



IOWATER's Gateway to Volunteer Data

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Iowa Department of Natural Resources
Iowa Geological Survey
Watershed Monitoring and Assessment Program
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Words of Wisdom

- **DISCLAIMER:** No database is created perfectly the first time, and that includes the IOWATER database.
- Learn from other volunteer programs. What's worked? What hasn't?
- Consider who the users of the data might be and how the data might be used.
- Design the database to evolve as your program grows and the needs for the data changes (*photos; use attainability information; perennial vs. intermittent*).
- The database should be flexible to meet the needs of the volunteers and other data users.

OUTLINE

- **What is IOWATER and how does it fit into water monitoring statewide in Iowa**
- **Development of the IOWATER database – 4 functions of a data management system**
- **Challenges / Positives**

Iowa's Water Monitoring Program

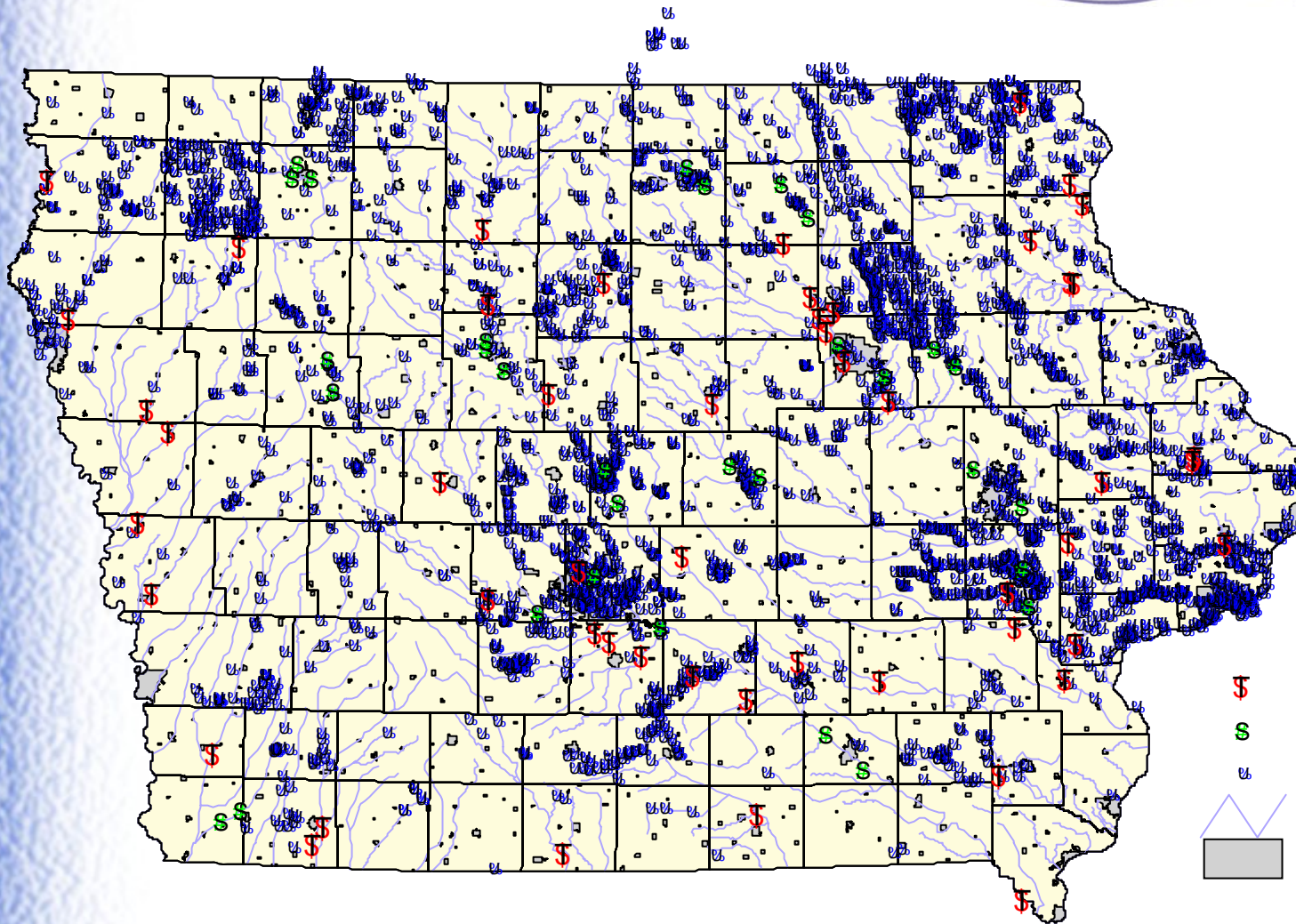
Iowa Department of Natural Resources

(collect water quality data to assess the condition of Iowa's water resources)

Program supported by \$2.9 million state money (10% to IOWATER) and supplemented by federal monies

- Surface Water – Streams/Rivers
- Biological – Fish and Aquatic Insects
- Lakes
- Beaches
- Groundwater
- Wetlands
- IOWATER – Iowa's volunteer program
- STORET (*professional data*)





- \$ Non-City Sites
- \$ City Stream Sites
- u IOWATER Sites
- ⚡ Rivers
- Cities

**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.**

The IOWATER Tenets

Citizen-based



This is **YOUR** program

The IOWATER Tenets

Focuses on

SOLUTIONS

NOT problems

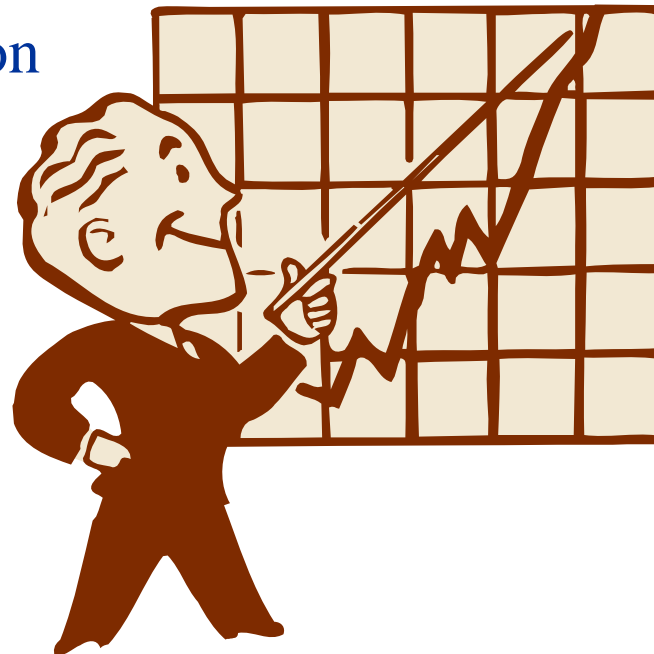
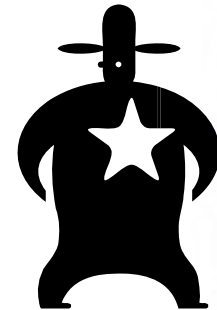


