



DEPARTMENT OF  
NATURAL RESOURCES

News and information for participants in the  
Minnesota Adopt-a-River Program

# Cleanup Review

Summer/Fall Issue 2006

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## Beyond the Cleanup What else can a volunteer do?

Samantha Wangsgard

Minnesota Conservation Corps/DNR Adopt-a-River Assistant

A common question volunteers ask upon the completion of a successful cleanup along one of Minnesota's shorelines or stream banks is: "What else can we do to protect our public waters?" To help answer this question the Adopt-a-River program provides educational literature on a large array of activities. One such activity is that of erosion control projects along shorelines and stream banks.

The type of erosion found along most cleanup sites is when water flows over the bank dislodges sediment and other debris. This sediment and debris is particularly harmful to the environment because it can alter whole ecosystems. When deposited, it can clog streams and fill low-lying areas, disrupting the flora and fauna that depend on undisturbed areas for their continued existence. Water quality is also compromised by the amount of suspended sediment and the potential increase in pollutants carried by the water. Additionally, the water carries nutrients from the soil, stimulating algal growth in our public waters. This algae consumes oxygen that would otherwise nourish aquatic species.

Erosion along cleanup sites can often be identified by the appearance of exposed roots, barren and/or cracked soil surfaces, overhanging or collapsed bank edges, or the presence of muddy water.

Two commonly accepted ways volunteers can help prevent erosion are through hard-armor and soft-armor along banks. One of the most widely used hard-armor techniques is the installation of artificial riprap. Riprap installation consists of the placement large rocks along banks and up slopes in areas where vegetation is not an adequate erosion control agent. This form of erosion control is often done incorrectly, and professional advice is highly recommended.

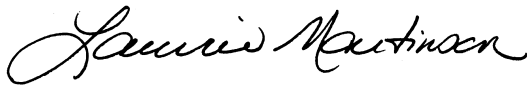
Soft-armor is a more natural approach, using a combination of inorganic structures and living materials such as plants to create a barrier of protection against erosion. Added benefits of using living materials instead of riprap include habitat enhancement for wildlife in the area.

*"Erosion Control" Continued on Page 8*

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## Director's Comments



**Laurie Martison,  
Director of the Division of Trails and Waterways,  
Minnesota Department of Natural Resources**

Future generations will look back upon us and ask whether we did what was necessary to protect vanishing landscapes from the pressures of development. Increasingly in our metro areas, preservation is beginning to center upon restoration of degraded or highly altered places. Saint Paul's newest park, for example, was developed from an old railroad yard (see *Cleanup Review*, summer 2005). This site, in what is now the Bruce Vento Nature Sanctuary below Mounds Bluff in Saint Paul, was about to become a paved-over truck-and-rail transfer area. Through a broad partnership, this degraded site was revitalized. A grant from DNR Metro Greenways and a cleanup coordinated by Adopt-a-River got things started. On-going money and support from numerous agencies, businesses and foundations pushed this restoration into a reality.

Another development in December 2005 brought ten major partners together to restore a highly altered portion of Pilot Knob bluff at the confluence of the Minnesota and Mississippi rivers. This land in Mendota Heights was purchased for public use just as it was to be developed with 157 town houses. That action would have permanently removed from the public a commanding view of Mendota Bridge, historic Fort Snelling and the distant skyline of downtown Minneapolis. Pilot Knob was preserved as a result of public involvement that both established and confirmed the site's substantial historical, cultural and ecological value. Such was also the case back in the 1960's when the area surrounding historic Fort Snelling was being considered for preservation. As was the case at the Vento site and Pilot Knob, the act of preservation created a discovery process that helped define the resource. As stated in the Fort Snelling park plan back in 1964, "Without measures to conserve this area, it may be only a short period of time before the so-called 'population explosion' will envelop it."

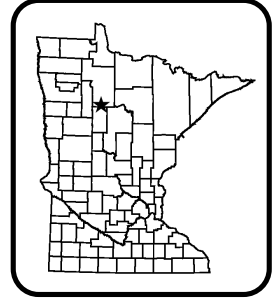
The opportunity Adopt-a-River presents to you is, for any public waters in the state, the beginning of one's own appreciation-building process. As one volunteer recently commented, "Being involved in a river cleanup each year makes me feel so 'bonded' to the river that I don't even mind the nettles."

