

**School of Government  
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# **Evaluation of the NC Dept. of Environment and Natural Resources' Ecosystem Enhancement Program**

Phase I Report

May 8, 2010

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## Background

The North Carolina Department of Environment & Natural Resources (hereafter: DENR) operates a voluntary compensatory mitigation program to offset unavoidable impacts to aquatic resources. This program, called the Ecosystem Enhancement Program (hereafter: EEP), collects funds from public- and private-sector entities whose construction projects will have a detrimental impact on the environment, and uses those funds to contract with private companies to design, construct and temporarily maintain restoration projects that improve the environment and thereby mitigate the permitted impacts. EEP contracts for these services through two different mechanisms: Full Delivery (hereafter: FD) and Design-Bid-Build (hereafter: DBB).

In 2009, a new state administration took over in North Carolina. DENR's new leadership identified a need to have an objective third party review EEP's procurement processes. DENR was interested in securing initial results of this analysis fairly quickly in preparation for the 2010 session of the North Carolina General Assembly, and to take advantage of ongoing efforts to make changes to EEP processes in compliance with new federal regulations. In October of 2009, DENR and the School of Government at the University of North Carolina at Chapel Hill (hereafter: SOG) began discussions on conducting an evaluation of EEP's two-pronged procurement process. The effort was envisioned to evaluate EEP's procurement methods in general terms of efficiency and effectiveness, and their effectiveness in relation to each other.

The overall evaluation was broken into two phases: Phase I, the subject of this report, focuses on the development of criteria and standards to be used in the subsequent analysis which will comprise Phase II. The results of the analysis provided in this report set the stage for Phase II. As described later in the report, DENR has not yet determined how Phase II of the analysis will be carried out.

For the purposes of this investigation, criteria and standards are defined as follows:

**Criteria** are values or virtues (like transparency, accountability, etc.) that serve as an organizational tool to help group related standards.

**Standards** are levels of performance a system is expected to achieve. For example, "A good passenger vehicle can get at least 35 miles per gallon on the highway." *At least 35 mpg highway* is the standard, a level of performance that a car either meets, exceeds, or fails to meet. A "good" passenger vehicle will meet or exceed that standard. In an evaluation of passenger vehicles, that standard would probably fall under a fuel-efficiency criterion.

The agreed-upon approach was to solicit opinions from four major stakeholder groups regarding what criteria and standards *they* thought should be used to evaluate EEP procurement methods.

The four stakeholder groups were defined as follows:

- Mitigation Providers – private sector companies that have been contracted by EEP to implement restoration projects for the purposes of compensatory mitigation.

- Mitigation Consumers – private- and public-sector entities that have chosen to make payments to EEP for the purposes of satisfying compensatory mitigation requirements.
- Government Regulators & Watchdog Groups – state and federal agencies (such as the U.S. Army Corps of Engineers and the N.C. Division of Water Quality) responsible for overseeing the delivery of compensatory mitigation and environmental interest groups.
- Program Administrators and Related Personnel – agencies, including EEP, responsible for delivery of program services and overseeing contractual processes.

Research commenced in mid-January 2010. The SOG research team consisted of three professors and a project manager:

- Maureen Berner - Associate Professor of Public Administration and Government (School of Government, University of North Carolina at Chapel Hill)
- Richard Whisnant - Professor of Public Law and Government (School of Government, University of North Carolina at Chapel Hill)
- Bill Holman – Director of State Policy (Nicholas Institute for Environmental Policy Solutions, Duke University)
- Paul Caldwell - Project Manager (School of Government, University of North Carolina at Chapel Hill)

The research team conducted six meetings with representatives of the four stakeholder groups in February and March to generate a list of stakeholder-proposed and -supported criteria and standards to use in Phase II of the study.

## Summary of Findings

- Six main criteria emerged from the initial meetings:
  - Quality/Effectiveness
  - Transparency/Accessibility
  - Cost-Efficiency
  - Accountability
  - Flexibility
  - Consistency
- By the end of the meetings, and after further discussion and refinement, there was strong support for three of those six criteria: Quality/Effectiveness, Transparency/Accessibility, and Cost-Efficiency.

- Nearly all of the potential standards suggested by the stakeholder groups focused on two of those three: Quality/Effectiveness and Transparency/Accessibility.

