

Spring 2008 Newsletter 2008-1

# O Water Quality Monitoring

#### **CLEAR...** Community Leaders Enhancing Area Rivers

Since 2003, over 2,000 volunteers have contributed thousands of hours towards beautifying Iowa's aquatic re-West Fork Des Moines O River sources. Project AWARE, which focuses on cleaning up Volga o one river, one week a year, one piece of trash at a time, North is organized by the Iowa Department of Natural Resource's (IDNR) IOWATER, Keepers of the Land, Middle o Rive and Water Trails programs. Over the last three Raccoon River Muddy years, a flood of requests have come from citizens and legislators who are interested and excited South Skunk® about developing their own river cleanup events. Oftentimes, however, they lack the funding needed to dispose of river trash in an environmentally ethical manner, to fully educate the public about the impact of human land activities on water quality, and to encourage respon-CLEAR-supported cleanup events in Iowa. sible care for Iowa's natural resources.

The Conservation Education Program (CEP) is a key provision of the Resource Enhancement and Protection (REAP) Act of 1989 and allocates approximately \$350,000 in grants annually for conservation education in Iowa. During 2005, IDNR's Watershed Monitoring and Assessment Section applied for and received a REAP-CEP grant for CLEAR (Community Leaders Enhancing Area Rivers), which then provided mini-grants of up to \$1,000 for river cleanup events. Local groups have used these funds to help recycle river trash and educate the public about water quality.

Overall, \$15,673.26 was allocated for 17 cleanup events (see map above) which have produced amazing results – not only in amount of trash removed (31.41 tons), but also in the number and distribution of volunteers involved (896), the water quality education provided, and the number of stream miles cleaned (162 miles) in 2006 and 2007, thus enhancing the recreational experience on Iowa streams. Overall, 65% of the trash removed (i.e., tires, glass, plastic, metal, etc.) was transported and recycled locally. The remaining 35% was non-recyclable (i.e., styrofoam, hazardous waste, and silt-laden items) and was transported to local sanitary landfills for proper disposal.

Due to both the overwhelming success of the program and the ongoing need for assistance to first-time event coordinators, CLEAR has been awarded a second REAP-CEP grant for approximately 15 additional river cleanup events in 2008 and 2009. CLEAR mini-grant information can be found on the IOWATER website at <a href="https://www.iowater.net">www.iowater.net</a>. Click on the activities tab and select CLEAR Mini-Grants. For more information, contact Brandon Harland at <a href="mailto:Brandon.Harland@dnr.iowa.gov">Brandon.Harland@dnr.iowa.gov</a>.

## Staff Comments...

It's out there. Some of it fiendishly and illegally discarded, some of it placed to protect soil, some of it moved by floods, and some of it simply dumped "out of sight, out of mind."

"It" is trash...and tons of it can be found in our rivers.

Nearly six years ago, a small but determined cadre of volunteers embarked on a fledgling river cleanup event called Project AWARE. With an ideologic mission – to improve the Maquoketa River by removing unsightly trash – these volunteers on the 1st Annual Project AWARE did more than just clean a river...they started a movement. Since that time, Iowa has experienced an explosion of river cleanup projects, creating what some have termed a *Cleanup Culture*.

By combining river cleanup, recreation, and education, Project AWARE nurtures in its volunteers a personal interest in Iowa's natural resources and proves that individual actions can lead to remarkable results. As AWARE volunteers interact with one another, the rivers, and their surroundings, the seeds of knowledge begin to bear the fruits of change. Working together – neighbor to neighbor, community to community – as stewards of the environment, these volunteers help make Iowa great.

This June, hundreds of Project AWARE volunteers will descend upon the Winnebago, Shell Rock, and Cedar rivers from Mason City to Cedar Falls. We hope to see you there!

