

How Does the N.C. Ecosystem Enhancement Program Determine *Priority Watersheds for Stream and Wetland Projects*?

The N.C. Ecosystem Enhancement Program uses a **watershed approach** to determine priority areas for implementation of stream- and wetland-mitigation projects. The purpose of this approach is to concentrate mitigation resources in areas where they will have the greatest benefit to local watershed functions. EEP's watershed approach includes **three major steps**, beginning at the scale of river basins, proceeding to local watersheds [14-digit Hydrologic Units (HUs)], and culminating in the identification of project sites (stream reaches, wetland sites and adjoining areas) within priority sub-watersheds. The figure below illustrates the major scales of EEP watershed planning.

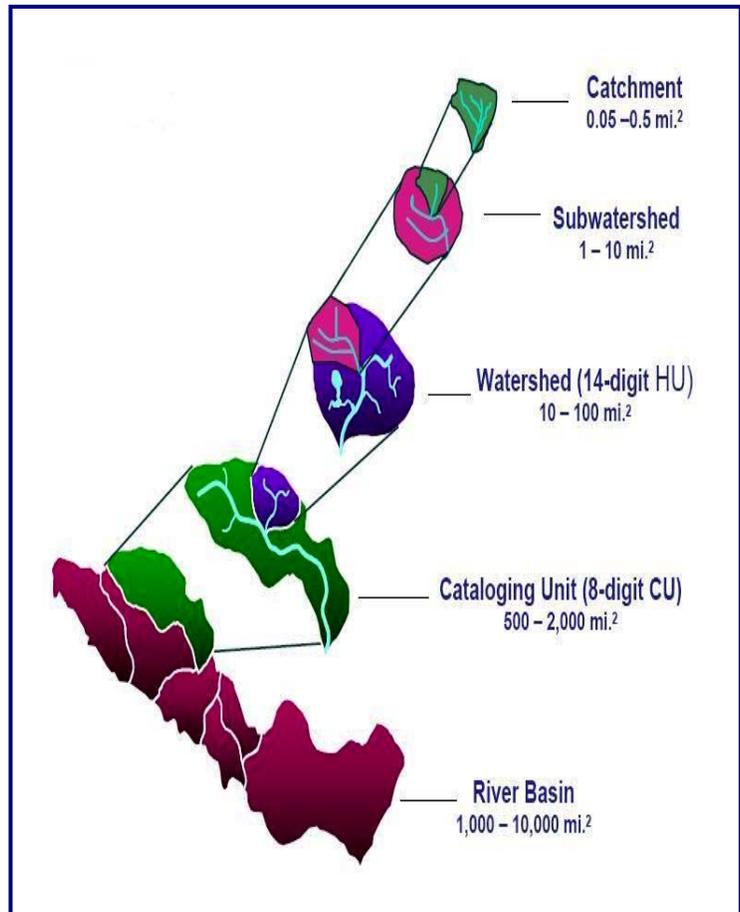
Step 1 – River Basin Restoration Priorities

EEP watershed planners develop and periodically update reports known as River Basin Restoration Priorities (RBRPs). RBRPs use available GIS data, field tours of local watersheds and input from state and local resource professionals to identify 14-digit HUs with a mix of problems (e.g., streams with impaired water quality and/or degraded habitat) and assets (e.g., rare aquatic species, healthy riparian buffer zones). A ranking methodology is used to prioritize such local watersheds, and a certain number are designated as Targeted Local Watersheds (TLWs) within the 8-digit Cataloging Units (CUs) comprising a given river basin. TLWs represent those local watersheds (approximately 10 to 100 square miles each) in which EEP restoration, enhancement and preservation projects should achieve the largest functional benefit. These include the areas in which the greatest need and opportunity for stream- and wetland-restoration projects exist. As of January 2008, the total number of TLWs designated by EEP planners is 380 -- of 1,601 total 14-digit HUs across the state.