## Celebrating the Importance of Water

### HISTORICAL MOMENT: April 18th, 1900

#### Kind Tribute Paid to Bemidji

The *Bemidji Pioneer (weekly)* for April 18, 1900 quotes the *Crookston Journal* in an article entitled “Kind Tribute Paid to Bemidji”. Referring to this city, it stated, “rapid growth of the town since completion of the railroad has surpassed even the enthusiastic proprietors of the townsite.” The Brainerd and Northern Minnesota Railway, the first to arrive in Bemidji in 1897, linked to the transcontinental Northern Pacific Railroad in Brainerd (see *Cleanup Review*, August 2002). In 1900 the second railroad arrived, the Eastern Railway of Minnesota, working with the Great Northern Railway, connecting Bemidji with Duluth to the east and Crookston to the west, where international connections could be made on the Saint Paul, Minneapolis and Manitoba Railway (see *Cleanup Review*, February 2000). These direct transportation links resulted in a population boom, with the town growing from less than 500 in December 1898 (mostly in temporary board and tarpaper buildings) to over 2,000 in April 1900. This population surge brought about a focused interest in visitor opportunity around Lake Bemidji.



The *Bemidji Pioneer (weekly)* describes the development of a “lake boulevard 1 ½ miles long, between one and three hundred feet wide, with zigzag walks bordered with vines and shrubbery leading down the hill to the water’s edge.” Village authorities described “building a fine dock and boat landing at the foot of 3rd street.” They planned to have “one stern wheel steamer, several steam launches and a fleet of row boats available for use of the beautiful lake...one of the most attractive bodies of water in the state. The Mississippi flows through the lake which is well stocked with fish and has already become a favorite resort for fishing and camping from the Red River Valley.” One week earlier, the same paper called for a bicycle path around the entire lake, complaining of the arrival of excursion parties of “young men with bikes and young ladies in short skirts and bike shoes” and having no place to ride.

Another item appearing the same day in the *Bemidji Pioneer (weekly)* speaks eloquently of the healthfulness of the lakes in the area. The author states, “Beltrami county is the Mecca of an increasing number of people every year who are in search of health. The life-giving balsam of the pine forests and the pure, dry air... make it what might be called a vast sanitarium of health and rest.”

Primary sources: *DNR Cleanup Review*, February 2000 and August 2002; *Bemidji Pioneer (weekly)* April 12, 1900 and April 18, 1900; *Rails to the North Star*, by Richard S. Prosser, Dillon Press, 1966.

# On the Water

**Featuring:**  
Melodee Seline  
and the members of  
Girl Scout Troop 1067

When the girls first embarked on their adventure with stream clean-ups they were in 3rd grade. I was looking for a fun community service project that they could all do and be proud of. Trout Brook in Afton State Park was chosen with the help of Paul Nordell, based on location, length and water depth. Most of the stream is about 12" to 16" in depth, a safe depth for twenty-one little girls. Our stream section runs about a mile. We could go camping



Girl Scout Troop 1067 after a cleanup in 1997

at Afton State Park, and do a stream-clean while there. Since the distance to the park wasn't too far from our homes, it was easily accessible for non-camping trips. Little did they know, this community service project would turn into a nine-year journey. The troop started the Adopt-a-River program with twenty-one eager little Brownie Girl Scouts and parents, as a fun thing to do in the summer while camping. It will end nine years later, with seven environmentally committed young women doing their last clean up this summer before entering colleges throughout Minnesota, Wisconsin and Iowa.

The girls have encountered many challenges during their years, from wading in ankle-deep icy water and discovering unexpectedly hip-deep drop offs, leaches, and being grossed out by items found. They have watched the stream change with the seasons, natural erosion and with flooding. They have picked up thousands of pounds of refuse and been amazed at the variety of garbage collected. They have removed large oil drums and dock parts that have floated into the stream from the St. Croix River. They have picked up toothbrushes, fishing lines, hooks and diapers in the main part of the park, and concession debris, tires and sports equipment for a section of the stream that shares borders with a local resort. It was a real treat for that oh-so-special girl when she picked up the coveted dirty diaper. This usually led to hours of gross-out stories in the days to come.