A detailed breakdown of the criteria and standards can be found in the [Findings](#) section.

## Methodology

### Stakeholder Groups

The first task was to identify potential participants for each of the stakeholder groups. EEP and the SOG research team each developed a suggested initial list of representatives for each of the four groups and used those as a starting point for the development of a combined list of potential representatives.

Four meetings were held in February, one each week, attended by representatives from one stakeholder group at a time. In order to foster effective dialogue, it was decided that each stakeholder group should consist of between six and eight representatives, preferably within reasonable driving distance of the SOG where the meetings would be held.

The research team also sought a range of viewpoints within each stakeholder group. Thus, only one or two people attending were associated with the same company, division, department, etc. Occasionally the initial choices for representatives were unable to attend a meeting. In those situations, we asked the preferred representative to select someone within their organization they thought would be the best alternative. In this way we tried to ensure group sizes remained manageable, while still providing a wide spectrum of opinion, both across and within stakeholder groups.

For the four stakeholder groups described previously, the following entities were identified by DENR and the SOG research team and invited to participate. Most, but not all, entities were able to identify representatives to attend some or all of the meetings.

- Mitigation Providers
  - Mitigation banking companies that provide mitigation to EEP through its FD procurement method
    - Restoration Systems, LLC
    - Environmental Banc and Exchange
  - Environmental consulting firms that provide restoration design services to EEP through its DBB procurement method
    - The Louis Berger Group, Inc.
    - Stantec
    - PBS&J
  - Backwater Environmental (a company specializing in the construction, maintenance and monitoring of environmental restoration projects)

- Mitigation Consumers
  - Federal Highway Administration
    - An agency that provides federal funding to the NC DOT, some of which is used for compensatory mitigation
  - NC Dept. of Transportation
    - EEP provides compensatory mitigation to offset impacts associated with NC DOT road projects
  - NC Home Builders Association
    - Many home developers have historically used EEP to meet their mitigation requirements
  - NC League of Municipalities
    - Many local governments have historically used EEP to meet their mitigation requirements
  - Soil and Environmental Consultants
    - An environmental consulting firm that assists various clients in meeting compensatory mitigation requirements and has coordinated with EEP on their behalf
  
- Government Regulators and Watchdog Groups
  - US Army Corp of Engineers
    - Oversees the delivery of compensatory mitigation, including the review of restoration projects, for federal permits
  - NC Division of Water Quality
    - An agency within DENR that oversees the delivery of compensatory mitigation for state permits
  - NC Environmental Management Commission
    - An appointed decision making body with oversight responsibilities for several DENR agencies
  - Environmental Defense Fund
    - A non-profit environmental advocacy group
  
- Program Administrators and Related Personnel
  - DENR
    - EEP
    - Division of Purchase and Services
  - NC Dept. of Administration
    - Division of Purchase and Contract
    - State Construction Office
  - Governor's Office



## Data Gathering Tools

In addition to the four meetings in February, we facilitated another two meetings in March. The purpose of the February meetings was to get input from each stakeholder group individually. The purpose of the March meetings was to assess the level of agreement across different stakeholder groups for the suggestions each made on potential criteria and standards.

While the six meetings were our primary data gathering tool, we knew everyone would not be able to attend every meeting. We also knew six to eight representatives for each group might not cast a wide enough net. With those limitations in mind, we also created a wiki page for this project, hosted within the greater UNC SOG Water Wiki<sup>1</sup>. The EEP Procurement page<sup>2</sup> provided a place for the SOG research team to post background information on the project and research team members, logistical details on the meeting schedule, dates, times, parking, etc., as well as notes from each meeting and a constantly evolving list of preliminary findings. The Water Wiki is accessible by anyone with internet access.

The Water Wiki allows significant freedom to post individual thoughts, comments, and reactions. The ability to read the page or post comments or new information was not restricted to stakeholder group representatives but was accessible to anyone who desired to contribute. We mentioned the wiki constantly during our stakeholder meetings as the central source for information and a great way to participate in the project. We also asked stakeholders to spread the word about the wiki to anyone they knew who might want to contribute through it or simply keep track of what we were doing. In addition, research team members offered to speak individually with anyone who was interested in the project and to post information to the wiki on their behalf if they wished, and did so during the contract period.

