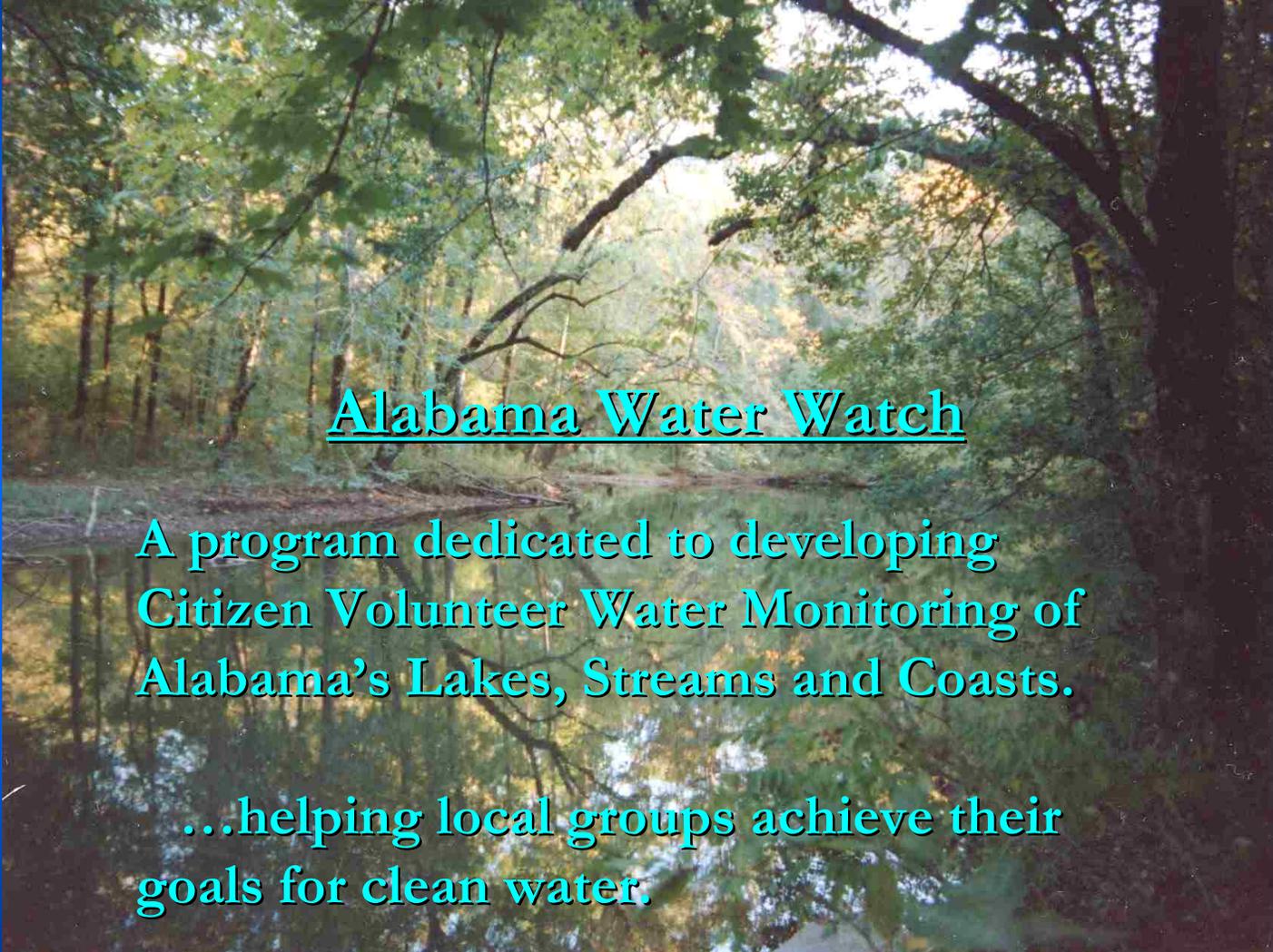


# **Increased Capabilities for Community-based, Water Data Analyses and Outreach.**

**2004 National Monitoring Conference  
*Building and Sustaining Successful Monitoring Programs*  
Chattanooga, Tennessee May 17-20, 2004**

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**Sergio S. Ruiz-Córdova and Bill Deutsch  
Alabama Water Watch, Auburn University**



## Alabama Water Watch

A program dedicated to developing  
Citizen Volunteer Water Monitoring of  
Alabama's Lakes, Streams and Coasts.

...helping local groups achieve their  
goals for clean water.

