



Project AWARE 2009

**Volunteer River Cleanup
on the Cedar River
June 20-27, 2009**

Join us!

- Weeklong, 80-mile river cleanup on the Cedar River
- Paddle 9-16 river miles per day, loading your boat with trash as you go
- Limited number of canoes available on a first-come, first-served basis
- Daily educational programs & water quality monitoring
- Catered meals (registration fee = cost of meals)
- Tent camping areas provided each night

*Registrations must be postmarked by June 5, 2009
(to avoid a \$10 late fee and to guarantee meals)*

Volunteer for a day, a week, or anytime in between.

For more information, contact Jackie Gautsch (319) 335-1761
email: iowater@iowater.net or visit: www.iowaprojectaware.com

IOWATER

Volunteer Water Quality Monitoring

Restoring River Functions at Dam Sites

by Nate Hoogeveen, Iowa DNR River Programs Coordinator

Low-head dams are currently under scrutiny in communities across Iowa, primarily due to safety concerns after a rash of drownings in 2006. Many dams serve few, if any, of their original purposes. Others that are still used could be redesigned to more safely and efficiently serve their current function, such as water supply. As the Iowa DNR River Programs conduct a state-wide planning process for dams, it's increasingly clear that carefully reconsidering what we do with dams can also have restorative effects on river systems.



On the Skunk River in Story City, a canoeist paddles where a dam was converted to rapids in 2008 with assistance from the Iowa DNR River Programs.

Even dams only one foot high block fish passage of almost all native species for part of the year because Midwestern species never evolved a need to leap upstream. "Many river fish species in Iowa rely on movements between spawning, feeding, and overwintering habitats to maintain healthy populations," according to Greg Gelwicks, interior stream research biologist for the Iowa DNR. "Dams that act as barriers to these movements can cause species to be reduced in number or eliminated from some segments of our rivers." On the Maquoketa River, there have been 89 fish species documented downstream of the dam near the city of Maquoketa. Upstream of that, only 76 species reside in the river. Further upstream (north of the fifth dam) on the Maquoketa River at Backbone State Park, known fish diversity is reduced to 48 species.

When dams were initially built in Iowa to power early industries, communities recognized the fish passage problem. A *Decorah Republican* article described a mad fishing scene for bass and pickerel at the newly built McNutt's Dam on the Upper Iowa River in 1880. "...the numbers were so large that there was no skill whatever necessary to secure a wagon-load in a very short time." In following years, Decorah residents petitioned for stocked fish from the Iowa Fish Commission, some of which were seined in the Mississippi River bayous and transported by rail to the community.

Threatened and endangered mussel species, such as the Higgin's eye, creek heelsplitter, and purple pimpleback, depend on fish like freshwater drum, sauger, and channel catfish to transport their larva (glochidia) and colonize rivers. In pre-settlement times, mussels had access to vast stretches of river, which helped them to maintain viable populations. Today, their populations are segmented in rivers bookended by dams.

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Staff Comments...

As an Iowa native, I grew up dreaming of moving west. When the time came to begin a career, the open road beckoned and I set off on a 6,000 mile job-seeking trek to answer its call.

I hadn't even left the state, however, before my thoughts began to focus on what I may be leaving behind. Family and friends, of course, topped that list, but there was also something else. Something I had taken for granted my entire life, but it wasn't until I was on the verge of losing it that I had really begun to appreciate it. The farther I got from Iowa, the more I began to value its wild places and the opportunities available therein.

As the miles on my journey piled up, the more I began to see opportunity in Iowa. I thought of rivers I'd never paddled, wetlands I'd never explored, and trails I'd never hiked. And that's when I knew that Iowa is where I wanted to be – all the adventure I always thought was elsewhere can be found right here at home.

This year, I encourage you to seek out and explore wild places near you – find a new bug in the backyard, look for lichens on a tree, or simply admire the beauty of a blossom in spring. Challenge yourself to see what may have gone unseen for many years and enjoy the beauty that is Iowa.

I always thought I never wanted to be an Iowan, but am now happy to say I never want to be anything else. *Happy trails!*

Brian Soenen
IOWATER Program



Jackie Gautsch accepts award for AWARE.

Project AWARE Wins Environmental Education Award

The Iowa Department of Natural Resources' annual river cleanup event Project AWARE (A Watershed Awareness River Expedition) has won the Iowa Association of Naturalists (IAN) and the Iowa Conservation Education Coalition's (ICEC) 2008 "Ding" Darling Environmental Education Award. This award commends outstanding environmental education events, which educate the general public. The award was presented to Project AWARE staff at the Annual Winter Solstice Workshop at Honey Creek State Park Resort on January 24, 2009. Project AWARE is an initiative of the DNR's IOWATER and Water Trails Programs.

