



# Ralph Engelstad Arena Raingarden



## Clean Water Funds: 2011

Clean Water Grant	\$88,681
Leveraged Funds*	\$22,170
Total Project Budget	\$110,851

\* Leveraged Funds include required 25% local match

**Targeted Water:**  
Red Lake River

**Project Sponsor:**  
Pennington SWCD

**Partners:**  
City of Thief River Falls  
Pennington County Master Gardeners  
Pennington SWCD

**Grant Period:**  
January 2011 - December 2012

**Project Contact:**  
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## Project Narrative

The Ralph Engelstad Arena in Thief River Falls is the premier high school hockey arena in the State of Minnesota. The Arena fills two city blocks and is covered by 85-90% impervious (hard) surface. Rainfall events completely inundate roads and sidewalks, overloading the stormsewer system. Larger events cause water to stand high enough to reach the front steps to the Arena. Roof runoff produces large amounts of water running from the downspouts. Runoff has made sod establishment on the grounds difficult. Washouts have developed carrying sediment to the stormsewer. During spring melt, runoff crosses the sidewalks and freezes at night causing a slippery and hazardous conditions.

By implementing multiple raingardens, runoff water will be stored on site to control a majority of the runoff. Not only will water quantity be reduced, but water quality of the stormwater will be improved coming off the site.

This project will have an immediate benefit, reducing pollutants associated with urban runoff such as phosphorus, sediment and nitrogen. The proposed raingardens will hold approximately 3.05 acre/ft of water during a one inch rainfall event. Runoff water will be slowly released either into soil or into the stormsewer through underground tile.



## Ralph Engelstad Arena Raingarden



Arena grounds during a rain event



Ralph Engelstad Arena currently



Example of how the Arena might look after the project is completed