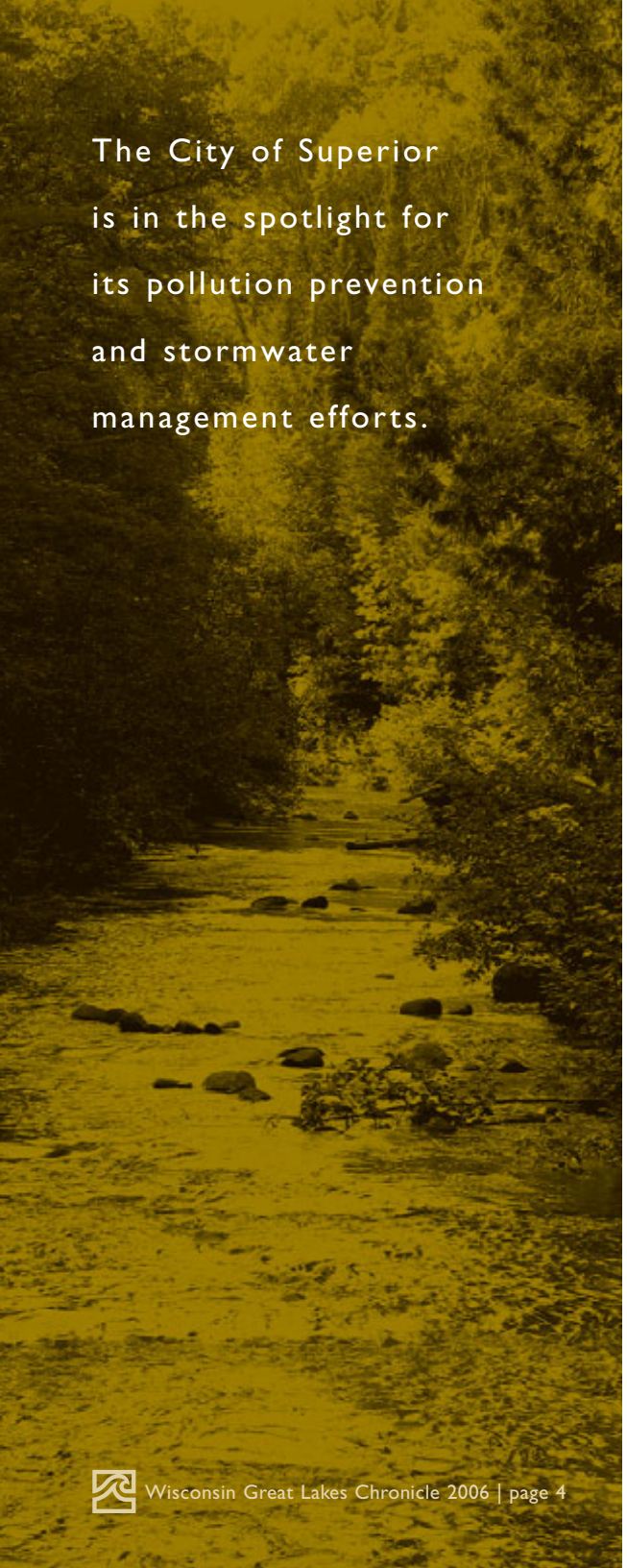
Excerpted from **www. doa.state.wi.us/docs_view2.asp?docid=6061**



SPREADING THE WORD ABOUT STORMWATER POLLUTION

Kari Jacobson-Hedin

When research assistants from the City of Superior come for a visit, expect to get wet. And muddy. You might even be asked to stick your head and shoulders in a barrel, handle bugs with long legs and lug bags of rocks. It is all for the good of Lake Superior.

Wisconsin identifies stormwater as the leading cause of water quality impairment for Lake Superior, and the City of Superior is in the spotlight for its pollution prevention and stormwater management efforts. The City's Environmental Services Division (ESD) Stormwater Education Program provides Superior residents of all ages the opportunity to participate in hands-on projects that teach ways to prevent stormwater pollution. Activities include planting rain gardens, stenciling storm drains, recruiting volunteer stream monitors and selling rain barrels.

