

Habitat Restoration and Enhancement: Maximizing Benefits from Sediment Remediation Projects

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Background/Objectives. The majority of remediation projects occur in urbanized areas where aquatic habitat and surface water quality have been degraded due to contaminated sediment. Habitat restoration and enhancement elements added to any remediation project can result in the most benefit and success. This presentation will outline a design methodology and highlight lessons learned from a project involving sediment removal from a tidally influenced urban creek, followed by habitat restoration. This project proved to be another example where the most visible benefit in public's view from sediment remediation projects can be achieved through added on habitat restoration and enhancement elements.

Approach/Activities. The project site is located in the mid-Atlantic region and includes a tidally influenced creek with tidal and non-tidal wetlands. Due to the urban nature of the creek being located adjacent to an elementary school, a county park, and residential neighborhood; restoring and enhancing the habitat value of the creek was one of the major challenges associated with the creek remediation. Public involvement and outreach along with extensive agency discussions and coordination during the design process resulted in selecting and maximizing the habitat restoration aspects of the remedy. As part of the remediation, dredging contaminated sediment was going to further impact already degraded existing habitat value of the creek. The remediation design faced the challenge of restoring and enhancing habitat value of the wetlands, floodplains and riparian areas. Habitat restoration components of the project included floodplain reconstruction, wetlands restoration, development of emergent wetlands, bioengineered slope stabilization, rootwad revetment, use of large woody debris for shore protection, and restoration of submerged aquatic vegetation.

Results/Lessons Learned. The project was approved through comprehensive agency coordination and public involvement, and construction was successfully completed. Lessons learned included several post-restoration impacts and issues, the community involvement in terms of reporting and being accountable to the community expectations and the repairs that were made necessary. This presentation will outline the approach and process of sediment remediation and habitat restoration and will document lessons learned during planning, design and construction of the project.