



# BWSR and partners restore white cedar in northern Minnesota

December 2013 Snapshots



Close your eyes and picture northern Minnesota. Do images of pristine lakes, abundant forests, white tailed deer, black bear and bobcats come to mind? It is that very picture that the Board of Water and Soil Resources (BWSR) is working to protect through a recent project spanning Beltrami, Koochiching, Lake, Aitkin, Itasca and St. Louis counties.

Northern white cedar, (*Thuja occidentalis*) is one of the icons of northern forests. Unfortunately, the species has been declining in Minnesota for decades. These trees can grow to a height of 25-50 feet, and live for hundreds of

years. In addition to being found in wetland communities in northern Minnesota, it is also a native tree to the northeastern United States and southeastern Canada. Cedar is valued throughout its range for its rot-resistant wood and high-quality wildlife habitat.

*“Northern white cedar is so important for many species, its decline will likely decrease biodiversity and habitat on a landscape scale.”*

Dr. Rodney Chimner



*Society of Wetland Scientists members visit a white cedar demonstration site in St. Louis County.*

White cedar forests play a vital role in keeping northern wetland communities healthy. These ecosystems help maintain cold groundwater for trout streams and provide important wildlife habitat for black bear, fisher, marten, and numerous song birds such as winter wrens, Swainson’s thrush, and Blackburnian warblers. Dr. Rodney Chimner, a project consultant and cedar expert explains “white cedar swamps contain over eighty animal species and provide important habitat for wintering white-tailed deer. The understory in natural northern white-cedar swamps is also noted for its diversity of herbaceous vegetation and bryophytes, including orchids and other rare plants.”



*The Leaves of a White Cedar*

The extensive influence of white cedar swamps on northern forest ecosystems has made these communities a high priority for BWSR and our partners. BWSR, the DNR and the University of Minnesota Natural Resource Research Institute are partnering with several local counties and soil and water conservation districts (SWCDs) to reverse the decline of northern white cedar wetland plant communities in Minnesota.

With funding provided through the Environment and Natural Resources Trust Fund, this group is working on a project to restore northern white cedar through site preparation and vegetation restoration techniques.

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Dale Krystosek, BWSR Wetland Special Project Lead, added “We are also evaluating how we can protect the white cedar plant communities from damage due to poorly designed wetland crossings for roads and trails.”

Pam Tomevi, Koochiching SWCD District Manager, recognizes the importance of the white cedar community in a county that is nearly three-fourths wetland. “White cedar is obviously conducive to our area – it’s a wet grower, struggling to regenerate on its own,” Tomevi said. “Koochiching County is very forested, and since forestry and clean water go hand in hand, this project fits into a multitude of goals identified in our water plan.” In addition, Tomevi appreciates how the project fosters great partnership and a shared goal between local SWCDs, counties and the state.

Since the project began in 2011, the project team has finalized plans for establishment of seven demonstration sites. These sites are located in Beltrami County, Koochiching County, St. Louis County and Lake County, and cover 485 acres in area. Restoration and site preparation plans or monitoring plans have been implemented for each of the sites. The Minnesota Conservation Corps has already completed restoration work including site preparation, tree planting, white cedar seeding and the installation of tree protectors (to prevent deer browsing damage) on several of the sites.



**White Cedar Community in St. Louis County**

The way Dale Krystosek sees it, “This project will provide valuable knowledge about how to best restore and protect northern white cedar plant communities, and will result in benefits to wildlife habitat, water quality as well as the restoration and preservation of an important ecosystem”.

The Legislative-Citizen Commission on Minnesota’s Resources agrees. Earlier this year, BWSR made a second proposal to the LCCMR and the project was selected for a funding recommendation to the 2014 Minnesota Legislature.