Proceedings of Coastal Zone 09
Boston, Massachusetts
July 19 to 23, 2009

NARROW RIVER STORMWATER ABATEMENT STUDY AND IMPLEMENTATION

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KEYWORDS: bacterial loadings, nitrogen, groundwater recharge capacity, water quality volume, BMP, pathogens, nutrients

The Narrow River has been closed to shellfishing since the 1990s due to pathogen impairment. Under a Rhode Island DEM commissioned study, Fuss & O'Neill developed conceptual designs for potential alternative controls to reduce bacterial loadings, nitrogen and recharge groundwater. Practices in the study were analyzed using priority ranking system, which compares end-of-pipe and upland options for each subwatershed of the study area.

The goal of the project was to design BMPs to reduce pathogens and nutrients; and return baseflow to predevelopment levels. Pathogen reduction is to be in accordance with the Narrow River TMDL, which calls for a 54% reduction in total fecal coliform loadings from the Upper Narrow River and 58% reduction in total fecal coliform loadings from the Lower Narrow River.

Four subwatersheds were selected for designs to 75% (i.e., ready for permit submission). The designs incorporate innovative BMPs including a 10,000 square foot sand filter, level spreader and vegetative filter strip, and 4,300 linear feet of disconnected catch basins.

Selected control strategies were analyzed for effectiveness in treating water quality volume (WQV) and groundwater recharge capacity (V_{GWR}) in each subwatershed of the Narrow River. We anticipate a 40 percent reduction in pollutants of concern entering the Narrow River from the study area during the water quality storm.

The Town of Narragansett has sought and received a $1.6 million to complete design work and install the four aforementioned BMPs as well as to fully design BMPs for the remainder of the watershed. This is presentation will focus on this water quality improvement initiative.

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