

# UC Davis

## Recent Work

### Title

Feasibility, pros, and cons of using DOT rights-of-way for stormwater quality treatment

### Permalink

<https://escholarship.org/uc/item/9bq3k6pz>

### Author

Teal, Michael

### Publication Date

2001-09-24

## FEASIBILITY, PROS, AND CONS OF USING DOT RIGHTS-OF-WAY FOR STORMWATER QUALITY TREATMENT

Michael Teal, RLA, Associate Transportation Researcher, Texas Transportation Institute, 3135 TAMU, College Station, TX 77843-3135, Phone: 979-845-0133, Fax 979-862-1759, E-mail: m-teal@tamu.edu

### Abstract

In the past, DOT stormwater drainage facilities have been designed solely on the conveyance of runoff from DOT facilities in terms of immediate discharge and runoff volume. Since the emergence of the National Pollutant Discharge Elimination System (NPDES) Phase I requirements, DOTs have relied on Best Management Practices (BMPs) for controlling stormwater. The idea has been that as long as one of the BMPs was being utilized, then the quality of the treatment and discharge was sufficient. Now, with the onset of the Phase II mandates, municipalities are scrambling to meet numeric concentration and mass limit restrictions on stormwater discharge. The implications in terms of implementation cost, monitoring, land-use planning, and acquisition could be staggering. These issues are weighing heavily on the minds of DOT personnel who are searching for solutions that are achievable within the logistic realm of current practices.

This paper discusses the feasibility, pros, and cons of using the expansive areas of land available at large highway interchanges, as a resource for treating stormwater runoff. Current practices for these areas do not typically utilize the available space for water quality. These large grassed areas require frequent mowing and weed control. In some instances, reforestation and landscape projects are being implemented, but with a little more attention to detail and very little added cost, they could perform a functional need. These large areas at interchanges could be valuable resources in terms of meeting Phase II requirements, and doing their part to service the entire watershed.

Biographical Sketch: Michael Teal has been with the Texas Transportation Institute's Environmental Management Program since February 1994. He has a Bachelor of Science in Horticulture from Stephen F. Austin State University, and a Master of Landscape Architecture from Texas A&M University. His professional interests are transportation aesthetics, maintainability of landscape development, corridor management for visual and environmental quality, and user perception of transportation systems. He has great interest in better understanding and managing the effects of design and implementation upon the natural systems within the transportation corridor. Current projects include landscape development for TxDOT's Construction Landscape Program. He has also written and lectured the Roadside Development section of the Texas Garden Club Master Gardener Certification Course.