



Cleanup Review

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

Stewardship. What's an angler to do?

By Roland Sigurdson, Aquatic Education Specialist, MinnAqua Program, MN DNR

It's another fine morning in Minnesota. The sun is just slipping over the stand of poplar trees, the birds are singing in full chorus announcing to the neighbors where they have set territorial boundaries. Standing on my dock and looking out over the lake I notice the tell-tale slurp of a sunfish taking a spent mayfly from the surface for its breakfast. I cast my fly toward the fading rings left by the sunfish and I am content, considering that with our fishing license dollars anglers are helping to ensure that this scene continues to repeat itself well into the future throughout Minnesota. Or are we? Perhaps I'm just thinking to myself that all is right with the world- nothing appears broken so no fixing is required.

There is a long held belief that the connection between outdoor recreation and stewardship is a strong one. We have heard many outdoor enthusiasts recant the tale that hunters and anglers were the first conservationists (*For a brief history on stewardship in Minnesota, see "Commissioner's Comments" on page 2 of the January 1998 issue of Cleanup Quarterly-Vol. 7, No. 1). Indeed this may be true. But does being a hunter or angler naturally lead to a sense of responsibility and stewardship for the environment? The premise has been that: "Involvement in outdoor recreational ac-



Will this young angler learn how to take care of Minnesota's water? (DNR MinnAqua photo 2003)

Contents:

Director's Comments	4
Historical Moment	5
Why Volunteer?	6
Tips for Organizers	8
Creature Feature	9
On the Water	10
Notes & News	11

"Angling Stewardship" continued on page 2

tivities creates an awareness of environmental problems by exposing people to instances of environmental degradation; creates a commitment to the protection of valued recreation sites; and also cultivates an aesthetic taste for a 'natural' environment which fosters a generalized opposition to environmental degradation."¹

Anyone who spends time outdoors, whether fishing, hunting, hiking, biking or bird watching, comes to recognize when a natural system has been damaged or impaired by unnatural activity. We are naturally led to think about how this situation could be corrected and returned to a natural state. However, we often wonder what state agency should be responsible for that action, rather than thinking we as individuals can make a difference.

Perhaps a review of the generally accepted definition of environmental stewardship might be useful at this point. "Stewardship is the moral obligation to care for the environment and the actions undertaken to provide that care. Stewardship implies the existence of an ethic of personal responsibility, an ethic of behavior based on reverence for the Earth and a sense of obligation to future generations."²

Research on environmental stewardship attitudes recognizes that "there is a stronger association between outdoor recreation (fishing and hunting) and concern for protecting aspects of the environment necessary for pursuing such activities than between outdoor recreation and other environmental issues such as air and water pollution."³ This is not to say that anglers and hunters are not concerned about these issues, but a natural human tendency exists to focus on those environmental concerns which directly impact our ability to continue to pursue these activities.

This is further supported in a study done by Jacobsen, Close, Anderson and Kelly.⁴ They examined the resource attitudes and preferences of anglers and non-anglers. They compared the support for fisheries management techniques, habitat protection, and satisfaction with the agency between anglers and non-anglers in Minnesota. Results of the study showed that anglers were significantly more supportive of fish stocking and the use of "artificial" fisheries management techniques than non-anglers. Anglers also tended to place higher value on fisheries habitat. Anglers were more satisfied than non-anglers with the Minnesota Department of Natural Resources' performance in addressing their concerns and were also more supportive of additional agency funding than non-anglers. This DNR study demonstrates a point made by Holsman (2000) that angler concern with and participation in wildlife conservation is tantamount to stewardship for desired game species and their habitats, rather than ecosystem-level stewardship.⁵

So where does this information leave us? We know that anglers and hunters are incredibly supportive and responsive to stewardship activities which ensure that they can enjoy their sport in the future. Will anglers and hunters also become more responsive to the environmental issues that affect us all? I believe that the angling and hunting community is coming full circle in their thinking. Global issues that are affecting this planet are issues that are also beginning to impact recreational outdoor activities. For instance, trout anglers are concerned about how potential climate change affects water temperature and dissolved oxygen levels in Minnesota lakes and streams. Staff at the University of Minnesota theorize that good

growth habitat for cold-water fishes, such as trout and cisco, will diminish as much as 90 percent under one global-warming scenario.⁶

Minnesota anglers have demonstrated their passion for outdoor recreation. They have been excellent stewards of the aquatic resources of this state for over a century. However, as the urban population of Minnesota continues to grow in size, the outdoor experiences of many young people are based primarily on the built environment rather than the natural environment. Education can provide us with the key to ensuring environmental stewardship continues to grow in the future. Research, as profiled by the Recreational Boating and Fishing Foundation, states that people must go through a developmental process before reaching behavior changes and active awareness and action of stewardship practices. This action is more likely to occur if all the levels listed below are addressed in an education program, such as the Minnesota Department of Natural Resources MinnAqua Program.