## **An AWW Data GOAL**

**To describe trends of stream and lake quality that are useful for decision-makers, educators and the general public.**

# Water Monitoring



**Physico-Chemical**

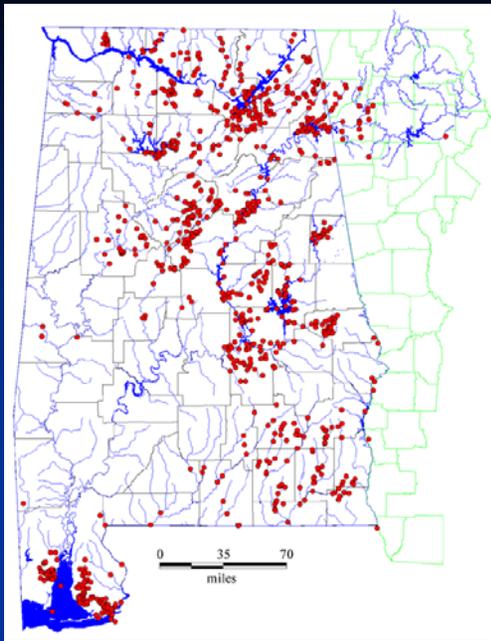


**Bacteriological**



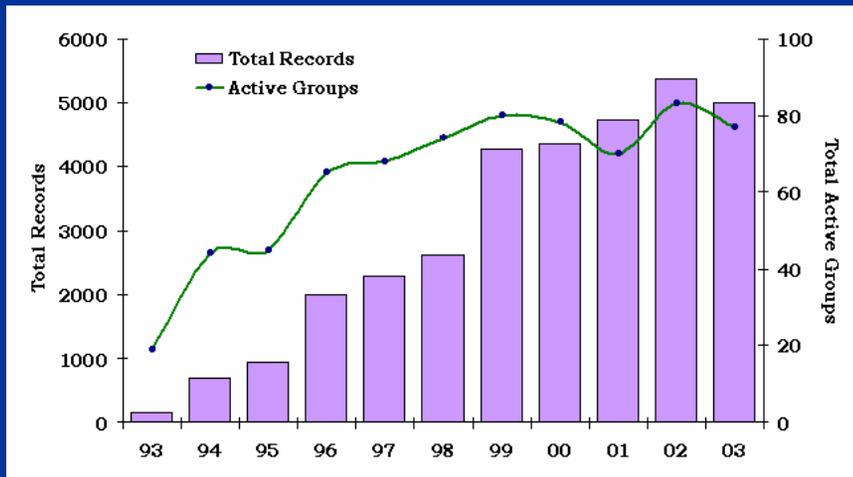
**Bioassessment**

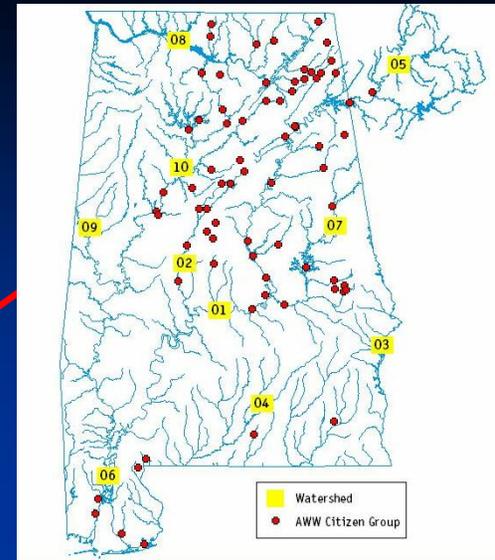
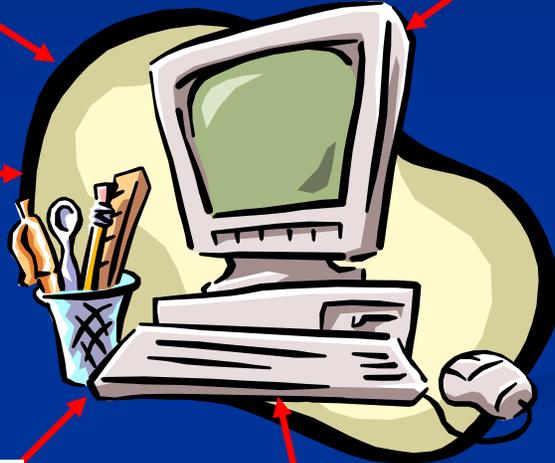
# AWW some numbers...



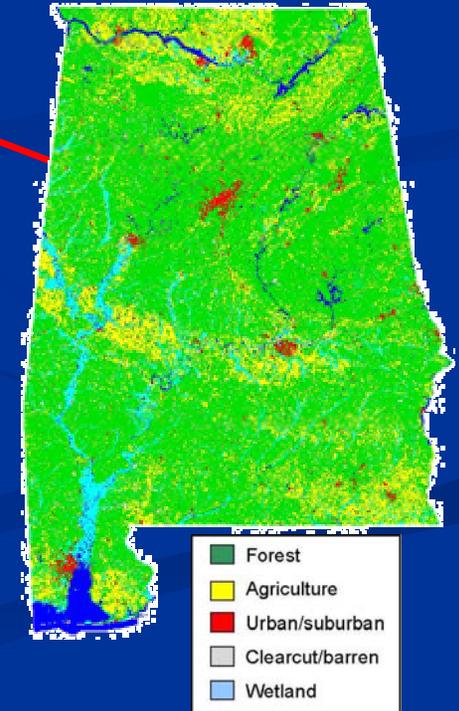
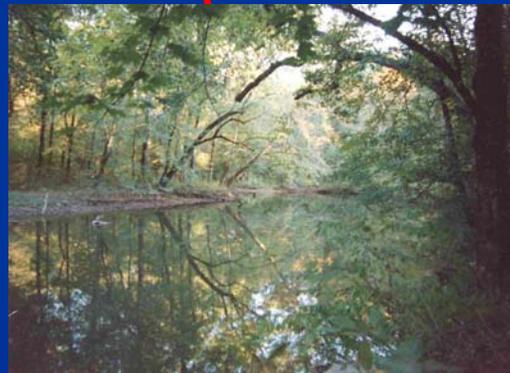
## Cumulative 1993-2004

- 1993 First Workshop
- 1996 *E. coli* Testing
- 200 Citizen Groups
- 4,000 Certified Monitors
- 1,600 Sampling Sites
- 500 + Waterbodies
- 150,000 Measurements
- 40% data entered online
- 35 Active Citizen Trainers