At the beginning, the clean-ups took approximately 10 people working 3 1/2 hours and hauling in excess of 50-80 lbs of trash per time. The stream runs through a ravine located in a section of Afton State Park that requires hiking down steep hills. All garbage collected was hiked out to containers above the ravine. A few items were driven out by state park staff when we could not handle them, such as tires and bigger drums. It has

been difficult, as they have gotten older, to get the girls to the stream, due to work schedules. Trips now consist of one or two people working for an hour, with possibly 10 lbs collected. The stream needs little maintenance now.

The girls have made a difference in the area and definitely left the stream cleaner than when they found it. By cleaning the stream, they have brought attention to the area within the state park. The park has started conservation projects on the stream by creating rock waterfalls as the stream meanders to the St. Croix River. This will improve the water quality in the future. Witnessing large turtles, fish, fawns, and tadpoles along our section would bring delight to the girls. They have experienced bugs and plant varieties not normally seen, as well as the feeling you get when you are wearing freezing-wet squishy tennis shoes while at the same time sweating and swatting bugs out of the water. They have worked on numerous science and outdoor badges during their time, but mostly enjoyed helping the environment.

This has been a valuable experience for them and one they will carry into the future and remember. In fact, at their “end of the troop” dinner, many of the stories and fond remembrances were of the stream clean-ups. The girls are now graduated from high school, and all are going to college. Five of the seven girls have earned and completed their Gold Awards, while two are still working on them with hopes of completion this



Current Members of the Troop: Ashley Hunstad (seated), Tricia Ellis, Laura Kostka, Railyn Zenner, Allison Bryant, Samantha Hawkins, and Kelsey Seline (seated)

summer. One of the remaining projects is working in conjunction with a city on labeling storm drains in the area. This is a direct result of working with the Adopt-a-River program.

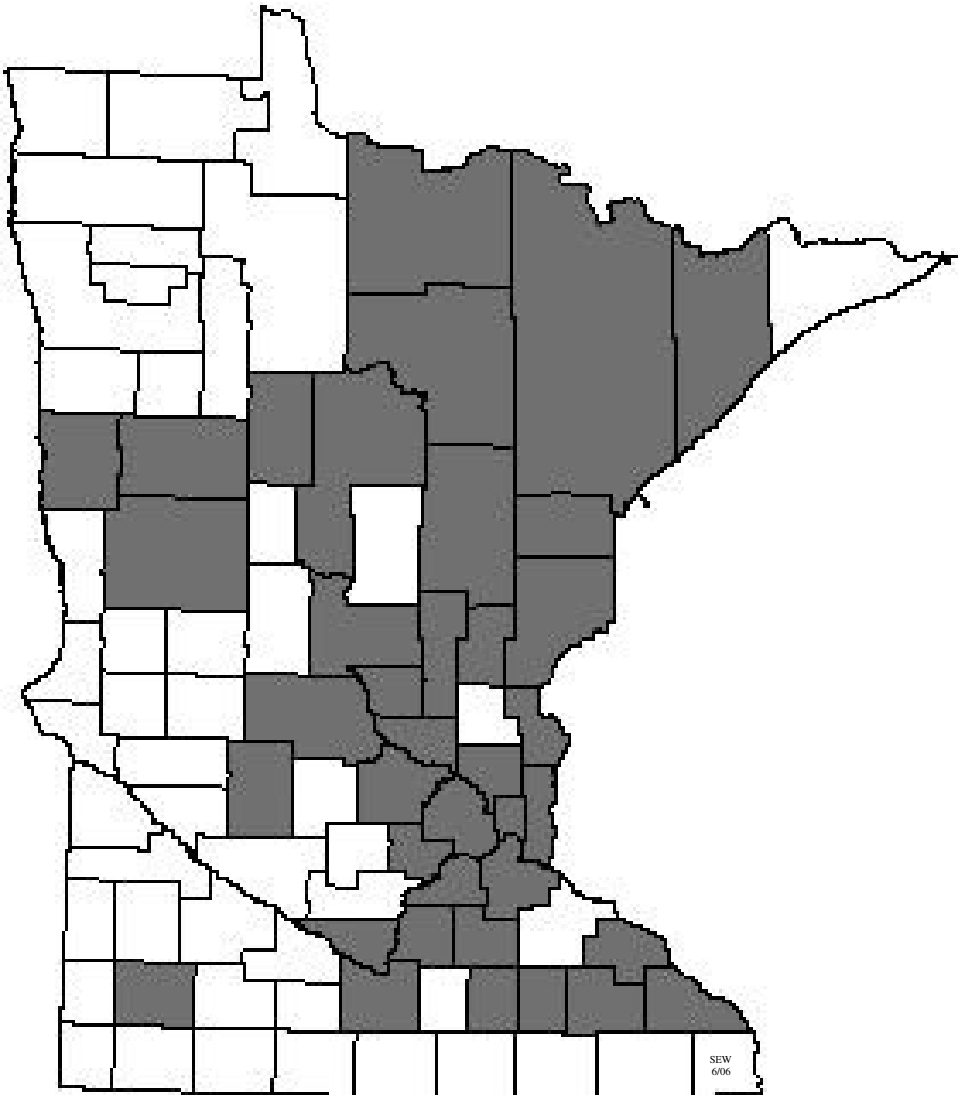
The troop is very protective of their little stream and making sure it is taken care of in the future. They have made arrangements for one of the girl's brothers and his Boy Scout troop to take over the project in the future.

