

Onsite Mitigation Construction

Project Development and Environmental Analysis Branch		Approved: 10/23/09 Version 1.0
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Purpose

This procedure outlines the responsibilities of the NEU-EG Project Manager with regards to the construction of mitigation sites.

Responsibility

The NEU-EG Project Manager provides assistance to the Construction and Maintenance personnel during the construction phase of wetland, stream, buffer, and conservation mitigation sites. This includes periodic site visits during construction of the sites. Staff is available to ensure that the approved design plans and details are installed to specification and that there is a clear understanding of the goals of the project. The NEU-EG project manager is responsible for making alterations and field adjustments as designs are implemented. This includes close coordination with the Division, Contractors, State and Federal Environmental Regulatory agencies.

Scheduling and Time Constraints

Scheduling and time constraints are project specific and are worked out between the NEU-EG and the Division personnel.

Procedures

- Step 1.** The NEU-EG will upon request from the Division assist in the construction of the stream or wetland mitigation site. Assistance includes, but is not limited to:
- Review of construction stakeout to make adjustments as necessary to ensure proper tie-in of channels and wetlands, as well as make adjustments to save mature trees or other objects that will benefit the stream or wetland.
 - Verify that all structures are installed according to detail and are installed at the appropriate elevation. Adjust structures as situations arise that prevent installation as called for in the plan.

- Consult with the contractor, division personnel, and regulatory agencies on adjustments that are needed to ensure everyone understands the adjustments and ensure that the goal of the project is maintained.

Step 2. Planting

Planting for on-site wetland, stream, buffer, and conservation sites will be included as part of the overall TIP roadway construction project contract. The details, specifications, and pay items are included as a part of the Erosion Control Plan provided by the Roadside Environmental Unit (REU). Planting installation is administered through the Division with input from the REU.

Step 3. Monitoring Gauge Installation

The NEU-EG is responsible for purchasing and installing monitoring gauges on the mitigation sites. This includes groundwater gauges, rain gauges and/or surface water gauges. These monitoring gauges are used in order to document alterations in hydrology on mitigation sites. Gauges are installed in accordance with the approved mitigation plan for each site. Each gauge is installed according to the detail found under the Resources and Tools section. After installation, each gauge is located using GPS for inclusion in the as-built report.

Step 4. Vegetation Sample Plot Installation

The NEU-EG is responsible for coordinating the installation of the vegetation sample plot locations with the Roadside Environmental Unit (REU). The REU installs 50 feet by 50 feet (0.05 Ac.) vegetation plots throughout mitigation sites that are planted to ensure adequate plant survival in order to meet regulatory permit requirements. At planting, plots are established and initial plant counts are obtained in each sample plot. This provides the baseline for subsequent monitoring periods throughout the monitoring process. Each vegetation sample plot is located using GPS and provided to the NEU-EG for inclusion in the as-built report.

Step 5. As-Built Package

Upon successful completion of site construction, the NEEG coordinates the completion of the as-built package for each mitigation site that is forwarded to the state and federal regulatory agencies, in order to meet permit requirements. The following information is required in the as-built package:

Wetlands, Buffer, & Conservation Mitigation

Complete set of Design Plans documenting any and all modifications, including reforestation sheets and planting details for the project.

Complete map depicting monitoring gauge locations, vegetation plot locations and photograph locations.

Stream Mitigation

Complete set of Design Plans documenting any and all modifications, including reforestation sheets and planting details for the project.

Complete map depicting monitoring locations, including cross sections (elevations), profile (elevations), and pebble count information.

Complete map depicting monitoring gauge locations, vegetation plot locations and photograph locations.

Background

Proper construction of planned onsite mitigation for projects greatly enhances the success of the mitigation site and adherence to the permit application for the project. Since the NEU-Engineering Group is involved with the conception and design plans for the site, they are the ones best qualified to assist the Division personnel at all stages of the construction.

Policy, Regulatory, and Legal Requirements

- [US Army Corps of Engineers-Wilmington District - Mitigation](#)

Warnings and Precautions

Failure to construct mitigation sites according to the standards and specifications in the plans could result in permit violations and/or remediation in the future.

Resources and Tools

- [Monitoring Gauge Installation](#)

Contacts

- For suggestions to change this procedure contact: Karen Capps (919) 431-2003
- For questions about performing this procedure contact: Randy Griffin (919) 431-6529

User Access

- Restricted NCDOT, FHWA, MPO, RPO, Consultants, etc.

Flowchart

- None