



EROSION & SEDIMENTATION CONTROL

THE PROBLEM WITH EROSION & SEDIMENTATION

Sedimentation is one of the most serious threats to aquatic species—especially imperiled species in the Etowah basin. An excess of fine sediment in waterways can blanket the bottom of a stream, degrading physical habitat, impeding spawning and reducing populations of aquatic insects on which fish feed. Suspended sediment in the water may also impair the ability of fish to breathe and forage for food. In recent studies in the Etowah, researchers found a link between sedimentation and the number and types of fish present in a reach of stream.



EROSION & SEDIMENT CONTROL LAWS IN GEORGIA

Sedimentation from construction sites is regulated through Georgia's Erosion and Sedimentation Act, which in most cases is administered by local jurisdictions that have been delegated enforcement authority from the state. A 2001 audit of the state Erosion and Sedimentation Control Program by the Georgia Department of Audits and Accounts found that the provisions of the Erosion and Sedimentation Act form a good basis for effective local programs, but many counties and municipalities lack resources to adequately enforce rules. Therefore, to improve E&S control in the Etowah, we don't need more regulations; we need effective and uniform enforcement of existing rules.

EROSION & SEDIMENT CONTROL & THE ETOWAH AQUATIC HCP

Because the impact of sedimentation on fish can be so great, the Etowah Aquatic HCP Steering Committee agreed that the Etowah Aquatic HCP must address E&S control. Representatives of local governments and a range of local professionals including builders, developers, and erosion control consultants formed two technical committees. The first developed mechanisms to improve planning, monitoring and enforcement of erosion controls on construction sites. This committee's recommendation was a Standard Operating Procedure (SOP) for local governments to follow as they oversee construction in their jurisdictions. The second committee proposed a grading ordinance to regulate potentially harmful grading activities.

STANDARD OPERATING PROCEDURE (SOP)

The SOP contains six elements that cover all phases of development: the pre-construction planning phase; the construction phase; and post-construction site stabilization. These elements are designed to be adopted as a whole; that is, no single action adequately addresses E&S problems.

1. Required Pre-Construction Meetings

The SOP requires two pre-construction meetings to make each actor in the development process aware of where, when, and how E&S BMPs will be installed and maintained.

The first meeting takes place before the site plan is finalized or approved. This allows problem areas to be identified before significant resources are invested in the site plan and designs, placing engineers in the "no-win" situation of designing E&S BMPs on a site that may contain significant barriers for successful implementation. Participants in this meeting include the developer, site planner, site engineer, and local E&S inspector.

The second meeting takes place before a land-disturbing permit is granted, and includes the landowner, developer, engineer, builder, grader, utilities representatives, and government officials. This meeting facilitates clear communication and coordination

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among the different entities working on a project so that subcontractors and utility workers can avoid destructive practices in potentially sensitive areas, and can avoid damaging E&S BMPs directly.

2. Bi-Weekly Self-Reporting Requirement

The SOP includes a self-reporting program which requires land-disturbing permit holders to complete an E&S control report once every two weeks, describing the status of E&S control practices at the permit holder's development site. These reports are accompanied by photographs of critical areas such as places where concentrated flow is leaving the site, retention pond outfalls, construction exits, steep slopes, and BMPs in close proximity to a stream.

3. Minimum Bi-Weekly Inspections by Certified Local Agents

The inspection protocol in the SOP is designed to ensure an adequate minimum inspection frequency (all sites visited once every two weeks) while requiring a more frequent average inspection rate of sites that certified E&S inspectors deem to be at greatest risk (once per week). This allows inspectors to visit some sites more frequently than others, as they deem necessary, as long as minimum inspection requirements are met. For example, if a county has two active sites, one could be visited twice a week while the other is visited twice a month. Similarly, if a county has twenty active sites, inspectors

should be making twenty site visits every week, although not all sites will be visited in all weeks.

4. Short E&S Checklist for Building Inspectors

Although E&S control is not the primary responsibility of building inspectors, their job descriptions often allow for inspection of E&S control structures. The SOP directs building inspectors to perform a brief E&S inspection, using a concise checklist, at each site visit. Given building inspectors' focus on residential and commercial buildings, this checklist is directed at lot-level E&S controls. The building inspector will have the freedom to deny building permits based on E&S BMP installation and function.

5. Mandatory Bonding Program

The SOP requires all land disturbance permit holders to post an E&S maintenance and performance bond to guarantee that E&S BMPs will be adequately maintained throughout the bonding period. Local issuing authorities may call all or part of the bond if the applicant does not comply with permit conditions.

6. Emergency On-Call Personnel Requirement

The SOP requires developers to identify an emergency contact that an inspector can call any time an E&S violation is observed. This gives enforcement officials a way to make an on-site professional aware of a problem as soon as possible, giving

the responsible party a chance to fix the problem before significant damage is done. This element also requires enforcement officials to call the contact person immediately upon discovery of an E&S problem or upon issuance of a fine or citation.

GRADING ORDINANCE

The Etowah Aquatic HCP Grading Ordinance is intended to minimize E&S problems from large cleared areas with inadequate ground cover or stabilization. It limits disturbed area on a site to no more than 17 acres of at any one time, and requires that 30% of all slopes $\geq 25\%$ remain undisturbed during and after development.

The ordinance sets out a 5-step approach to developing grading plans:

1. Identify site characteristics such as soil infiltration classes, hydrologic and geologic features, specimen trees, and slopes $\geq 25\%$, on the grading plan.
2. Identify non-gradable areas including stream buffers, wetlands, endangered species and their habitat, and 30% of slopes $\geq 25\%$ that will remain undisturbed during and after development
3. Identify stormwater infiltration areas.
4. Identify areas to be graded.
5. Delineate 17 acre phased grading

Helpful links:

Etowah Aquatic HCP:

www.etowahhcp.org

Erosion & Sedimentation Control in Georgia

www.rivercenter.uga.edu/service/erosion.htm

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