Each person will walk away knowing they helped a little and learned a little. From working at the Adopt-a-River booth at the state fair, to weighing and sorting debris, to enjoying the stream. All were valuable experiences to carry with them and pass on.

*Editors Note: Girl Scout Troop 1067 completed 27 cleanups of South Trout Brook in Afton State Park. Volunteers contributed 379 hours of service, removing over 1,452 pounds of rubbish. Interesting finds they reported to the program since their first cleanup in June of 1997 include: diapers, shot gun shells, carpeting, ski poles, sponges, and batteries. Thank you again Girl Scout Troop 1067, for all you have done!*

# 2005 Adopt-a-River

Counties With Reported Cleanups\*



\* 2005 Cleanups included in this summary as reported through 06/06/2006

# Year In Review

## Counties Reporting Cleanups Include:

Aitkin	Hubbard	Ottertail
Anoka	Itasca	Pine
Becker	Kanabec	Ramsey
Benton	Kandiyohi	Rice
Blue Earth	Koochiching	Scott
Carlton	Lake	Sherburne
Carver	LeSueur	Saint Louis
Cass	Mille Lacs	Stearns
Chisago	Morrison	Steele
Clay	Murray	Wabasha
Dakota	Nicollet	Washington
Dodge	Olmsted	Winona
Hennepin		Wright

## Summary of 2005 Results

Miles Cleaned:

**420**

Pounds of Trash Collected:

**148,934**

Number of Volunteers:

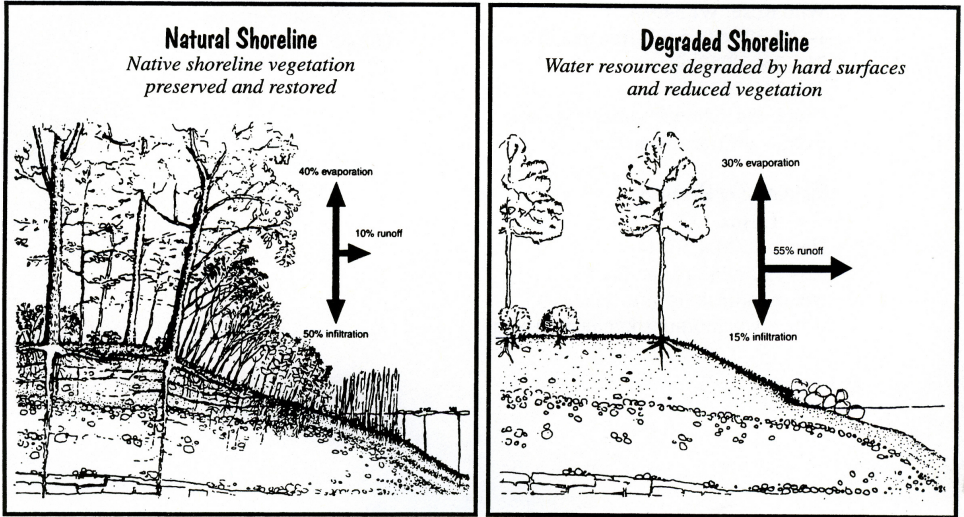
**3,347**

Total Volunteer Hours:

**12,346**

Most frequently reported items:  
**plastic bottles and aluminum cans**

*“Erosion Control” Continued from Page 1*



With vegetation in place runoff can be decreased by 45% and potential infiltration increased by 35%.

