



St. Croix Watershed Research Station

Highlights of 2003



New Research in the St. Croix Valley

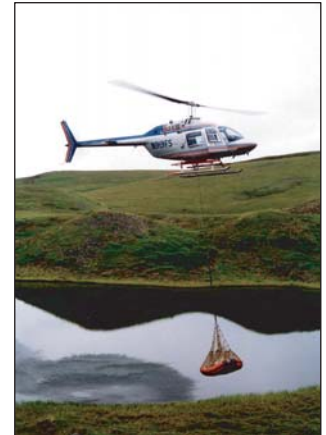
Several new research projects focus specifically on the St. Croix watershed.

- In Bucks and Buckthorn, bowhunting is used to involve young people in land restoration efforts on properties owned by the research station, Kiwanis Camp and Warner Nature Center.
- Two new restoration projects, Arcola and Rice Lake Flats, will use experimental plantings of prairie species to maximize floristic diversity on National Park Service lands overlooking the St. Croix River.
- The first project of TAPWaters (Technical Assistance Program for Watersheds) will be to model key tributaries of the St. Croix to help determine how land-use, soils, and climate control nutrient runoff and to help predict the effects of future management decisions.
- Staff scientists will collect a series of cores in Rice Lake and two other backwater areas to determine the environmental history of these St. Croix River features.



Mercury in Watersheds

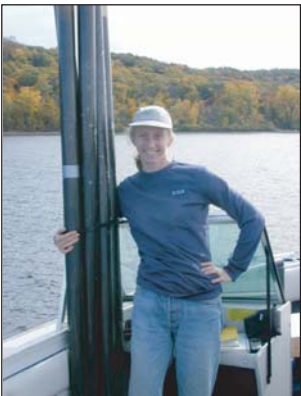
SCWRS Director Dan Engstrom is participating in several major studies of how mercury is atmospherically deposited into the environment and how it changes once it reaches watersheds. The Mercury in Forested Watersheds project at the Marcell Experimental Forest near Grand Rapids, Minnesota is in its third year of study; it aims to determine how this pollutant becomes transformed into highly toxic methylmercury, which eventually accumulates in the food chain. Mercury Contamination and Biogeochemical Cycling in the Arctic and Evaluation of Recent Trends in Atmospheric Mercury Deposition in South Florida are investigating mercury deposition in these two very different environments. Results of these research projects are important to watersheds everywhere, including the St. Croix River.



Graduate Student Research

Two graduate students from the University of Minnesota's Department of Geology completed master's theses on research station projects during 2003.

- Laura Triplett completed her thesis research on Lake St. Croix with Dan Engstrom and Mark Edlund; her work reconstructed a basinwide history of the sediments and nutrients that have impacted the river. She is expanding this work for her doctoral research.
- Sara Mueller, also working with Edlund, completed her master's thesis on the paleohydrologic history of Devils Lake, North Dakota. This investigation has documented the duration and severity of extreme climate events (droughts, flooding) in the past as a means of predicting future climates in the face of global warming.



Tornquist Property Acquisition

Through the Burn, Plant, and Learn project, the research station was able to acquire and preserve a key piece of property in the middle of its land base. This nearly 9-acre site along Highway 95 will provide both planting areas and a demonstration site to teach about restoration activities at the station. A new project funded by the Metro Greenways initiative of the Minnesota DNR will support test plots of native plants, as well as development of an information kiosk.

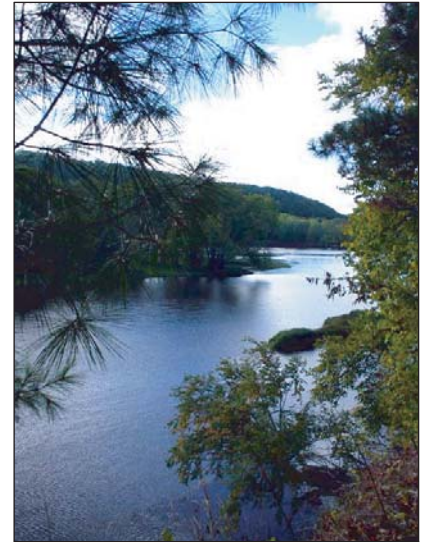


Friends Event Features Prairies

On July 23, members of the SCWRS Friends toured restored areas in full summer bloom and enjoyed a picnic dinner. Plots of different ages and plant diversity were shown, and guests learned how researchers are looking at species and floristic diversity on restored lands.

Cooperative Work on Nutrient Guidelines for St. Croix

Members of the research station's scientific staff are closely involved with the St. Croix Basin Water Resources Planning Team, an interagency group working to protect and improve the water quality of the St. Croix River through coordinated planning and management. Results from two major SCWRS projects are being used to help set goals for nutrient and sediment inputs, and senior scientific staff are working with representatives from state and federal agencies to determine future management directions. SCWRS staff also help plan the program for an annual conference on nutrients each February.



Artists at Pine Needles

Seitu Jones and David Morrison were chosen as resident Artists at Pine Needles. Each artist was in residence for a three-week period, and they discussed their experiences in a public program offered in cooperation with the Washington County Library, Marine Branch. Applications for the summer 2004 program will be available in February 2004.



River Café Draws A Crowd

The first public event of the Artist at Pine Needles Program drew over 125 people to the Marine Village Hall in March. There, they enjoyed a staged reading of a one-act play, River Café, written by Laurie Allmann during her pilot season as an Artist at Pine Needles.