Sixth-Graders Soak Up Science—and Learn How to Plant Rain Gardens. About 125 sixth-graders from Superior Middle School recently spent the entire year immersed in rain gardens. Rain gardens are *mini wetlands* that collect stormwater and allow it to soak into the ground where contaminants are removed and groundwater reserves are slowly recharged. Rain gardens differ from normal gardens in that they are bowl-shaped and contain native plants that can withstand the fluctuations of wet and dry periods.

Teachers Pat O'Connell and Becky O'Brien partnered with ESD research assistants Kari Hedin and Amber Westerbur to get students involved in the entire process of creating rain gardens. Each activity carried a message about stormwater pollution and the role of rain gardens.

In October 2005, students designed their gardens on paper and held class-wide votes for their favorite designs. They transferred these designs to the grounds of the Middle School by spreading landscape fabric over areas where rainwater naturally collects. In winter, they chose plants using a computer program that allowed them to create virtual gardens, and they grew native seedlings from seeds collected by Ms. Hedin.

Once the five rain gardens were dug out, they helped back-fill them with rocks, sand, peat, compost and mulch—a wet and muddy process! Everything came together in June 2006 when the students planted hundreds of native seedlings. Over their ensuing years at the middle school, they will be able to point out the beautiful blooming gardens that they helped create, and it will remain fresh in their minds that they, too, can keep Lake Superior clean.

Dump No Waste – Drains to Lake! These were the words shouted far and wide by Superior's fifth-graders as they walked City streets using their traffic cones as megaphones. They spread this message in another way—by stenciling storm drains around their school in May 2006. Nearly every fifth-grader from Superior's six schools participated in the stenciling, and approximately 735 drains were stenciled.

Keeping Current on Northern Wisconsin Streams. Visitors to Amnicon State Park in May 2006 were not enjoying a lazy lunch as they sat at picnic tables under the shade of pine trees. They were trying to determine whether the macroinvertebrates in the trays were mayflies or stoneflies. These types of macroinvertebrates caught in the Amnicon River would tell these volunteer monitors something about water quality.

They also strapped on waders and climbed in the river to learn how to measure dissolved oxygen, temperature, water clarity, water flow and habitat condition. The University of Wisconsin Superior-Extension (UWEX) Program and the ESD coordinated the stream monitoring program by recruiting and training volunteers and helping them find wadable monitoring sites on rivers from Superior to Ashland.

"Monitoring is an important way to obtain baseline and trend data, especially in streams where little is known about water quality and habitat condition," said Sue O'Halloran of UWEX.

"Consistent monitoring information is needed to make informed resource decisions," said Scott Toshner, Wisconsin Department of Natural Resources fisheries biologist. "It will help us protect areas with good water quality and point out areas where additional management efforts should be made by our agency."

After a season of monitoring, volunteers will submit their data to an online statewide database managed by Wisconsin Water Action Volunteers. Their hope is to continue this monitoring program and get a clear idea of the water quality of northern Wisconsin streams.

From Pickles to Rainwater. "Time to do the rain barrel reach!" announced Kari Hedin as she reached waist-deep into an empty rain barrel to secure a spigot with a washer and locknut. Afterward, rain barrel workshop participants approached her and fellow research assistant Amber Westerbur to ask if they could get help securing the spigots on their barrels.

They had just learned how rain barrels can keep rainwater from becoming polluted stormwater runoff and are excited to take their rain barrels home. The recycled plastic barrels that once carried pickles from Greece now serve as catch basins for water running off the roofs of hundreds of Duluth and Superior homes. Approximately 420 rain barrels have been sold since 2005.

Kari Jacobson-Hedin is a research assistant with the City of Superior Environmental Services Division. She can be reached at (715) 394-0392 or jacobsonk@ci.superior.wi.us.

