

SWPBA

Southeastern Water Pollution Biologist Association



**Newsletter
Volume 33, Number 2
July 2006**

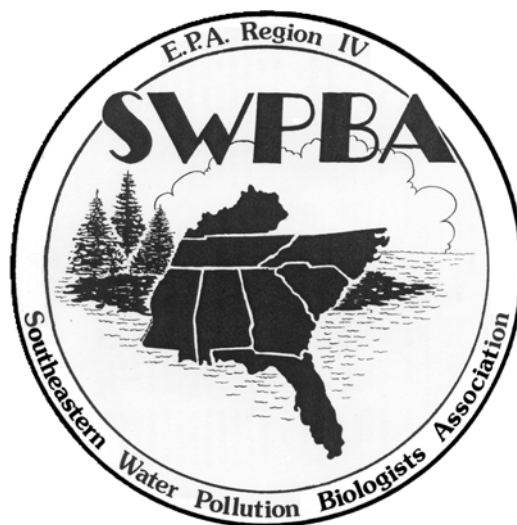


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(Updates are unavailable at this time for EPA Region IV.)

SWPBA

Southeastern Water Pollution Biologists Association

Letter from the President

I hope everyone's summer is going well and is not too hectic!

This is the last chance for each state and tribe to submit their 2006 award nominations. Nomination procedures and criteria are presented later in the newsletter. For nominations to be considered they must be submitted by September 1st, 2006. Please submit the nomination letters to me at michele_brossett@dnr.state.ga.us .

Within this newsletter you will find the information for the 2006 SWPBA meeting. If you have any questions, please feel free to contact one of us.

Please send in your abstracts and registration forms, making sure to mark your t-shirt orders and if you plan to attend the BBQ Monday evening and the Flint River Aquarium on Tuesday night. Please send this in as soon as possible so we can make ample preparations.

Ed Decker at EPA has provided us with funding to have Jan Stevenson come and conduct a Periphyton Workshop on Monday (November 13). We are very excited about having him and are hoping that others will be presenting periphyton and nutrient information during the meeting, so please send in those abstracts.

Important Dates to remember:

Award Nominations Deadline – September 1, 2006

Registration Deadline – October 13, 2006

Hotel Room Reservation Deadline – October 29, 2006

Hotel Room Cancellation Deadline – November 3, 2006

Abstract Deadline – September 29, 2006

Send Presentations By – October 31, 2006

Aquarium Registration Deadline – October 13, 2006

Take care and hope to see you in November,

Michele Brossett
SWPBA President, 2006
4220 International Parkway, Suite 101
Atlanta, GA 30354
(404) 675-1663
michele_brossett@dnr.state.ga.us

SWPBA

Southeastern Water Pollution Biologists Association

From the Secretary's Desk

Hello folks! I hope everyone is having a great summer. I'm sure everyone is in full swing with the summer sampling season, that is, if you have water. Here in Georgia, the bug team is in the lab for the summer. Fortunately we are missing out on the heat, the mosquitoes, and the snakes.

As you may remember from my letter in the last edition, we have requested SWPBA archival materials. However, as of time of print, we have only received one picture from Dave Penrose and a few photos from William McDermott, all from previous Mississippi meetings. Thanks Dave and William. So, if anyone else out there has anything from past SWPBA meetings, such as photographs, old newsletters, executive committee members list, etc. please send them to me. Also send those candid shots of SWPBA members hard at work.

As you're most likely aware, we have sent out a call for presentations and abstracts. All aquatic related topics are welcome, however there are a few topics that are of particular interest, such as nutrient criteria development, periphyton studies, blackwater related studies, and drought affects. Please try and get your abstracts in as soon as possible so that we can begin fine-tuning the agenda. The deadline for abstract submittal is September 29, 2006.

We have once again attached each state's database record to the newsletter e-mail. I have made any additions/corrections that were sent to me. Please look it over again and send me any further additions/corrections that need to be made.

Hope to see you all in November!

Tim Pugh
SWPBA Secretary, 2006
4220 International Pkwy., Suite 101
Atlanta, Ga. 30354
404-675-1683
timothy_pugh@dnr.state.ga.us

SWPBA

Southeastern Water Pollution Biologists Association

Editor's Update

A special thanks to everyone who contributed material for the first newsletter of 2006. We realize it's not easy to find extra time in the middle of the year to prepare another SWBA write-up, but we believe with your help we've put together another very informative newsletter. In addition to state write-ups, we've included in this newsletter the registration information needed to attend this year's SWPBA meeting. I think most will find this year's venue to be excellent. Please plan on attending.

Once again, please let us know if there are different contacts for the SWPBA newsletter that we should be contacting other than those listed in the states' database record. Below is the projected date for the final 2006 newsletter and the submittal deadline.