Plant material that is suitable for soft-armor erosion control projects are those that occur naturally along shores. Such material roots easily, is long, straight, and flexible, and is abundant near the project site. These plants will stabilize the surface layer, slow the movement of water and soil particles down the slope, trap sediment and promote infiltration. They also allow seeds to establish, creating a future substrate for succession. Examples of these plants may include willows, dogwoods, and the American elderberry.

Once an erosion project is finished it will need to be continually monitored. Conditions in both hard and soft-armoring erosion projects can quickly change, creating ineffective protection against future erosion.

The cleanup does not end with the last trash bag being picked up. It is a continual process, with many facets. If you are interested in doing work beyond the initial cleanup, investigate erosion control projects to ensure the future health of our public waters.

**IMPORTANT NOTE:**

Before starting a project involving any type of erosion control, whether it be hard or soft-armoring or another method, please contact the Department of Natural Resources. You may need a **Public Waters Work Permit**. You will also want to **know** you are doing the project **CORRECTLY**.

Source:

Anderson, Angela. 2000. *Guidelines for Managing and Restoring Natural Plant Communities Along Trails and Waterways*. MN Department of Natural Resources Trails and Waterways Division



# Plant Page

## Black Willow: *Salix nigra*

The black willow (*Salix nigra* Marsh) is known to be the most commercially important member of the Salicaceae family. Uses for this tree have ranged from being made into boxes and crates to being utilized for its ability to hold shapes well and keep from splintering in the manufacturing of artificial limbs.

Commercial importance pales in comparison to the environmental importance the black willow plays in the floodplain ecosystem in which it commonly resides. The black willow, either growing in pure stands or mixed with other floodplain forest trees, plays a key role in the control of erosion at the waters edge.

The major characteristic of this tree that contributes to its ability to function as an excellent erosion control agent is the presence of a shallow, but very dense rooting structure. During repeated rises and drops in water levels, these roots hold onto soil particles much more readily than many other trees with rooting systems that are neither as shallow, nor as dense as black willow. Additionally, when flooding deposits more soil around the base of the tree, it has the ability to grow new roots from buds on the previously exposed trunk of the tree. These roots also hold onto soil particles effectively, allowing for the continued stabilizing of banks and reduction of erosion.

Within the Salicaceae family, many trees look very similar. The black willow can be distinguished from its peers based on several factors including its sheer size. It is considered to be the largest of the willows, reaching heights up to 140 feet. Additionally, the bark is virtually black, with deep furrows and thick scaly ridges. The leaves are narrow with a tapered and curving tip. They are shiny light green on top and are a duller green below.

Source:

Burns, Russell M., and Barbara H. Honkala, tech. coords. 1990. *Silvics of North America: 1. Conifers; 2. Hardwoods. Agriculture Handbook 654*. U.S. Department of Agriculture, Forest Service, Washington, DC. vol.2, 877 p.



Britton, N.L., and A. Brown. 1913. *Illustrated flora of the northern states and Canada*. Vol. 1: 592. Courtesy of Kentucky Native Plant Society. Scanned by Omnitek Inc. Usage Guidelines.

**The Minnesota DNR keeps a record of the state's largest native trees through the Native Big Tree Registry. Minnesota's record Black Willow was recorded in Minneapolis in 2003. At that time, it measured 63 feet high and had a circumference (at 4.5 feet) of 384 inches. If you think you have seen a bigger one contact the DNR's Big Tree Registry at (651) 259-5265.**



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## Fall 2006 Adopt-a-River Calendar of Events

As of July 19, 2006 \*Contact organizers to verify times and locations.