CONTENTS

Foreword 1
Governor Jim Doyle

The Great Lakes-St. Lawrence River Basin Water Resources Compact and Agreement 2
Kathleen Angel

Spreading the Word about Stormwater Pollution 4
Kari Jacobson-Hedin

Wisconsin Lake Superior National Estuarine Research Reserve 6
Travis Olson

The Milwaukee Urban Water Trail 8
Cheryl Nenn

Mashkiigimin (Cranberry) in the Kakagon Sloughs 10
Leah Anne Gibala

Project Shipshape 12
Carolyn Colwell and Virginia Schwartz

Coastal Community Planning . . .14
Angela Pierce

2006 Wisconsin Coastal Management Program Grants . . .16

Acknowledgements 20

On the Cover

Recreational sailors enjoy Lake Michigan near downtown Milwaukee.

ACKNOWLEDGEMENTS

The Wisconsin Coastal Management Program (WCMP) in the Wisconsin Department of Administration (DOA) publishes *Wisconsin Great Lakes Chronicle.* It welcomes but is not responsible for the opinions expressed by contributing authors.

Wisconsin Coastal Management Program

Jim Doyle
Governor

Stephen E. Bablitch
Secretary, DOA

Laura Arbuckle
Administrator, Division of Intergovernmental Relations, DOA

Harald (Jordy) Jordahl
Director, Division of Intergovernmental Relations, DOA

Mike Friis
Leader, Resource Policy Team

Travis Olson
Wetland Protection & Land Use Planning Coordinator, WCMP

Kathleen Angel
Federal Consistency Coordinator, WCMP

Andrea Finch
Great Lakes Education & Performance Management Coordinator, WCMP

Kristen Chellis
Intern, WCMP

Wisconsin Coastal Management Council

Mayor Gary Becker, *Chair, Racine*

Todd Ambs, *Wisconsin Department of Natural Resources*

Laura Arbuckle, *Wisconsin Department of Administration*

Robert Browne, *Superior*

Sharon Cook, *Milwaukee*

Patti Hoeft, *Oneida*

James P. Hurley, *University of Wisconsin Sea Grant Institute*

Larry Kieck, *Wisconsin Department of Transportation*

Ken Leinbach, *Whitefish Bay*

Larry MacDonald, *Bayfield*

William Schuster, *Sturgeon Bay*

Representative Terry Van Akkeren, *Sheboygan*

Senator Robert W. Wirch, *Kenosha*

Editor

James M. Langdon, *Deputy Administrator, Division of Enterprise Operations, DOA*

Photographs

Page, Image, Source

Cover, Milwaukee Lakefront, VISIT Milwaukee
Contents, Little Sand Bay, WCMP
1, Gov. Jim Doyle, Governor's Press Office
2, Wequiock Falls, WCMP
3, Oronto Bay, WCMP
4, Sioux River, WCMP
5, Superior Elementary School Students, City of Superior
5, Amnicon River Volunteers, City of Superior
6, Fish Creek Estuary, WCMP
7, Lake Superior, NOAA Coastal Program Division
8, Milwaukee River Paddlers, Friends of Milwaukee's Rivers
9, Milwaukee River Paddlers, Friends of Milwaukee's Rivers
10, Kakagon/Bad River Sloughs, WCMP
11, Kakagon/Bad River Sloughs, Bad River Band of Lake Superior
12, *SS Meteor,* NOAA Coastal Program Division
12, Herman Runge, Milwaukee Public Library
13, School Tour, Milwaukee Public Library
13, Kewaunee Tug, Wisconsin Department of Tourism
14, Fox River, NOAA Coastal Program Division
15, Sheboygan Bluff, NOAA Coastal Program Division
16, Little Sand Bay, WCMP
20, *SS Meteor,* NOAA Coastal Program Division
21, Chequamegon Bay, WCMP

DOA-9743-P 09/2006

Wisconsin Coastal Management Program

101 East Wilson Street
PO Box 8944
Madison, Wisconsin 53708-8944
(608) 267-7982
http://coastal.wisconsin.gov
coastal@wisconsin.gov

Funded by the Wisconsin Coastal Management Program and the National Oceanic and Atmospheric Administration, Office of Ocean and Coastal Resource Management under the Coastal Zone Management Act, Grant #NA06NOS4190183.

The Wisconsin Coastal Management Program, part of the Wisconsin Department of Administration, was established in 1978 to preserve, protect and manage the resources of the Lake Michigan and Lake Superior coastline for this and future generations.

WISCONSIN COASTAL MANAGEMENT PROGRAM