For more information on this event please visit www.iowaprojectaware.com or contact Project AWARE by email at iowater@iowater.net or phone Brian Soenen at (515) 205-8587 or Jackie Gautsch at (319) 335-1761.



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River restoration at dam sites can include a variety of techniques to minimize the drowning hazards of re-circulating currents, allow fish and mussels to pass upstream, and increase biological diversity. Some of these techniques can be used to stabilize channels, lower dam heights, create riffles or rapids, or entirely remove dams, allowing restoration to occur in the former impoundment.

Projects across the Midwest are showing that rivers can return to their natural bounty, bumping up numbers of habitat sensitive species, when flowing rivers are restored. For example, on Wisconsin's Milwaukee River, after the Woolen Mill dam was removed the former impoundment area's rocky habitat increased by 50 percent, common carp numbers declined by 80 percent, and the smallmouth bass population increased 10-fold. In Minnesota, increased species diversity is well documented at dozens of project sites that either removed dams or converted dams to rapids.

On the flip side, some larger dams on the lower ends of rivers in Iowa may be keeping rivers and lakes from being invaded by species in our large border rivers, the Missouri and the Mississippi. This is especially true of Asian carp species, such as big-head and silver carp. Silver carp can go beyond being a nuisance to being a menace species, especially when they invade lakes. Because these large fish leap out of the water in schools, they can ruin summer recreation activities like waterskiing and boating.

Additionally, some Iowa dams are actively used for hydroelectric power generation, flood protection, or to provide recreation areas at their large impoundments. Clearly, these types of structures would not be targeted as high priorities for change.

As Iowa DNR's River Programs staff conduct the statewide planning process for water trails and low-head dam safety, considerations like those above, opinions of dam owners, and advice from various experts will be taken into account as priorities are developed for river restoration relating to dams. And, in the near term, several communities are interested in being at the head of the line to restore ecological functions to their rivers by taking on restoration projects at dams. A new day is in store for many rivers and streams.

For more information about the Iowa DNR River Programs, visit www.iowadnr.gov/watertrails/index.html

IOWATER action!

Press releases, events, & news articles involving IOWATER monitors – Many thanks to all of you for your continued efforts.

- **Boone County** – IOWATER volunteer Kevin Griggs lead fourth graders from Boone County in the testing of Peas Creek at Ledges State Park during the Boone County Outdoor Classroom sponsored by ISU Extension, SWCD, NRCS, and Keep Boone County Beautiful.
- **Pottawattamie County** – Students from Riverside and Avoca-Hancock-Shelby-Tennant attended "Water Day" organized by the East Pottawattamie SWCD where they tested the Nishnabotna River.
- **Howard County** – Jim Green is the recipient of the "Conservation Teacher of the Year" award presented by the Iowa Soil Conservation Awards Program. Jim has involved his Riceville Community School students in IOWATER testing and in the Environthon. Through class and FFA, his students are responsible for tree planting and conservation projects at school and around the Riceville community.



Congratulations Jim!

If we missed your happenings, please call or email Jackie Gautsch with an update.



Volunteer viewpoints

... in their own words.



More to Lakes than Water and Fish: Iowa School for the Deaf Coordinates Local Monitoring Project

article by Danelle Schmielau and photo by Tracy Bruun



Staff and students at Iowa School for the Deaf (ISD) have been involved with their own local watershed improvement project for several years. In 2006 they began IOWATER monitoring on Little Pony Creek and the rehabilitated wetlands on their Council Bluffs, Iowa campus. In 2007, they participated in their first World Water Monitoring Day (WWMD). On September 25, 2008, the students from ISD, their instructor Kris Newton, and a visiting student from neighboring Lewis Central Middle School met at Lake Manawa State Park to enjoy a WWMD Field Day. The group met with staff from the U.S. Geological Survey (USGS), Iowa Department of Agriculture & Land Stewardship (IDALS), Pottawattamie County Resource Planner Kevin Seevers, and staff photographer Josh White from The Council Bluffs Nonpareil.