The IOWATER Tenets

Focuses on

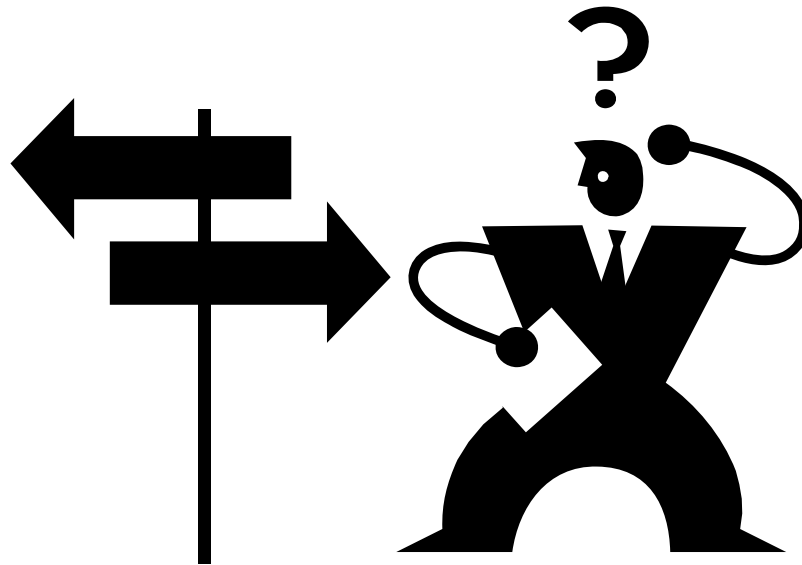
RESULTS

NOT regulation



The IOWATER Tenets

Flexible

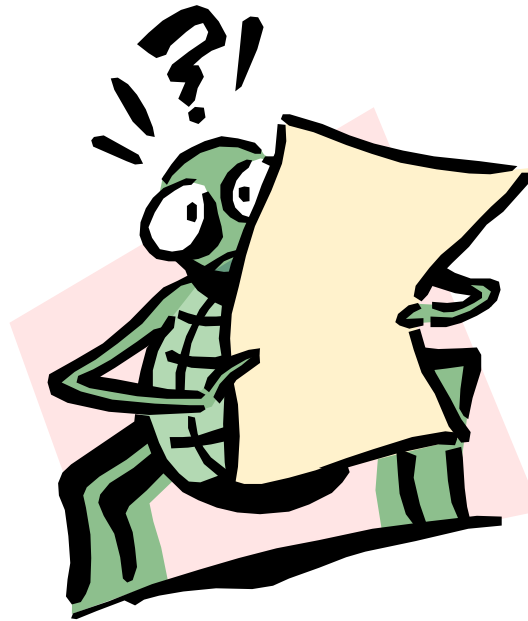


IOWATER volunteers decide where, when,
what, and why

Watersheds

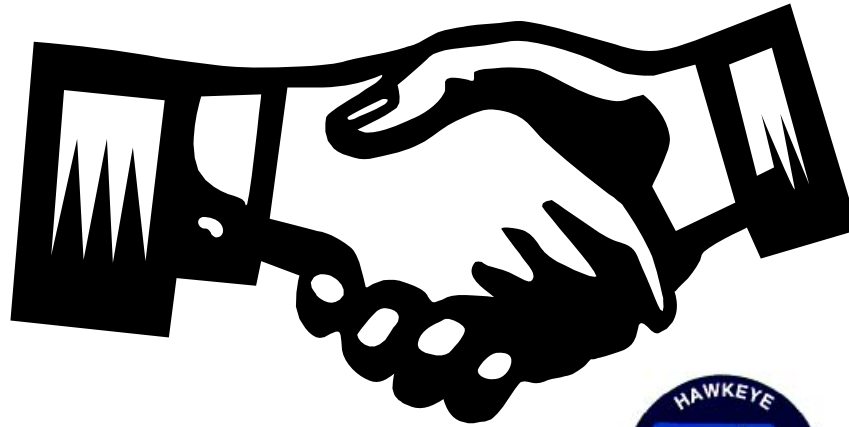
What's your watershed address?

(What's a watershed...?)



The IOWATER Tenets

Partnerships

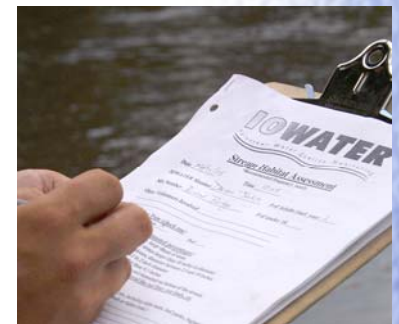


&
YOU!



Plan for Action

- Began in 1998 (*changes in 2000*)
- On-site Trainings
- Testing Equipment
- IOWATER Manual
- Additional Trainings
- Technical Assistance
 - Full time staff
 - IOWATER Newsletter
- Online Database
(*www.iowater.net*)



IOWATER Online Database

- **IOWATER database created by the Iowa DNR – Water Monitoring Program. Created in conjunction with Iowa STORET. (*Issues when contractors are used to develop databases.*)**
- **IOWATER database went online in June 2000.**
- **Data submitted by volunteers through the Internet.**
- **Original intent was to build the IOWATER database so that volunteer data eventually would be migrated to STORET.**
- **IOWATER data initially stored in Access but quickly converted to an SQL database.**
- **IOWATER database is a series of tables linked by monitor ID or monitoring site.**
- **FrontPage™ forms used to submit data.**

Level 1 Assessments

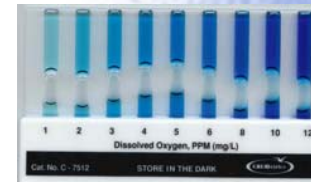
- Chemical
- Physical
- Biological
- Habitat
- Standing Waters



Photo from University of Iowa Hygienic Lab

Advanced Monitoring

- Bacteria
- Benthic Macroinvertebrates



Four Functions

- **Documentation and QA/QC**
- **Data Storage**
- **Data Retrieval**
- **Data Interpretation and Presentation**

FUNCTION 1

Documentation and QA / QC

- **Password and ID needed to enter data; anyone can view data**
- **Standard IOWATER testing methods used**
- **Use of dropdown menus to minimize data entry errors**
- **Coding to create checks on data entry**
- **Use of Water Monitoring Atlas (ArcIMS application) to determine UTM coordinates for monitoring sites**

IOWATER

Volunteer Water Quality Monitoring

[About](#)[Workshops](#)[Database](#)[Learning Corner](#)[Publications](#)[Activities](#)[Links](#)[Iowa Water Monitoring Atlas](#)[Online Database](#)[Data sheets](#)[Storet](#)[Precipitation Information](#)[Register a site](#)[Submit data](#)[View data](#)[Fisheries sechi disk data](#)[Volunteer Directory](#)[Add your name to Volunteer Directory](#)[Search Volunteer Roster](#)[Update Personal Profile](#)

CLEAR Mini Grants

The Iowa Department of Natural Resources is seeking proposals for a



mini-grant river cleanup program, funded by the REAP CEP

[Read more](#)

IOWATER Mini Grants

One-time grants of up to \$1,000 are available to individual volunteers and watershed groups (including school classes, civic organizations, etc.)