## Data Gathering Process

As mentioned above, the first activity involved four meetings in February, one with each stakeholder group. The purpose of those meetings was to cast a wide net and get as many different ideas as possible from each group. During February, the research team looked for patterns and similarities between the comments, concerns, and suggestions voiced by each group.

While the February meetings were broad but not very deep, the March meetings were the exact opposite. The purpose of the March meetings was to focus primarily on the areas of common agreement and dig down into each one in order to generate a list of standards that could be used to evaluate EEP's two-pronged procurement process.

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<sup>1</sup> [http://sogweb.sog.unc.edu/Water/index.php/Main\\_Page](http://sogweb.sog.unc.edu/Water/index.php/Main_Page)

<sup>2</sup> [http://sogweb.sog.unc.edu/Water/index.php/EEP\\_Procurement](http://sogweb.sog.unc.edu/Water/index.php/EEP_Procurement)

The first March meeting, held on March 24, involved Turning Point® technology, which allows a facilitator to ask a question and for everyone in the audience to respond through the use of handheld voting controls. The Turning Point® software was linked with PowerPoint® so that the prompting questions were presented in one slide, and once all the votes were in, the results were displayed in numerical and graphical form on the next slide. This process was used to facilitate contemplation and prompt additional discussion on:

- The importance of each of the six criteria discussed at that time<sup>3</sup>
- The clarity of each criterion
- The measurability of each criterion
- The quality of each standard under consideration
- The ideal threshold to use for each standard<sup>4</sup>

The conversations instigated by the Turning Point® exercise lead to many changes in the standards that were up for discussion at that time.

The second March meeting, held on March 31, reviewed the streamlined list of criteria and standards that came out of the previous meeting and provided an additional opportunity to fine-tune those standards and provide additional ones.

## Findings

In order to measure the performance of EEP's two-pronged procurement process, the research team sought to obtain guidance on which performance measures to use. Our February meetings primarily focused on obtaining criteria and our March meetings focused on obtaining standards.

By the end of February, a clear pattern had emerged regarding criteria. Nearly every stakeholder group mentioned the following six criteria:

- Quality/Effectiveness
  - For example, regulators and watchdogs care about making sure the projects are very effective at mitigating the environmental damage caused by the projects they're associated with. Thus, standards that fit best under this criterion were those that compare the number and type of mitigation credits a project was expected to produce to the actual number and type of mitigation credits a project produces at several milestones.
- Transparency/Accessibility

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<sup>3</sup> The six criteria are those found under the first bullet in the [Summary of Findings](#) section above

<sup>4</sup> The results can be viewed at <http://sogweb.sog.unc.edu/Water/images/9/92/BigStakeholdermeeting1Results.pdf>

- For example, mitigation consumers like cities and towns who had to purchase mitigation credits were interested in knowing which project(s) was/were funded by the credits they purchased. At least one consumer said it was easier for them to explain the expenditure to their constituents if they could tell the constituents that the credits purchased by the municipality funded stream restoration in a city park. Thus, standards that fit best under this criterion were those that deal with collecting useful information and making it available and easily accessible to people who may not be well versed in the technical language surrounding this kind of service.
- Cost-Efficiency
  - For example, mitigation providers were interested in comparing the cost-efficiency of FD vs. DBB projects. In order to do that, EEP would need to use full cost accounting and possibly look at new methods of assigning costs while private firms may need to provide access to their accounts in order to measure the efficiency of not only projects as a whole, but also individual steps along the way. Thus, standards that fit best under this criterion were those that deal with opening financial records and organizing them in such a way that allows them to be fairly comparable.
- Accountability
  - For example, regulators and watchdogs were interested in ensuring that mitigation providers who did poor quality work did not receive funding for more projects in the future. Thus, standards that fit best under this criterion were those that involved positive and negative consequences for good or bad work, respectively.
- Flexibility
  - For example, mitigation providers expressed concerns about how a new rule/regulation, or a new interpretation of an existing rule/regulation, may cause an application they've spent month on to no longer fit certain funding criteria, and that such changes may occur without providing enough time to modify proposals so that they comply with the current requirements. Thus, standards that fit best under this criterion were those that talked about allowing sufficient time to amend processes already underway whenever the rules/regulations, or their interpretation, changed.
- Consistency
  - Consistency is the alternative to Flexibility and grew out of the same concern. In short, if the procurement process could not be made flexible enough to allow for the amendment of proposals already submitted to account for different rules, then it would be advantageous for either the rules to not change, or for proposals already in the pipeline to be "grandfathered" in and thus be held harmless when new requirements were applied.

