

Environmental Restoration and Protection Opportunities

As part of the cost sharing agreement between the City of Chesapeake and the U.S. Army Corps of Engineers, improvements to the Deep Creek watershed must include features that provide valuable habitat restoration or creation opportunities that may also provide ancillary flood damage reduction benefits. This study was authorized by Resolution of the Committee of Transportation and Infrastructure of the U.S. House of Representatives, Docket 2674, Dismal Swamp and Dismal Swamp Canal, Chesapeake, Virginia, adopted 22 May 2002, which states in part “...to determine whether modifications to the existing project are advisable to address flooding problems, environmental restoration and protection, and related water resources needs in the vicinity of the Dismal Swamp Canal in Chesapeake, Virginia.”

There are five categories under which potential restoration opportunities are evaluated: scarcity, connectivity, special species status, plan recognition, and self-sustainability.

The City of Chesapeake worked closely with URS to develop restoration and protection concepts that could be applied in this watershed to enhance environmental resources. The most practical opportunities involve benching of drainage outfall ditches and channels, using the typical channel sections presented in Figure 12. These conceptual improvements were reviewed with Norfolk District Corps of Engineers staff, who also offered ideas for implementation of wetland and riparian habitat corridors. After discussing these ideas at several meetings between the City of Chesapeake, the Norfolk District and URS, technical staff from the District visited the candidate sites, and further pared the list of potential improvement projects based on the five requirements noted above. After field screening, Corps staff identified one potential environmental protection and restoration project, as shown in Figure 13.

The project that holds potential for further study is a passageway for threatened and endangered (T&E) species to travel from the Great Dismal Swamp and into the subject watershed through a wetland and riparian habitat corridor. This corridor facilitates access because it is sufficiently wide to encourage animals to travel through it from the 60-acre borrow pit lake (Node 290) to intersect at an upper portion of the Southern Branch of the Elizabeth River (Node 288). Studies have shown that the corridor must be wide enough that animals will not see predators or they won't use it. This corridor could be graded and planted with wetlands vegetation while providing positive drainage towards the ultimate outfall. In addition, it would be most feasible to construct this wetlands area utilizing the least number of land parcels. The re-creation of wetlands will restore this corridor area to be more like the original land cover (Dismal Swamp) conditions that existed before development activities began.

Several other potential benching projects were considered, but when field examined by the Corps these candidate sites were found to be in relatively good shape and did not meet the five requirements for one or more reasons. For example, benching a farmer's ditch does not provide connectivity for T&E species if there is no potential habitat at the upstream end of the ditch. The selected project should meet all of the five requirements used in the Corps evaluation process.