[Read more](#)

See the latest GIS application to find watershed groups, watershed statistics and more.

[Click Here](#)



To access this area you need to enter your MONITOR ID and password assigned to you. The password is case sensitive, so enter all letters as lowercase. If you want to become an IOWATER trained volunteer, register for an IOWATER workshop.

Monitor ID	<input type="text" value="120119"/>
Password	<input type="password" value="•••••"/>

Login

*Password and ID to register
sites and submit data*

Water Color (Check all that apply)

☐ Clear
 ☐ Brown
 ☐ Green
 ☐ Oily
 ☐ Reddish
 ☐ Blackish
 ☐ Milky
 ☐ Gray

Water Odor (Check all that apply)

☐ None
 ☐ Sewage/Manure
 ☐ Rotten Eggs
 ☐ Petroleum
 ☐ Musky

Air Temperature (degrees Fahrenheit)

Precipitation over the last 24 hours (inches; *do not enter text*)

Transparency (centimeters)

(Note: If the value is greater than 60, enter 60+)

pH (Select one)

Dissolved Oxygen as mg/L (Select one)

Nitrite-N as mg/L (Select one)

Nitrate-N as mg/L (Select one)

Phosphate as mg/L (Select one)

(dissolved orthophosphate)

Chloride as mg/L

(Select one; if your number is not to Cl⁻)

Water Temperature (degrees Fahrenheit)

NOTE: If your bacteria count is

Bacteria Counts

(from petri dishes)

Replicate 1

Replicate 2

Replicate 3

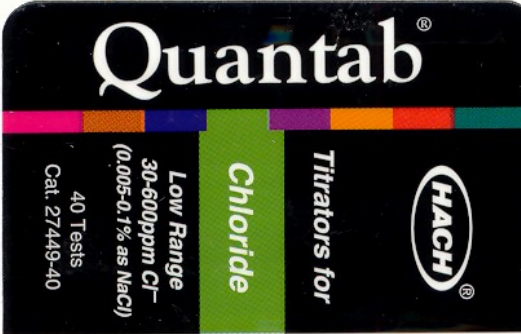
General Coliform Bacteria

(counts)

Use of dropdown menus to minimize data entry errors

the chloride test strip vial to make sure you converted from Quantab Units

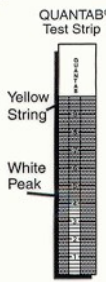
due of 100. teria



- DIRECTIONS:**
1. Remove a titrator from bottle and replace cap immediately.
 2. Insert lower end of titrator into solution. Do not allow solution to reach yellow completion string at top of titrator.
 3. Allow solution to completely saturate wick of titrator. Reaction is complete when yellow string turns dark.
 4. Note where the tip of the white chloride peak falls on the numbered Quantab[®] scale. This represents the Quantab[®] unit value.
 5. Refer to the table below to convert Quantab[®] units into salt concentration.

NOTE: Filtration of the sample solution may be needed to prevent obstruction of the titrator.

Quantab			Quantab		
Units	%NaCl	ppm(mg/L) Cl ⁻	Units	%NaCl	ppm(mg/L) Cl ⁻
1.2	0.004	25	4.6	0.030	180
1.4	0.005	30	4.8	0.032	196
1.6	0.006	36	5.0	0.035	212
1.8	0.007	42	5.2	0.038	230
2.0	0.008	48	5.4	0.041	250
2.2	0.009	54	5.6	0.045	270
2.4	0.010	61	5.8	0.048	292
2.6	0.011	68	6.0	0.052	315
2.8	0.013	76	6.2	0.056	340
3.0	0.014	85	6.4	0.061	367
3.2	0.016	94	6.6	0.065	396
3.4	0.017	104	6.8	0.070	427
3.6	0.019	114	7.0	0.076	461
3.8	0.021	126	7.2	0.082	499
4.0	0.023	138	7.4	0.089	540
4.2	0.025	151	7.6	0.097	587
4.4	0.027	165	7.8	0.105	640



Important: Keep Cap on Tight Between Uses

STORE AT TEMPERATURES NOT TO EXCEED 86°F (30°C).

Hach Company, P.O. Box 389, Loveland, CO 80539 U.S.A.
 (800) 227-4224 Outside U.S.A. (970) 669-3050
*Quantab[®] is manufactured by Environmental Test Systems, Elkhart, Indiana.



IOWATER

Volunteer Water Quality Monitoring

- About
- Workshops
- Database
- Learning Corner
- Publications
- Activities
- Links

- Iowa Water Monitoring Atlas
 - Online Database
 - Data sheets
 - Storet
 - Precipitation Information

Watershed Atlas for UTMS

Welcome to IOWATER

[click here for an Introduction](#)

CLEAR Mini Grants

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IOWATER Mini Grants

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[Read more](#)



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[Click Here](#)







Forum/Event Calendar

Check out the Event Calendar and join

Equipment Resupply

Is your IOWATER equipment

Address http://gis.sims.iugsb.uiowa.edu/website/Water_Monitoring/viewer.htm?Layers=100&ActiveLayer=0

Google Search 2 blocked Check AutoLink AutoFill Options

Iowa DNR Interactive Mapping

for website help, [click here](#)

