

IOWATER

Volunteer Water Quality Monitoring

IOWATER Data Use *Past, Present & Future*

The question of how IOWATER data are used by officials in the water quality community is important to IOWATER volunteers. A major priority for program staff is to deliver volunteer data to officials who can use it, and to bridge the gap between professional and volunteer monitoring efforts. The following examples illustrate how IOWATER data have impacted Iowa's water quality.

Buttermilk Creek

Volunteer data from Buttermilk Creek, a small tributary of the Boone River in Wright County, has been used to place the small stream on the DNR's draft 2004 Impaired Waters List. While this addition may not be something for Iowa to be proud of, the use of volunteer data to justify its listing is a landmark event, especially since the stream is considered a general use stream, only protected against excessive pollution.

Clear Creek

According to DNR estimates, 150 incorporated and 550 unincorporated communities are classified as "unsewered," meaning they have no centralized wastewater treatment facility, and therefore may face problems with failing and illegal septic systems discharging raw sewage directly into surface waters. Although wastewater discharges into surface waters are explicitly prohibited by law, various political, economic, and enforcement issues can inhibit the development of effective solutions to the problem.

In Iowa County, IOWATER data have supported theories that homes in the upper watershed are impacting Clear Creek even before its waters surface from a tile. Pictures of raw sewage coming from the tile have also provided irrefutable evidence as to the nature of this stream's problem. While county and state officials have been aware of and working on the problem for many years, data and observations from Clear Creek highlight the seriousness of these issues and illustrate the immediate impacts they pose. While a process has now been initiated to sewer these homes, the task may take three to nine years, leaving another estimated 699 communities yet to be sewered, each of which can take an additional three to nine years to tackle. While monitoring in areas where raw sewage is known to be present is not encouraged by IOWATER due to immediate risks to human health, data from these areas may help to improve the process of sewerage communities and thus improve Iowa's water quality.



Paula Francis

Water monitoring at Clear Creek, Iowa County.

...from IOWATER's Coordinator

By the time you read this newsletter, the phrase "From the home office in Sioux City, Iowa" will once again have meaning. No, David Letterman isn't moving his fictional home office back to this northwest Iowa town nestled along the banks of the Missouri River. Rather, yours truly is leaving the hustle and bustle of Des Moines and heading west. You know what they say, loess is more, right?

I am not moving on, however, I'm just moving. It is with much enthusiasm and excitement that I announce my continued service to IOWATER from Sioux City – primarily because it means that my wife, Annie, has finally graduated and entered the working world! But more importantly, IOWATER staff now have offices across the state, from the Missouri to the Mississippi. I strongly feel that this geographic diversity will enable us to help you with your volunteer water monitoring projects.

I'm eager to uphold the new and improved IOWATER mission – *To protect and improve Iowa's water quality by raising citizen awareness about Iowa's watersheds, supporting and encouraging the growth and networking of Iowa's volunteer water monitoring communities, and promoting water monitoring activities as a means of assessing and understanding Iowa's aquatic resources.*

From the home office in Sioux City, where the Big Sioux meets the Big Muddy, happy monitoring!

Brian Soenen

Money for your Monitoring!



We are now seeking proposals for our mini-grants program to help IOWATER volunteers fulfill the mission of protecting and improving Iowa's water quality. One-time grants of up to \$1,000 are available to individual volunteers and watershed groups who meet applicable criteria and submit an IOWATER grant application form. For more information and application forms, contact Jackie at Jacklyn.Neely@dnr.state.ia.us or 515-281-4476, or visit www.iowater.net.



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Wallace State Office Building, 502 E. 9th Street
Des Moines, IA 50319-0034

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Snapshot Sampling Events

Since October 2000, 45 snapshot events in 13 areas across Iowa have sampled over 2,700 sites. Events provide snapshots of water quality during spring high-flow and fall low-flow periods, and the data have increased our understanding of point source (namely wastewater discharges) pollution on small streams. As water quality standards are discussed by state officials, knowledge gained from snapshot data can help in that process.

Although packaging and delivering snapshot data to DNR officials faces some challenges, we continually strive to promote water monitoring activities as a means to assess and understand Iowa's aquatic resources. Data from Cedar River snapshots have been evaluated for the Total Maximum Daily Load (TMDL) process currently underway for the river, and are also being used to target federal dollars for prioritization of sub-watershed improvements.