The WWMD Field Day started at Longs Landing, the Missouri River access site in the park. The students were shown the boat, probes, and sampling equipment that the USGS uses to monitor the river. They learned that the USGS tests for the same parameters they test for and how the USGS uses these data. The WWMD Field Day group also monitored at Boy Scout Island, a public area on Lake Manawa. Lake Manawa is a large recreational lake that is on the Iowa Department of Natural Resources 303(d) list of impaired waters. There the students collected water samples for testing. Using IOWATER techniques, tests were done for pH, dissolved oxygen, chloride, phosphate, nitrate, and nitrite. Water and air temperatures were also recorded.

The kids' favorite part of the day was wearing hip and chest waders as they waded into the lake to collect macroinvertebrates for identification. They learned the importance of caring for their watershed and of using conservation practices to improve water quality. They also enjoyed seeing their story in the newspaper the next day.

As part of the ongoing ISD Council Bluffs, Iowa campus water monitoring project, USGS has partnered with ISD and the West Pottawattamie Soil & Water Conservation District to install a real time monitoring station on the school grounds. The monitoring station collects data from both the wetlands and creek every 15 minutes and uploads the data to the USGS website. Students can monitor the gage height, precipitation, and the air and water temperature from their computers anytime. These data can be found at <http://waterdata.usgs.gov>.

A Whole New World of Water article and photos by Jennifer Welch



It's not the same-old ordinary summer school program. Summer school at Woodward-Granger Elementary was a "It's a Wild World" theme-based adventure for more than 100 students in first through fifth grades. The students learned about oceans and deserts and rainforests and the Iowa prairie.

When the rain and floodwaters cooperated, highlights of their June adventures included field trips to experience the different habitats and biomes. One of their favorite field trips did not even require a school bus. The trip was just outside the Granger Elementary door to Oxley Creek.

Jennifer Welch, Urban Conservationist for the Polk Soil and Water Conservation District, teamed with Lisa Fascher, Iowa DNR, to provide 100 students with a water experience they would not soon forget.

The morning included a virtual trip from roof-top to storm drain to stream with an animated raindrop while learning about storm water runoff and pollution. They were quizzed by the raindrop about pollution prevention and decisively responded about how to best manage pet waste, yard waste, leaves, and fertilizer.

A six-foot tall hip-hopping frog helped them understand the implications of their actions and what pollution can do to a habitat. The tall green frog's catchy water protection rap song "Water down the drain" was a good summary. *Water down the drain | this is such a shame, | this pollution game | is driving me insane!*

This session was followed up with a very popular trip outside and into Oxley Creek. Teams of children checked the clarity of creek water. Then everyone jumped in and began to search for macro-invertebrates (water bugs and animals) with enthusiasm. Four groups tried their luck with nets and picked up rocks to see what they could find in the water.

The little creek produced lots of creatures and adventure for group after group of exuberant children. Diving beetles, mayflies, leeches, and exciting crawdads of all sizes were collected and viewed with fascination by all the children. Several kids talked about how cool Lisa and Jennifer's jobs seemed. We provided a look into the adult world and an experience with potential career paths. The kids also realized that there are some really fun opportunities for discovery and play just beyond the entertainment and comfort of the living room and video games. They discovered new creatures in nature, learned about the impacts of their activities on water, and brought the connection much closer with the stream that ran right beside the school. One boy said it was the best summer school field trip-- and it didn't even require a bus ride!

Let this be inspiration to adults to think about where you can impact a child or a group of children. Steer them towards understanding, appreciating, and protecting our natural environment and not let them be "the last child left inside."



QUIZ

Wildlife along River Corridors



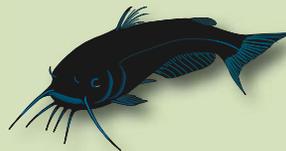
- On July 28, 2007 this creature was taken off the Endangered Species List. It was one of the original species protected by the Endangered Species Act when it was enacted in 1973.
 - Higgin's eye Mussel
 - Bald Eagle
 - Peregrine Falcon
 - Trumpeter Swan



- The North American River Otter can dive underwater to a depth of...
 - 10 ft
 - 30 ft
 - 60 ft
 - 90 ft



- The process in which a tadpole becomes an adult frog is called?
 - Transformation
 - Holometabolism
 - Hemimetabolism
 - Metamorphosis



- Which Iowa salamander is the only one that lives its entire life in the water?
 - Eastern Newt
 - Tiger salamander
 - Mudpuppy
 - Blue-spotted salamander



- What is Iowa's most abundant and widespread gamefish?
 - Channel Catfish
 - Largemouth Bass
 - White Crappie
 - Walleye



- One of the most common Iowa snakes that's mainly aquatic is...
 - Garter snake
 - Northern Watersnake
 - Massasauga Rattlesnake
 - Plainbelly Watersnake



Answers at the bottom of page 7.

