THE CAROLINA VEGETATION SURVEY NEWSLETTER

March 10, 2010

EEP is currently reviewing its relationship with the Carolina Vegetation Survey. In this context we have presented a summary of our collaboration to EEP staff and its business partners. The Executive Summary and the PowerPoint presentation developed in support of this summary are available for your viewing on our website:
~http://cvs.bio.unc.edu/presentations/ExecutiveSummary_2010-3-3v2.pdf
~http://cvs.bio.unc.edu/presentations/2010-03-03_ACEC.pdf

The EEP-CVS vision is a collaboration that benefits the citizens of North Carolina in several ways:

* CVS provides tools for detailed, justifiable, and efficient generation of targets for restoration and management based on site-specific knowledge of the vegetation of the state. Development and application of the CVS North Carolina Vegetation Database to generate restoration targets will allow otherwise unattainable state-of-the-art predictions

of the natural vegetation of a site that should satisfy the most stringent current and future restoration guidelines.

* CVS methods and tools reduce risk through demonstration of compliance with US-ACE requirements by tracking individual trees, greater likelihood of planting success through use of past species performance and site characteristics to guide plant selection, early detection of likely project failure so that prompt corrective action can be taken, and robust and documented planning that should be resistant to future litigation by diverse interest groups.

* Collaboration with CVS is leading to decreased costs and greater efficiency through optimized data collection procedures, use of previous monitoring data in resampling, automated analysis and report generation, automated evaluation of plans and reports, automated and transparent QA/QC on submitted data, improved ease of material selection by contractors, early detection of project problems, ability to determine when a project is going well such that less sampling is needed, greater likelihood of selected species survival, and application of a methodology that is scalable to more robust and challenging regulation.

As a consequence of five years of collaboration with EEP, CVS has significantly increased the efficiency and effectiveness of EEP restoration planning and monitoring. A formal EEP cost-benefit analysis has projected a cost savings to EEP of $200,000 per year starting in 2010. CVS is now on the cusp of being able to create a set of very powerful tools that would address the three components of the CVS-EEP vision: generation of optimal restoration targets, reduced risk of project failure, and greater efficiency and cost savings. In particular, we see seven opportunities that are only now becoming available and that would allow the State to realize considerable additional savings that will directly result from its past investment in the CVS-EEP partnership.

1. We can provide web-based tools that allow better, cheaper and more defensible selection of restoration targets. These tools would provide a quick and highly effective alternative to searching out field reference sites.

2. We can provide an enhancement to our database system to automatically assess likelihood of project success or failure based on monitoring data, which in turn would allow adjustment of monitoring strategy and would allow early adaptive management of projects to minimize risk of failure.

3. We can provide a web-based service for contractors whereby they can determine how their projects are doing, the risk of failure of a project, the level of success of past projects in which they were involved, and the complexity of a project in which they might want to participate.

4. We can develop a tool that draws on our multiple datasets to aid in selection and evaluation of species for planting designs. This tool should be equally useful to contractors and to EEP staff, and it would maximize the transparency of the review

process.

5. We can provide a service whereby we draw on past monitoring data to evaluate the success of plant materials of specific species, sizes and sources previously used in restoration projects as related to known local site conditions.

6. We can conduct a formal, quantitative review of the current EEP-mandated monitoring protocol to determine whether some of the measurements are redundant relative to EEP needs so that they might be dropped from monitoring requirements, thereby reducing monitoring costs.

7. We can plan regular four-way meetings with contractors, and staff from EEP, CVS, and US-ACE to assess what additional analyses and data services CVS might provide to increase efficiency and decrease costs for EEP and its contractors.

Such tools and services are available nowhere else in the country and should help make EEP a national model of efficiency and effectiveness. Continuation of the CVS-EEP collaboration will also ensure ongoing maintenance and efficient use of the database of vegetation monitoring data from EEP-sponsored mitigation projects.

Robert Peet, UNC-CH
Tom Wentworth, NCSU