Volume 33 Newsletter Dates

Issue #	Date States Submit Update By	Date Newsletter e-mailed
Number 3	September 15, 2006	Early-October

Please e-mail state updates and other newsletter inserts to michael_basmajian@dnr.state.ga.us by the date listed above. Also, it would be helpful if submittals were formatted in Times New Roman font and a point size of 12.

Thanks,

Michael Basmajian
SWPBA Newsletter Editor, 2006
4220 International Parkway, Suite 101
Atlanta, GA 30354
michael_basmajian@dnr.state.ga.us

REGISTRATION FORM

2006 ANNUAL MEETING OF THE *Southeastern Water Pollution Biologists Association* --- **Lake Blackshear (Cordele, GA)** **November 13 - 16, 2006**

Name:	
Agency:	
Address:	
City, State, Zip:	
Phone:	
Email:	

Registration Deadline is October 13, 2006.

Registration Fee:	Qty:	@ \$55.00	= \$	
Banquet Fee: (Awards Banquet not included in registration fee)	Qty:	@ \$20.00	= \$	
EXTRA Banquet Ticket:	Qty:	@ \$28.00	= \$	
Parking fee: (Only one parking ticket needed per vehicle for entire stay – not needed for GADNR vehicles)	Qty:	@ \$3.00	= \$	
Flint River Aquarium:	Qty:	@ \$8.00	= \$	
T-Shirts: Size S-XL	Qty:	@ \$13.00	= \$	
Size XXL	Qty:	@ \$14.00	= \$	
Total = \$				

T-Shirts (size, quantity and color choices):

T-Shirt Color	Size	Quantity Ordered	T-Shirt Color	Size	Quantity Ordered
<i>Maroon</i>	S		<i>Charcoal</i>	S	
	M			M	
	L			L	
	XL			XL	
	XXL			XXL	

Please make checks payable to Michele Brossett (Note on Memo Line SWPBA) and send along with registration form to:

**Watershed Planning and Monitoring Program
4220 International Parkway, Suite 101
Atlanta, Georgia 30354
Attention: Michele Brossett**

Please indicate which Wednesday afternoon session you would like to participate in. Space is limited for the Jones Ecological Center and will be on a first come first serve basis. The center is about an hour drive and we will carpool with each other. An alternate special session will be held at the conference center and will include speakers such as Dr. Chris Skelton (presentation: Crayfish of GA).

_____ Joseph W. Jones Ecological Research Center (<http://www.jonesctr.org/>)

_____ Special Session with guest speakers

Number Count

Please mark which days you will be attending the conference to help us with a total number count for each day. (Thank you):

Monday	Tuesday	Wednesday	Thursday

_____ **Please check if you plan to attend the BBQ Monday night (Cost included with registration.)**

(The BBQ will be Pork, but if you have special dietary requirements we will offer chicken or vegetarian upon request. We need to know no later than October 13, 2006.)

Special Dietary Requirements for BBQ

_____ **Chicken**

_____ **Vegetarian**

Wednesday Afternoon Sessions

Choice 1:

Joseph W. Jones Ecological Research Center

(<http://www.jonesctr.org/>)

Please register early if you are interested in a field trip to the Jones Ecological Center because space is limited at the center so it will be on a first come first serve basis. We will need volunteers to drive and we will carpool together. This is about an hours drive, but it will be worth the trip. The center is by invitation only and thanks to Harold Harbert's contacts with the center, we are getting this great opportunity.

The first half of the visit will be presentations on nutrient and blackwater ecosystem research. For the second half of the visit, we will divide into vans and go on a tour of three types of ecosystems at the center: Ichawaynochaway Creek, wetland, and the longleaf pine plantation.

Choice 2:

Special Sessions

Speaker 1: Dr. Christopher E. Skelton

Georgia College & State University

Assistant Professor, Biology

PhD, Ecology and Evolutionary Biology, University of Tennessee--Knoxville

chris.skelton@gcsu.edu

<http://www.faculty.de.gcsu.edu/~cskelton/>

Dr. Skelton will be giving a presentation on crayfish of Georgia. (*ABSTRACT to come.*)

Speaker 2:TBA

Speaker 3:TBA

Tuesday Evening Activity

Flint RiverQuarium

The Flint RiverQuarium is a modern facility located along the Flint River in Albany, GA. in an area that has recently been redeveloped. The facility was completed in 2004. The main tank is a replica of an exiting (but unnamed) Blue Hole Spring located in Southwest Georgia.

The Aquarium offers a view into a 22-foot deep 175,000-gallon Blue Hole Spring. There are hundreds of fish, turtles, alligators, snapping turtles, and other creatures to view in a natural environment. In addition to the main tank, there are also many smaller fresh and salt-water aquariums with flora and fauna native to the area.

