BOARD OF WATER AND SOIL RESOURCES

# Assessing long-term success of restored wetlands

## November 2017 Snapshots

In Minnesota wetlands are a valued resource, with protection and restoration efforts occurring through both conservation and regulatory programs. While the Minnesota Board of Water and Soil Resources (BWSR) has a significant role in protecting wetlands through regulatory programs, the Agency is also responsible for the implementation of two significant restoration programs: the Reinvest in Minnesota (RIM) conservation program and the Minnesota Wetland Bank.

Since 1986 voluntary restoration projects through the RIM conservation program have resulted in over ***6,000 easements protecting over a quarter million acres*** of wetlands and adjacent uplands.

*A wetland community from a naturally occurring wetland.*

The State Wetland Conservation Act (WCA) was passed by the legislature in 1991 to protect wetlands and the benefits they provide. It was part of the legislature's larger goal of achieving no-net-loss of wetland quantity, quality, and biological diversity. In some cases, WCA allows the draining or filling of wetlands when the lost functions and values of those wetlands are adequately replaced by: restoring, enhancing, or creating wetlands elsewhere. These replacement wetlands are most commonly provided through a process called "wetland banking."

Under WCA over 400 wetland bank sites have been established, covering approximately 40,000 acres. The WCA prescribes specific standards and procedures for replacement wetlands, including a typical five-year monitoring period, but little information is collected after that monitoring period to evaluate the sustainability of the replacement site over the long-term.

*A wetland community from wetland bank site.*

In the past, long-term monitoring efforts on BWSR's conservation easements have been focused on compliance more so than quantifying long-term sustainability. Recently, BWSR was awarded a Wetland Program Development Grant from the U.S. Environmental Protection Agency (EPA) to fund a three year study of restored and natural wetland conditions.

BWSR staff are using the Floristic Quality Assessment (FQA) method to assess conditions on approximately 150 restored and natural wetlands. The FQA tool, developed by the Minnesota Pollution Control Agency, assigns a condition category of excellent, good, fair, or poor to wetlands based on vegetative composition and cover.

*BWSR staff sample subaquatic vegetation at a RIM site in Redwood County.*

Under this grant, BWSR staff are targeting populations of restored wetlands and naturally occurring depressional wetlands in the temperate prairie and mixed wood plains ecoregions of the State. For restored wetlands, staff will survey both WCA wetland banks and RIM restored wetlands to compare how restoration standards and actions influence long-term condition.

Data collected may also provide indications of the long-term efficacy of prescribed performance standards related to native vegetation cover. This data will better inform BWSRs' wetland restoration and replacement guidelines and help more accurately determine the extent of long-term management activities necessary to maintain native wetland communities in restored wetlands.

BWSR staff have already begun reviewing restored wetlands and collecting data for the study. Grant funds were used to hire a seasonal botanist to collect field data and help ensure quality assurance measures are being met.

To date, BWSR staff have sampled approximately one-third of the sites planned to be assessed as part of the study. The study is expected to be completed by the end of 2019.