



# Cook County partnership aids water quality, highway safety



**G**RAND MARAIS — Highway 61 through Grand Marais is a bit safer and Grand Marais Harbor is a bit cleaner as a result of a stormwater project that slows and treats runoff before it enters Lake Superior at the marina.

Completed at the same time as the Cook County Highway Department’s Fifth Avenue West/ County State Aid Highway 15 reconstruction, the project involved



Hansel

(the water is) going through a treatment system, a filtration system that’s got a

the Cook County Soil & Water Conservation District (SWCD) and the city of Grand Marais.

“This project is doing something really new in the city; it’s creating attenuation — so it’s holding the water and

**VIDEO:** Cook County SWCD and Highway Department staff discuss the Watershed-Based Implementation Funding backed stormwater project. [BWSR YouTube link](#)

**Top:** The marina on Lake Superior at Grand Marais Harbor, seen in September 2023, benefits from a Cook County SWCD stormwater project that treats runoff. Watershed-Based Implementation Funding from BWSR supported the work, completed in conjunction with a highway improvement. **From left:** The stormwater filtration system installed under the Cook County Courthouse lawn keeps an estimated 1,974 pounds of sediment out of the marina annually. “Lake Superior is pretty cold, which is really great. We want to keep it oligotrophic,” said Ilena Hansel, Cook County SWCD manager. The Cook County Highway Department’s Fifth Avenue West/ County State Aid Highway 15 reconstruction is seen here from the courthouse. **Photo Credits:** Ann Wessel, BWSR



lot of pipes and different methods to treat that water. And then it comes back out and it's slowing the water down. ... So it's not just going to flow down the street like a river," said Ilena Hansel, district manager and Cook County water planner for the Cook County SWCD.

"(That will) help the water quality. It's going to help also not to erode the road quite as quickly, so help with the infrastructure — because before it was just running straight on the road, and you could watch pieces of pavement actually going with the water," Hansel said.

Previously, Cook County Engineer Robert Hass said the road would wash out. Driveways would wash out. Ice would build up at intersections.

Untreated stormwater flowed into the marina.

"(The marina) doesn't have a lot of water circulation. And water acts like Velcro, so it's picking up nutrients. It's picking up sediment," Hansel said. "Lake Superior is pretty cold, which is really great. We want to keep it oligotrophic. This project is treating the water quality."

Water quality is part of what drives North Shore tourism, too.

"Maintaining our pristine waters up here is vital. We're a tourist economy, and that's what people come to see. The tourism is a small reason. Clean water is crucial to maintain this



*Stormwater that enters Lake Superior through this pipe is now treated, keeping an estimated 12 pounds of nitrogen and 3.8 pounds of phosphorus out of Grand Marais Harbor each year.*



**“The Clean Water Fund is really what allowed us to do this project. ... I appreciate the opportunity not only for the grant, but to incorporate this type of system up here and really help preserve our waterways.”**

— Robert Hass, Cook County engineer

beautiful part of the state we live in," Hass said.

Hansel said keeping nutrients out of the water helps to keep the water cold, which discourages algae growth.

"Whatever we can do now and be proactive was kind of the goal of this project," Hansel said.

Stormwater upgrades were also part of the city's stormwater management plan. This project was first discussed in 2017. Work finished in 2023. The SWCD provided technical expertise and funding.

The six-block-long stormwater

treatment accounted for about \$295,000 of the \$5.3 million reconstruction project. The filtration system was installed under the Cook County Courthouse lawn, which occupies nearly an entire block partway up a steep hill overlooking Lake Superior.

It drew from Watershed-Based Implementation Funding (WBIF) the Minnesota Board of Water and Soil Resources (BWSR) awarded to the Lake Superior North One Watershed, One Plan planning partnership.

"The partnership with the soil and water conservation

district allowed us to secure funding to perform work that was more on the advanced side of filtration. Instead of just the standard stormwater management system, we were able to install a filtration unit to make sure that the stormwater is also clean on its way to the big lake. These Clean Water Funds really open that door and open the conversation to even have these possibilities," said Jacob Backer, Cook County Highway Department engineering technician.

The lack of available land to site projects and the underlying bedrock made other options impractical or impossible.

"Those Clean Water Funds were a huge reason why we could even do it. Fronting all of it was just something that we couldn't do. Kudos to soil and water for reaching out," Hass said.

The sediment treatment system and vaults — which allow sediment to filter out, and which are vacuumed out when they fill — will keep an estimated 1,974 pounds of total suspended solids, 3.8 pounds of phosphorus and 12 pounds of nitrogen out of the marina on Lake Superior annually. The project treats 15.5 acre-feet of previously untreated stormwater.

Written by Ann Wessel, BWSR conservation marketing coordinator



The Minnesota Board of Water and Soil Resources' mission is to work with partners to improve and protect Minnesota's land and water resources. [www.bwsr.state.mn.us](http://www.bwsr.state.mn.us)