

New online tool will track condition of state's wetland restorations



Above: A conservation easement on Paul Brutlag's farm in Otter Tail County is one of more than 8,000 easements across the state that include wetland restorations. A new tool being developed by BWSR will help soil and water conservation district staff track the condition of structural components included in restored wetlands. **Right:** A restored wetland sustained wave damage along an embankment. **Photo Credits:** BWSR



A new online tool being developed by the Minnesota Board of Water and Soil Resources (BWSR) will help track the condition of structural components — such as embankments, pipes and weirs — incorporated into wetland restorations that are part of conservation easements across the state.

Wetland restorations are part of nearly 8,000 conservation easements covering about 340,000 acres across Minnesota. Many of these restoration projects require structural components that restore wetland functions, protect downstream properties from flooding and maintain

drainage for neighboring landowners. Examples of common structural components include embankments, pipes, rerouted tile and sheetpile weirs.

While the easements are permanent, the structures built to support wetland functions can deteriorate over time, depending upon changing site conditions and natural elements. Rodents — such as muskrats — can burrow into embankments, creating weak spots. Metal pipes will eventually rust. Frost can shift sheetpile weirs. Waves can erode embankments where vegetation has died. In cases where the drainage systems have grown or stormwater

runoff has increased, some components may no longer be large enough to handle the volume.

“SWCD (soil and water conservation district) field office staff are usually the first to discover these issues,” said Sharon Doucette, BWSR easements section manager. “These staff members are required to complete on-site inspections as part of our stewardship process, and they often identify these types of issues during these inspections or when a landowner alerts the SWCD about an issue.”

Because many easements have complex restoration plans, it can be difficult to identify and describe components in need of attention. Last year, BWSR engineering staff began developing an online structural asset reporting tool to make it easier for SWCD staff to report structural issues on wetland easements and streamline the response process. The tool is expected to be available in the coming months.

“The reporting tool will provide a consistent level of detail about structural issues, making it easier for BWSR to track these issues and assess the need for further investigation and response,” said Aaron Peter, BWSR training engineer and one of the BWSR staff members building the tool. “Information entered into the tool will help give BWSR engineering staff an idea of the problem’s severity.”

The tool’s five sections will cover typical wetland restoration components and common maintenance issues: general/vegetation, embankments, pipe outlets, open spillway outlets and drainage systems. Each section will contain a brief description of the structures, along



Wetland restorations — such as this one in Pope County — help to increase water storage, improve water quality and enhance wildlife habitat.

with photos that illustrate restoration components.

Designed to be user-friendly and fast, the form SWCD staff members fill out to describe the property and easement will consist of checkboxes and drop-down menus, with minimal narrative. Photos illustrating structural concerns may be uploaded directly from a smartphone or computer. A GIS mapping tool helps

to pinpoint locations within an easement that may be difficult to describe.

After an issue is reported using the tool, BWSR engineering staff will evaluate the problem based on its severity and its impact to the restoration or affected properties. If immediate repairs are not needed, SWCD staff may be advised to schedule a follow-up visit with the landowner and track the

issue over the next several years. If repairs are needed, BWSR engineering staff will design a solution the landowner can review, and then coordinate with the landowner and their contractor to complete the repairs, providing construction oversight. Costs will be reimbursed by BWSR.

More information about how to access the tool will be shared once the tool is fully developed and available online.