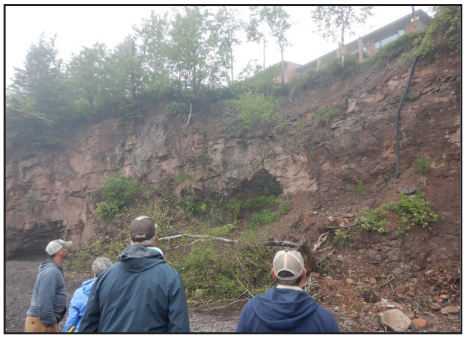
Cook County SWCD staff gain experience via collaboration with BWSR engineer


Left: *A 45-foot-tall bluff along Lake Superior's shoreline was partially eroded in spring 2022. Cook County SWCD staff are working to prevent further erosion, which can be seen here from a balcony.* **Middle:** *Cook County SWCD Administrator Stephen Janasie (far right), two members of the homeowners' association, and the individual who oversaw the construction of the development viewed the erosion during a site visit.* **Right:** *A balcony view shows the proximity of the building to the bluff crest. The area where the grass is worn down is roughly where the outlet pipe for the gutter project will be installed.* **Photo Credits:** Cook County SWCD

A new emphasis on providing one-on-one, project-specific training led a Minnesota Board of Water and Soil Resources (BWSR) engineer to work on a project involving a 45-foot-tall bluff on the shore of Lake Superior. The collaboration assisted Cook County Soil & Water Conservation District (SWCD) staff with technical aspects of an erosion control project affecting a condominium complex.

Cook County SWCD staff members are among the latest to use BWSR's expanded one-on-one assistance. The focus aims to help fill the demand from BWSR partners for more direct support.

In spring 2022, a combination of melt from a record-setting seasonal snowfall plus rain events led to massive runoff. When Cook County SWCD staff visited the site that July, SWCD Administrator Stephen Janasie said a 50-foot-long stretch of the crest had fallen to the beach below — which brought the bluff edge closer to several housing units.

BWSR Northern Regional Training Engineer Patrick Schultz, who worked with Cook County SWCD staff, said runoff from large roofs at the condominium complex exacerbated the erosion problem. Cook County SWCD staff addressed the problem using the USDA Natural Resources Conservation Service's (NRCS) roof runoff structure and underground outlet practices, which typically are used to divert clean rainwater from roofs away from feedlots to prevent it from becoming contaminated. The idea was simple: Use gutters to capture and redirect the roof runoff.

"This project was a priority for the district due to the amount of sediment that entered Lake Superior, and the potential of this continuing during future events. The landowners are taking additional steps to eliminate runoff from this sensitive area, like increasing the vegetative buffer, reducing off-site runoff ... entering the property, and installing vegetated swales," Janasie said.

Because the Cook County SWCD staff did not have the Job Approval Authority (JAA) needed to approve the project, they turned to Schultz, who worked

through the design process with them, and ultimately reviewed and approved the project.

Schultz began working one-on-one with district staff in late summer 2022. He provided technical expertise and support throughout the design phase, and answered SWCD staffers questions as they worked their way through challenges. The site itself is challenging from a stormwater perspective, partly because it is adjacent to Highway 61, Janasie said. The challenge lies in figuring out how to manage large amounts of water that flow through the area. There is a narrow strip of land between the highway and the bluff, and much of that area is impervious surface — including a large parking lot. Across the road, a big hill sends water to the highway and, eventually, to the property.

Janasie said he found the one-on-one assistance invaluable on this project, a first of its kind for Cook County SWCD staff.

"Patrick's willingness to work through each step of the design phase provided us with the knowledge and resources needed to properly address the problem. The BWSR technical training videos got us started, but it was very helpful developing the designs with someone like Patrick who has done this before. He helped us balance all the factors at this challenging site and showed us where to find and how to use the resources from BWSR and NRCS for the conservation practices employed," Janasie said.

The property owners have hired contractors for the project. The goal is to begin installing gutters and outlet pipes this spring. SWCD technicians anticipate that the project should be completed quickly.

Funding comes from Cook County SWCD's State Cost-Share Program allocation, which is officially called the Erosion Control and Water Management Program. The program provides funds to SWCDs to share the cost of systems or practices for erosion control, sedimentation control, or water quality improvements that are designed to protect and improve soil and water. Through the program, landowners can request financial and technical assistance from their local district for the implementation of conservation practices. The state cost-share funding is a general fund appropriation that BWSR distributes to SWCDs via a formula. This program has its own statutory requirements and BWSR policy details for implementation.

The Technical Training and Certification Program (TTCP) provides training and assistance to conservation field staff on engineering practices that address erosion and other conservation needs. Most of this training takes place in the classroom, in group sessions or in the field. Especially during the COVID-19 pandemic, training was offered via webinars and other virtual means. A shift in job duties starting in fall 2022 allowed the training engineers to do more one-on-one or project-specific training and assistance. Roughly 25% of training engineers' time is dedicated to this one-on-one type of training.

"We've always known that people need more one-on-one help than what's being offered out there. It's something we've always wanted to do, and we've always done it to a small extent, we just never really advertised what we were doing or tried to push it," Schultz said.

One-on-one training might include helping staff to design a practice, reviewing and approving plans, helping staff with construction oversight and other on-site activities.

Further, one-on-one training supports the TTCP's mission of having highly trained and skilled field staff, providing mentors for field staff, and helping field staff move toward achieving JAA by gaining experience.