

# Raingardens make a difference in Thief River Falls

April 2015 Snapshots

When you think of urban stormwater projects you probably don't think of Northwest Minnesota. The truth is that urban best management practices play a role throughout the state, as the Pennington Soil and Water Conservation District (SWCD) demonstrated in a recent project.

The Ralph Engelstad Arena in Thief River Falls is Minnesota's premier high school hockey arena. The 3,593 seating capacity arena and its 1,000 parking spaces fill two city blocks, 85-90% of which is impervious surface. This creates a large amount of runoff in rain events because there is little opportunity for the water to filter through the soil. To address this issue, the Pennington SWCD and its partners worked together to design and install raingardens on the arena campus.



*A view of some of the raingardens at the Engelstad Arena. Pictured is Pennington SWCD's Conservation Corps Apprentice, who coordinated watering and other maintenance activities with City staff.*

In the past, runoff from average rainfall events would overwhelm roads and sidewalks around the arena. Larger events would even back water up to the front steps of the arena. Sediment, nutrients, and other pollutants from the arena campus were carried into the storm sewer system, which empties into the Red Lake River.

The raingardens, installed in 2014, now provide just over three acre-feet of water storage capacity, preventing flooding of the streets and sidewalks. They also allow for infiltration of the runoff before it enters the storm sewer which reduces the amount of pollutants entering the Red Lake River. The arena roof runoff is delivered to the raingardens through underground pipes which reduces erosion on the grounds and addresses the safety issue by preventing the roof runoff from flowing over the sidewalks.

The native vegetation that was planted in the raingardens not only adds beauty to the arena campus, but provides pollinator habitat in the City of Thief River Falls. Pennington SWCD Manager Bryan Malone says "This project was an answer to many problems and a great addition to the arena campus."

Getting the project completed was challenging at times. There were some unexpected roadblocks that occurred including funding issues, a change in engineers, and weather delays. The project pushed on, ultimately successful because of the dedication and perseverance of the Pennington SWCD staff, Board, and the partnerships they have built over the years.

"This was truly a community project," Malone continues. The SWCD received a Clean Water Fund grant for the project, but there were also significant financial contributions from the Pennington SWCD, Red Lake WD, City of Thief River Falls, and Al Gustafson memorial donations. The latter is especially meaningful: Al Gustafson was not only a hockey icon in Northwest Minnesota, he also worked over four decades for the Natural Resources Conservation Service.

“It seems more than just acknowledgement of his work that this raingarden is dedicated as the Al Gustafson Memorial Rain Garden,” Pennington SWCD Supervisor Grant Nelson says. “It is acknowledgement of a life that has inspired others and led to this project in this place.”