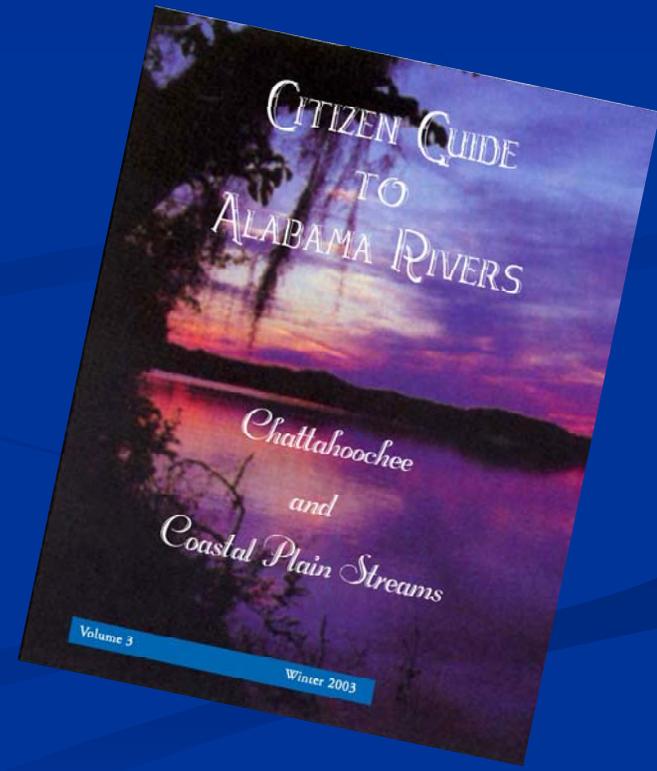
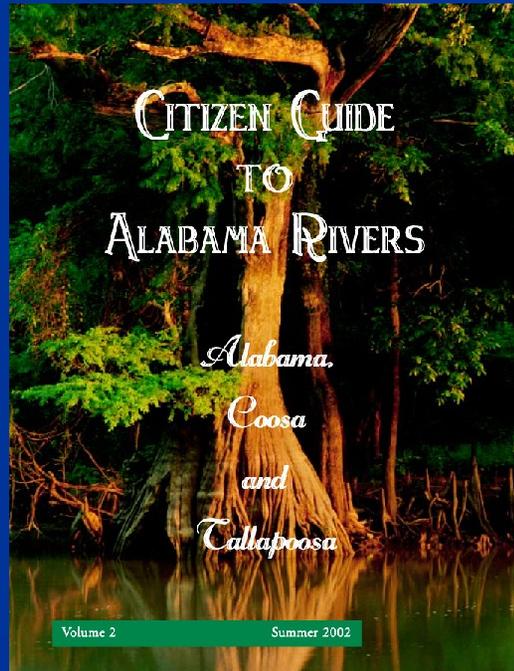
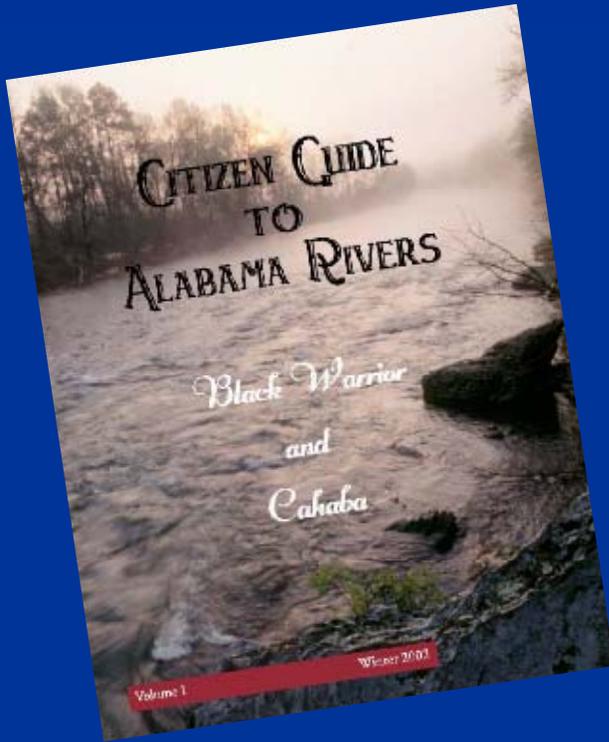
Record #	Collector 1	Month	Day	Year	Time	AWW Site Code	Watershed	Water Temp	pH
01-0001	Cunningham, Dave	1	3	2001	1500	05030009	Coosa	8	8
01-0002	Hughes, Jeff	1	6	2001	1125	08007001	Tennessee	7	7.5
01-0003	Hughes, Jeff	1	6	2001	1010	08007003	Tennessee	5	7.5
01-0004	Spraggs, Ken	1	8	2001	900	05003005	Coosa	3	8.5
01-0005	Sammons, Calvin R	1	4	2001	1315	05035001	Coosa	3	9
01-0006	Sammons, Calvin R	1	4	2001	1415	05035002	Coosa	5	8.5
01-0007	Blankenship, Valeria	1	3	2001	1020	08005027	Mobile	5	8.5
01-0008	Smith, Mary Lou	1	6	2001	1515	07016006	Tallapoosa	12.5	8.5
01-0009	Smith, Mary Lou	1	6	2001	1420	07016001	Tallapoosa	13	8.5
01-0010	Smith, Mary Lou	1	6	2001	1330	07016005	Tallapoosa	6	7.5
01-0011	Davis, Lee	1	7	2001	1140	07009024	Tallapoosa	0	7
01-0012	Davis, James T.	1	10	2001	1430	05030008	Coosa	8.5	8
01-0013	Toffaletti, David	1	6	2001	1300	07011017	Tallapoosa	6	7
01-0014	Sanders, James	1	15	2001	1345	10010004	Warrior	6.5	6.5
01-0015	Sanders, James	1	16	2001	1315	10010003	Warrior	8.5	6
01-0016	Hung, John Y	1	14	2001	1430	07017004	Tallapoosa	9	7
01-0017	Manning, Jimmy	1	14	2001	1435	08042004	Tennessee	7.5	8
01-0018	Easton, Andrew	1	6	2001	1347	05037004	Coosa	5.5	7.8
01-0019	Drube, Sharon	1	6	2001	915	05037001	Coosa	0	7
01-0020	Deutsch, Bill	1	13	2001	1015	07015001	Tallapoosa	3.5	6.5
01-0021	Newton, David	1	23	2001	1320	07011002	Tallapoosa	7.5	7.5
01-0022	Hall, Ed	1	16	2001	1430	08044001	Tennessee	7	8
01-0023	Hall, Ed	1	16	2001	1615	08044002	Tennessee	6	8
01-0024	Hurley, Patti	1	20	2001	1130	07009002	Tallapoosa	8	7
01-0025	Hurley, Patti	1	20	2001	1100	07009001	Tallapoosa	8	7
01-0026	Allen, Joe H	1	24	2001	1600	07004001	Tallapoosa	9	6.5
01-0027	Spraberry, Zack	1	28	2001	910	07016003	Tallapoosa	8	7
01-0028	Cox-Rodgers, Becky	1	13	2001	1415	02027001	Cahaba	11	8.5
01-0029	Cox-Rodgers, Becky	1	14	2001	1230	02027002	Cahaba	11.5	8.5
01-0030	Cox-Rodgers, Becky	1	14	2001	1330	02027003	Cahaba	8	8
01-0031	Cox-Rodgers, Becky	1	14	2001	1340	02027004	Cahaba	8	8
01-0032	Cox-Rodgers, Becky	1	14	2001	1430	02027005	Cahaba	12	8
01-0033	Cox-Rodgers, Becky	1	14	2001	1515	02027006	Cahaba	8.5	8
01-0034	Greer, Don	1	15	2001	1000	05012001	Coosa	6	8



# How are the data used?

- **Basin Guides, Waterbody Reports and Data Interpretation Sessions for raising public awareness.**
- **Provided to local officials to address water quality issues.**
- **Provided to EPA and ADEM for 305b report, TMDL modeling, etc.**

