



River Bank Restoration Plan
CSX Transportation, Inc. Lynchburg, VA
Prepared by: EnviroScience
Date: August 26, 2014

Purpose

The purpose of the River Bank Restoration Plan is reduce the potential for erosion and restore vegetation on the James River bank from the April 30, 2014 Lynchburg, VA train derailment. Additionally, a schedule for restoration is included.

Tree Inspection and Removal

On August 12, 2014, Michael Liptak and Tim Ator from EnviroScience completed an onsite meeting with Mike Cholko and Joey Daniel from Virginia DEQ to evaluate the revegetation of the site, mark trees for removal with orange spray paint, and discuss restoration efforts. A total of 21 trees were marked for cutting. Fourteen of these trees were dead, but seven were damaged with stump sprouting. Trees were marked at the approximate height recommended for cutting. VDEQ and ES agreed to leave some other trees that were damaged but showing evidence of regrowth.

Criterion for Cutting

For the trees determined to be cut by ES and VDEQ, the trunks will be cut approximately three feet above the ground and the stumps will not be removed. The remaining roots will help maintain bank stability, and provide some potential for root sprouting. Any removed trees will be disposed under the CSXT waste program. Tree cutting is planned for September 3 through 5, 2014.

Seeding

The site is fully revegetated with herbaceous plants. The only areas that will require seeding will be areas disturbed by the tree removal process. This will be accomplished by a mix of 50% Virginia wildrye (*Elymus virginicus*), 50% riverbank wildrye (*Elymus riparius*) installed at a rate of 20 lbs/ac and a cover crop of oats or annual rye (*Lolium multiflorum*) installed at a rate of 30 lbs/ac.

Live Stakes

In addition, a total of 200 live stakes will be installed by ES in mid-November 2014 at the toe of the slope and approximately 20 feet toward the river. Willow stakes will consist of 100 black willow (*Salix nigra*) on the riverward side and American sycamore (*Platanus occidentalis*) at the toe of the slope (upland side).

Restoration Schedule

Trees will be cut and areas seeded on Wednesday, September 3 through 5, 2014. Live stakes will be installed in fall 2014 when plants are dormant (mid-November).