- **Entry Level:** Individual develops an awareness of or interest in the activity.
- **Ownership:** Individual makes a personal investment of time and/or resources in the activity.
- **Empowerment:** Individual feels they have control. For example, they have enough knowledge to fish on their own, know where to go, and have equipment to do so.
- **Changed Behavior:** Individual becomes (and thinks of themselves as) a steward of the resource.

Anglers, by the very nature of their passion, become well versed on the intricate workings of aquatic ecosystems. It is not such a stretch to believe that they will extend this passion to other facets of environmental stewardship. Stewardship will ultimately ensure the integrity of the biological functions of the planet and the lakes and streams anglers hold so dear.

My fly makes one last arc over the water before softly landing within inches of my target. I strip in a bit of line to give the fly life. A moment later there is a swelling beneath the water and the tell-tale slurp. I lift my rod and set the hook. This scene will be replayed again. I believe that anglers, young and old, will rise to the challenge and lead the way as environmental stewards.

**Editor's note: 20 different hunting and fishing organizations throughout the state have promoted stewardship through the Adopt-a-River program during its 15-year history, with eight organizations currently active.*

Works Cited:

1. Dunlap and Heffernan 1975. *Outdoor recreation and environmental concern: An empirical examination.* *Rural Society* 40:18-30
2. Holsman, R.H. 2000. *Goodwill hunting: Exploring the role of hunters as ecosystem stewards.* *Wildlife Society Bulletin* 28(4): 808-816
3. Dunlap and Heffernan 1975.
4. Jacobsen, Close, Anderson, and Kelly 1999. *Minnesota Department of Natural Resources Investigational Report* 478
5. Fedler, A.J. 2001. *An Examination of the Relationship Between Recreational Boating and Fishing Participation and Aquatic Resource Stewardship*
6. University of Minnesota 1999. *Playing with Fire. Minnesotans for an Energy-Efficient Economy*

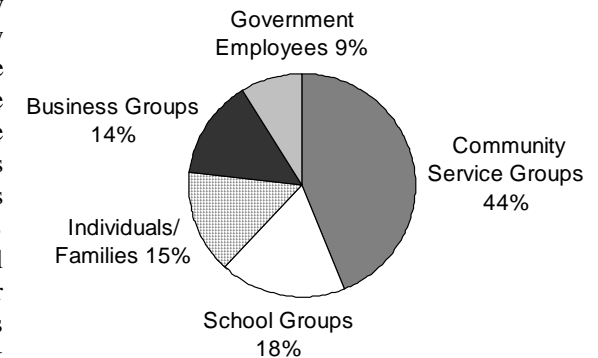
Director's Comments: In pursuit of a common dream

By: Laurie Martinson, Director DNR Trails & Waterways Division

Laurie Martinson

Much of what gets done in this department depends upon the efforts of citizens who work with us behind the scenes, year after year. They work together with us in pursuit of a common dream: the dream that individual efforts can make a difference for our natural resources. A good example of this joint effort is the Adopt-a-River program. Ever since it began in 1989, the program has worked at the grass-roots level to encourage individuals, families and organizations to reach out and serve their neighbors, providing a basic service to the community at large. Each individual or group steps forward to remove the trash from streams, lakes, wetlands, ditches or ravines.

Since 1989, the Adopt-a-River program has completed 1,800 cleanups statewide. Efforts have concentrated almost 57,000 volunteers on more than 6,300 miles of shoreline. Who are all these volunteers? They include individuals from nearly 500 groups. As illustrated by the graph to the right, 44% of these groups are from highly diverse community service organizations (ranging from churches to scouts to lake owner's associations), 18% are from a variety of school groups, 15% are individuals or families, 14% are from business groups and 9% are government employee efforts.