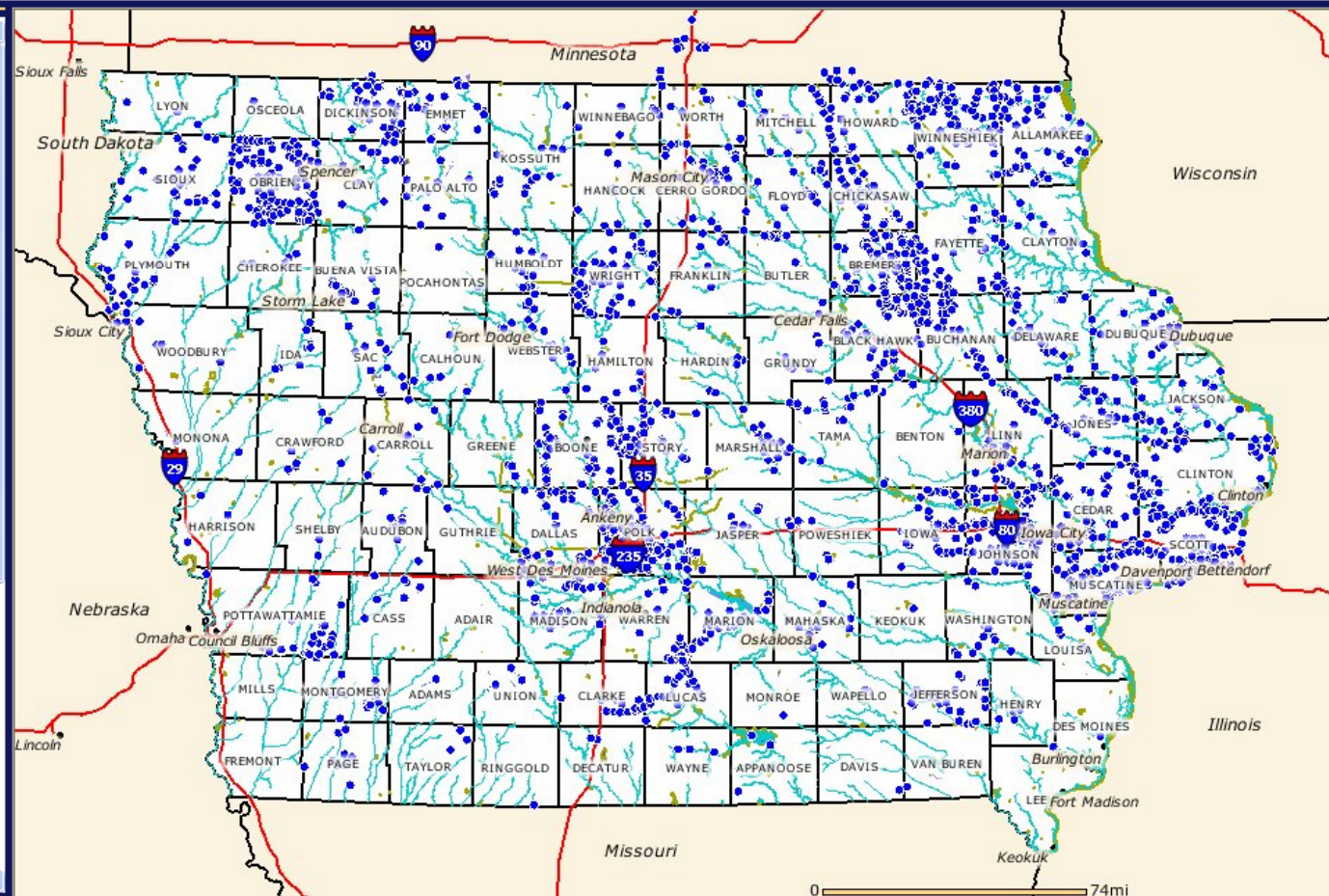
show map print map print legend query find set units buffer clear locate zoom full zoom last zoom in zoom out pan identify link meas select box select line enter a scale: legal description

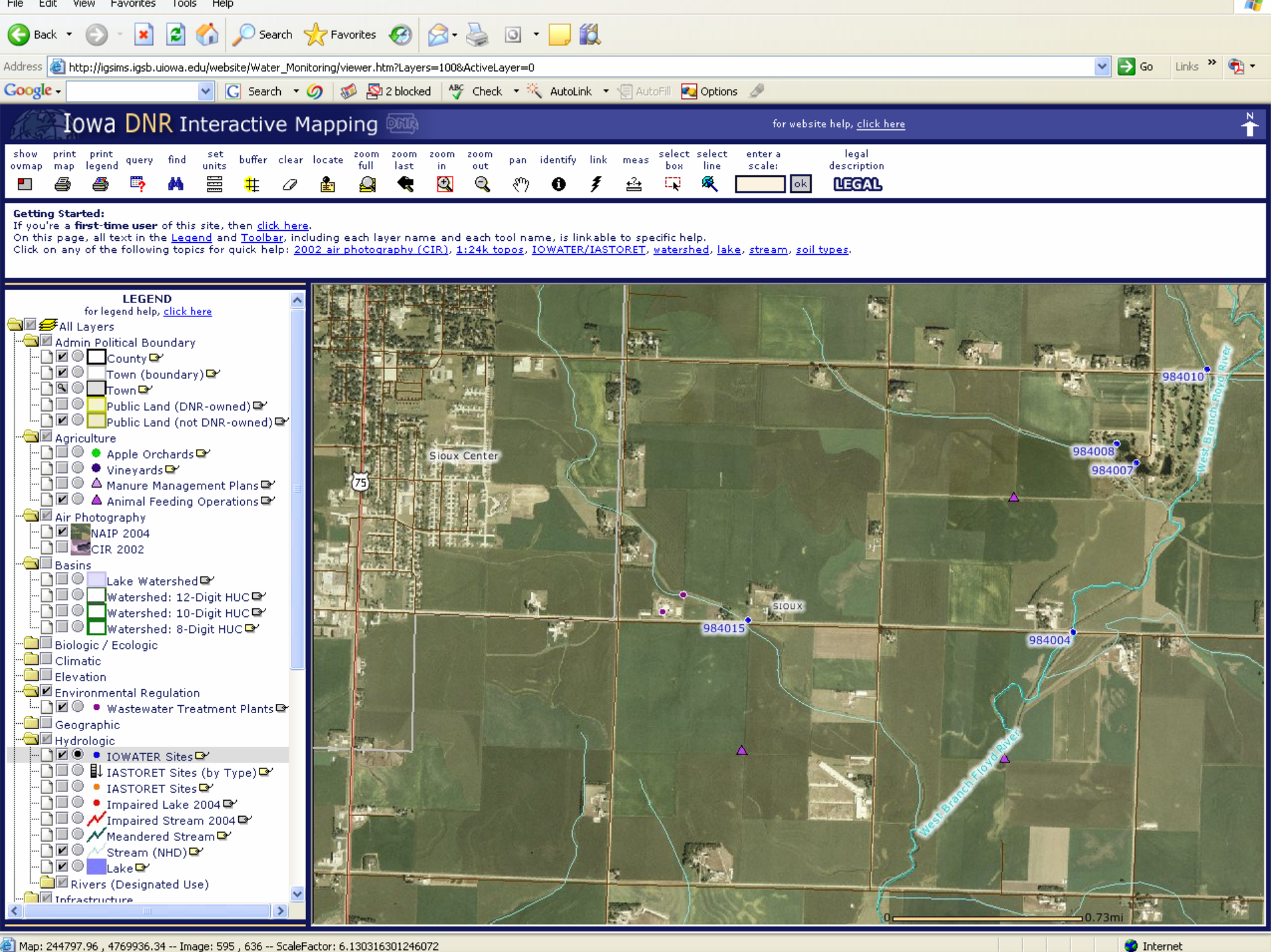
LEGAL

Getting Started:

If you're a **first-time user** of this site, then [click here](#).On this page, all text in the [Legend](#) and [Toolbar](#), including each layer name and each tool name, is linkable to specific help.Click on any of the following topics for quick help: [2002 air photography \(CIR\)](#), [1:24k topos](#), [IOWATER/IASTORET](#), [watershed](#), [lake](#), [stream](#), [soil types](#).