Classify your Stream – If you know whether your stream is intermittent or perennial, let us know by completing the "Classify Your Stream" section in the data entry area for your site. Observations, narratives, or data that support your claim would also be helpful and much appreciated.

For more information about perennial and intermittent streams, review Chapter 9 (Defining Your Stream) of the IOWATER manual, which can be found in the "Publications" menu under "Manuals" at www.iowater.net.

To flow or not to flow?

For many streams, this is the simple question to which there's often no answer. Development of water quality standards and how they are applied are largely dependent on a stream's classification. Your observations, data, and educated input as to the true nature of these streams may lead to a better understanding of them (see sidebar above right).

Together we can accomplish great things...

IOWATER's mission is *to protect and improve Iowa's water quality*. There are a number of mechanisms through which protection and improvement can be accomplished, but the common denominator is you, the Iowa citizen. IOWATER volunteers provide the knowledge and voice for protecting Iowa's aquatic resources, and participation in IOWATER – no matter how big nor how small – is crucial to meeting the ongoing goals for the program's mission.

Riverside 8th Graders Get Their Feet Wet.

The East Pottawattamie Soil and Water Conservation District (SWCD) held their 2nd annual Water Day with the Riverside 8th grade class, Friday, Sept. 10th, at Carson Park. The students enjoyed a warm Friday morning wading through the West Nishnabotna River conducting various assessments at three different stations. The West Nishnabotna River is one of 13 sites throughout Pottawattamie County at which the East Pottawattamie SWCD conducts monthly monitoring. Science teacher Ruth Murray and her class adopted this site and conduct monthly data collections as part of their curriculum.

Monthly data collections include physical assessments for stream width, average depth, average velocity, water clarity, temperature, color and odor. Chemical assessments include oxygen, phosphorus, nitrates, and pH. Water testing kits are provided through IOWATER. The East Pottawattamie SWCD started its monitoring project in June 2003 to begin a long-term study on the health of streams entering and leaving the county. This project has been successful because of volunteers such as Mrs. Murray and her science class.



photo courtesy of East Pottawattamie SWCD

Project

clear

"Let's make one thing clear . . . water."
That's what he said,
at the Iowa State Fair.
Seated among the others –
men and women . . .
some with families in tow . . .
each comprehending how
Iowa's fallopian borders
could mean
more life than death. . . here.
Learn here: a river without water is an empty bed.
Taste here: the sweetest raspberries picked in childhood are wild at the river.
Awaken here: on a sun-speckled sand bar, all the senses begin to make sense.
Remain here: like the father whose father
ushered his young son toward Turkey creek and a willow grove.
The family's whetstone had prepared their knife.
A willow stick was culled, then experienced hands
tapped, tapped the bark – coaxing it forward
to reveal fresh wood and the spot to cut the notch.
Resetting its yellow sleeve,
a new willow whistle was handed to the boy.
Amid the applause of poplar leaves and cottonwood confetti,
the instrument was steadied on eager lips
as branch and breath, together,
trickled a small gift toward the creek . . . a note;
and it was clear.

Believe it or not, hundreds of Iowans are wading through mud, wrenching canoes over sand bars and shallow water, and getting tired – all in the name of water quality. It may sound miserable, but it's **memories that last a lifetime.**

Who: Anyone - paddlers of all ages and skill levels are welcome.

What: 7-day, 7-night float trip down an Iowa River - volunteer programs, and river cleanup.

When: National Rivers Month (June) – Spend one day, the

Why: ● To engage volunteers in a service learning project, involve river miles traveled, and quantity of trash collected. To increase awareness about, and involvement in, river resources, and to promote advocacy. To demonstrate that Iowa citizens are passionate about water quality **one stretch of river.**

Where: www.iowaprojectaware.org

In 2004, when AWARE tackled the Riverstone project, the project came on board. Riverstone honored the process.

With Williamson's assistance, Project AWARE collected and turned recovered scrap metal into a sculpture. 96-cubic yards of trash collected throughout the

David Williamson invited participants to share their thoughts about rivers, water, and the

Riverstone 2004, a half-ton water quality improvement model of a stonefly, an insect associated with

Look closely at this canoe paddle and you'll see bits of farm machinery parts, sled runners, bicycle sprockets, a spinner, and a clevis. All the aluminum pieces were cast in sand molds by volunteers at the State Fair. The sculpture was collected during Project AWARE (pop cans, baseball bats, lawn furniture, running boards, storm doors, and more) during the cleanup. For example, part of a cast iron stove's flue grate inspired the mouthpiece and wings of the stonefly. The official note of the bottom of the stonefly's legs. During the State Fair, a boy who had been watching and listening to the cleanup proudly announced that he had found legs for our "bug." We took the best of those sticks and used them as padding for the

From the bottom up, every inch of this sculpture has had volunteer input, whether in thoughts and suggestions or in the process of approval. As David Williamson has said from the beginning, "Some artists focus on the process of public art."