The Adopt-a-River adventure starts with taking a careful look at those public waters nearest and dearest to one's self. Sometimes this involves tracing the flow of water from the street in front of one's home or school. When people do this, they begin to realize these waters are directly connected to public waters in the area. They see the close relationship between storm water and public waters. People are generally astounded when they first make the stormwater/public waters connection. Some of these astounded citizens sign up with Adopt-a-River, and thus decide to improve their communities in a most tangible and straight-forward manner.

When citizen volunteerism combines with the structure of Adopt-a-River, the partnership produces many desired outcomes. Volunteers provide the sweat and energy and the program provides connections to a network of potential helping hands and helpful materials.

Celebrating the Importance of Water

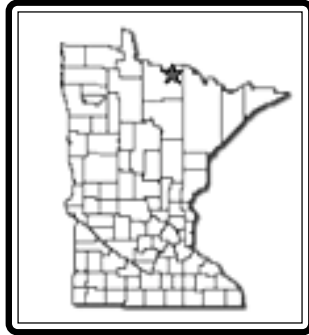
Historic Moment: February 16, 1899

The Power of Gold and Water at Koochiching

By Paul E. Nordell, MN DNR, Adopt-a-River Program Coordinator

In 1897, just north of Koochiching (later known as International Falls), a highly successful mine, the Golden Star, began operation. Gold fever was in the air. Fortune-seekers were searching for gold in exposed quartz veins all over the Rainy Lake region. As quoted from Grace Lee Nute's book, *Rainy River Country*,

"All about the countryside canoed little groups of men, secretly trying out this boulder or that ledge with their hammers. Even Brown, the peripatetic taxidermist and diary keeper, turned prospector... Although his trip into the Manitou Lake country showed up no lode of gold, it was not time lost, since the beauty and grandeur of the scenery appeared to have been adequate compensation for Brown, the nature lover."



The *Rainy Lake Herald and Koochiching Advertiser* of **February 16, 1899** fanned the flames of gold fever with the headline, "Golden Star Sends Out \$15,000 for January." This mine had shipped a 74-pound brick of gold worth \$15,000 from its January production. During the previous week, Fred H. Merritt had taken the brick to Duluth. The Rainy River gold field and nearby Seine River gold field in Ontario were beginning to show real promise. The newspaper went on to claim that the gold fields of that district had an advantage over most other fields in the world: availability of waterpower for crushing the gold ore.

To illustrate the potential of water in a gold field, the nearby Alice Gold Mine was said to cost \$20,000 per year in fuel (more than likely coal for steam) to operate a 100-stamp crushing mill. The same mill could be powered by a hydroelectric plant costing \$65,000 to build.

The **February 16** issue of the *Rainy Lake Herald and Koochiching Advertiser* also offered something for the less intrepid sufferer from gold fever: stock in the American-Canadian Gold Mining Company for 50 cents per share. It claimed it to be "a safe investment."

By 1904, International Falls had given up on gold, except for use of the tailings as street fill. Koochiching Falls had been harnessed for hydroelectricity. A dam that added three feet to the height of the falls, for a total drop of 27 feet, brought 25,000 horsepower to the new mills of the Minnesota and Ontario Paper Company.

Sources: Minnesota Place Names, Warren Upham, 3rd Ed., 2001; *Rainy Lake Herald and Koochiching Advertiser*, July 28, 1898, February 16, 1899 and March 9, 1899; *Rainy River Country*, by Grace Lee Nute (1950); WPA Guide to Minnesota, 1985 (revised from 1938).

Why volunteer to "Adopt-a-River?"

By Shaun Lettau, MCC-AmeriCorps member, Adopt-a-River Program Assistant

*Shaun was hired in late September 2003 to succeed Ami Thompson as the Adopt-a-River Program Assistant. He has a Bachelor's Degree in Environmental Science from Southwest Minnesota State University in Marshall, MN.

This is a very common question. To address it fairly, I will first describe what the program asks a person to do. The volunteer is asked to remove all the man-made rubbish from a portion of Minnesota's 92,000 miles of flowing water and 22,000 lakes, ponds, and wetlands during their scarce moments of "free" time. To some, this may seem completely absurd, yet in 2003 alone we had about 3,000 people from 85 different groups reporting they participated in over 100 cleanups. These efforts removed almost 180,000 pounds of trash in just under 17,000 total hours of work. Since the program started in 1989, our volunteers have removed almost 4.3 million pounds of garbage from Minnesota's waterways. These numbers indicate a large public interest in this type of volunteer effort. What motivates such people?



