



## **Success Stories from the Northeast Region**

### **Cohesive Strategy Success Story: Necedah National Wildlife Refuge**

In 2003 the US Fish and Wildlife Service, Necedah National Wildlife Refuge in Wisconsin initiated an extensive combined fuels reduction and habitat restoration project. This project has continued to expand and now includes an eastern boundary fire break in an effort to reduce fuel loads within the wildland urban interface (WUI) in conjunction with barrens restorations.

The main goal of the project is to reduce potential for wildfire spread from continuous stands of jack pine on to residential property adjacent to the refuge and the community of Necedah. In initiating landscape scale barrens/savanna restorations the refuge has found a way to keep costs insignificant or nothing-out-of-pocket, while using less than usual National Fire Plan (NFP) WUI funding to construct maintainable firebreaks. The project utilizes contributions from partnerships and the American Recovery and Reinvestment Act (ARRA), along with services provided by contract logging operations, and the value of wood products (timber, pulp and chips) from using biomass.

Projects funded in part through annual project dollars from contract thinning of 5-8 thousand acres annually. Much of this work is self-supporting due in part to services provided by the contractor and the value of the timber which covers the value of other needs, such as chipping, archeological surveys, and maintenance treatments. In addition, contract work funded through ARRA was used to improve existing fire breaks with heavy equipment, and hire temporary employees to hand cut and improve interior breaks near the community of Sprague.

#### **Ongoing Projects, Partnership and Successes:**



**Hazard Fuel Reduction (HFR)** – The construction of fire breaks in addition to open landscape restoration reduces risks to the public, firefighters and private property by reducing fuel loads, interrupting continuous jack pine dominated fuel bed and eliminating crown potential associated with closed canopies. The result is a more two-dimensional model allowing more options for suppression. In addition the Fire Management Program accomplishes an average of 2000 acres of prescribed burn treatments annually. The majority of treatments are conducted within restoration units.



**Habitat Restoration** – Restoration of open landscapes increases habitat for federally endangered Karner blue butterfly (*Lycaeides melissa samueli*). By excluding standing dead trees within the interior of harvest areas, the number red-headed woodpeckers (Audubon yellow list) on the refuge have increased significantly. Monitoring data from harvest sites indicates the presence of native plant species not previously documented on the refuge. With the canopy open or removed, seeds of native species remaining in the seed bed are able to germinate within the restored grassland habitats.

**Cultural Resource Protection** – Cultural and historic sites, have been identified through archeological surveys associated with restoration and fire break projects. Although some have been previously disturbed by land use practices prior to the establishment of the refuge, they can now be better protected.

**Carbon sequestration** – The project reduces potential for stand-replacing fire in jack pines as well as a permanent underground storage of carbon through establishment of native grasses.



**Biomass Utilization** – Slash from timber harvest is chipped and sent to DTE Stoneman Station, Cassville, WI, which uses the material as an alternative source of energy. Harvested trees are skidded to a designated processing area, reducing residual slash, which decreases fire behavior in subsequent burns. Contract cost of chipping, removing and transporting this material off the refuge is covered by the value of the product. In addition, the refuge reports a saving of \$17K-20K in annual heating cost by utilizing dead and downed timber from restoration projects as a heat source in refuge facilities.



**Volunteer and Youth Hire Programs** – Jack pine regenerates quickly, requiring supplemental treatments to reduce fuel loads and maintain the initial investment of these projects. Volunteers, YCC and AmeriCorps work in conjunction with refuge and fire staff on mechanical, chemical and prescribed fire treatments within the project area. These groups are typically provided on-the-job training and experience for their time and service to the refuge.



**Partnership** – Without partnerships much of the restoration work at Necedah would not be possible. The work initiated along the refuge’s eastern boundary as well as restoration work adjacent to the communities of Necedah and Sprague have contributed to building of these partnerships with state and local agencies. In 2010, fire managers from the Necedah NWR and Region 3 of the USFWS joined with other fire protection agencies, community leaders and natural resource professionals to adopt the NE Juneau County Community Wildfire Protection Plan (CWPP). The purpose of this plan is to be better prepared to protect the community’s residents, property and natural resources against negative impacts of wildfire.

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Photos provided by Daniel J. Laber