- LEGEND**
for legend help, [click here](#)
- All Layers
 - Admin Political Boundary
 - County
 - Town (boundary)
 - Town
 - Public Land (DNR-owned)
 - Public Land (not DNR-owned)
 - Agriculture
 - Apple Orchards
 - Vineyards
 - Manure Management Plans
 - Animal Feeding Operations
 - Air Photography
 - NAIP 2004
 - CIR 2002
 - Basins
 - Lake Watershed
 - Watershed: 12-Digit HUC
 - Watershed: 10-Digit HUC
 - Watershed: 8-Digit HUC
 - Biologic / Ecologic
 - Climatic
 - Elevation
 - Environmental Regulation
 - Geographic
 - Hydrologic
 - IOWATER Sites
 - IASTORET Sites (by Type)
 - IASTORET Sites
 - Impaired Lake 2004
 - Impaired Stream 2004
 - Meandered Stream
 - Stream (NHD)
 - Lake
 - Rivers (Designated Use)
 - Infrastructure
 - Land Description
 - Midwest

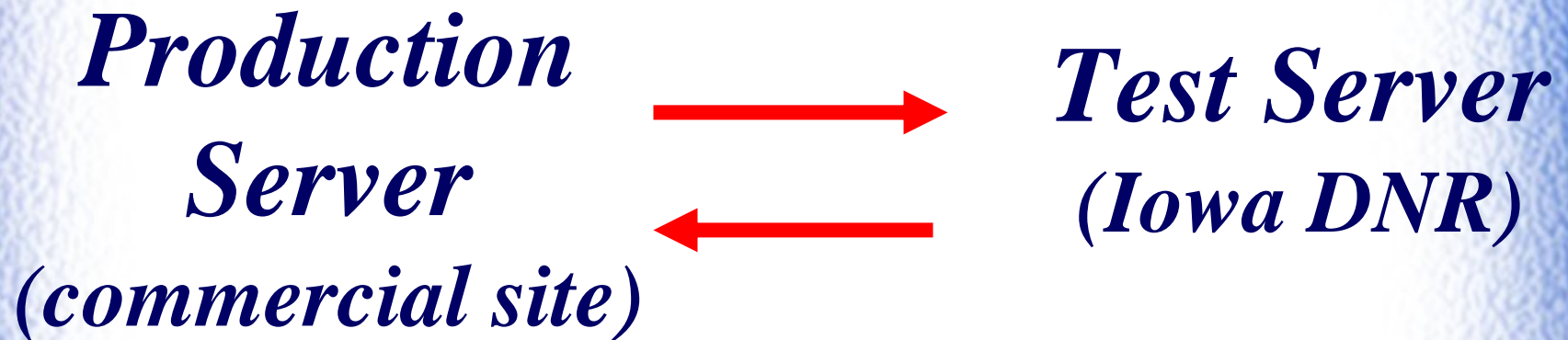




FUNCTION 2

STORAGE

- **IOWATER data stored in an SQL database on a commercial server, which is backed up weekly to DNR server.**
- **IOWATER database is a series of tables linked by monitor ID or monitoring site (allows for additional testing procedures to be added)**
- **FrontPage TM forms for data entry.**
- **Chemical data loaded into Iowa's STORET database**

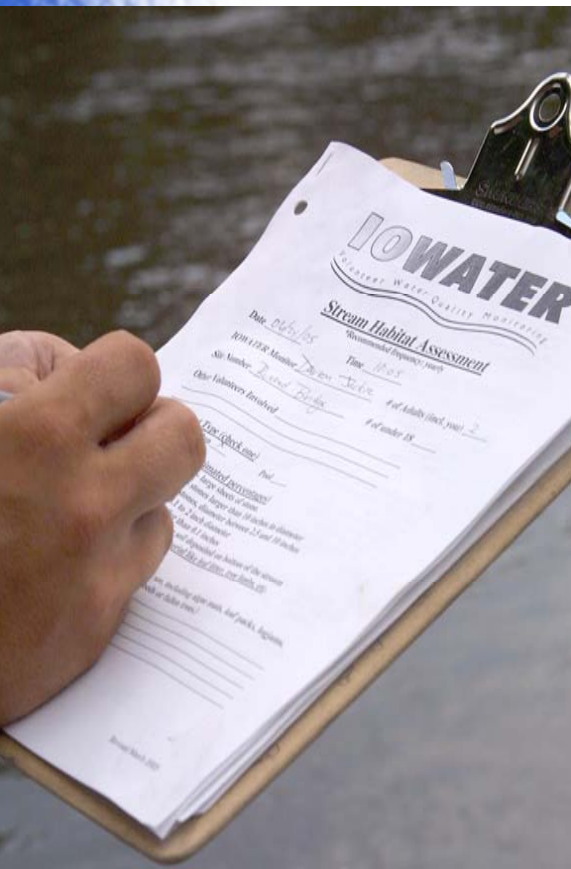


- **Initial Database Development Cost - \$78,000.**
- **Ongoing Costs - database maintenance, development of new online forms, site registrations – time and cost varies**
- **Ongoing Commercial Site Fees - \$1,700/year**

Field sheets



Online Database



IOWATER
Volunteer Water Quality Monitoring

Welcome Brian Soenen
Monitoring site selected: 997012 - Perry Creek at Lincoln Middle School

Enter Biological Stream Assessment Data
Enter Chemical/Physical Stream Assessment Data - Level 2
Enter Stream Habitat Assessment Data
Enter Biological Macroinvertebrate Indexing Data
Classify Your Stream
Upload Photographic Records for this Site
Select Another Monitoring Site For Data Entry

Return to IOWATER Home Page	View Data Online	Submit Data Online	Register a New Monitoring Site
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Console Root\Microsoft SQL Servers\SQL Server Group\XRSQL 2.XROADS.NET (Windows NT)\Databases\Iowater\Tables

Tables 39 Items

Name	Owner	Type	Create Date
Benthic2	dbo	User	3/7/2006 6:00:00 PM
Benthic2_bad	dbo	User	4/5/2004 5:15:41 PM
BioAssessment	dbo	User	3/3/2006 7:47:38 AM
BugTolerances	dbo	User	7/29/2003 11:26:26 AM
ChemPhysAssessment	dbo	User	1/10/2006 12:32:51 PM
dnrStandAssessment	dbo	User	1/5/2006 4:29:27 PM
FORUM_A_REPLY	dbo	User	5/19/2003 10:53:57 AM
FORUM_A_TOPICS	dbo	User	5/19/2003 10:53:57 AM
FORUM_ALLOWED_MEMBERS	dbo	User	5/19/2003 10:53:54 AM
FORUM_BADWORDS	dbo	User	5/19/2003 10:53:57 AM
FORUM_CAL_EVENTS	dbo	User	8/21/2003 1:52:40 PM
FORUM_CATEGORY	dbo	User	5/19/2003 10:53:53 AM
FORUM_CONFIG_NEW	dbo	User	5/19/2003 10:53:53 AM
FORUM_FORUM	dbo	User	5/19/2003 10:53:53 AM
FORUM_GROUP_NAMES	dbo	User	5/19/2003 10:53:57 AM
FORUM_GROUPS	dbo	User	5/19/2003 10:53:58 AM
FORUM_MEMBERS	dbo	User	9/22/2004 11:09:50 AM
FORUM_MEMBERS_bad	dbo	User	5/19/2003 10:53:53 AM
FORUM_MEMBERS_PENDING	dbo	User	5/19/2003 10:53:54 AM
FORUM_MODERATOR	dbo	User	5/19/2003 10:53:54 AM
FORUM_NAMEFILTER	dbo	User	5/19/2003 10:53:57 AM
FORUM_REPLY	dbo	User	5/19/2003 10:53:54 AM
FORUM_SUBSCRIPTIONS	dbo	User	5/19/2003 10:53:54 AM
FORUM_TOPICS	dbo	User	5/19/2003 10:53:54 AM
FORUM_TOTALS	dbo	User	5/19/2003 10:53:54 AM
HabitatAssessment	dbo	User	3/2/2006 7:47:04 PM
IaCounties	dbo	User	10/31/2002 3:03:18 PM
Monitor	dbo	User	1/9/2006 8:36:51 AM
Monitorold	dbo	User	2/27/2004 5:50:00 PM
MonitorOriginal	dbo	User	2/27/2004 5:50:33 PM
NewsLetter	dbo	User	8/16/2004 12:52:33 PM
Pictures	dbo	User	8/24/2004 9:20:55 AM
Site	dbo	User	12/20/2001 9:49:57 AM
siteinfo	dbo	User	8/5/2004 2:11:52 PM
siteinfoOld	dbo	User	8/3/2004 10:46:27 AM
Stand2Assessment	dbo	User	1/19/2006 3:29:05 PM
StateCounties	dbo	User	3/2/2004 10:50:27 AM
StreamType	dbo	User	1/15/2004 10:18:39 AM
X_Monitor	bbunker	User	6/17/2004 3:22:24 PM