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**August 24—September 4: Minnesota State Fair.** Come out and see the Adopt-a-River booth at this year's "Great Minnesota Get Together." We will again have a "found objects" sculpture along with educational material on the problems facing our waterways. Contact Paul Nordell, DNR Adopt-a-River Coordinator (651-259-5630, paul.nordell@dnr.state.mn.us) for more information.

**September 9: International Coastal Cleanup/Great Lakes Beach Sweep.** The Great Lakes Aquarium is sponsoring the Great Lakes Beach Sweep in conjunction with the International Coastal Cleanup. Cleanups will take place throughout the Duluth area with supplies and refreshments being provided. Contact Erin Zoellick at (218) 740-3474 ext. 1027 or email ezoellick@glaquarium.org for more information.

**September 9: 6th Annual Eagle Cliff Campground and Lodging Cleanup.** Help clean the Root River from Torkelson Creek to Eagle Cliff Campground. Volunteers will be cleaning from canoes provided by the campground and dinner will be provided Saturday evening. For more information contact Ivan Naber at (507) 467-2598.

**September 16: Crow River Watershed Cleanup.** The Crow River Organization of Water (C.R.O.W) is organizing a large cleanup involving many of the cities within the Crow River watershed. For information contact Diane Sander, Crow River Watershed Coordinator at (763) 682-1933 ext. 3 or email at diane.sander@mn.nacdn.net

**September 30: Fall Cannon River Watershed Cleanup.** Come help cleanup the Cannon River Watershed. Please call Sil Pembleton at 507-664-0770 for more information.

**October 21: Annual Guidant Shoreline Cleanup.** Guidant and the Adopt-a-River Program invite you to participate in the annual Guidant Shoreline Cleanup. For the second year in a row the event will take place at the Pig's Eye SNA near downtown Saint Paul. Refreshments will be provide. Please contact Paul Nordell, DNR Adopt-a-River Coordinator for more information at 651-259-5630 or via email at paul.nordell@dnr.state.mn.us.

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## Adopt-a-River Notes & News

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**Phone Numbers:** As of November 2005, the Adopt-a-River program has two new phone numbers. Paul Nordell can now be reached at 651-259-5630 and the Adopt-a-River Assistant Samantha Wangsgard is now at 651-259-5620. Please make sure you update your records to reflect the changes. Thank you!

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**Purple Cards:** Thank you to all the groups that have sent in their purple cleanup report cards for 2005. Over the programs history, *Adopt-a-River* volunteers have spent nearly 226,000 hours removing nearly 4.8 million pounds of trash from Minnesota's public waters. Excellent work! Also, please remember that if you have completed a cleanup and not reported it to SEND IN THOSE PURPLE CARDS. Results can also be emailed to [samantha.wangsgard@dnr.state.mn.us](mailto:samantha.wangsgard@dnr.state.mn.us) or called in to 651-259-5620.

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**Web Site:** Don't forget to visit us on the web at <http://www.dnr.state.mn.us/adoptriver/> to find out more about the program. If you are interested in adopting an area or learning about "How-to" adopt an area, please let us know and we can send you an informational packet.

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### Quote of the Issue:

"If you always have dry feet, you miss half the fun of life."

—Henry David Thoreau 1817-1862

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The Adopt-a-River Program Assistant and Cleanup Review Editor position is filled by a Minnesota Conservation Corps Specialist .

The Minnesota Conservation Corps was created in 1981 by the Minnesota Legislature to do two things - engage youth and young adults in enhancing natural resources and provide opportunities for training and life skills development.

For more information on the program please visit [www.conservationcorps.org](http://www.conservationcorps.org).



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Please direct your comments, questions, and suggestions to the editor of *Cleanup Review* at 651-259-5620 or to the Adopt-a-River Coordinator, Paul Nordell at 651-259-5630; FAX 651-297-5475; MN Toll Free: 1-888-646-6367; e-mail: [paul.nordell@dnr.state.mn.us](mailto:paul.nordell@dnr.state.mn.us); or write to: MN DNR, Trails & Waterways Division, 500 Lafayette Road, St. Paul MN 55155-4052.

\*Don't forget to visit our web site at: [www.dnr.state.mn.us/adoptriver](http://www.dnr.state.mn.us/adoptriver).



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