While we had been successful in obtaining a list of criteria, less progress had been made on standards. In order to facilitate March's focus on detail and standards, the research team generated a sample list of several potential standards for each criteria and solicited feedback via the wiki, email, or phone calls prior to the first March meeting. During this process, we obtained several new suggestions from the participants which were reviewed during the second March meeting.

Our meetings with stakeholders generated the following list of criteria and standards to consider for use in an evaluation of EEP's two-pronged procurement process:

- CRITERION: Quality/Effectiveness

- STANDARD: Number of years between:
  - Institution date and end of design phase
  - End of design phase and end of construction phase
  - End of construction phase and end of monitoring phase

The purpose of this standard is to compare the amount of time a project was planned to take to the amount of time it actually took to reach certain milestones. This would be a measure of quality/reliability of the contractors, and of the effectiveness of the projects.

- STANDARD: Number of *anticipated* credits at construction vs. # of credits *delivered* at close out

The purpose of this standard is to compare the amount of credits planned for a mitigation project to the amount of credits actually delivered at the end of the required monitoring period for the project. This would be a measure of quality/reliability of the contractors, and of the effectiveness of the projects.

- STANDARD: Percent of projects in River Basin Restoration Priorities (RBRPs)

The purpose of this standard is to measure how many mitigation projects occur in watersheds targeted as priorities for restoration attention based on environmental criteria. Its utility is based on the understanding that restoration for the purposes of mitigation can have enhanced benefits when concentrated in areas in need of restoration activity.

- CRITERION: Transparency / Accessibility

- STANDARD: All scoring decisions made during competitive selection processes will be made public on the agency website at award announcement for all proposals and shall clearly explain how/why the winning proposal won and what other proposals would have needed to change in order to be more competitive

The purpose of this standard is to enable external examination and comparison of funding decisions based on funding requirements and the merits of each proposal. A secondary purpose is to provide constructive criticism to firms who submit proposals for mitigation projects.

- STANDARD: Anticipated full costs (using full cost accounting) associated with each project phase are made publicly available on the department web site at time proposals are awarded.

The purpose of this standard is to enable internal and external examination and comparison of the input cost of each phase of each project procured under the FD and DBB methods. This standard could also fit under the Cost-Efficiency criterion as the information it will provide would be useful in determining which projects are most efficiently funded through each of the two procurement methods.

- STANDARD: Make repair and maintenance costs (using full cost accounting) for each project available on EEP's website.

The purpose of this standard is to enable internal and external examination and comparison of the post-construction cost of each phase of each project procured under the FD and DBB methods. This standard could also fit under the Cost-Efficiency criterion as the information it will provide would be useful in determining which projects are most efficiently funded through each of the two procurement methods.

- CRITERION: Cost-Efficiency
  - STANDARD: Average cost per credit over rolling, 3-5 year spans, and at close out, controlled by region of the state (to account for different property values) and type of credit.

The purpose of this standard is to enable internal and external examination and comparison of the output cost (the cost per credit) from projects that used the FD and DBB methods. The information it will provide would be useful in determining which projects are most efficiently funded through each of the two procurement methods.

## Next Steps

This list of criteria and standards presented above represents the areas of consensus across the representatives of the stakeholders with whom we met. We believe any future evaluation of EEP's procurement process could be conducted with the application of these standards.

During the course of this study, the SOG team heard from some stakeholders a desire to evaluate issues beyond the two-pronged procurement process. Potential research questions include:

- Does EEP's current operation provide effective mitigation?
- Is EEP's current mode of operation the most efficient way to provide effective mitigation?
- Are there alternative practices that would improve EEP's ability to provide (or facilitate the provision of) effective, high-quality mitigation?
- Should the government play any role in the provision of mitigation services?

Based on the findings of this document, DENR will consider how to move forward with the evaluation of EEP's procurement methods (Phase II). DENR intends to use these findings to take a broader look at the effectiveness of EEP's mitigation delivery, and in particular the effectiveness of the program's procurement system.