it. Although there is hope this could happen again someday, the respondents do not feel they have been given all the information they need.

Local Watershed Planning

There seems to be strong interest in local watershed planning for the Fishing Creek watershed area. The local governments, environmental organizations, residents, and government natural resource agencies have all expressed a desire to participate.

On a very positive note, many of the respondents mentioned that the future was looking better in the Fishing Creek area than it has for long time. People are pleased that the WWTP and the lift station are being fixed. Some consider these events and the interest brought about by the local watershed planning process to be a turning point for the Fishing Creek planning area.

Recommendations for Proceeding

The results from interviews show that interest in participating in a watershed planning process is high. All respondents interviewed expressed an interest in sitting down with other participants who may not share their views. This willingness to engage with each other allows participants to seek opportunities for mutual gain. Careful attention to the watershed planning process will be necessary to enable stakeholders to feel comfortable and interested in participating. Some principles that need to be adhered to include:

Science informed decision making

People are interested in seeing the results of the technical watershed analysis. However, if the study results seem to contradict participants' beliefs, they may feel less inclined to want to base their recommendations on it. For this reason, it is crucial that the watershed group participates in the assessment by hearing interim results and questioning researchers' assumptions. Ongoing participation will increase the likelihood that watershed group members will accept and possibly champion the results.

Mutual education of each others interest and values

Collaborative skills training and team building should be provided to create a group environment where participants can hear each other's concerns and work together to address those concerns. Information about the wastewater treatment plant issues should be shared and reviewed jointly by participants, compiled in an accepted format and dispersed to all interested parties.

Equity concerns of communities in the planning area should be raised and discussed, to ensure that the watershed planning process openly addresses these issues.

Meeting participants' process, psychological, and substantial needs

Participants must feel:

1. they are being heard,
2. their input will influence watershed plan recommendations, and
3. these recommendations will result in specific, measurable actions.

The facilitators must be neutral and unbiased, and ground rules should be adopted and enforced by the group.

EEP will need to set forth specific guidelines from the start about what it is able and not able to do concerning watershed planning and funding watershed plan implementation.

The US Environmental Protection Agency (EPA) Nine Required Minimum Elements for a Watershed Plan

The NC Ecosystem Enhancement Program (EEP) will not likely be able to finance all projects that will be identified in the plan, so the watershed planning team will need to seek additional funding to implement projects. EPA is a significant source of funding for non point source pollution

projects and restoring 303(d) listed streams. EPA requires that watershed plans address nine elements if funding is sought, and recommends that all watershed plans that seek to restore impaired waters include the nine elements. Because of this requirement, the local watershed plan EEP develops should include these nine elements. WECO recommends that EEP includes these elements in the scope of work for the environmental consulting firm that will be conducting the technical watershed planning activities. This will facilitate local stakeholders' ability to obtain funding to help implement the watershed plan. The nine elements include:

1. An identification of the causes and sources or groups of similar sources that will need to be controlled to achieve the pollutant load reductions estimated in the watershed
2. A description of the management measures that will need to be implemented to achieve pollutant load reductions as well as to achieve other watershed goals identified in the watershed based plan
3. An estimate of pollutant load reductions expected for the management measures
4. An estimate of the amount of technical and financial assistance needed associated costs and or sources and authorities that will be relied upon, to implement the plan
5. An information/education component that will be used to enhance public understanding of the project
6. A schedule for implementing the NPS management measures identified in this plan that is reasonably expeditious
7. A description of interim, measurable milestones for determining whether pollutant management measures or other control actions are being implemented
8. A set of criteria that can be used to determine whether pollutant loading reductions are being achieved over time and substantial progress is being made towards attaining water quality standards
9. A monitoring component to evaluate the effectiveness of the implementation efforts over time measured against the criteria established under item 8.

Appendix 1

Fishing Creek Watershed Situation Assessment Interview Script

1. What is your connection to Fishing Creek?
2. What plans does your organization have within the watershed?
3. What groups/clubs/organizations do you know about in the watershed?
4. What are the biggest issues facing Fishing Creek?
5. How healthy is the watershed? And why?
6. Can you share any specific observations about insects, fish, odors, flooding, etc.?
7. Are there any imminent changes to the watershed that you think might impact Fishing Creek, either positively or negatively?
8. Where do you get information about local issues?
9. Would you like to be kept informed of this Fishing Creek project?
10. Who could represent your organization?
11. How can we contact landowners? Through what agency or group?
12. Who else should we interview?
13. Before we leave, is there any other issue you want to talk about?

Fishing Creek Local Watershed Planning Area

