Environmental Mitigation as a Transportation Enhancement

Transportation Enhancement Activity Number 11 is defined by TEA-21 as “environmental mitigation to address water pollution due to highway runoff or reduce vehicle-caused wildlife mortality while maintaining habitat connectivity.” FHWA’s Guidance on Transportation Enhancement Provisions of TEA-21 (12/ 17/ 99) interprets these activities as those that “go beyond what is considered ordinary environmental mitigation.” TE funds are not to be used to finance required mitigation of impacts from highway construction, but rather to rectify negative impacts from existing transportation facilities. The Guidance also discusses wildlife crossings as a means of reducing mortality caused directly by vehicles as well as to create habitat connectivity.

Less than 2 percent of the programmed projects in NTEC’s database are coded as environmental mitigation. While the number of projects in this category is relatively low, there are some outstanding enhancement projects among them. Projects that fall into this category include wetlands acquisition and restoration, detention and sediment basins, storm drain stenciling and river clean-ups, water pollution studies, wildlife underpasses and overpasses, data collection on wildlife mortality, and wildlife signing. All mitigation activities must be associated with mitigating pollution from highway runoff.

This issue will explore the mitigation efforts of the TE programs in Michigan and Maine, the states with the greatest number of environmental mitigation projects, as well as highlight several innovative projects throughout the nation.

Maine Commits to Environmental Stewardship

With the use of Transportation Enhancement dollars for the creation of the Surface Water Quality Protection Program, the Maine Department of Transportation (DOT) has made a commitment to its environmental stewardship responsibilities for the state’s numerous water resources. The health of these natural resources is vital to the economic well being of the state which depends on revenues generated by recreation and tourism. The program is designed to mitigate the impacts from stormwater runoff and other human activities associated with highway use such as pollutant inputs.

As growth and development increase, highway drainage systems are often overwhelmed with increased flows. These increased flows can result in erosion and sedimentation of exposed soils to the detriment of the state’s surface waters. For lakes and ponds, excess phosphorous has become problematic. High concentrations of phosphorous, a naturally occurring nutrient in soil, can cause algal blooms.

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streams, rivers, and coastal waters, increased sediments become a problem for fish and other wildlife. Highways provide access to the many recreational facilities that Maine is famous for. However, overuse of features such as scenic turnouts, fishing holes, and boat launches can result in damaged vegetation, exposed and eroded soils, and increased runoff.

To combat these problems Maine DOT developed the Surface Water Quality Protection Program. Under this program, a potential project is nominated by a sponsor, such as a conservation group or municipality. They then work with the Maine DOT program manager and maintenance staff to develop preliminary designs. A selection committee comprised of volunteer citizens in addition to staff from Maine DOT and the Maine Department of Environmental Protection score and prioritize the project proposals based on detailed selection criteria. Once selected for funding, the project is developed by Maine DOT in cooperation with the sponsor and town. Design and construction are generally conducted by Maine DOT. Designs are intended to consist of unique combinations of erosion control best management practices with an emphasis on visual improvement of the site.

Maine DOT utilizes a consultant to administer the Surface Water Quality Protection Program. The consultant maintains an office within the Maine DOT facilities and serves as the project manager for all projects in the program.

To date, 36 projects have been programmed totaling $2.28 million in federal TE funds. These projects are located in 28 towns and 11 counties throughout the state. Construction has been completed on 16 of these projects. Project awards have ranged from $4,000 for control of erosion from a highway shoulder to more than $500,000 for control of water runoff at various locations into a lake.

The Sebago Lake — Route 35 Project in Standish is an example of a project completed as part of the Surface Water Quality Protection Program. Sebago Lake is a multi-use water resource that supports many recreational uses, including warm and cold water fisheries. The lake also serves as the public water supply for ten communities, among them, the City of Portland. Untreated highway runoff was being discharged to the lake from a culvert located approximately 500 feet from the water supply intakes. The project consisted of treating the highway runoff before it reached the lake by installing a catch basin to capture sand and debris, containing the water in a 3,000-gallon concrete holding tank, then slowly releasing the water to two treatment units that contain wetland plants that remove nutrients and pollutants. The $59,000 project was a collaborative effort with the Portland Water District and received $47,365 in federal TE funds.