# General Environmental Education



# The Latest Additions to the AWW Waterbody Report Series



## Citizen Volunteer Water Quality Monitoring of Alabama's Reservoirs



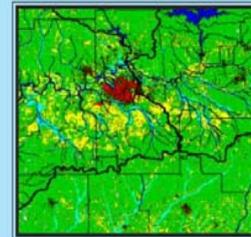
...special lakes  
worth protecting



Lake Wedowee  
Alabama Water Watch  
June 2003



## Citizen Volunteer Water Quality Monitoring on Alabama's Streams



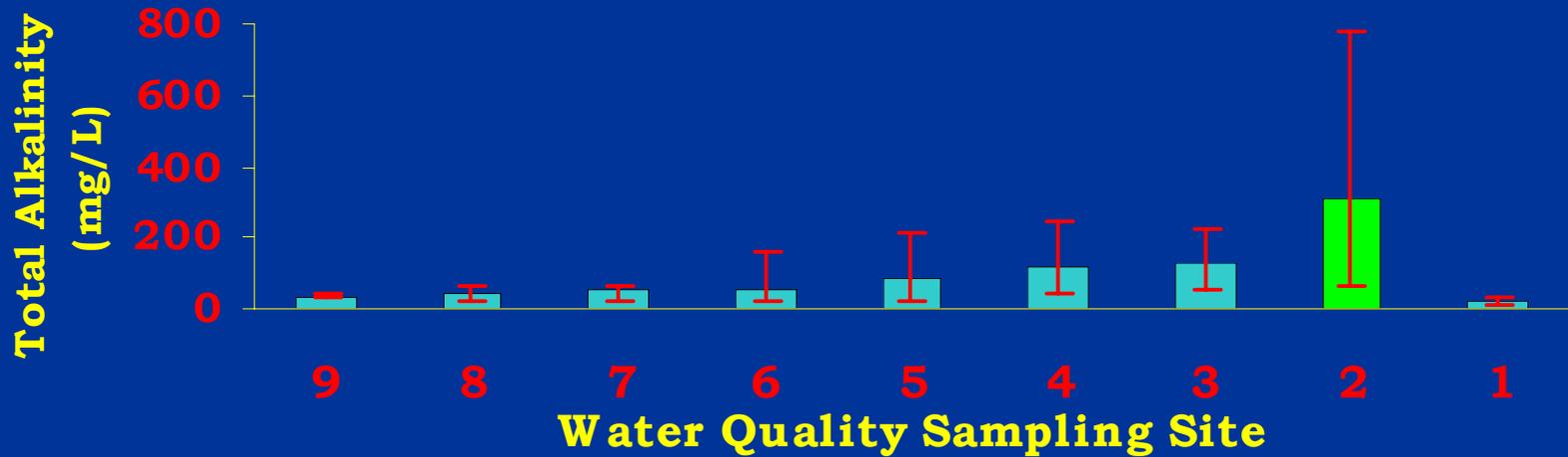
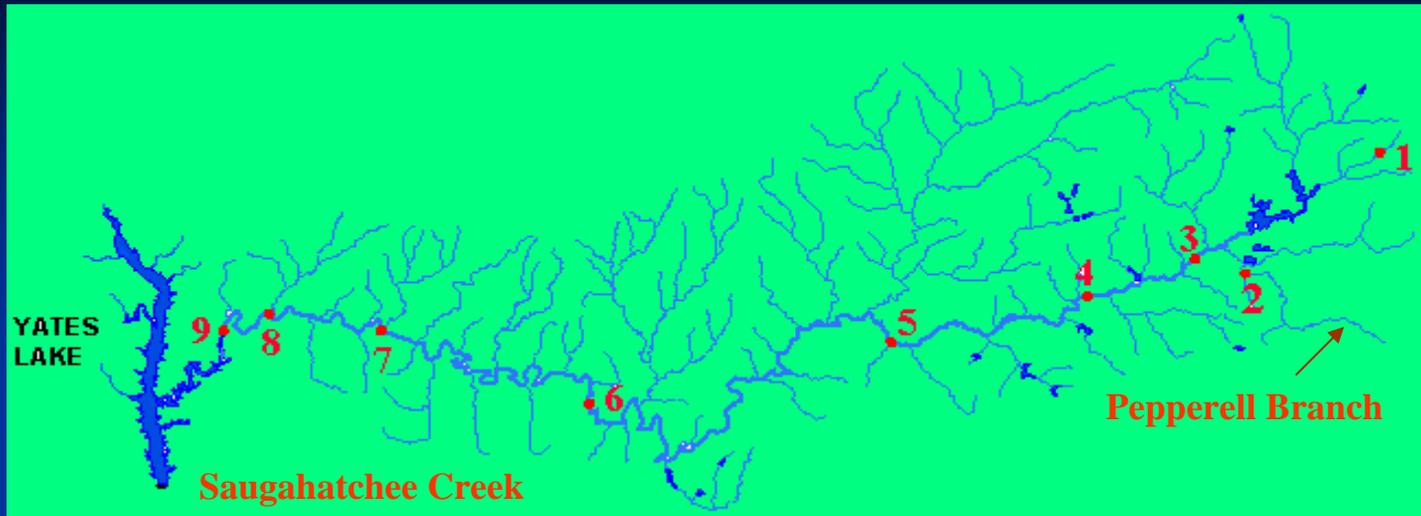
...protecting over 75,000  
miles of aquatic treasures



Tri-River Region  
Alabama Water Watch  
December 2002

# TOTAL ALKALINITY

From the Headwaters to Yates Lake 1997-2003



\*Bars are averages of all data measured at each site from 1997 through July 2003. Total number of readings = 220. Brackets within bars are ranges.

# Online Benefits...

## AWW Data Forum

Alligator Bayou  
Mobile County, AL  
Site code: 06005016

AWW Home Page | Tour AWW Auburn Database | Web Feedback | Contact AWW

Site powered by ASP.NET

Data Entry AWW Summary Data Sites Groups Watersheds 303(d) Misc

### Features of the Data Forum:

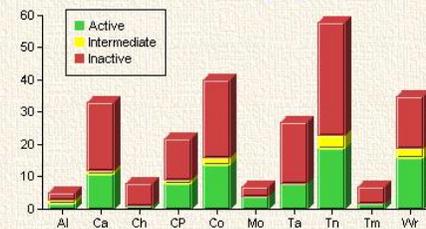
- Charts by ChartDirector
- Microsoft's new ASP.NET
- Photographic Gallery
- Background watershed averaging
- Data Entry for Chemistry, Bacteria and Lake Profiles
- Data Editing for Personal and Geographic information
- Real-Time charting when data entered on-line
- USGS Aerial and Topographic elevation maps
- EPA Envirofacts, RTK and STORET databases
- Statistics for background watershed averaging
- Chart types incld Bubble, Polar, Pareto and others
- 303(d) impaired streams

Short-cut to Site Histories...

