

Livable Delaware Activity

Activity/Policy/Program Name: Roadside Environment

Contact Person: Bill Smith

Purpose: To improve the appearance of Delaware roadsides by using landscape enhancements that include native plants that are adapted to the region, displace invasive species that are highly competitive and detrimental to most plant species, and to do so in a manner that is cost effective and does not result in more maintenance but will require the same level of maintenance or will reduce the frequency of maintenance operations.

Enabling Laws: 17 Del. C. § 132 (General Authority) and 525 (Vegetation)

Policies: D-07 – Context Sensitive Design, M-02 – Tree Preservation Policy.

History: DelDOT made a commitment to improve the aesthetics of the roadsides of Delaware under the leadership of the former Secretary of Transportation and Roadside Environmental Administrator. Colorful mass plantings of annual wildflowers can be costly for labor and soil preparation and are sometimes lost due to highly competitive weed situations. Instead, the Department has elected to employ the use of indigenous plant species to compliment already existing noninvasive plants on roadsides. The study “Enhancing Delaware Highways” brought together specialists in the areas of native herbaceous perennials, shrubs, and trees were recommended to be contracted to assist the Department in conducting roadside trials of native plants to evaluate aesthetics, compatibility with existing vegetation, costs associated with installation and maintenance. A contractual agreement was made in FY2001 with the University of Delaware under the auspices of the Delaware Transportation Institute to fund a 5 year initiative to determine how native vegetation alone and in combination with existing plant communities on DelDOT rights-of-way can provide aesthetically pleasing surroundings in a cost effective manner for motorists traveling the highways of the First State.

Current Situation: The objectives of this study are:

- Enhancing the appearance of roadsides of Delaware rights-of-way by selectively removing undesirable vegetation that competes with native species. Encourage growth of regional native species, particularly trees that are in place on roadsides and can be accented by proper vegetation management techniques. Allow native wildflowers, and perennial, herbaceous, broadleaf plants and grasses to proliferate for color, texture, form, height, and natural harmony that complement the surroundings.
- Working with Civic Associations and organizations such as the Delaware Nature Society and Delaware Center for Horticulture to insure the benefits of using regional native plant species are understood. Distribute educational material on preserving our regional botanical heritage to Delaware residents that are embarking on community projects on DelDOT rights-of-way and are making an application for a DelDOT right-of-way use permit to carry out such activities.

Deliverables - " Enhancing Delaware Highways Project " - Mtg. 4-11-2001

		Fiscal Year					
		<u>1999/ 2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
" Jump Start "							
Total Expenditures	DeIDOT M&MC		\$174,049	\$132,529	\$185,950	\$136,874	\$190,719
Deliverables	Plot Installation, maintenance Preliminary Survey - Roadside Aesthetics		Data Generation, 28+ demo. Plots obs/summary/key lessons learned Public Presentations & interaction with investigators Veg. Manual - outline all sections, draft concept section, draft matrix- plants vs parameters, literature search Brochure - Outline	Data Generation 28+ demo. Plots obs/summary/key lessons learned Scale up - 2 large locations - based on successful & cost effective demo's. Public Presentations & interaction with investigations-NRVMA & FHWA. DeIDOT Presentations Districts & Expressways- Maint.eng. & supervisors Veg. Manual draft section, establishment, installation, Brochure - Distribution Incorporate into DeIDOT landscape plans.- when appropriate Incorporate into DeIDOT ROW use agreements- when appropriate Adopt-a-gateway - 10-1-5 Grants for Enhancement of DE Roadsides.	Data Generation 28+ demo. Plot obs/summary/key lessons learned Scale up- 2 Large locations - based on successful & cost effective demo's. Pubic Presentations articles - journal/trade & meetings. DeIDOT Presentations District & Expressways Maint. personnel. Veg. Manual- draft section, maint., cost estimates for- native plant landscaping	Data Generation 28+ demo. Plot obs/summary/key lessons learned Final Design Aesthetic Survey of Roadsides Initiation of Aesthetic Survey of Roadsides Collection & Analyses Survey Data Preliminary Outline Final Report Review & Update of all Veg. Manual sections	Summary & Detailed Report to include data / findings / conclusions & recommendations Journal Articles Presentation DeIDOT Leadership Team Vegetation Manual Finalized & Ready for Publication.