The aquarium is approximately 45 minutes drive time from Lake Blackshear. Everyone that wants to go to the Aquarium will meet prior and carpool together. We will meet at the aquarium at 6:30. This will be an after hours guided tour that will last about an hour. After the tour we can plan to eat in Albany (dinner on your own). The admission price is not included in SWPBA registration price and the discounted price would be \$8.00.

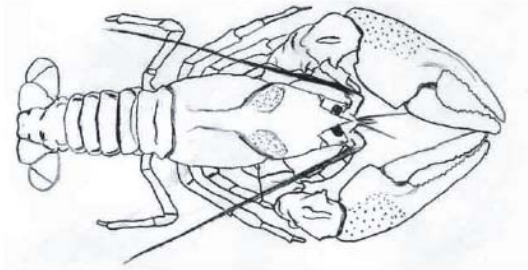
We need to know no later than October 13, 2006 how many people want to go to the aquarium.

For more information on the aquarium please visit their website at www.flintriverquarium.com .

T-shirt Design

Back of Shirt

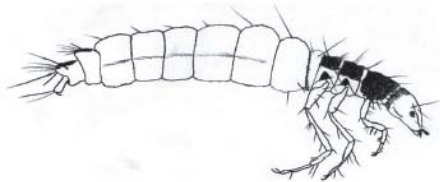
Georgia Endemics



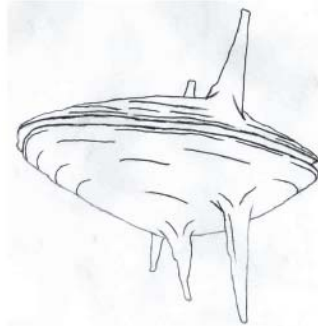
Cambarus coosawatee



Paraleptophlebia georgiana



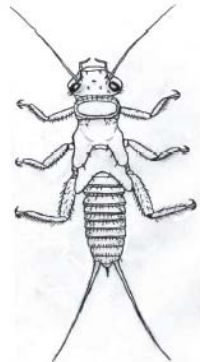
Neotrichia mentonensis



Elliptio spinosa



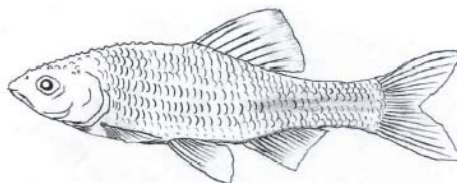
Elliptio shepardiana



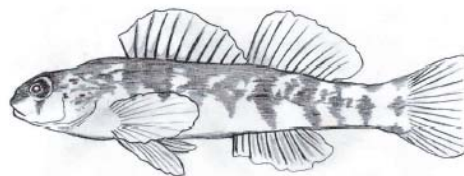
Remenus duffieldi



Spilochlamys turgida



Cyprinella xaenura

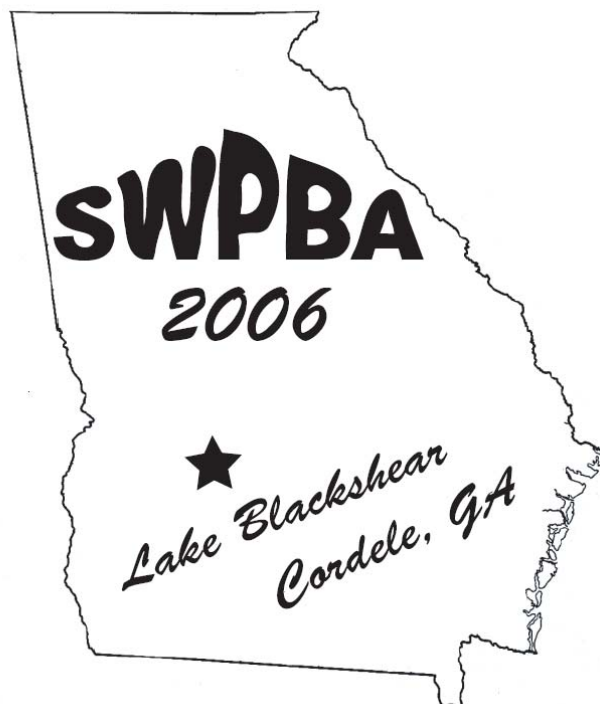


Etheostoma scotti

Left Sleeve



Right Front Chest



GEORGIA 2006 SWPBA ABSTRACT FORM

ABSTRACT DEADLINE DATE: September 29, 2006

TITLE OF PRESENTATION:
Presenters:
State or Department Name:
ABSTRACT: Please use a 10-point font, no more than 200 words.
TYPE OF PRESENTATION: _____ Oral _____ Poster Session
SPECIAL REQUIREMENTS:

Presentations are 15 minutes long. If you need more than 15 minutes, please contact us with the specific details.