Enter Site code:  Chem

Use Internet Explorer until further notice  
How to control the News rotator with your mouse  
We are currently using ASP.NET Menu

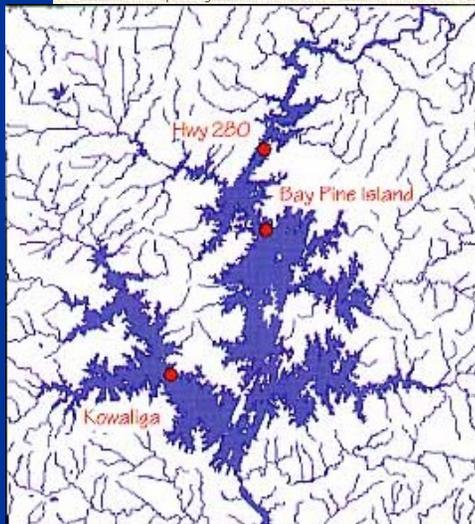
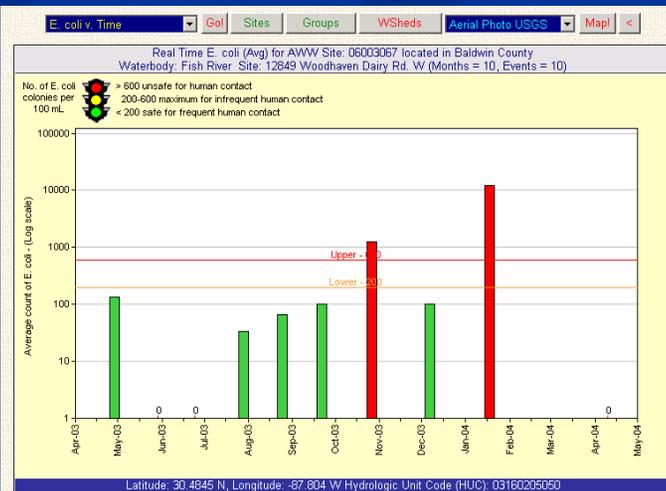
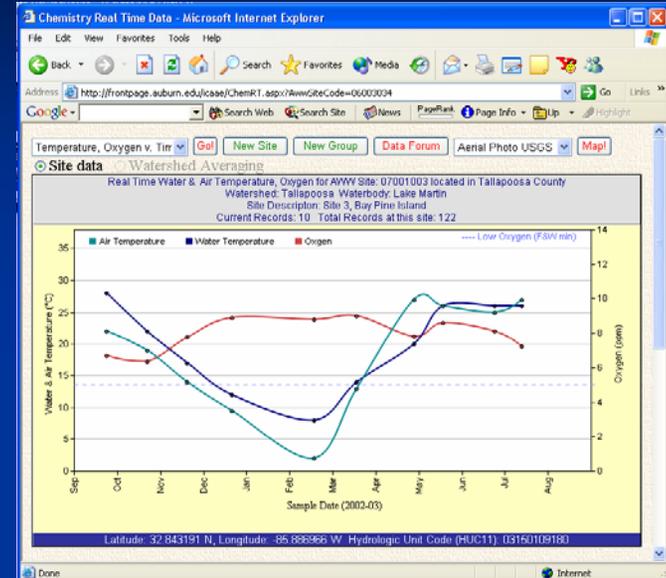
### Active-Inactive Groups



AWW WShed On-Line Train Samp Act Groups Act Sites

**>> Chem Rec No. 25,000 submitted** August 27, 2003  
Bob Keefe, of Cullman SWCD, submitted Chemistry record number 25,000, from AWW Site 10029010. Congrats to Mr. Keefe, and all who have sampled over the years to bring the Chemistry records to a milestone.

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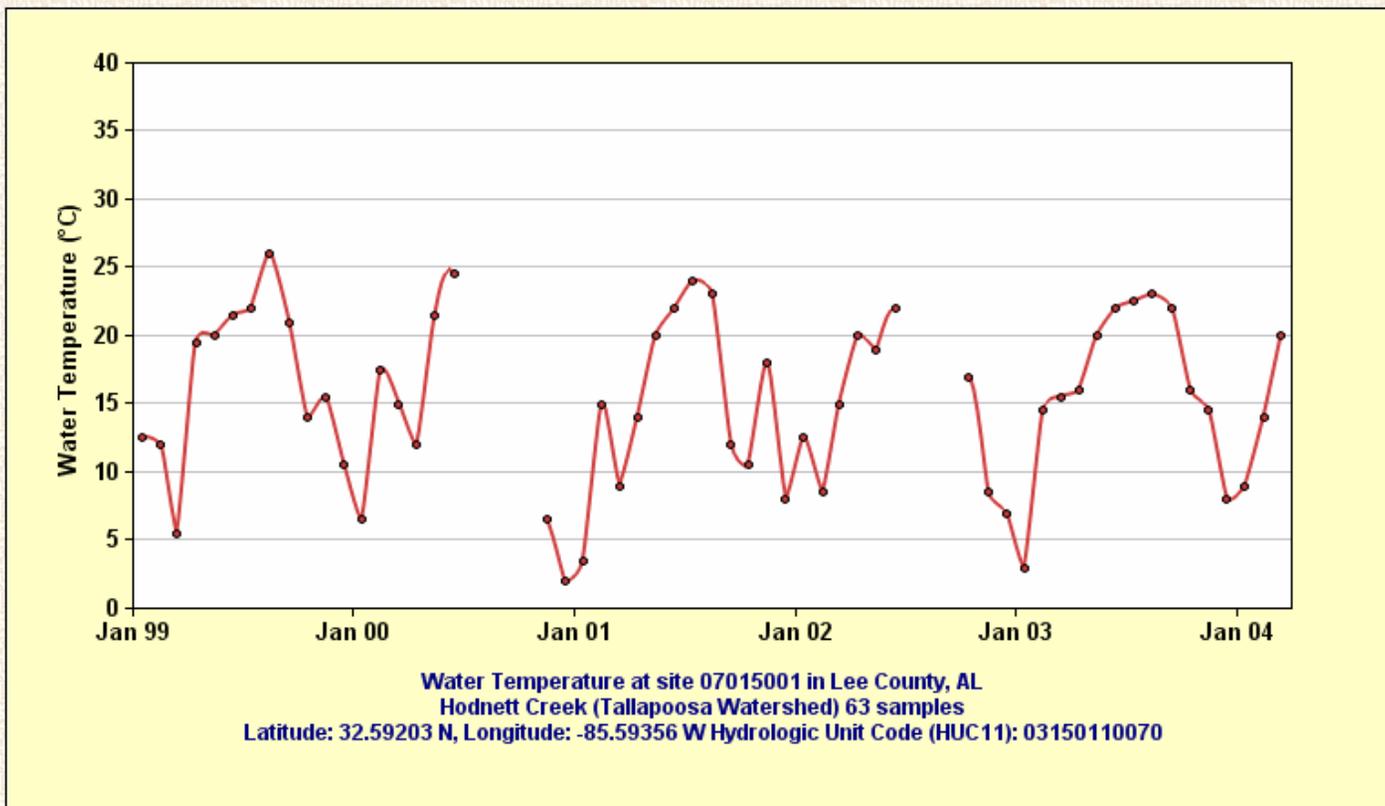