- A product of the overall effort will be a vegetation manual that provides operating procedures for vegetation management on roadsides with an emphasis on indigenous plants. This document will allow DelDOT personnel who maintain roadsides to make decisions to improve roadside appearance based on actual demonstration trials in Delaware that have proven to be successful in improving roadside aesthetics in a cost effective manner. The principal investigator for this study is an extension horticulturist at the University of Delaware. Also participating on the team are two consultants. One employed by the Delaware Center for Horticulture and a second a freelance writer, photographer, and spokesperson for the use of regional native vegetation in the Mid-Atlantic region. A DelDOT employee who serves as the Roadside Environmental Administrator manages the project.

This project and subsequent recommendations will primarily affect roadways where the Department owns wide right-of-ways, such as SR 1 and I-95. This activity supports the Livable Delaware goals by making Delaware's roadways nicer and more aesthetically pleasing for residents and visitors to travel to and through, enhancing our image as a state. Also, the preservation of diverse, native plant resources that are envisioned to be used in many landscape settings will serve to educate the public and Department employees of the value of our Delaware native plant heritage which could easily be lost along roadsides if left to highly competitive and invasive species.

Assessment and recommendations pertaining to this project are being provided to the Secretary of Transportation by the Horticultural and Vegetation Management Advisory Group chaired by a member of the Council on Transportation. This advisory group includes the project team, DelDOT employees, and residents of Delaware who have demonstrated an interest in native plants, horticulture, or vegetation management. The advisory group is a subcommittee of the Council on Transportation.

Revisions/Actions Needed: The structural organization has been defined. The project team has been selected, an advisory group is in place and has met three times and will meet a minimum of four times per year. Funding has been secured for FY2001 but funds for each year will have to be secured from a process that requires the ranking of all projects. DelDOT personnel have established criteria for the ranking of projects.

Resources Needed to Create/Revise: All resources are in place and revisions in these areas are not envisioned to change over the course of the project. Implementation of actual DelDOT projects carried out by DelDOT employees will have to be phased in near the close of the project.

Process for Creation/Revision: An advisory group is in place to offer recommendations to the Secretary of Transportation. The project team will offer revisions to original plans based on analysis of findings of demonstration trials conducted on DelDOT roadsides. Emphasis will be directed to scaling up successful efforts that are proven to provide aesthetically pleasing results that are cost-effective.

Schedule: A development schedule containing deliverables over the course of each year has been created and presented to the advisory group (the schedule is provided as an attachment to this document).

Measures to Guide Progress: Deliverables stated on the schedule will serve as milestones for the project and hence can be used to guide and measure the progress that the project team is making. Customer satisfaction will be determined by using survey sheets and analyses developed by the project team to assess the reaction of residents to various landscape enhancements along the roadside established during the project to improve aesthetics in a cost effective manner. The cost of maintenance will be estimated for any landscape enhancement proposed by the project team for large-scale implementation. A determination will be made if these costs are offset by lower frequency of maintenance over a 5-year period so that overall costs for maintenance remain constant or are reduced and the only increase is due to an inflationary factor.

Interactions or Inter-relationships with Other Agencies or Units of Government: The use of regional native vegetation along roadsides is being heavily emphasized by the FHWA. DelDOT personnel have attended workshops and training sessions. Replacement of invasive plant species that exist along roadsides is being encouraged by federal and state agencies. The preferred replacement species are native plants that can compete with roadside plants that are not considered to be invasive. DelDOT is active in Federal and State meetings that pertain to invasive plant species, i.e. Delaware Invasive Species Council and DE Department of Agriculture programs that address invasive species.