These three young volunteers celebrate their find after the Crow River Cleanup (9-13-03).

To understand why people do cleanups, we should first ask the larger question, "Why do people volunteer at all?" The reasons for volunteering are as diverse as the volunteers themselves. However, they can be grouped into broad categories. The initial response is usually something related to altruism or "giving for the sake of giving." The *American Heritage Dictionary* states that a true altruist is someone who has a "genuine concern for the welfare of others, as opposed to egoism; selflessness." For this reason, altruism sometimes is called "true volunteerism" and many feel it should be the only reason to volunteer. In fact, some people feel that when volunteers do receive benefits of any kind, the value of their volunteer work decreases.

Even if altruism is the underlying philosophy for volunteering, many other perfectly legitimate reasons exist to volunteer. One reason might be career advancement. Many prospective employers examine resumes for evidence of volunteerism. Why is this? It is because of the skills volunteers develop. In fact, 89% of employers polled by Loughborough Community Action Group (www.lborosu.org.uk) said they noticed an increase in teamwork skills and 74% noticed improved communication, time management, and negotiation skills in people with extensive volunteer experience. The rest of this study polled the volunteers themselves, with 98% of them saying that volunteering improved existing skills, 96% claimed to learn new skills that were beneficial to their careers, and 94% said they noticed an increase in their overall personal development as a result of volunteering.

Career advancement may also be connected to another reason to volunteer: meeting people.

The people one meets while volunteering may be anyone from a potential business contact, to a teacher or friend of your child, to residents new to your community. Since we are social creatures, the atmosphere of teamwork created by volunteering can contribute to an individual's improved self-esteem, relief from loneliness and guilt, and a better overall understanding of who they are.

Finally, another reason why people volunteer is to fulfill a sense of obligation. These obligations range from needing to "give something back" to a community, to feeling peer pressure from the community. Many people also feel obligated to lend a helping hand when they notice community problems. All of these psychological aspects tend to provide a strong motivational force to the individuals who volunteer, and often lead to some of the most active volunteers within an organization.

Having examined the over-arching motivations for volunteerism, let's discuss why people volunteer to become "river rubbish wranglers." Programs such as Adopt-a-River not only provide the benefits listed above, but they also encourage people to get in touch with nature. By getting people outdoors and by a river or lake, they begin to realize how much of an impact everyday actions can have on the environment. By picking up litter, they are able to make an immediate positive impact. Such "hands-on" work tends to give a feeling of pride for a job well done, and an increased level of familiarity with the area being cleaned. These feelings are important psychologically. First of all, research has shown the number-one reason people give as to why they quit volunteering is that they no longer feel their efforts are needed or that they are insignificant. By doing something as tangible as filling a bag of garbage or collecting a pile of scrap metal, our volunteers can see precisely how much good they are doing. This may serve as a strong motivator in increasing their desire to return and inspect the area they just cleaned, to make sure it stays as pristine as it was when they left it.

The idea of returning to the same place time-after-time provides another strong psychological benefit of a program like this: a sense of ownership. It is human nature to have a stronger passion for the preservation of things that are familiar. By returning to the same place repeatedly, individuals become more comfortable with the area, thus causing the value they place on the area to also increase. This increased stake in the condition of a particular area may cause the volunteer to take note of any small environmental changes in their area. These changes can range from an increase in fish populations to revegetation along a restored piece of shoreline.

All of the above-listed reasons represent the tip of the iceberg in terms of why people might want to "adopt" a section of Minnesota's waterways. No matter how or why you decide to volunteer, the actual effort is the most important thing. And if you don't believe me, just remember the words of famed anthropologist Margaret Meade, who stated, "Never doubt that a small group of thoughtful, committed citizens can change the world; indeed it's the only thing that ever has."