Real Time Graphs

AWW Site Maps

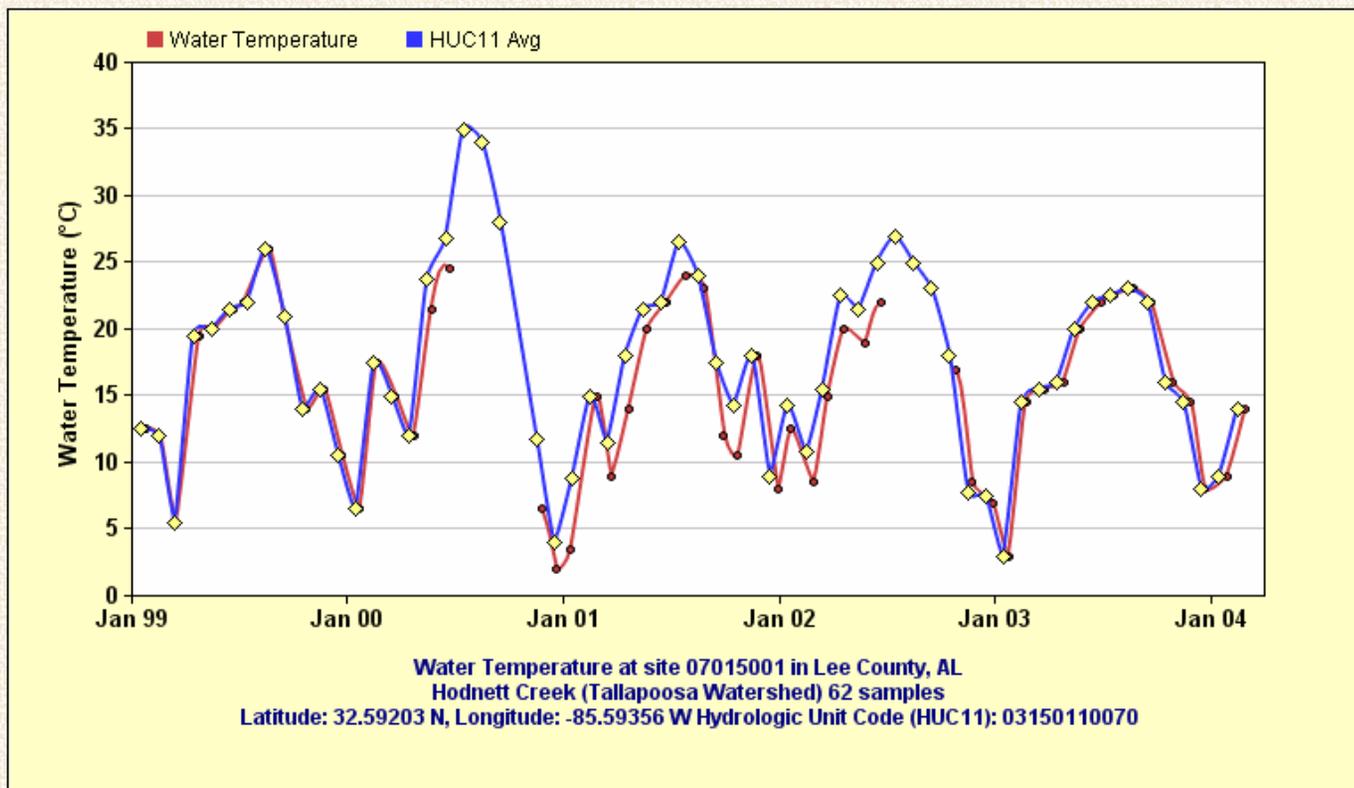
# AWW single Site Data...

Water Temp Y1 ... Y2 Plot Sites Groups WSheds Aerial Photo USGS Map  
HUC11 ... Avg From: Jan 1999 To: Mar 2004 Plot Map! DF Home  
 Spline Std  +Curve Std  +Trend  +cL  Graphs help



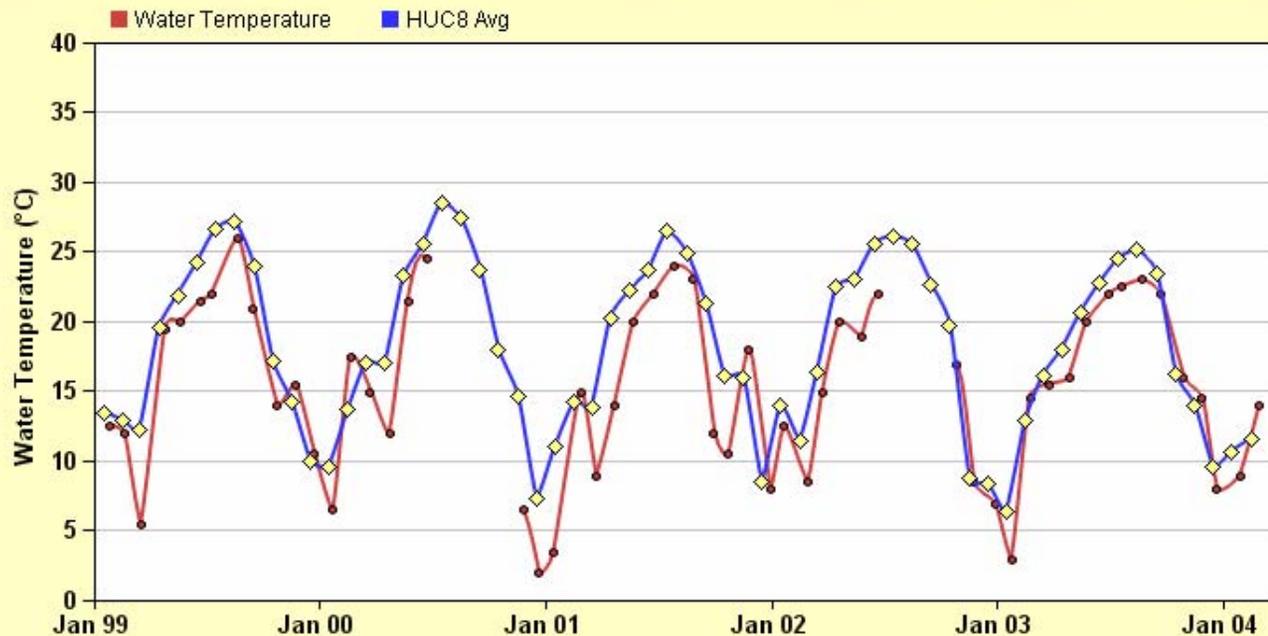
# AWW Site data and HUC 11 average...