Brian Soenen
Project AWARE Coordinator



a. Stream flow b. Time of dayc. Water temperature d. All of the above

- 2. How often should you check the expiration date on your IOWATER issued chemical kits?
- a. Every morning b. Every time you sample c. Every year
- **d.** Never. There are no expiration dates on chemical kits.
- **3.** Which of the following two nutrients are necessary for plant growth, but in excess levels may cause water quality problems?
- **a.** Calcium and magnesium **b.** Nitrogen and phosphorus
- **c.** Iron and phosphorus **d.** Mercury and sulfur
- **4.** What is the general range for pH of lowa streams? **a.** 8.1 to 8.4 **b.** 2.5 to 4.0 **c.** 7.2 to 7.7 **d.** 10.0 to 11.0
- 5. For a stream, where should a water sample be collected for IOWATER chemical testing, assuming it's safe?

  a. From the bank, facing midstream b. In the main flow, facing downstream c. In the main flow, facing upstream d. From a pool or stagnant area of water

Answers at the bottom of page 6.



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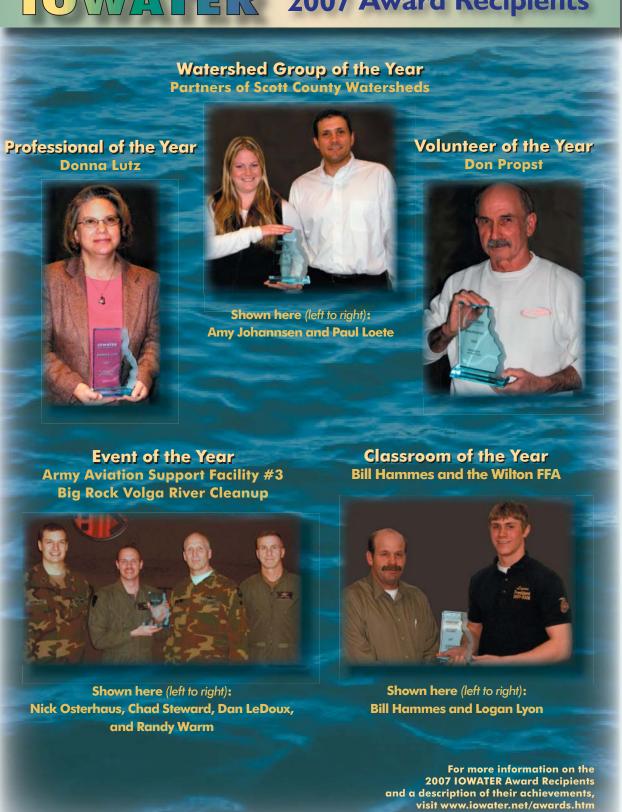
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**Brandon Harland**, Natural Resource Biologist Brandon.Harland@dnr.iowa.gov *phone:* (515) 281-3150

**Lynette Seigley**, Research Geologist Lynette.Seigley@dnr.iowa.gov *phone:* (319) 335-1598

**Brian Soenen**, Natural Resource Biologist Brian.Soenen@dnr.iowa.gov *phone:* (515) 205-8587

### 2007 Award Recipients



## olunteer viewpoints

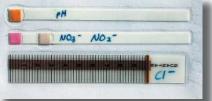


## Walnut Ridge Academy Biology Class Integrates IOWATER & Geocaching by Tom Wagner, Walnut Ridge Acadamy Instructor



After participating in a snapshot of Dry Run Creek in Cedar Falls this fall, I decided to introduce my biology class to IOWATER – and they love it! Not only do they get to go outside but they acquire unparalleled hands-on experience in matters that have real-life significance.

We adopted Prescotts Creek, less than two miles from the school. Being avidly involved in geocaching, I thought of placing a biology class geocache at the site. It's called IOWATER, and the purpose of the cache is to promote knowledge of volunteer water quality monitoring to the geocaching community.



Geocaching is an activity that resembles a high tech scavenger hunt that can be used for educational purposes. Geocachers hunt with GPS receivers. They search out geocache containers hidden all over the globe. Once found, the finds are logged online. The coordinates and descriptions of geocaches are searchable at <a href="https://www.geocaching.com">www.geocaching.com</a>.