**For more information on this topic consult the following websites: www.nonprofits.org, www.volunteerpro.com, www.altruisticadventures.org, and www.fiu.edu. If interested in other volunteer opportunities with the Minnesota Department of Natural Resources, check their website at: www.dnr.state.mn.us/volunteering.*

14 Tips for Volunteer Organizers

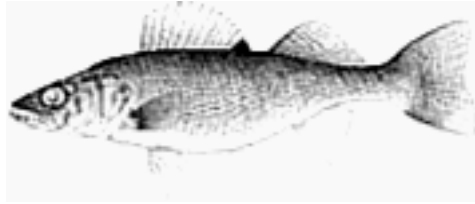
1. Find activities for volunteers to do as soon as they arrive. People tend to get frustrated when they have to wait around.
2. Make sure your expectations for the volunteers are clearly defined and understood beforehand, to reduce confusion.
3. Be flexible enough to listen and use the suggestions of the other people involved.
4. Make sure that the volunteers know how important their task is to the big picture, no matter how seemingly small.
5. Understand a person's time is very important and make sure they do not feel it is being wasted.
6. Provide refreshments afterwards; it gives them time to relax and socialize after their hard work.
7. Know personal information about your volunteers. If they realize you care enough to know not just their names, but things like their birthdays, it lets them know they are not just cheap labor to you.
8. Provide an organizational structure so that those who would like more responsibility can have it.
9. Be Polite. A sincere "thank you" goes a long way in shaping a person's experience.
10. Make your cleanup an "event," let people know how much better it is than staying at home.
11. Public recognition. This could include a variety of different things, from a recognition banquet to alerting the local media of your organization's efforts.
12. Freebies. Everybody loves to get things for free, especially if it serves as a reward. T-shirts, hats, and pins are common examples.
13. Have other get-togethers with people in your organization in addition to your cleanups. It helps develop feelings of camaraderie.
14. Within your organization have meaningful titles that invoke a sense of respect (i.e. Coordinator, Committee Chair, etc.).

**List based on Florida International University's website: www.fiu.edu/~time4change/library/recruit.Keep*

Creature Feature:

Walleye: *Stizostedion vitreum*

Minnesotans annually harvest 3.5 million walleye weighing a total of 4 million pounds from about 17,000 lakes and 3,000 miles of rivers. This means the official state fish of Minnesota is also its most popular.



Walleye
(from DNR website by Joseph Tomelleri)

The walleye, also known as pickerel, walleyed pike, pike perch, and yellow pike, has long fascinated anglers. This is illustrated by all the names used to describe it. Although the names suggest differently, walleye are not part of the pike family, which includes northern and muskie. Actually, they are members of the perch family, along with their favorite food, yellow perch. The name “walleye” comes from the pearlish appearance of their eyes, caused by a special reflective pigment in them called tapetum lucidum. Tapetum lucidum is both an advantage and a disadvantage for walleye. It does allow them to see better in dark or dirty water but it also creates an increased sensitivity to light. This is one reason why walleye typically stay in the deepest parts of the lake during summer and usually come near the surface to hunt only at dusk, dawn, or on cloudy days.

Walleye can be identified a few different ways. The first way is by their torpedo-shaped body and 2 dorsal fins that are unspotted except for a dark blotch at the base. Also, walleye have a small whitish tip on the bottom of their tail.

During spawning in early spring, walleye usually find shallow, rocky areas. These locations provide the eggs both protection and aeration. The number of eggs laid and their development into walleye fry depends greatly on water temperature. Walleye need temperatures between 42-50° F for the eggs to mature properly. Under the right conditions, a 5-pound female walleye may lay as many as 100,000 eggs during the spring spawn!

Walleye are more tolerant of environmental changes than most fish species, but biologists still have a few concerns about them. One of these concerns is the mercury level in the water. The higher a fish is on the food chain, the higher the concentration of toxins, such as mercury. Because walleye are predator fish, the Minnesota Department of Health recommends the average person should eat only one meal of walleye per week. Another environmental concern for walleye comes from chemicals found in household cleaners and pesticides. When these chemicals get mixed in the water, they form what is called “endocrine disruptors.” A common side effect of endocrine disruptors in walleye and other fish is a tendency for males to produce female hormones, thus disrupting reproduction.

Help keep the walleye flourishing in Minnesota by keeping its home clean and by reducing the amount of chemicals dumped down the drain. You never know, you might be the one to break the state record of 17 pounds, 8 ounces for the largest walleye caught in Minnesota.