Water Temp Y1 ... Y2 Plot Sites Groups WSheds Aerial Photo USGS Map  
HUC11 ... Avg From: Jan 1999 To: Mar 2004 Plot Map! DF Home  
 Spline  +Curve  +Trend  +cL  Graphs help



# AWW Site data and HUC 8 average...

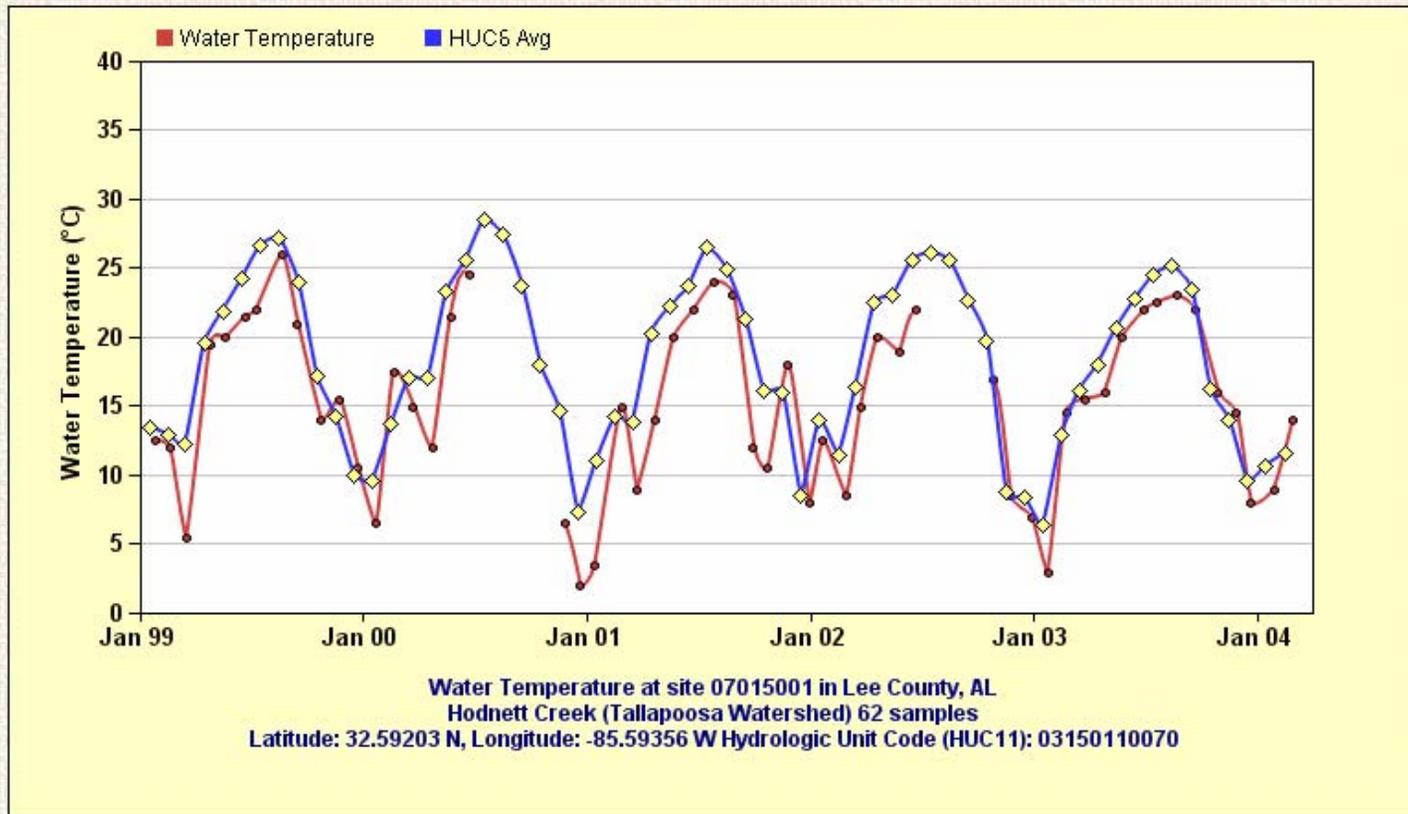
Water Temp Y1 ... Y2 Plot Sites Groups WSheds Aerial Photo USGS Map  
HUC 8 ... Avg From: Jan 1999 To: Mar 2004 Plot Map! DF Home  
 Spline Std  +Curve Std  +Trend  +cL  Graphs help



Water Temperature at site 07015001 in Lee County, AL  
Hodnett Creek (Tallapoosa Watershed) 62 samples  
Latitude: 32.59203 N, Longitude: -85.59356 W Hydrologic Unit Code (HUC11): 03150110070