To view the latest RBRPs developed for each of our state's 17 river basins (and maps of designated TLWs), go to <http://www.nceep.net/services/restplans/watershedplans.html>. To get more details on EEP's RBRP process, go to EEP's *Policy, Process and Procedures Manual*. http://www.nceep.net/abouteepp/PPPM2/Section%20Covers/8.2_.htm.

Step 2 – Local Watershed Plans

Depending on programmatic mitigation needs – which are driven by anticipated impacts associated with N.C. Department of Transportation projects and permitted impacts associated with other development activities in the state – certain CUs within the state are periodically identified for new local watershed planning (LWP) initiatives. LWP initiatives usually include three phases of work designed to identify the most significant local watershed problems, and then develop recommendations (including specific mitigation projects) to most



effectively address these problems. To determine the areas (14-digit HUs) in which to focus LWP efforts, EEP watershed planners begin by looking at the TLWs identified within the latest RBRPs for a given river basin. EEP planners typically select one to three contiguous TLWs, comprising approximately 50 to 150 square miles, within which to conduct Local Watershed Planning.

Factors used to select the LWP focus areas (specific 14-digit HUs) include: GIS information and feedback from local resource professionals indicating abundant project site opportunities; observations made during "windshield surveys" (field tours) of the watershed area indicating restoration/enhancement and preservation opportunities; willingness of local resource professionals to participate in an LWP stakeholder group; ongoing and/or planned local watershed funding initiatives being spearheaded by local resource professionals; and existing EEP mitigation projects within the proposed LWP area.

EEP's LWP initiatives, which typically require 24 to 30 months to complete, culminate in the development of three major products:

- a *Watershed Assessment Report*, summarizing major functional conditions within the LWP study area and prioritizing subwatershed areas for restoration/enhancement and preservation opportunities;
- a *Project Atlas* containing maps and site-specific information for the most promising mitigation project sites identified within the LWP study area; and
- a *Watershed Management Plan* containing recommendations (e.g., BMPs and institutional measures) for the most critical local watershed problems identified.

Ongoing and completed Local Watershed Planning initiatives conducted by EEP Planners are highlighted on the EEP website at <http://www.nceep.net/services/lwps/localplans.htm>. As of January 2008, EEP Planners had initiated a total of 35 Local Watershed Planning efforts across the state; seven of these efforts are currently in active development.

Step 3 – Project Site Selection

EEP Project Managers use the LWP-derived Project Atlases to pursue option agreements from willing landowners for the highest-ranking project sites identified within the LWP study area. Project opportunities identified through the LWP process represent those sites where EEP can achieve the greatest return on its investment in terms of long-term functional benefits to local water quality, hydrology and habitat.

The EEP Monitoring & Research section is pursuing long-range monitoring activities at selected project sites to determine the extent to which functional benefits are being realized at the project-reach and catchment scales. Data generated by such project- and subwatershed-specific monitoring will be used to gauge the long-term success of EEP's watershed approach.

In areas (8-digit CUs) with pressing mitigation needs, but where EEP Local Watershed Plans have yet to be developed, the EEP Project Managers prioritize their search for good mitigation project sites (and willing landowners) within the TLWs identified through the RBRP process described in Step 1 above.

A note about EEP projects located *outside* of TLWs and LWP areas

Since its establishment in 2003, EEP has been committed to using a watershed-based approach for optimizing the location of its restoration/enhancement and preservation projects. [Even prior to EEP's establishment, the N.C. Wetlands Restoration Program utilized the same basic watershed approach for identifying the best locations for mitigation project sites.] An ever-increasing number (and percentage) of EEP projects are now being implemented within TLWs and LWP areas, further strengthening the statewide benefits of our watershed approach. However, at times EEP does consider implementing projects that can provide significant functional uplift but are located outside of TLWs or LWP areas. Maintaining this geographic flexibility ensures that EEP can meet its mitigation goals in a timely manner if landowner outreach in TLW or LWP areas has not been successful. It also enables EEP to consider projects outside our targeted areas that are priorities of local stakeholders, or that are ecologically important.