

Economic and Ecological Benefits of Roadside Native Wildflower Plantings

Compiled by

Jeffrey G. Norcini, University of Florida/IFAS, NFREC-Quincy; September 2003

City finds way to cut mowing costs. Harper-Lore, B.L.. 1997. Where flowers bloom, so does hope. Public Roads On-Line 61(3):38. <http://www.tfhrc.gov/pubrds/pr97-12/p38.htm>, accessed Sept. 4, 2003.

"Texas, for example, has documented a reduction of roadside maintenance costs of about 25 percent -- about \$8 million per year. Other benefits include: increased wildlife habitat and biodiversity; improved erosion control; enhanced aesthetics; increased planting success with hardy native plants; strengthened partnerships with natural resource agencies and volunteer groups; **suppressed noxious weed invasions, which are costly**; and a demonstrated commitment to the environment."

Anon. 1999. Making interchanges more natural. Texas Transportation Researcher. Vol. 35, No. 1. <http://tti.tamu.edu/researcher/v35n1/natural.stm>. Accessed Sept. 4, 2003.

"For many growing cities with growing transportation systems, **multilevel interchanges** are constructed where highways meet loops and freeways meet interstates.

These structures occupy areas sometimes in excess of 100 acres, and they are becoming more and more common. For most of these mammoth concrete sprawls, their presence creates an aesthetic imbalance with their surrounding environment.

The project site is the 110 acres surrounding the interchange of Loop 1 and U.S. 183 in Austin, Texas.

The plan included the establishment of plant communities of assorted native plants. These groupings were planted in such a way that over time they would become self-sustaining areas of dense vegetation. Grass areas between the tree groupings and outside the safety-strip mow zone were managed to promote native prairie grasses, while using wildflowers and forbs to provide perennial color.

The ponds were modified to slow water velocity and catch more silt. The lower pond was lined with patches of trees, and an island was created to provide additional tree cover, suggesting the presence of a winding creek. The elimination of mowing of the upper pond allowed denser vegetation growth that, in turn, aided filtration of the runoff.

The implementation of the plan has resulted in an interchange that is now part of a sensitively balanced ecosystem. In addition to the aesthetic benefits, **over 50 acres have been eliminated from routine maintenance. Mowing cycles have been reduced by over 80 percent from six per year to as few as once every two years.**"

City finds way to cut mowing costs. 2002. Calgary Herald, Sept. 12 Final Edition, City & Region, p. B9.

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"The city is preparing to go au naturel with its boulevards under a plan to save money by planting native plant species along major roadsides.

A pilot project has found that, if the city uses wildflowers and native grasses that require less upkeep than traditional grass, it stands to save "significant" amounts of money in mowing costs.

"The whole goal of this is to be more aesthetically pleasing and more environmentally conscious," said Ald. Craig Burrows, who spearheaded the city project earlier this year.

The city's environment committee asked Calgary Roads staff on Wednesday to come up with a plan for expanding its program to major roadways around the city in spring.

A two-month trial that saw the city quit mowing the grass on the west side of Sarcee Trail between 17th Avenue and Signal Hill Drive S.W. has saved \$4,000 out of the \$24,000 in maintenance costs budgeted for the strip, said Don Basarsky, operations manager of roads maintenance."

Dana, M.N., R.D. Kemery, and B.S. Boszor. 1996. Wildflowers for Indiana highways. Final report. Report No. FHWA/IN/JHRP-96/1, 158p. NTIS Order No. PB96209499XSP.

"Wildflowers were found to be cost-effective when compared to the current grass monoculture vegetation strategy used by the Indiana Department of Transportation. "Garden" wildflowers were less costly to establish, but were more costly on an annual basis. **Prairie plant community wildflowers were more costly initially, but became cost effective when low, long-term management costs were factored into the analysis.**"

Savings or Benefits Realized Through Implementation: If implemented statewide, the findings of this study will alter the appearance and environmental function of Indiana's roadsides. The cost to taxpayers for vegetation management will be reduced over the long term. The study estimates that the maintenance costs for a prairie wildflower community would be between \$22 -\$39/acre per year compared to \$77/acre per year for mowing and herbicide application to grass.

McCully, W.G. 1987. Roadside maintenance considerations in the Texas wildflower program. Transportation Research Circular 307. Transportation Research Board, pp. 8-10.

"The Texas State Department of Highways and Public Transportation has installed a vegetation management system (VMS) to develop and implement the most cost-effective, practical and appropriate methods and concepts for managing roadside vegetation. VMS will integrate applicable maintenance methods (mechanical and chemical mowing, herbicides), basic objectives of the maintenance activities (safety, protection of investment, user comfort, and aesthetics), and the Department policies. The purposes of VMS are threefold: to reduce the cost of maintenance and labor; to create a sound native vegetation community on the highway right-of-way that is aesthetically pleasing; and to establish an unannounced right-of-way that blends rather than contrasts with its surroundings. The early establishment of the wildflower program is described. Their attractive appearance and beneficial erosion control aspects are noted. **A year after implementation of the VMS, mowing costs in the 24 pilot counties were reduced an average of 23.1 percent. Changes in roadside appearance were also dramatic. The success of the program requires that native vegetation, including wildflowers, be utilized to the fullest extent.** Ladybird Johnson's support and appreciation for beautification efforts in Texas are noted."

Assoc. Press. Let it grow? Arkansas debates roadside vegetation. Fri., July 27, 2001, Little Rock, Arkansas.

In 1998, the Arkansas Highway and Transportation Department changed its mowing schedule for the 16,353 miles of state highways. **The number of mowings was reduced from four to three times a year to encourage the natural growth of wildflowers like Queen Anne's lace, purple coneflower, butterfly weed, downy phlox, and black-eyed Susan.**

Mr. Hall said the department hasn't heard from many who dislike the flowers. **"We've actually had more calls and letters complimenting our mowing practices than complaining,"** he says.

Jacobson, R. The cost effectiveness of prairie passage plantings. Minnesota DOT.

Recently MnDOT looked at the cost benefits of managing for natives vs. turf vs. forage species. Costs of seed mixes, establishment, and both short term and long term maintenance costs were looked at. Maintenance activities included mowing, spot spraying, burning, fertilizing and spraying. **The costs for native prairie seed mixes can be \$150 per acre more than the forage mix and \$50 more than the turf mixes. However, the total maintenance costs per acre over a 10 year time it costs about half as much to manage for native prairie mixes as it does for forage mixes. Turf mixes are somewhat more costly than native prairie mixes.**

Cost savings extended beyond ten years were estimated at even greater savings in the native prairie mixes.

The long-term savings in managing natives vs. forage species is significant. Increased benefits of native cover vs. introduced forage species, cover for wildlife, ecosystem health, and water quality, is not easily quantifiable. However, **fewer pesticides and less fuel is needed to manage native prairie than other types of cover.** These factors alone provide environmental and economic incentives to look at the benefits of growing native.