As additional testing modules added, tables added to store the data.



Iowa Department of Natural Resources, Energy & Geological Division

Iowa Geological Survey

Water Monitoring Section



Welcome to Iowa's STORET Database

The ambient water quality program is a diverse program responsible for the collection, analysis and dissemination of information on Iowa's rivers, lakes, groundwater and wetlands. Physical, chemical, biological and habitat data are administered as part of this program. To handle this complex data set, the [Iowa Department of Natural Resources](#) (IDNR) is using the Environmental Protection Agency (EPA) database called STORET (STORage and RETrieval). Iowa's STORET database runs on a Oracle™ database platform and is managed by the [water monitoring section](#) of the [Iowa Geological Survey Bureau](#). Ultimately, the water monitoring section envisions Iowa STORET as a "one-stop shopping" location for all the state's water monitoring data. For information on current and future monitoring data in STORET [click here](#).

Water quality data is available from the following Organizations.
Please select one from the list below:

21IOWA - Iowa Dept. of Natural Resources
COE/ISU - Des Moines River - Corp of Engineers (IOWA)
IAAFO - Iowa DNR Animal Feeding Operation
IOWATER - Iowa Volunteer Water Monitoring Program
NEIARCD - Northeast Iowa RC&D (USDA)

Additional custom retrievals of data from Iowa's STORET Database:

- [DNR Beach Data](#)

For more information about STORET check [About](#) menu item under Help and the ["Managing Iowa's Water Quality Information"](#) fact sheet. For questions or comments on Iowa's STORET web site email the web administrator: [Joost Korpel](#).

FUNCTION 3

RETRIEVAL

- **Data can be queried by site, site number, county, watershed, monitor, or geographically.**
- **Data for a site can be copied and pasted into a spreadsheet.**



VIEW IOWATER DATA ON-LINE



NOTE: This interactive online database application can best be viewed under *Internet Explorer 5.01 (SP2)* (Note: IE5.5 has some bugs and may not operate properly), however *Netscape 4.7* will function properly. For more information on Hydrologic Unit Codes (HUCs), [click here](#).

Select by site:

#2 (Anderson) - 955005

Get site

Reset

Select by site no.:

Get site

Reset

Select by county:

Adams

Get county

Reset

Select by HUC 8:

10170203 - Big Sioux River - Lower

Get HUC 8

Reset

Select by HUC 11:

10230006010 - Allen Creek

Get HUC 11

Reset

Select by monitor:

Abbas, Gary

Get monitor sites

Reset

[Search Geographically](#)

To download Internet Explorer 5.01, go to <http://www.microsoft.com/windows/ie/download/ie501sp2.htm> (PC) or <http://www.microsoft.com/mac/products/ie/> (MAC) to download a free copy of the latest version of Internet Explorer, or go to <http://www.netscape.com/computing/download/index.html> to download a free copy of the latest version of Netscape. If you do not have Internet Explorer installed, but are running Windows 98 or NT2000, you can access Internet Explorer by opening My Computer, selecting View, Toolbars, Address Bar, and then type www.iowater.net into the address line.

[Return to IOWATER Home Page](#)
[View Data Online](#)
[Submit Data Online](#)
[Register a New Monitoring Site](#)



VIEW IOWATER DATA ON-LINE



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Select by site:

#2 (Anderson) - 955005

Get site

Reset

Select by site no.:

Get site

Reset

Select by county:

Wright

Get county

Reset

Select by HUC 8:

10170203 - Big Sioux River - Lower

Get HUC 8

Reset

Select by HUC 11:

10230006010 - Allen Creek

Get HUC 11

Reset

Select by monitor:

Abbas, Gary

Get monitor sites

Reset

[Search Geographically](#)

To download Internet Explorer 5.01, go to <http://www.microsoft.com/windows/ie/download/ie501sp2.htm> (PC) or <http://www.microsoft.com/mac/products/ie/> (MAC) to download a free copy of the latest version of Internet Explorer, or go to <http://www.netscape.com/computing/download/index.html> to download a free copy of the latest version of Netscape. If you do not have Internet Explorer installed, but are running Windows 98 or NT2000, you can access Internet Explorer by opening My Computer, selecting View, Toolbars, Address Bar, and then type www.iowater.net into the address line.

[Return to IOWATER
Home Page](#)
[View Data Online](#)
[Submit Data Online](#)
[Register a New
Monitoring Site](#)



County: Wright

Select new County

Internet Explorer users will be able to open multiple site record windows.

Netscape users will be able to open only one site record window at a time.

By clicking on the colored header bar for the Biological, Chemical/Physical, or Habitat tally, a window will open that will allow you to copy the dataset of the current area of selection and paste into an Excel 2000 spreadsheet. Simply copy all elements in the opened display window and paste into Excel as a paste special choice ([html](#)).

Site No.	Site Name	Number of records per site			
		Biological	Chem/Physical	Habitat	Photo
999047	Arends Site	1	0	0	2
999044	Asbe Site (Otter Creek)	1	0	0	0
999002	Boone River	0	2	0	0
999003	Boone River (below dam)	0	20	0	0
999051	Boone River (Eagle Grove Country Club)	0	0	0	2
999027	Boone River Greenbelt West Access	0	0	0	0
999050	Boone River west of Woolstock	1	1	1	0
999039	Brandt-Jackson Ave Site	1	0	0	1
999009	Buck Creek	0	1	0	0
999022	Buttermilk Creek	3	26	0	4
999052	Buttermilk Creek (East Tile Outlet)	0	2	0	0
999053	Buttermilk Creek (North Tile Outlet)	0	2	0	0
999038	Coltvet Site	1	0	0	2
999014	Crown Point Park Stream	7	0	0	1

BIOLOGICAL LOG

January 21, 2002	1:30 pm
January 21, 2002	1:30 pm
May 31, 2001	1:30 pm

CHEMICAL/PHYSICAL LOG

April 2, 2003	5:00 pm
February 20, 2003	2:30 pm
February 19, 2003	5:30 pm
January 7, 2003	4:30 pm
November 13, 2002	4:30 pm

HABITAT LOG

No data is currently available.

