

Regenerative Stormwater Conveyance Workshops

Annapolis, Maryland



Biohabitats, working with Underwood & Associates and the Anne Arundel County Department of Public Works, developed and delivered a set of five training workshops on the theory and design of open channel coastal plain outfalls using elements of stream

restoration, bioretention, and wetland restoration. Over 400 participants, including development engineers and local, state, and federal regulators, attended the workshops.

This innovative approach to today's stormwater management challenges, which combines

Regenerative stormwater conveyance produces greater benefits than conventional stormwater conveyance, and costs about half as much to implement.

stream channel restoration with improved sediment and nutrient processing, is called Regenerative Stormwater Conveyance (RSC).

With conventional stormwater conveyance, runoff from impervious surfaces travels through systems such as pipes and concrete channels, magnifying and transferring energies to the discharge or outfall. This energy causes erosion, failure of structures and stream channel degradation, which can ultimately lead to lowered shallow groundwater levels, destabilized soils, reduced native vegetation and degraded water quality.

Alternatively, RSC incorporates natural stream channel design techniques and materials,

minimizing soil destabilization, vegetation disturbance and invasive plant establishment. RSC optimizes the conversion of stormwater to groundwater, reduces erosive energies and increases natural capital. A truly regenerative approach, RSC results in a system of physical features, chemical processes and biological mechanisms that dramatically enhance the ecological and aesthetic value of a drainage area. RSC is generally less expensive to construct and easier to secure permitting for than conventional stormwater conveyance projects. RSC is a win-win-win approach in terms of ecology, economics and aesthetics.

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