North Carolina’s Ecosystem Enhancement Program: A National Model for Mitigation

William S. Gilmore, PE

The same challenge faces every state in the nation: achieving responsible growth while simultaneously protecting the environment. In every state, new roads and other economic development activities cannot go forward until federally mandated environmental safeguards protecting wetlands and waterways are achieved.

North Carolina is working to meet this challenge by proactively and comprehensively addressing the environmental impacts associated with certain development activities through its newly created, groundbreaking Ecosystem Enhancement Program (EEP).

In the mid-1990s the N.C. Department of Transportation (NCDOT) experienced significant project delays. Up to 40 percent of the missed start-dates of new construction projects could be attributed to problems with wetland mitigation required as compensation for environmental impacts.

As a result, NCDOT joined with the state Department of Environment and Natural Resources (NCDENR) and the U.S. Army Corps of Engineers, Wilmington District (USACE) to create EEP. This initiative is designed to address the state’s core mitigation needs:

- Mitigation in advance of impacts. EEP works to enhance, restore, and create wetlands and streams as mitigation in advance of environmental disturbance to ensure no net loss of natural resources.
- Watershed-planning based mitigation. EEP focuses on the watershed context of mitigation, seeking restoration sites of high ecological value.
- Adequate funding provision. The initiative is sufficiently funded to assure that mitigation projects are completed in advance of impacts.
- Separation of impact-permitting decisions from mitigation decisions.

All projects carried out by EEP must follow a specific sequencing that considers avoidance, minimization, and finally, mitigation. EEP combines all project impacts and address cumulative impacts with cumulative mitigation.

EEP reflects the state’s commitment to leave behind the old project-by-project strategy and focus on quality mitigation that provides substantial benefit and protection to the state’s natural resources while promoting responsible economic growth. The state is moving beyond efforts to merely comply with environmental permits and instead base its mitigation practice on a solid foundation of watershed planning.

These environmental investments are targeted via broad-scale, in-depth watershed planning. EEP considers long-range projections of road-building and other development-related impacts, as well as environmental data, and directs program resources to high-priority watersheds across the state.

EEP follows a carefully developed business model. Each year, NCDOT examines the state’s seven-year highway construction program to determine the type, amount, and location of impacts to wetlands and stream corridors. NCDOT then provides its analysis to EEP, which is administered by NCDENR. EEP develops a plan to meet the mitigation needs and crafts a biennial budget to fund the necessary mitigation.

The strength of EEP lies with the coalition of partners working to improve North Carolina’s advance-mitigation process. Representatives from the Federal Highway Administration (FHWA), the National Oceanic and Atmospheric Administration, the U.S. Environmental Protection Agency, the U.S. Fish & Wildlife Service and USACE help to oversee the program via an advisory panel that functions as an external quality-assurance mechanism for EEP management processes, methods, and outcomes. FHWA also provided funding for program assessment services and development of an Internet database system that will track credits produced and permit actions, as well as providing a full-time liaison staffer.

The program also relies on private-sector partners and public-private cooperative initiatives, partnerships that help EEP avoid big-government stereotypes and access the expertise of consultants and contractors. The program forged an innovative agreement with the state’s land trusts to promote land acquisition and open-space preservation to protect the state’s most precious lands from development and the subsequent loss of wildlife habitat and stream buffers, already preserving more than 34,000 acres in perpetuity. EEP has collaborated with private-sector partners in about 400 wetland- and stream-restoration projects statewide.

In 2005 EEP was chosen from more than 1,000 applicants as one of the top 50 new government initiatives in the nation by Harvard University’s Kennedy School of Government—the so-called Oscars of government prizes. The National Association of Environmental Professionals honored EEP with an Environmental Excellence Award in 2005 for local watershed planning. Also, FHWA has designated EEP as one of 15 Exemplary Ecosystem Initiatives nationwide, an honor awarded to transportation projects that successfully employ an ecosystem approach to environmental management.

By grounding advance mitigation on a solid foundation of watershed planning, North Carolina is providing states around the nation a model for a transportation-development program that works to restore, enhance, and protect wetlands and waterways.

William Gilmore is director of the N.C. Ecosystem Enhancement Program. He is a registered professional engineer with specialization in the National Environmental Policy Act, permitting, and heavy civil engineering public works.