BENTHIC MACRO INDEX LOG

No data is currently available.

PHOTO LOG

July 25, 2002	4:30:00 pm
July 25, 2002	4:30:00 pm
July 20, 2002	4:30:00 pm
July 20, 2001	4:30:00 pm

IOWATER Site Information

Site No.: 999022
Site Name: Buttermilk Creek
County: Wright
Site type: Stream
Stream name: Buttermilk Creek
7.5' Quadrangle: EAGLE GROVE
Lat: 42.7384 **Long:** -93.9183
UTM_X: 424,831 **UTM_Y:** 4,732,171 **Zone 15**
HUC 8 Watershed: 7100005 - Boone River
HUC 11 Watershed: 7100005050 - Boone River
HUC 14 Watershed:

The daily assessment log files for this site are noted to the left. By clicking on the **time** a window will open with the selected assessment information for that date and time.

By clicking on the colored header bar of the Biological, Chemical/Physical, or Habitat sitelogs, a window will open that will allow you to copy the dataset of the current site for those records and paste into an Excel 2000 spreadsheet. Simply copy all elements in the opened display window and paste into Excel as a paste special choice ([html](#)).



Chemical/Physical Assessment Log

Monitoring Site: 999022 - Buttermilk Creek

County: Wright

Date: April 2, 2003 (5:00 pm)

HUC 8 Watershed: 7100005 - Boone River

HUC 11 Watershed: 7100005050 - Boone River

HUC 14 Watershed: 0 -

Site Monitored by Greg Soenen

Other Volunteers: Richie Folkerts

Weather

Sunny

Calm

Air temperature 84°F (28.9°C)

Precipitation over the last 24 hours was 0 inches.

Chemical

pH - 8

Dissolved Oxygen (mg/L) - 12+

Nitrite-N (mg/L) - 0.15

Nitrate-N (mg/L) - 5

Phosphate (mg/L; dissolved orthophosphate) - 0.2

Chloride (mg/L) - 0

Bacteria Numbers - Colony Forming Units per 100 ml (CFU/100 ml)

No bacteria samples were collected.

BIOLOGICAL LOG

January 21, 2002 [1:30 pm](#)
 January 21, 2002 [1:30 pm](#)
 May 31, 2001 [1:30 pm](#)

CHEMICAL/PHYSICAL LOG

April 2, 2003 [5:00 pm](#)
 February 20, 2003 [5:30 pm](#)
 February 19, 2003 [5:30 pm](#)
 January 7, 2003 [4:30 pm](#)
 November 13, 2002 [4:30 pm](#)

HABITAT LOG

No data is currently available.

BENTHIC MACRO INDEX LOG

No data is currently available.

PHOTO LOG

July 25, 2002 [4:30:00 pm](#)
 July 25, 2002 [4:30:00 pm](#)
 July 20, 2002 [4:30:00 pm](#)
 July 20, 2001 [4:30:00 pm](#)

IOWATER Site Information

Site No.: 999022
Site Name: Buttermilk Creek
County: Wright
Site type: Stream
Stream name: Buttermilk Creek
7.5' Quadrangle: EAGLE GROVE
Lat: 42.7384 **Long:** -93.9183
UTM_X: 424,831 **UTM_Y:** 4,732,171 **Zone 15**
HUC 8 Watershed: 7100005 - Boone River
HUC 11 Watershed: 7100005050 - Boone River
HUC 14 Watershed:

The daily assessment log files for this site are noted to the left. By clicking on the **time** a window will open with the selected assessment information for that date and time.

By clicking on the colored header bar of the Biological, Chemical/Physical, or Habitat sitelogs, a window will open that will allow you to copy the dataset of the current site for those records and paste into an Excel 2000 spreadsheet. Simply copy all elements in the opened display window and paste into Excel as a paste special choice ([html](#)).

Buttermilk Creek

Chemical/Physical Assessment Summation Table

Site_no	DateMonitored	TimeMonitored	Monitor_id	Other_volunteers	Weather_Sunny	Weather_Partly_Sunny	Weather_Cloudy	Weather_
999022	4/25/01	800	140004	Jim Johnson, Richie Folkerts, Billy Harris, Zach Steig	True	False	False	False
999022	5/18/01	1700	140004		True	False	False	False
999022	6/25/01	1830	140004		True	False	False	False
999022	7/19/01	1900	140004		True	False	False	False
999022	8/22/01	1900	140004		True	False	False	False
999022	9/21/01	1730	140004	Jake Fletcher	True	False	False	False
999022	11/8/01	1630	140004		True	False	False	False
999022	1/22/02	1630	140004		True	False	False	False
999022	2/7/02	1300	140004	Bruce Voigts, Viri Crafton	False	True	False	False

Iowa DNR Interactive Mapping

for website help, [click here](#)

☐ show map ☐ print map ☐ print legend ☐ query ☐ find ☐ set units ☐ buffer ☐ clear ☐ locate ☐ zoom full ☐ zoom last ☐ zoom in ☐ zoom out ☐ pan ☐ identify ☐ link ☐ meas ☐ select box ☐ select line enter a scale: ☐ legal description **LEGAL**

IOWATER Sites: For IOWATER Sites metadata, which contains a description of the columns in the table below [click here](#).

Zoom To	SITE NO	SITE NAME	COUNTY	SITE TYPE	STREAM	HUC14 NAME	HUC8	HUC8 NAME	HUC11	HUC11 NAME	ECOREGION
1	952075	Johnson/Iowa Snapshot (MC1)	Johnson	Stream	Johnson/Iowa Snapshot (MC1)		7080209	Iowa River - Lower	7080209060	Rapid Creek	Southern Iowa Rolling Loess Prairie

LEGEND

for legend help, [click here](#)

- All Layers
 - Admin Political Boundary
 - ☒ County
 - ☒ Town (boundary)
 - ☒ Town
 - ☒ Public Land (DNR-owned)
 - ☒ Public Land (not DNR-owned)
 - Agriculture
 - ☒ Apple Orchards
 - ☒ Vineyards
 - ☒ Manure Management Plans
 - ☒ Animal Feeding Operations
 - Air Photography
 - ☒ NAIP 2004
 - ☒ CIR 2002
 - Basins
 - ☒ Lake Watershed
 - ☒ Watershed: 12-Digit HUC
 - ☒ Watershed: 10-Digit HUC
 - ☒ Watershed: 8-Digit HUC
 - Biologic / Ecologic
 - Climatic
 - Elevation
 - Environmental Regulation
 - ☒ Wastewater Treatment Plants
 - Geographic
 - Hydrologic
 - ☒ IOWATER Sites
 - ☒ IASTORET Sites (by Type)
 - ☒ IASTORET Sites
 - ☒ Impaired Lake 2004
 - ☒ Impaired Stream 2004
 - ☒ Meandered Stream
 - ☒ Stream (NHD)
 - ☒ Lake
 - ☒ Rivers (Designated Use)
 - Infrastructure





IOWATER Monitoring Site Log

[Exit site log](#)**BIOLOGICAL LOG**

No data is currently available.

