

Engineering

Engineering accomplishments in 2010 were outstanding. Engineering specialists across the Region worked across boundaries and units to accomplish projects with long-standing benefits. These projects included: road and trail repair and maintenance; reparation of roads damaged by storms and natural disasters; replacement of culverts for improved aquatic organism passage; restoration of historic facilities; and sustainable development of administrative buildings and recreation sites. Members of the Region's Technical Services Team worked with partners to implement innovative new techniques and sustainable designs to move us forward in the realm of "greening" the Region. Field specialists worked with contractors to implement numerous Recovery Act projects that will have long-standing benefits.

RECOVERY ACT & OTHER FEDERALLY FUNDED PROGRAM ACCOMPLISHMENTS

In 2010, over \$37 million in Recovery Act, Legacy Roads & Trails (CMLG), and Emergency Relief for Federally Owned Roads (ERFO) dollars funded more than 70 contracts for road, trail bridges, and major culvert projects. Fifty percent of the projects removed existing deteriorated or undersized culverts, and replaced them with structures which improved and restored passage for aquatic organisms. Other funded projects included survey, design and repair of damaged bridges and replacement of deficient bridges. The Region provided oversight and monitoring of these funds and associated projects.

Recovery Act funded 13 contracts for over \$2.1 million of work on 33 dams throughout the Region. Work included dam removal, routine maintenance, construction of access roads, and reconstruction of existing dams.

- One project was the Lefferts Pond Dam rehabilitation project on the Green Mountain National Forest in Vermont. Lefferts pond is a popular recreation area on the Forest.
- Another project was reconstruction of the Tipsaw Recreation Road in the Hoosier National Forest in Indiana. The road accesses a seven-mile hike/bike trail system, boat ramp, beach/picnic area, and five camping areas. This important roadway had fallen into serious disrepair due to inappropriate use and ineffective drainage systems.



(top) Before: Prior to replacement the dilapidated North Light Creek Bridge on Grand Island in the Hiawatha NF, built in early 1900's, was closed. (middle) After: Thanks to Recovery Act funds local contractors installed the new North Light Creek Bridge. (bottom left) The Lefferts Pond Dam on the Green Mountain National Forest after re-construction. (bottom right) Tipsaw Recreation Road project on the Hoosier National Forest.

“GREENING” THE REGION

The Region reduced greenhouse emissions in 2010 by:

- purchasing 4 hybrid vehicles – bringing our total to 44 vehicles; and
- purchasing 44 Flexible Fuel Vehicles – bringing Regional total to 183 vehicles.

Administrative buildings throughout the Region got retro-fitted for energy efficient lighting, increased insulation, biomass boilers, solar energy development, and low-flow water fixtures. Thanks to these energy saving updates, six facilities are in the process of becoming Leadership in Energy and Environmental Design (LEED) certified. And, the Kawishiwi Ranger District Office in the Superior National Forest (Minn.) received Silver LEED certification; the first in the Region.

Through Recovery Act funds, the Wayne Headquarters’ Office in Athens, Ohio, placed additional solar panels on their roof. As of September 30, 2010, the entire solar system has reduced 65 tons/130,000 pounds of carbon dioxide emissions, eliminating approximately 63.9 tons of coal that would have been burned to generate an equivalent amount of electricity.



Solar panels on the Wayne Headquarters’ Office roof.

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- Follow us on twitter at: http://twitter.com/usfs_r9
- Share in our successes by visiting our Success Story Reporting System at: www.fs.fed.us/r9/ssrs/
- While you are there, sign up for our subscription service and receive regular e-mail updates!



(left) Wakeley Lake boardwalk in the Huron Manistee National Forests in Michigan. (middle) Threatened & Endangered Species the Kirtland’s warbler. (right) Dolly Sods Wilderness Area in the Monongahela National Forest in West Virginia.