To provide geocachers with an IOWATER experience, we've placed outdated bottles of nitrite/nitrate and pH test strips in

our cache (photos above). Visitors are invited to take readings and record data in their online logs. Their numbers are then added to a table on the geocache webpage. This provides them with a real sense of taking part.

Geocaching also includes the trading of items found in the caches and the moving of so-called "travel bugs" from cache to cache. A travel bug can be anything small enough to fit into a geocache. Each bug has a purchased registered tag attached and is given a mission. The biology class placed an explanatory travel bug called IOWATER in their IOWATER cache. Its mission is to visit geocaches around Iowa and to introduce any finders of the bug to this volunteer water quality monitoring program.

Each biology student has joined www.geocaching.com and is monitoring the visits to their geocache. They are watching the movements of their travel bug as well. Between IOWATER testing and participating in geocaching, this year in biology could not have been better!



#### History of Water Projects by Ron Wilmot, Akron-Westfield School Biology Instructor



In 2000, I was asked if some students would be interested in conducting a well water and surface runoff project in the western area of Plymouth County. Jim Lahn with the Natural Resources Conservation Services (NRCS) in LeMars was aware that science students and staff at Akron-Westfield School (AWS) had been using the Hach Company "Soil and Irrigation Water Test Kit" for four years and that the science staff had continued to upgrade soil and water analysis equipment. As a result, the AWS students and faculty conducted extensive analysis of water samples in western Plymouth County.

In 2005, a representative of the Iowa Department of Natural Resources (IDNR) met with the Plymouth Soil and Water Conservation District (SWCD) board and NRCS staff to discuss the inclusion of the Big Sioux River on its list of impaired waterways due to high bacteria levels in the river. As a result, the Plym-

outh SWCD wanted to determine what contribution streams in western Plymouth County were making to the high bacteria levels in the Big Sioux River. Once this could be determined, discussion would follow as to what could be done in these tributaries to reduce bacteria levels below the established Total Maximum Daily Load (TMDL). As a result, Mr. Lahn called AWS science staff and asked if we would be interested in attending a meeting to discuss the problem. The following attended this meeting in the fall of 2005: Plymouth SWCD, Iowa Farm Bureau Federation, Iowa State University Extension, NRCS, and AWS. The outcome of this meeting was that AWS students and staff would develop and carry out the "Big Sioux Tributaries – Water Monitoring Project" and the other members involved would provide funding. A "Quality Assurance Project Plan" (QAPP) was written by AWS staff and students and was approved by the IOWATER Program. This was the first volunteer QAPP approved in the state of Iowa. Water samples were collected and analyzed every two weeks for one year (Jan. 1, 2006 – Dec. 31, 2006) from specific tributaries (Indian Creek, Beaver Creek, Westfield Creek) and from the Big Sioux River.

At the conclusion of the "Big Sioux Tributaries – Water Monitoring Project," the data showed that Westfield Creek had the highest average level of bacteria (*E. coli* per 100ml). At a public meeting which involved 70 residents, farmers, and landowners from the Westfield Creek watershed, the students were asked if they could now study the Westfield Creek watershed to determine where all the *E. coli* were coming from. Students and staff said, "Yes," if funding was provided.

The "Westfield Creek Project" has followed the same QAPP that was approved for the "Big Sioux Tributaries – Water Monitoring Project." Students (6), AWS science staff (2), and a community volunteer accumulated 315 hours of volunteer time: 67.5 hours collecting samples; 180 hours processing samples; 67.5 hours lab prep time and counting colonies; plus time entering data into a computer data base and analysis of data. The QAPP saved us time as all problems were worked out during our "Big Sioux Tributaries – Water Monitoring Project" and samples were never collected when the weather was bad.

A core group of Westfield Creek watershed residents, farmers, and landowners has formed a Westfield Creek Leadership Team (WCLT). This team discusses the following: other studies that are needed; what assistance can be provided to help landowners; how to reduce bacteria (*E. coli*) in Westfield Creek; and effects of sediment delivery (due to erosion) in the creek. WCLT holds public meetings quarterly at the Westfield Community Center.

