



WATERSHED UPDATE

Formed in 1981, the Carnelian–Marine–St. Croix Watershed District oversees a variety of projects and programs to assess and improve the health of our 81-square-mile watershed—which includes 31 lakes, three designated trout streams, hundreds of acres of wetlands, and over 17 miles of St. Croix River shoreline. The Watershed District is managed by the following volunteer board of residents appointed by Washington County:

- President**..... Kristin Tuenge, 651.433.3763
- Vice President**..... Dave De Vault, 612.670.5530
- Secretary/Treasurer** Andy Weaver, 651.491.2656
- Manager** Wade Johnson, 651.356.9573
- Manager** Eric Lindberg, 612.760.6695
- Manager** Thomas Polasik, 651.430.0263
- Manager** Joel Stedman, 651.433.2836
- Administrator** Jim Shaver, 651.433.2150

Carnelian–Marine–St. Croix Watershed District meetings are open to the public and take place the second Wednesday of the month at 6:30 p.m., in the Heritage Room of the Scandia Community Center, 14727 209th St. N. in Scandia.

A public meeting, to gather input on two projects in Scandia, will be held on Monday, July 20 at 6:30 p.m. in the Scandia Community Center, 14727 209th St. N.

> Reducing Erosion at the 197th St. Ravine

A ravine reconstruction plan for erosion reduction will be presented. The District has been working with property owners to acquire temporary and permanent easements, and has hired Wenck Engineering to design the plan.

> Reducing Phosphorus at Sand Lake

Possible designs for a sand-iron filter at Sand Lake will be discussed. The District has been working with residents to identify the best site for the project, which should reduce the amount of phosphorous flowing into the lake.

PHOTO CONTEST

The CMSCWD is seeking pictures of the lakes, parks, wetlands, wildlife, plants, outdoor recreation—pretty much anything that depicts life within the Watershed District. Photos must be in horizontal format and digitally unaltered beyond standard optimization. For a complete set of rules, visit the District website at www.cmscwd.org or contact Jim Shaver.

Visit us online at www.cmscwd.org

Pair Of Clean Water Grants Sets Plans In Motion

Nearly 200 applications were received. Only 36 grants were awarded. The Carnelian-Marine-St. Croix Watershed District received two of them.



The CMSCWD is moving forward with two projects that recently received major funding through the state's Clean Water, Land, and Legacy Amendment. The Minnesota Board of Water and Soil Resources (BWSR) announced in February that it had awarded grants totaling more than \$200,000 to the two projects— one focused on Marine on St. Croix (\$98,200) and the other on Goose Lake (\$108,400).

The Marine on St. Croix project aims to protect Mill Stream and the St. Croix River through the design and construction of a series of storm water runoff improvements including 18 rain gardens, a biofiltration basin, and a sand iron filter. At a kickoff meeting in April, stakeholders received an update on the project's status. Among the highlights: Initial work on identifying sites for the rain gardens has been completed and more in depth analysis will be conducted prior to meeting with targeted neighborhoods this summer. Cost-sharing funds for the rain gardens will be available to homeowners in non-targeted areas. A study of potential sites for the biofiltration basin and the sand iron filter should be complete in July.



The Goose Lake project, once implemented, will reduce polluted runoff into the top priority water body in the Carnelian-Marine-St. Croix Watershed District. Plans call for four improvements: a ravine stabilization and three sand-iron filtration systems. A concept design has been completed for the first project and will be presented to property owners. If everything goes as planned, the project will be put out for bid in March 2016, and construction will be finished by summer.

LAKE CARNELIAN “CAPSTONE” PROJECT COMPLETED

Four civil engineering students from the University of Minnesota have presented to the District a series of recommendations on how to address longstanding sediment runoff problems at Panorama Avenue and 133rd Street in Scandia. The students assembled the recommendations as part of their senior year “Capstone” project, a final-semester requirement for all civil engineering graduates at the U. They worked with District engineers Carl Almer, Cecilio Olivier and Derek Lash to identify the causes of the runoff and to propose solutions. The students' recommendations:

- Regrade 133rd Street and install two bioretention basins at top of the road to stop the runoff at the source. Cost: \$16,000-\$86,000.
- Install bioretention basins at the bottom of the road and clean the culverts to keep them operating. Cost: \$12,000.
- Add temporary biologs with blankets to reduce the water velocity and hold back sediments in major ravines. Cost: \$1,000-\$2,250.
- Install rain barrels on properties to capture roof runoff and reduce velocity. Cost: \$400 per house (not including the additional expense of gutters, if needed).
- Install headcut stabilization—a damlike structure of biologs held with fence stakes to reduce velocity and hold soils. Cost: \$1,000.