CHEMICAL/PHYSICAL LOG

March 18, 2006	10:00 am
March 11, 2006	10:00 am
March 4, 2006	10:30 am
February 24, 2006	11:00 am
February 18, 2006	11:30 am

HABITAT LOG

May 15, 2004	10:30 am
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BENTHIC MACRO INDEX LOG

No data is currently available.

PHOTO LOG

No data is currently available.

IOWATER Site Information

Site No.: 952075
Site Name: Johnson/Iowa Snapshot (MC1)
State: Iowa County: Johnson
Site type: Stream
Stream name: Johnson/Iowa Snapshot (MC1)
7.5' Quadrangle: IOWA CITY W
Lat: 41.7268 Long: -91.5981
UTM_X: 616,597 UTM_Y: 4,620,396 Zone 15
HUC 8 Watershed: 7080209 - Iowa River - Lower
HUC 11 Watershed: 7080209060 - Rapid Creek
HUC 14 Watershed:

The daily assessment log files for this site are noted to the left. By clicking on the **time** a window will open with the selected assessment information for that date and time.

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FUNCTION 4

DATA INTERPRETATION AND PRESENTATION

- **Data for a site can be copied and pasted into a spreadsheet – individual uses Excel or other programs to run statistics and generate graphs.**
- **Graphing capabilities in STORET**

Buttermilk Creek

Chemical/Physical Assessment Summation Table

Site_no	DateMonitored	TimeMonitored	Monitor_id	Other_volunteers	Weather_Sunny	Weather_Partly_Sunny	Weather_Cloudy	Weather_
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999022	11/8/01	1630	140004		True	False	False	False
999022	1/22/02	1630	140004		True	False	False	False
999022	2/7/02	1300	140004	Bruce Voigts, Viri Crafton	False	True	False	False



Iowa's STORET Water Quality Database

[IOWATER](#) → [Projects](#) → [Stations](#) → [Results](#)
[Start over!](#) | [Export results](#) | [Graph results](#) | [Station Info](#)

Prairie Creek 1 -908021

Pivot table view by station


STORET ID	Station Name	Start Date	Parameter	Sample Fraction	Result	Units	Rem
908021	Prairie Creek 1	2/13/2005 3:00:00 PM	Transparency, tube with disk	Total	6	cm	
908021	Prairie Creek 1	3/13/2005 2:30:00 PM	Transparency, tube with disk	Total	60	cm	
908021	Prairie Creek 1	4/17/2005 2:30:00 PM	Transparency, tube with disk	Total	60	cm	
908021	Prairie Creek 1	5/15/2005 3:00:00 PM	Transparency, tube with disk	Total	30	cm	
908021	Prairie Creek 1	6/19/2005 4:00:00 PM	Transparency, tube with disk	Total	60	cm	
908021	Prairie Creek 1	7/17/2005 1:00:00 PM	Transparency, tube with disk	Total	46	cm	
908022	Prairie Creek 2	2/13/2005 4:30:00 PM	Transparency, tube with disk	Total	5	cm	
908022	Prairie Creek 2	3/13/2005 4:00:00 PM	Transparency, tube with disk	Total	17	cm	
908022	Prairie Creek 2	4/17/2005 4:00:00 PM	Transparency, tube with disk	Total	31	cm	
908022	Prairie Creek 2	5/15/2005 4:30:00 PM	Transparency, tube with disk	Total	10	cm	
908022	Prairie Creek 2	6/19/2005 5:30:00 PM	Transparency, tube with disk	Total	18	cm	
908022	Prairie Creek 2	7/17/2005 12:00:00 PM	Transparency, tube with disk	Total	51	cm	

Total number of records returned = 12


Iowa STORET Water Quality Database Iowa Geological Survey 109 Trowbridge Hall Iowa City IA 52242-1319
 Phone: 1-319-335-1575 Fax: 1-319-335-2754

**Iowa's STORET Water Quality Database****Please select graphing options:**


Group Series By

Parameter 

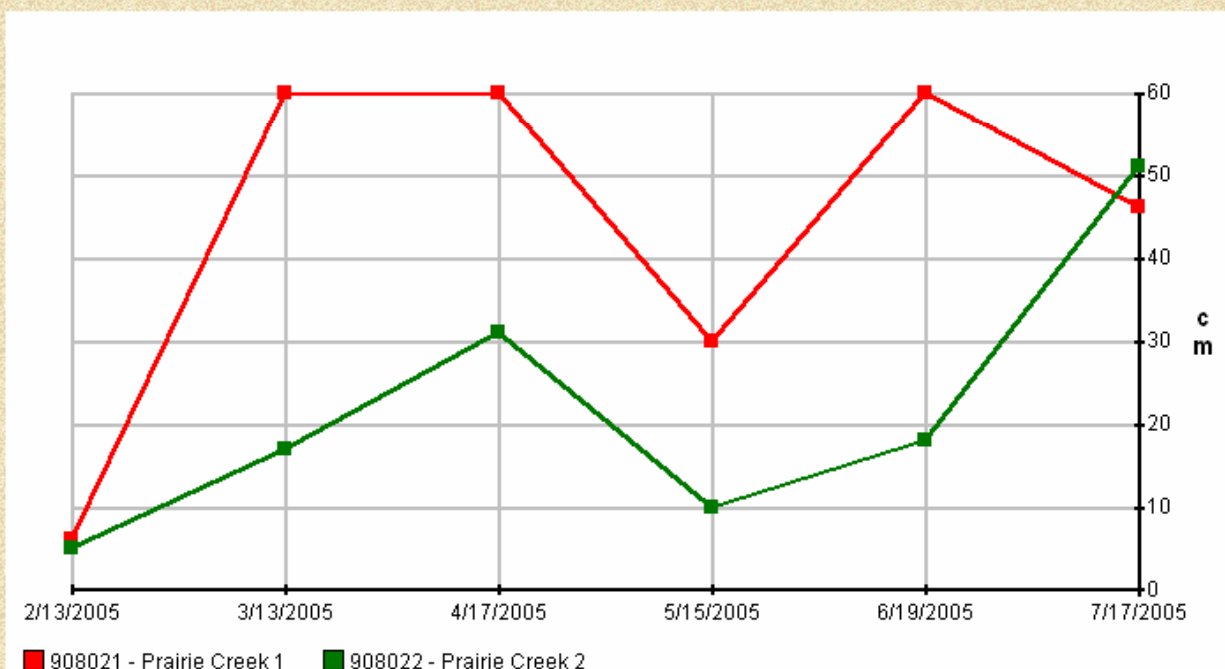
Group Time By

Day 

Graph Type:

MultiLine **Make Graph**

Transparency, tube with disk



Positives

- **There have been few concerns about uploading data – Internet access good throughout Iowa.**
- **Linkage of IOWATER with professional monitoring program (STORET).**
- **Watershed Atlas**

Challenges

- **Building flags to identify problem data for follow up**
- **Graphing and summary statistics of data (chemical data into STORET)**
- **Lab data associated with snapshot events (county or watershed)**
- **Maximizing the use of the Watershed Atlas – gap between technology and user proficiency**