# pcoming events ... cleanups, snapshots, & more.



**Apr. 19** (Sat); Second Annual Volga River Cleanup Contact: Katherine McCarville (563)425-5233 mccarvillek@uiu.edu

**Apr. 26** (Sat); Dry Run Creek Watershed Snapshot (Cedar Falls) Contact: Rebecca Kauten (319)296-3262 Rebecca.Kauten@ia.usda.gov

**Apr. 26** (Sat); Beaver and Walnut Creek Snapshot Contact: Steve Witmer (515)727-7765 switmer@ci.johnston.ia.us

May 10 (Sat); Johnson and Iowa County Snapshot Contact: Dave Ratliff (319)354-1397 oldmanscreek@qwest.net

May 10 (Sat); Squaw Creek Watershed Snapshot Contact: Rick Dietz rsdietz@yahoo.com

May 10 (Sat); IOWATER Spring Statewide Snapshot Contact: Lynette Seigley (319)335-1598 Lynette.Seigley@dnr.iowa.gov

May 13 (Tues); Scott County Snapshot Contact: Amy Johannsen (563)391-1403 ext. 3 Amy.johannsen@ia.nacdnet.net

May 17 (Sat); Catfish Creek Snapshot Contact: Eric Schmechel (563)876-3418 (ext. 3) Eric.Schmechel@ia.nacdnet.net

May 21 (Wed); Polk County Snapshot Contact: Susan Heathcote (515)244-1194 ext. 205 heathcote@iaenvironment.org

**June 7** (Sat); Raccoon Watershed Snapshot Contact: Steve Witmer (515)727-7765 switmer@ci.johnston.ia.us

July 12 (Sat); CREG's Cedar River Cleanup (Cedar Falls/Waterloo) Contact: Vern Fish (319)266-0328 vernfish@aol.com

**July 12** (Sat); Johnson and Iowa County Snapshot Contact: Dave Ratliff (319)354-1397 oldmanscreek@gwest.net

**July 12** (Sat); IOWATER Summer Statewide Snapshot Contact: Lynette Seigley (319)335-1598 Lynette.Seigley@dnr.iowa.gov July 26 (Sat); Dry Run Creek Watershed Snapshot (Cedar Falls) Contact: Rebecca Kauten (319)296-3262 Rebecca.Kauten@ia.usda.gov

**Aug. 2** (Sat); Coldwater Snapshot (Northeast Iowa) Contact: Steve Veysey (515)294-5805 sveysey@iastate.edu

**Aug. 16** (Sat); Boone River Cleanup (Briggs to Albrights) Contact: Brian Stroner at (515)832-9147 brian.stroner@webstercity.com

**Aug. 16** (Sat); Xstream Cleanup 2008 (Quad Cities) Contact: Erin Robinson (563)386-9575 erobinson@wastecom.com

**Aug. 16** (Sat); River Run Garbage Grab (Des Moines River) Contact: Robin Fortney rbfortney@msn.com

**Aug. 22-24** (Fri-Sun); Lower Wapsipinicon River Cleanup project Allen's Grove to Walter's Landing (McCausland) Contact: Melisa Petersen (coordinator@lowerwapsicleanup.org) or KJ Rebarcak (admin@lowerwapsicleanup.org)

**Sep. 20** (Sat); Dragoon River Romp. Contact: Lois Powers (515)433-0591, loisp@boonelandfill.org

**Sep. 27** (Sat); Beaver and Walnut Creek Snapshot Contact: Steve Witmer (515)727-7765 switmer@ci.johnston.ia.us

Oct. 4 (Sat); Dry Run Creek Watershed Snapshot (Cedar Falls) Contact: Rebecca Kauten (319)296-3262 Rebecca.Kauten@ia.usda.gov

Oct. 8 (Wed); Polk County Snapshot Contact: Susan Heathcote (515)244-1194 ext. 205 heathcote@iaenvironment.org

Oct. 11 (Sat); Johnson and Iowa County Snapshot Contact: Dave Ratliff (319)354-1397 oldmanscreek@qwest.net