Project AWARE cover photo & sculpture photo by Clay Smith.

Project AWARE

...lling to spend a week of National Rivers Month slogging through riffles, and spending their vacations dungy, drenched, and dead miserable, but **Project AWARE can evoke wonderful**

...ome!

...ers participate in water quality and wildlife monitoring, educational

...e whole week, or anywhere in between on AWARE.

...project that produces tangible, quantitative results (citizens in-
...f trash removed, recycled, reused, or properly disposed). ● To in-
...ent in, water quality issues that threaten the health of Iowa's water
...y and action towards their improvement and protection. ● To dem-
...sionate, motivated, and dedicated to making a difference towards
...ver, **one week a year, one piece of trash at a time.**

...re.com

Riverse

...e Des Moines River watershed, David Williamson's Riverse art proj-
...rs the work of volunteers while involving them in the art-making

...ect AWARE volunteers and other Iowa citizens constructed a poem
...nto artwork during the 2004 Iowa State Fair. They used some of the
...at summer. Riverse 2004 was born.

The Poem

...and observers at the 2004 Iowa State Fair to write down their
...environment. He then used their words to craft the poem "Clear."

The Sculpture

...on, depicts a scale-model canoe paddle. Atop its handle sits a
...d with healthy watersheds.

...bridge pilings, part of a box car door U-joint, fence posts, rebar,
...from a fishing lure, a car bumper, a truck rim, a tire tread, and a
...ate Fair. This metal came from smelting the aluminum trash col-
...rs, etc.). The mold impressions were inspired by items found during
...efly. You can also see many aluminum fishing bobbers. Take spe-
...ng to our demonstrations presented us with a handful of sticks. He
...patterns for our "bug's" aluminum legs.

...ns that provided a creative spark, hands-on effort, or a simple nod
...rt. I focus on making the process of art public."



*The poem and sculpture on display
in the Wallace Building lobby, Des Moines.*



Say **CHEESE!**

It's Snapshot Sampling Season . . .



Are you looking for a way to get involved with IOWATER monitoring and meet other volunteers in your area? If so, consider participating in an IOWATER snapshot sampling event!

During a snapshot event, multiple sites throughout a geographic area are sampled within a short period of time. These events can be completed:

- To increase public awareness and involve the local community in water quality issues.
- To collect baseline data for a geographic area.
- As a screening tool for identifying "hot spots" or streams that may contribute elevated concentrations.
- Using a variety of testing methods, including both field and lab methods.
- Using a combination of physical, chemical, and biological parameters.
- During different times of the year or different flow conditions.

And the best part about participating in snapshot sampling events is that ***you don't have to be an IOWATER volunteer monitor*** – ANYONE can participate!

Snapshots Scheduled in 2005

Saturday June 11 – Cedar River Watershed

Lynette Seigley (319)335-1598
lseigley@igsb.uiowa.edu

Saturday July 9 – Beaver Creek Watershed

(Boone and Polk counties)
Steve Witmer (515)727-7765
switmer@ci.johnston.ia.us

Saturday July 16 – IOWATER Statewide Snapshot

Lynette Seigley (319)335-1598
lseigley@igsb.uiowa.edu

Saturday July 16 – Old Mans/Clear Creek

Dave Ratliff (319)354-1397 (day)
oldmancreek@qwest.net

Saturday August 6 – Cold Water Streams (Decorah)

Steve Veysey (515)294-5805
sveysey@iastate.edu

Saturday September 24 – Beaver Creek Watershed

Steve Witmer (515)727-7765
switmer@ci.johnston.ia.us

Tuesday October 11 – Scott County

Sara Klindt (563)326-6150
Sara.klindt@ia.nacdnet.net

Wednesday October 12 – Polk County

Susan Heathcote (515)244-1194
Heathcote@earthweshare.org

Saturday October 15 – IOWATER Statewide Snapshot

Lynette Seigley (319)335-1598
lseigley@igsb.uiowa.edu

Saturday October 15 – Old Mans/Clear Creek

(Johnson and Iowa counties)
Dave Ratliff (319)354-1397 (day); (319)337-4445 (evening)
oldmancreek@qwest.net

Tuesday October 18 – Muscatine County

Ellen Myers (563)263-8938 x115
emyers@ci.muscatine.ia.us

Wednesday October 19 – Cedar County

Dave Meyer rockcrk@netins.net

Saturday October 22 – Wapsipinicon River Watershed

Vicki Wilson (319)827-1690 mvw@jtt.net

IOWATER action!