**Editor's note: The walleye is the thirteenth in our series of Creature Feature/ Plant Page but only the first fish.*

On the Water:

Featuring: Gary Ruckdaschle
Area Adopted: Portions of the St. Louis & Partridge Rivers

About a year ago, Gary Ruckdaschel visited our website and decided to adopt the section of the St. Louis River near his home just outside of Aurora. He adopted the five-mile stretch straddling the confluence of the Partridge River. This is an area where he has enjoyed canoeing and snowmobiling since 1980.

Last September, Gary was canoeing in this adopted stretch of river when he noticed something unusual sticking out of the mud just below a small set of rapids. It was a rusted-out 55-gallon steel drum that looked like it may have been deposited during an earlier flood. He decided the barrel should be removed. This, however, presented a couple of problems. First of all, he was

alone, so it was a struggle getting it out of the mud. Once he did get the barrel dislodged, he decided he really did not want this muddy barrel in his canoe. Also, he remembered he still had the portage around the rapids ahead of him. Gary decided to place his new “treasure” on the bank of the river in a stand of cedar trees for safekeeping until he could retrieve it after the river froze.

Finally, on January 7th of this year, Gary noticed snowmobile tracks on the river and decided it was frozen over enough to walk on. He set out on his three-mile afternoon walk, deciding it would be a good day to retrieve the barrel. He grabbed a sled and thought it best to follow the snowmobile tracks. On his way he spotted two deer bounding across the river just ahead of him. Suddenly it looked like one of them had slipped on the ice. As he got closer, he realized the deer had broken through the ice right beside the snowmobile track he was following. Thankfully, Gary says, “The deer was all right, because it got up right away and ran off. The river is very shallow in that spot.” Because of his close call, Gary instructs others who wish to go out on river ice to be very careful to properly assess the situation.

Gary plans to keep cleaning his section and would like to see his neighbors also get involved because, like he says, “It’s just a pretty stretch of river that deserves a little care.”

**Editor's note: Has your group been really active this year? Maybe you took some great pictures or have some words of wisdom to share. Let us know! You might be featured in an upcoming issue of the Cleanup Review.*



Gary Ruckdaschle pulled this 55-gallon drum from the St. Louis River (1/7/04).



Adopt-a-River Notes & News

Send In Those Purple Cards!

Now is the time, if you haven't done so already, to turn in your purple reporting cards with the results of your latest cleanups. The purple card is our only means of collecting cleanup information and keeping in contact with you. Has your cleanup been included in our database? Be sure your hard work gets recognized. Send in your purple card. If you've lost your purple card, just call or email and ask for another: (651) 297-5474, shaun.lettau@conservationcorps.org.

Adopt-a-River Loaner Videos:

We have decided to no longer offer the Adopt-a-River loaner videos. This decision is based on the small number of videos we have left and the fact they are out-dated. We will be exploring future options for a new video.

Do you know what's in your drinking water?

The Minnesota Department of Health has released their source water assessments for all public drinking water sources in Minnesota. If you would like to see what is in your water, visit their website at: www.health.state.mn.us/divs/eh/water/swp/swa.

Where's the Adopt-a-River Calendar?

Some of you may have noticed the calendar, usually on this page, has been removed. Have no fear, we still have the calendar and in an attempt to make it more accesible, we have put it on our website (www.dnr.state.mn.us/adopriver). Adopt-a-River-related events will also be posted on www.seek.state.mn.us and www.nextstep.state.mn.us. If computers aren't really your thing, just let us know and we'll be happy to send you a list of events.



This 20-foot tall tundra swan stole the show for Adopt-a-River at the 2003 Minnesota State Fair. The bird, created by Steve Bateman, "migrated" to Lebanon Hills Regional Park in Dakota County after the fair (Photo: 8-31-03).

Cleanup Review is published by the Minnesota Department of Natural Resources for the Adopt-a-River Program in the Trails & Waterways Division.

CR Editor..... Shaun Lettau
Adopt Coordinator..... Paul E. Nordell
Dir., Trails & Waterways Laurie Martinson
Technical Assistance Dave Lonetti
Graphic Consultant Linda Escher

Please direct your comments, questions, and suggestions to the editor of *Cleanup Review* at (651) 297-5474 or to the Adopt-a-River Coordinator, Paul Nordell at (651) 297-5476; MN Toll Free 1-888-646-6367; FAX (651) 297-5475; **e-mail:** 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/adopriver.

Page intentionally left blank.