**Oct. 11** (Sat); Squaw Creek Watershed Snapshot Contact: Rick Dietz rsdietz@yahoo.com

**Oct. 11** (Sat); IOWATER Fall Statewide Snapshot Contact: Lynette Seigley (319)335-1598 Lynette.Seigley@dnr.iowa.gov

Answers to TEST YOUR SKILLS on page 2 I. d; 2. b; 3. b; 4. a; 5. c

#### **IOWATER 2008 Level | Workshop Schedule**

Date & Time	Location	Contact	Phone	E-mail
Apr 4 (5-9 PM) Apr 5 (9 AM- 3 PM) @ Holiday Lake Maintenar	Poweshiek Co.	Mark Kennett 796 400th Ave. Grinnell, IA 50112	(641) 990-4480	mkfarms@hotmail.com
Apr 23 (5:30-9:30 PM) Apr 24 (5:30-9:30 PM) @ Prairiewoods Center	Linn Co.	Emy Sautter Prairiewoods Center 120 E. Boyson Rd. Hiawatha, IA 52233	(319) 395-6700	esautter@prairiewoods.org
May 2 (5-9 PM) May 3 (8 AM- 2 PM) @ Mayne's Grove Lodge *This workshop is followed by	Franklin Co.* an IOWATER Bacteria	Mike Finnegan 1460B Mallard Rd. Hampton, IA 50441 Monitoring Workshop, plea	(641) 456-9820 ase indicate on your	mrfinn@wbfrec.com registration if you are attending.
July 18 (5-9 PM) July 19 (9 AM- 3 PM) @ The Brenton Arboretum	Dallas Co.	Kay Meyer The Brenton Arboretur 25141 260th St. Dallas Center, IA 5006		kay@thebrentonarboretum.org
July 30 (6-10 PM) July 31 (6-10 PM) @ Wapsi River Env. Ed. Cer	Scott Co.	Dave Murcia Scott CCB 31555 52nd Dixon, IA 52745	(563) 328-3286 Ave.	jmurcia@scottcountyiowa.com
Aug 15 (5-9 PM) Aug 16 (9 AM- 3 PM) @ Prairie's Edge Nature Ce	Howard Co.	Michael Praska 311 7th St. SW #2 Cresco, IA 52136	(563) 547-3040	mike.praska@ia.usda.gov
Sep 5 (5-9 PM) Sep 6 (9 AM- 3 PM) @ Jefferson County Nature	Jefferson Co.  Center	Jack Eastman 2587 New Glasgow Rd. Fairfield, IA 52556	(641) 451-0208	jacktoni@iowatelecom.net
Sep 26 (5-9 PM) Sep 27 (9 AM- 3 PM) @ Prairie Heritage Center	O'Brien Co.	Charlene Elyea O'Brien CCB 4931 Yello Peterson, IA 51047	(712) 295-7200 ow Ave.	occb@iowatelecom.net

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

#### **IOWATER** action!

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

- Carroll County Coon Rapids-Bayard High School environmental science class, along with teacher Laurie Rollefson, conducted water testing of the Middle Raccoon River.
- Ida County Ida County Conservation Board Naturalist Steve Hummel and Carol Sadler's Battle Creek- Ida Grove High School environmental science class conducted water testing of Odebolt Creek.
- Iowa County Iowa County Conservation Board Naturalist Maria Koschmeder, Iowa County District Conservationist Steve Johnston, and Elyse Wilde's Lutheran Interparish School eighth graders conducted water testing of Old Man's Creek.
- Jackson County Farmers Creek Watershed Project was recently awarded the "Outstanding Watershed Project Award" by the Conservation Districts of Iowa (CDI). This project received an IOWATER Mini-Grant in 2006-2007.
- **Johnson County** Congratulations to Gary Arner who was awarded the Conservation Award at the annual meeting of the Hawkeye Fly Fishing Association.
- Scott County Davenport West High School Environmental Club, along with teacher Kim Strunk, monitored water in Scott County as part of the Scott County Snapshot organized by Partners of Scott County Watersheds.

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