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



- **Cerro Gordo and Franklin Counties** – Rockwell-Swaledale FFA Chapter monitored three streams as part of their yearly activities.
- **Ida County** – Galva-Holstein Middle School teacher Lynn Davis and Ida County Naturalist Steve Hummel have been working with students on a small stream near the school.
- **Muscatine County** – The Muscatine Environmental Education Committee selected Chris Clark for the Iowa Soil Conservation Awards Program, teacher division, grades 7-12. Congratulations, Chris!
- **Story County** – Mary Gregory shared her monitoring skills with Nevada Elementary's first and second grade students by helping them conduct a study on Indian Creek.
- **Story County** – The Story County Conservation Board involved junior high students in water quality monitoring through their "How to Save the World in 3 Days" program.

IOWATER 2005 Level I Workshop Schedule

Date & Time	Location	Contact	Phone	E-mail
July 8 (5-9 PM) July 9 (9 AM - 3 PM) @Storm Lake Fire Station	Buena Vista County	Kimberly Proctor 1617 N. Lake Ave. Storm Lake, IA 50588	(712) 732-3096	kimberly.proctor@ia.nacdn.net
July 18 (5-9 PM) July 19 (5-9 PM) @Jester Park	Polk County	Heidi Anderson Polk Co. Conservation Jester Park, Granger, IA 50109	(515) 323-5360	HAnders@co.polk.ia.us
July 22 (5-9 PM) July 23, (9 AM - 3 PM) @Carson City Park	E. Pott. County	Rachel Hack, Box 429 321 Oakland Ave. Oakland, IA 51560	(712) 482-6408	Rachel.Hack@ia.nacdn.net
July 27 (5-10 PM) July 28, (5-10 PM) @to be announced	Grinnell	Gene Rohr 520 11th Ave. Grinnell, IA 50112	(641) 236-1074	genemrohr@iowatelecom.net
Sept 9 (5-9 PM) Sept 10 (9 AM - 3 PM) @Grimes Farm & Conservation Center	Marshalltown	Diane Pixler 2349 233 rd St Marshalltown, IA 50158	(641) 752-5490	dpixler@co.marshall.ia.us
Sept 16, (5-9 PM) Sept 17, (9 AM - 3 PM) @ Oak Grove Park	Sioux County	Sioux Co. Conservation 4051 Cherry Ave. Hawarden, IA 51023	(712) 552-3057	sfnaturalist@acsnet.com
Sept 30 (5-9 PM) Oct 1 (9 AM - 3 PM) @Nahant Marsh	Quad Cities	Jody Patterson 1717 West 12th Street Davenport, IA 52804	(563) 323-5196	patterson@putnam.org

IOWATER 2005 Advanced Workshops*

**You must have attended a Level 1 workshop to participate in an advanced workshop.*

Benthic Macroinvertebrate Indexing and Bacteria Monitoring Workshops:

Date	Location	Topic & Time
Aug. 27	Heartland RC&D Office (Polk County)	Bacteria (8 AM - 12 PM)
Aug. 27	Heartland RC&D Office (Polk County)	Benthic (1 - 5 PM)
Nov. 5	Lime Creek Nature Center (Mason City)	Bacteria (8 AM - 12 PM)
Nov. 5	Lime Creek Nature Center (Mason City)	Benthic (5 PM - 10 PM)

To register, contact Jackie at (515) 281-4476 or Jacklyn.Neely@dnr.state.ia.us, or visit www.iowater.net.

IOWATER

Wallace State Office Building
502 E. 9th St.
Des Moines, IA 50319



June 18-25, 2005
Little Sioux River

Twin Forks (Dickinson County)
to Spring Lake Park (Cherokee County)

Registrations must be postmarked
by June 10th, 2005

www.iowaprojectaware.com

*photo from Project AWARE 2004,
Brushy Creek.*