For further information on the program in Maine contact Susan Breau at 207-624-3080.

RESOURCES

The National Highway Runoff Water Quality Data and Methodology Synthesis is a cooperative project between the United States Geologic Survey and the Federal Highway Administration. Visit their web page at http://ma.water.usgs.gov/FHWA/biblio/default.htm for an extensive bibliography of over 2,600 report citations and over 1,300 report abstracts relevant to the study of highway runoff and/or urban runoff water quality.

Critter Crossings: Linking Habitats and Reducing Roadkill – this FHWA web site describes transportation’s impact on wildlife and highlights exemplary projects and processes that are helping to reduce these impacts. Visit http://www.fhwa.dot.gov/environment/wildlifecrossings/

Wildlife-Friendly Roads (4/12/02), an article from the Michigan Land Use Institute describes new research revealing the various hazards that roadways inflict on wildlife. Much of this research is also revealing ways to design roads to avoid harming wildlife. To read the article, visit http://www.mlui.org/projects/growthmanagement/general/roadkill.asp.

The Center for Transportation and the Environment provides information services and technology transfer at North Carolina State University. www.itre.ncsu.edu/cte.

Defenders of Wildlife Habitat and Highways Campaign provides information on wildlife and transportation including links to laws and policies. www.defenders.org/habitat/highways.
The Michigan DOT is committed to the use of TE funds for the mitigation of the adverse effects to water quality from highway runoff. Michigan is a state in which roadways cross large numbers of rivers and streams. Where roads and streams intersect, pollution problems often result. Road/stream crossing features, necessary features in transportation infrastructure, have been shown to contribute varying amounts of sediment and non-point source pollutants to rivers and streams. In an effort to combat the influx of these types of pollutants, the Michigan DOT has used federal TE funds to support inventories of road/stream crossings in several locations throughout the state. These inventories are then used to prioritize the further funding of mitigation efforts.

One such inventory was undertaken in Ionia County located in the southern portion of the state. The Ionia County Road Commission received roughly $32,500 in federal TE program funds (in addition to their local contribution of $19,500) to complete an inventory of all bridge and culvert road/stream crossings in the county. The inventory was intended to highlight potential problems and increase reaction times in resolving water impairment issues. Field crews from a local university collected site data from over 700 locations. The sites were ranked and the data was entered into a Geographic Information System (GIS) that included information on soils, land use, drains, school districts, and road ratings. The project was the cooperative effort of several County agencies, Grand Valley State University, and the Michigan DOT.

Mr. O'Malley, a resource specialist in the Environmental Section, of the Michigan DOT has referred to TE Activity 11 as the “ugly stepchild” of the TE program. Projects that focus on the mitigation of highway runoff and wildlife mortality are not glamorous and are not even visible to most citizens. There are no ceremonies or ribbon cuttings that accompany their completion. Yet these projects serve a vital function and are of significant benefit to the environment and the community. With the support of Michigan DOT management, Mr. O'Malley has spent a great deal of time on outreach to local communities, primarily through Metropolitan Planning Organizations, providing training on how to secure TE funds for mitigation projects.

For information on Michigan DOT's efforts at mitigating highway runoff and wildlife mortality contact Mr. O'Malley at 517-335-2634. For information on Michigan's TE Program contact Mike Eherlein at 517-335-3040.

Land Bridge Offers Wildlife Connectivity

COMPLETED IN THE SPRING OF 2001, Florida’s Greenway Land Bridge is an artificial wilderness bridge crossing a major 6-lane Interstate and connecting sections of the Cross Florida Greenway State Recreation and Conservation Area. Funded with 3.4 million TE dollars, the construction of the land bridge was a cooperative effort between Florida's Department of Environmental Protection and Department of Transportation. The 200-foot long bridge is 52 feet wide and stands 17 feet above I-75 in Marion County in the north central portion of the state.

The bridge was designed to compliment the natural surroundings. The entrances to the bridge are located in rural, pine-dominated habitat. The path across the bridge is surfaced with crushed shell and lined with native vegetation of oak, pine, and saw palmetto to provide a visual screen and an auditory buffer. The interior walls are faced in natural, local stone.