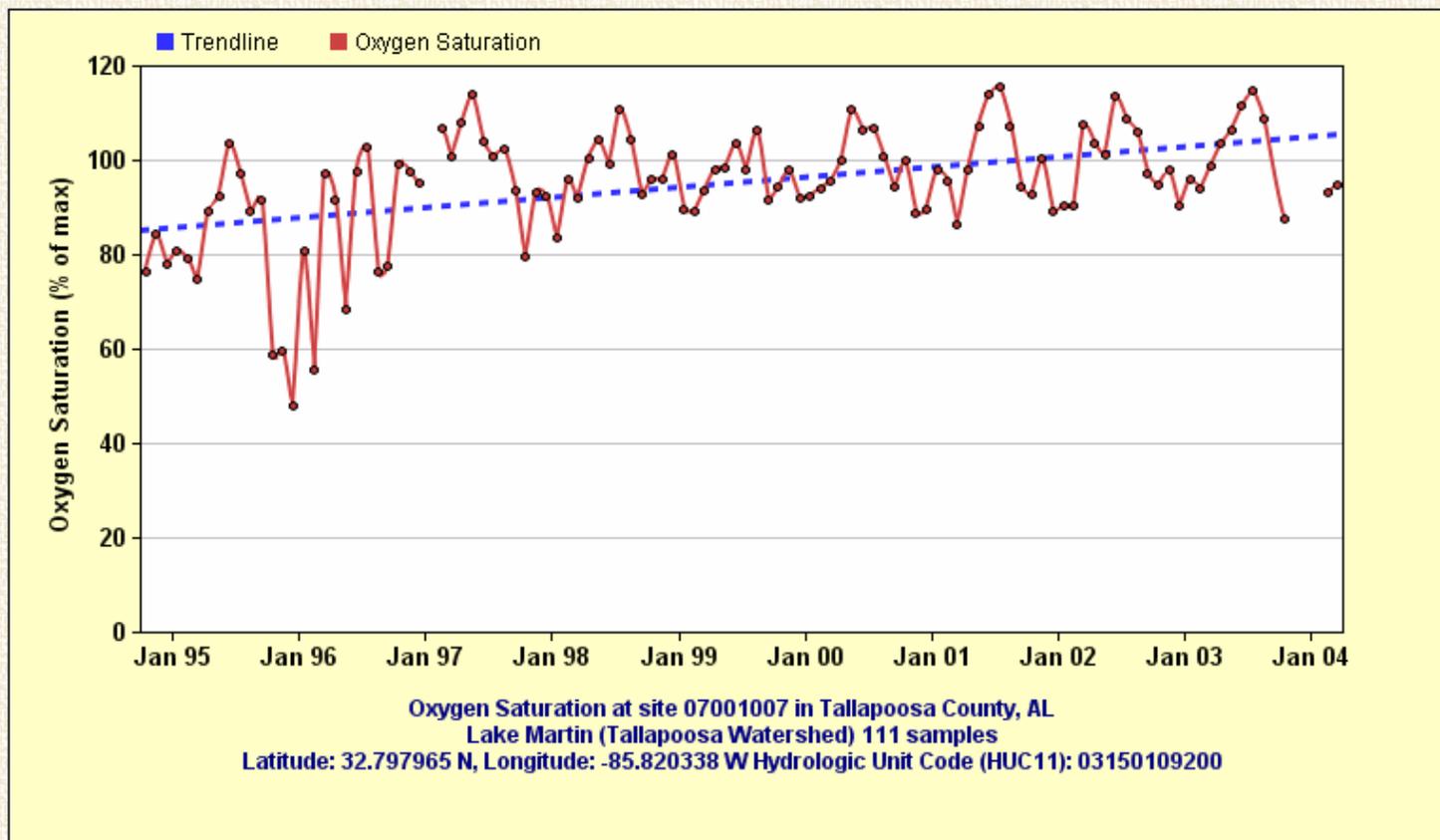
# AWW Site data and HUC 6 average...

Water Temp Y1 ... Y2 Plot Sites Groups WSheds Aerial Photo USGS Map  
HUC 6 ... Avg From: Jan 1999 To: Mar 2004 Plot Map! DF Home  
 Spline Std  +Curve Std  +Trend  +cL  Graphs help

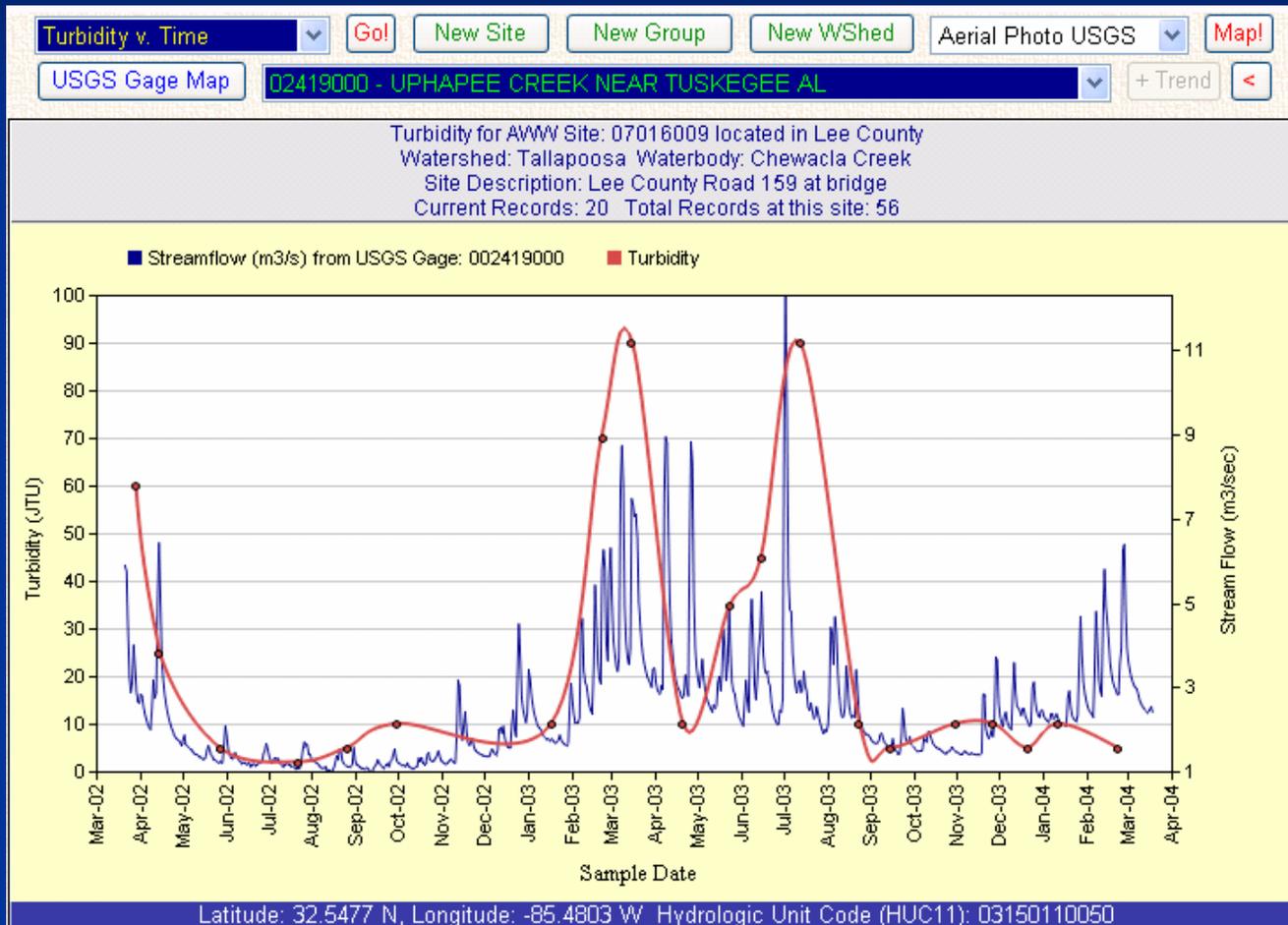


# AWW site online trend lines...

Oxygen Sat           
HUC11   From:   To:        
 Spline   +Curve   +Trend  +cL  Graphs help



# AWW Data corresponding with USGS Data





*Alabama Water Watch*

*[www.alabamawaterwatch.org](http://www.alabamawaterwatch.org)*

*Toll Free: 1-888-844-4785 Fax: 334-844-9208*