Upcoming events . . . cleanups, snapshots, & more.



April 18 (Sat) Earth Day River Clean-up (Iowa River: Oakville to Mississippi). Contact: Katie Hammond at (319) 523-8381 khammond@lccb.org

April 18 (Sat) Carter Lake Clean-up
Contact: Carter Lake Preservation Society at (712) 347-6455 carterlake@hotmail.com

April 25 (Sat) Volga River Clean-up (Fayette Co.)
Contact: Katherine McCarville at (563) 425-5233 mccarvillek@uiu.edu

May 6 (Wed) Polk County Snapshot
Contact: Susan Heathcote (515)244-1194 ext. 205 heathcote@iaenvironment.org

May 16 (Sat) IOWATER Spring Statewide Snapshot
Contact: Lynette Seigley at (319) 335-1598 Lynette.Seigley@dnr.iowa.gov

May 16 (Sat) Johnson and Iowa County Snapshot
Contact: Dave Ratliff (319) 430-3586 oldmanscreek@qwestoffice.net

May 16 (Sat) Squaw Creek Watershed Snapshot
Contact: Rick Dietz at rsdietz@yahoo.com

June 14 (Sun) Maquoketa River Cleanup (Jackson Co.)
Contact: Jackson CCB at (563) 652-3783 amburns29@jacksonccb.com

June 20- 27 Project AWARE (Cedar River)
Contact: Brian Soenen at (515) 205-8587 iowater@iowater.net

June 27 (Sat) Missouri River Clean-up (Sioux City)
Contact: Missouri River Relief at (573) 443-0292 riverrelief@riverrelief.org

July 10 (Fri) Dam to Dam River Clean-up (Des Moines River)
Contact: Webster CCB at (515) 576-4258 khansen@webstercountyia.org

July 11 (Sat) Cedar River Fest
Contact: Cedar River Environmental Group info@crfgroup.org

Jul 18 (Sat) IOWATER Spring Statewide Snapshot
Contact: Lynette Seigley at (319) 335-1598 Lynette.Seigley@dnr.iowa.gov

July 18 (Sat) Big Sioux River Clean-up
Contact: Victoria Shamblen at (712) 947-4270 victoria_shamblen@plymouthcountyparks.com

August 15 (Sat); River Run Garbage Grab (Des Moines River)
Contact: Robin Fortney at rbfortney@msn.com

August 21-23 Lower Wapsi River Clean-up
Contact: Melisa Jacobsen coordinator@lowerwapsicleanup.org

August 22 (Sat) Xstream Clean-up (Quad Cities)
Contact: Erin Robinson at (563) 386-9575 erobinson@wastecom.com

August 29 (Sat) Webster Co. River Clean-up (Des Moines River)
Contact: Webster CCB at (515) 576-4258 khansen@webstercountyia.org

August 29 (Sat) Otter and Glover Creeks Clean-up (Fayette Co.)
Contact: Katherine McCarville at (563) 425-5233 mccarvillek@uiu.edu

September 12 (Sat) Turkey River Clean-up (Fayette Co.)
Contact: Katherine McCarville at (563) 425-5233 mccarvillek@uiu.edu

IOWATER 2009 Level I Workshop Schedule

Date & Time	Location	Contact	Phone	E-mail
July 21 (6-9:30 PM) July 23 (6-9:30 PM) @ Oakland Mills Nature Center	Henry Co.	Cari Burnstedt 2953 Nature Center Dr. Mt. Pleasant, IA 52641	(319) 986-5067	cburnstedt@henrycountyconservation.com
Aug 28 (5-9 PM) Aug 29 (9 AM- 3 PM) @ Grimes Farm & Conservation Center	Marshall Co.	Diane Pixler 2349 223rd St. Marshalltown, IA 50158	(641) 752-5490	dpixler@co.marshall.ia.us
Sept 11, (5-9 PM) Sept 12, (9 AM- 3 PM) @ Central Park Nature Center	Jones Co.	Michele Olson 12515 Central Park Rd. Center Junction, IA 52212	(563) 487-3541	naturalist@co.jones.ia.us

To register for a workshop, contact the appropriate person listed above.

Answers to WILDLIFE QUIZ on page 6.
1. b; 2. c; 3. d; 4. c; 5. a; 6. b