In addition to providing a means for wildlife to move between habitat areas on either side of the Interstate, the land bridge also provides a link for pedestrians, equestrians, and cyclists to access more than 100 miles of trails of the Cross Florida Greenway. The Greenway encompasses a 70,000-acre, 110-mile long corridor stretching from the St. Johns River to the Gulf of Mexico.

This project provides an exceptional example of the use of TE funds for Wildlife Crossings, and plans are already in the works for another land bridge crossing I-95 in the northeast portion Florida.
In the Senate

THE SUBJECT OF THE MAY 12, 2002 HEARING
on the reauthorization of TEA-21 held by the U.S. Senate Committee on Environment and Public Works was Transportation Planning and Smart Growth. In his opening statement Senator Jeffords (I-VT), Committee Chair, referred to transportation planning as “one of the linchpins of the new thinking” introduced by ISTEA.

Cynthia Burbank, Program Manager of the Planning and Environment Core Business Unit of the FHWA, was among those to present testimony before the Committee. She discussed FHWA’s view of smart growth as “a set of state and local policies and programs designed to protect and preserve valuable natural and cultural resources and make efficient use of existing infrastructure, while accommodating economic development and population growth.” She explained that support of the Transportation Enhancements Program was one of FHWA’s efforts to help state and local governments make smart decisions about growth.

The Senate Banking Committee Subcommittee on Housing and Transportation held a hearing on June 18, 2002, focusing on intermodalism, light rail, and transit. Witnesses included local government officials. A subsequent hearing was held on June 26, 2002 focusing on the benefits of transit and the benefits of increased funding under TEA-21. A broad spectrum of public interest groups provided support for transit.

Hearings Continue in the House

THE U.S. HOUSE OF REPRESENTATIVES COMMITTEE on Transportation and Infrastructure Subcommittee on Highways and Transit held another in a series of hearings on reauthorization on May 12, 2002. The focus of the hearing was Relieving Highway Congestion through Capacity Enhancements and Increased Efficiency. Among those providing testimony was Mary Peters, FHWA Administrator, who discussed capacity enhancements, improved efficiency, system preservation, and asset management.

The focus of a June 18, 2002 hearing of the Subcommittee on Highways and Transit was Intermodalism: Moving America’s People and Goods. Testimonies concentrated on improving connections between the nations various modes of transportation and creating a transportation network that efficiently moves people and goods. Among the various industry and government witnesses was Emil Frankel, the Assistant Secretary for Transportation Policy, USDOT, who stated support of budgetary firewalls protecting the Highway Trust Fund.

The opportunity for the Subcommittee to review the future viability of the Highway Trust Fund (HTF) with regard to the current sources of Highway user tax receipts was provided at the July 16 hearing. The hearing also examined current and future impacts of alternative fuels on the HTF as well as how to generate revenue in the future if less petroleum based fuels are being used on the nation’s road system.

The Subcommittee’s July 25 hearing concentrated on the theme Transportation Solutions in a Community Context: The Need for Better Transportation Solutions for Everyone. Representatives from several “non-traditional” transportation groups provided testimony including Keith Laughlin, President of Rails-to-Trails Conservancy. His testimony discussed the community and health benefits of trails and the important role that Transportation Enhancement activities have played in the development of trails over the past ten years. He called for “a national commitment to creating walkable, bikeable communities...for improving the health of our people and the places where we live.” Testimony was also offered by the American Association of Retired Persons, Travel Industry Association, Surface Transportation Policy Project, Scenic America, and American Motorcyclists Association. In her testimony Elissa Margolin, Executive Director of League of American Bicyclists, voiced the need for explicit language regarding the use of highway funds for bicycle projects beyond the “oversubscribed” TE program.