Capstone Project Team students (foreground) with (back row left to right) District engineers Carl Almer and Derek Lash and resident Scott Miller.

Administrator Shaver has contacted May Township to meet with the Carnelian Heights Association and review possible next steps to solve these long-standing issues.



TRENDS IN LAKE WATER QUALITY ARE PROMISING

The monitoring of lake water quality within the District proceeded on schedule with 20 of the watershed's 31 lakes sampled and measurements are encouraging. Ten of the lakes sampled were found to be improving in at least one of three standard water quality parameters: water clarity; algae growth; and nutrients (total phosphorus, or TP). One of those lakes, East Boot, is now meeting state standards and could soon be removed from the list of impaired lakes. Square Lake was the only one of the sampled lakes deemed to be declining in water quality.

The District's monitoring program is designed to provide early warning of negative trends in water quality. Lakes are examined on a rotating basis to keep costs down and yet insure that negative trends are identified early. Each lake is graded on a curved scale from A to F, based on the average of its scores in the three parameters. A "C" grade is typical of lakes in the seven-county metropolitan area.

2013-2014 Lake Grades

Lake	Grade	Water Quality Trend
Alice	A	NA
Barker	D+	No trend
Bass	B+	Improving
Big Carnelian	A	Improving
Big Marine	A	No trend
Carol	B*	No trend
Clear	A	NA
East Boot	A	Improving
Fish	C*	Improving for clarity
German	A-	NA
Goose	B	Improving for TP
Hay	C+	Improving for TP
Jellums	C-*	Improving for clarity
Little Carnelian	A	Improving for clarity
Long (May)	C+	Improving for TP

Lake	Grade	Water Quality Trend
Long (Scandia)	D+*	Improving for clarity
Loon	D*	Declining for clarity
Louise	C-*	No trend
Mays	A-	NA
Mud	F*	NA
North Twin	A-*	Improving for TP
Sand	C	No trend
Silver	C*	No trend
South Twin	C-*	Improving for clarity
Square	A	Declining for clarity
Staples	B	NA
Terrapin	A	NA
Turtle	C-	NA
Twin	A	NA
West Boot	A	Improving for clarity

*Based on results from the last year monitored



Did you enjoy time at a local lake, or the St. Croix River, this summer? Learn what your Watershed District is doing to keep these beautiful natural resources clean and healthy!



CARNELIAN-MARINE-ST. CROIX WATERSHED DISTRICT
Scandia Plaza II • 21150 Ozark Avenue • P.O. Box 188 • Scandia, MN 55073

INSIDE

Clean water grants, reducing erosion, lake water quality trends and more!

THANK YOU, STEVE KRONMILLER!



Manager Steve Kronmiller is retiring from the Board at the end of June, after twelve years of service.

His tenure included four years as president, from 2008 to 2012, followed by two years as treasurer. In an interview during his final year as president, Kronmiller said that his top goal was to get the "most bang for the buck" in efforts to protect water quality. Although he's leaving the District Board of managers, he says he intends to remain involved in the community.

MEET MANAGER DAVE DE VAULT



It would be hard to find a resume more tailor-made for a watershed board manager than that of the CMSCWD's current board vice president, Dave De Vault. De Vault's list of career accomplishments is truly impressive: thirteen years as a fish and wildlife biologist with the U.S. Fish and Wildlife Service; eighteen years in various scientific positions with the U.S. Environmental Protection Agency; dozens of peer reviewed articles with titles like "Possible Effects of Increasing Sodium Concentrations on the Biota of Lake Michigan;" the list goes on. De Vault obviously understands the importance of protecting water quality. But why, after a long career focused largely on big bodies of water like Lake Michigan and Lake Superior, did he seek appointment to the board of Carnelian-Marine-St. Croix Watershed District in 2013?

Let's just say he was looking for a new challenge.

"I spent thirty-five years working on national and international water quality issues with the federal government," he says. "When I retired I wanted to continue contributing on a more local level."

As a seven-year resident on Big Carnelian Lake, De Vault feels he has a responsibility to help protect all the water bodies in the area. He thinks his work as a District manager allows him to do just that. "I want to see the District continue its current efforts to reduce nutrient inputs to our lakes and streams," he says. "Two other goals I believe are important are linking District action to water quality improvements and increasing the visibility of the District and its actions."

For more information on District managers, and opportunities to get involved in the watershed, visit www.cmscwd.org.