Comments Solicited by USDOT

U.S. Transportation Secretary Norman Y. Mineta invites citizens to take advantage of a new online service to express opinions and offer ideas as the U.S. Department of Transportation (USDOT) prepares its proposal to Congress on reauthorization of the nation’s surface transportation programs. Submit comments at www.dot.gov/reauthorization.
Alamosa, Colorado

A new sheltered pavilion is being constructed to showcase the 120-year old Locomotive Engine No. 169. TE funds will be used towards the installation of a large concrete foundation, ornate steel roof, decorative security fencing and handrails, as well as a loading platform so the train can be moved and displayed at other locations. This project is the first in a series of off-systems transportation projects that are being developed by the City of Alamosa using Transportation Enhancement funds. [Alamosa Valley Courier 7/3/02]

Sacramento, California

The Capital City Freeway underpasses on 15th and 16th street have a new look thanks to TE funds. The walkway is now covered with art-deco tiles in shades of pink and orange with blue and gray stripes. Blue wire fences covered with fine mesh screens depict the Sacramento skyline and local landmarks in shades of orange, trees in green, and bushes in turquoise and lime green. The aesthetically pleasing underpass walkway serves as a traffic calming measure; drivers slow down as they pass the area making it safer and more inviting for pedestrians. [Sacramento Bee 5/24/02]

Richland, Georgia

After several months of renovation, the historic 19th century Richland Depot has reopened as the Richland City Hall. The TE funded depot also contains a railroad museum, welcome center, and a community meeting room. The depot, currently owned by the Georgia Department of Transportation, will be leased to the city for $1 a year. [Columbus Ledger-Enquirer 4/24/02]

Lawrence County, Alabama

Local history makers like Olympian Jesse Owens, General Joe Wheeler, and the Cherokee Indian Chief Doublehead are being recognized with the installation of TE-funded commemorative historical markers. The 23 historical markers were purchased with a $45,400 TE award and matching funds provided by the Lawrence County Historical Commission, Lawrence County Commission, and assistance from governmental officials. [The Times Daily 7/1/02]

St. Paul, Nebraska

The Transportation Depot Museum, located inside the former Shelton railroad depot, opened this summer as the main visitor complex in St. Paul’s historic village. Interior depot renovations, exhibits, and exterior platform restoration was financed by $124,868 in TE funds, a $50,000 U.S. Department of Rural Development loan, and moneys raised by the Howard County Historical Society. The museum, open year round, features educational programs as well as county historical and cultural artifacts. [Grand Island Independent 4/30/02]

Missoula, Montana

The half-mile Northside Greenway bicycle and pedestrian trail is being constructed as part of Missoula’s Community Transportation Enhancement Project program. U.S. Senator Max Baucus attended the June 15th groundbreaking ceremony. The trail, expected to open later this fall, will be located within an 18-foot easement along the north edge of the Montana Rail Link ROW between Waverly and Worden Streets. [The Missoulian 6/15/02]

National Conference on Transportation and Historic Preservation

The first national conference focusing on transportation and historic preservation was held in Lexington, Kentucky on June 2, 3, and 4. More than 200 participants from the transportation and historic preservation communities were brought together at this conference in an effort to raise the level of understanding of the goals and responsibilities of each of the groups. The conference was a cooperative effort sponsored by the American Association of State Highway and Transportation Officials, Federal Highway Administration, Great American Station Foundation, Kentucky Heritage Council, Kentucky Transportation Cabinet, National Conference of State Historic Preservation Officers, and National Trust for Historic Preservation.

The conference focused on the ways that states, state historic preservation officers (SHPOs), and citizens are using the TE program, the (continued on page 6)
management of historic transportation resources, and context-sensitive design techniques to successfully meet the goals of both transportation and historic preservation. The conference provided a forum to examine the current historic preservation review processes and brainstorm on ways of improving it.

Among the presenters was Kentucky’s Governor, Paul Patton, who expounded his and the state of Kentucky’s commitment to historic preservation and transportation. Mary Peters, Administrator of the Federal Highway Administration presented her agency’s perspectives on streamlining, stewardship, transportation enhancements and historic preservation. Numerous representatives of state DOTs and SHPOs also provided insight to their respective state programs.

It was clear from the presentations that DOTs and SHPOs interact differently from state to state. Those states with the greatest success stories appear to be those in which the two groups work collaboratively from the onset of projects. Clear communication is an essential element in their success.

The conference ended with a tour of Paris Pike, an historic highway on the outskirts of Lexington. TE funds were used to finance the preservation and relocation of historic dry-laid stone fences along the roadway, a context-sensitive design solution for the upgrading of the historic highway.