All presentation topics are welcome! Some topics that people have shown interest in are nutrients, periphyton, volunteer monitoring (adopt-a-stream), outreach, local government monitoring, blackwater ecosystems, and drought effects on streams.

NOTES: Power point will be available for your presentation. If you need other equipment, please contact us immediately.

For larger presentations you may have to split the presentation in two separate e-mails or send the presentation by CD to us. ***Please send to us by October 31, 2006.***

Please e-mail abstract forms and power point presentations to
michele_brossett@dnr.state.ga.us or mail to:

Michele Brossett Watershed Planning and Monitoring Program
4220 International Parkway, Suite 101 Atlanta, Georgia 30354

Hotel Information

2006 ANNUAL MEETING OF THE *Southeastern Water Pollution Biologists Association* Lake Blackshear (Cordele, GA) November 13 - 16, 2006

Room Reservations must be made by each individual (or each room party) no later than October 29, 2006.

Room Rates:

Lodge/Villas:

\$80.00/per night (Plus applicable state and local taxes.) - Single Occupancy

\$100.00/per night (Plus applicable state and local taxes.) – Double Occupancy
(*\$50 per person*)

Cottages:

\$149.00/per night (Plus applicable state and local taxes.) – Four Occupancy
(*\$37.25 per person*)
(*Very limited numbers*)

(State of Georgia employees are exempt from state tax with proper tax exemption certificates. Individual tax exemption certificates must be presented upon check-in for exemption of room tax.)

Room Block:

November 10 – November 19, 2006 (Friday – Sunday)

Make hotel reservations by calling directly at 229-276-1004 or 1-800-459-1230. Make sure to identify yourself as being part of the Southeastern Water Pollution Biologists Association at the time you are making the reservation in order to receive the special group rate. All reservations must be called in on or before October 29, 2006.

Address:

LAKE BLACKSHEAR RESORT & GOLF CLUB
2459-H US Highway 280 West
Cordele, GA 31015

(Nestled in the middle of Georgia Veteran's Memorial State Park.)

www.lakeblackshearresort.com

Room reservation must be canceled no later than November 3, 2006.

Lake Blackshear Resort and Accommodations



Georgia 2006 Tentative SWPBA Agenda

➤ Monday November 13

- Breakfast on your own
- Jan Stevenson will conduct periphyton workshop (8-12 & 1-5)
 - Lunch on your own
 - Executive committee meeting during lunch
- BBQ 6:30 pm included in registration

➤ Tuesday November 14

- Breakfast on your own
- Morning session - Nutrients & Periphyton presentations/Macroinvertebrate Comparability Topics – 15 minute presentations
 - Lunch on your own
- Afternoon session - Volunteer Monitoring/Outreach/Local Government Monitoring Presentations
- Poster session
- Evening Activity – (not included in registration fee) – Flint River Aquarium - (Visit website for more information on the aquarium. <http://www.flintriveraquarium.com/>)
 - Dinner on your own
- Hospitality room

➤ Wednesday November 15

- Breakfast on your own
- State Presentations
 - Lunch on your own
- (Wednesday afternoon will be a choice between attending the Jones Ecological Center or a Special Session at the Lake Blackshear Conference Center. The Jones Ecological Center has limited space and will be on a first come basis, so sign up early!!!)*
- Afternoon Choice 1 – Jones Center (<http://www.jonesctr.org/>)
- Afternoon Choice 2 – Alternate Special Session
 - Dr. Chris Skelton – Crayfish of Georgia presentation.
 - TBA
 - TBA
- Banquet
- Hospitality room

➤ Thursday

- Breakfast on your own
- Morning State Presentations
- Business Meeting
- SWPBA meeting adjourned

2006 CALL FOR AWARD NOMINATIONS

Last call for nominations!! Please send in your 2006 nominations by September 1, 2006. Nomination procedures follow:

“SWPBA Biologist of the Year” Award

Overview of the Award

Sponsored each year by the EPA Region 4 Ecological Assessment Branch in Athens, GA, the “SWPBA Biologist of the Year” award recognizes the innovative work of a front line Region 4 State/Tribal biologist. The Executive Committee of the Southeastern Water Pollution Biologist Association (SWPBA) will review the nominations and select the recipient. The “Biologist of the Year” award winner will receive a beautiful plaque from the EPA at the annual SWPBA meeting. An additional “rotating” plaque that lists the recipient’s name along with previous winners will be presented to their agency for display during the following year.

The Nomination Process

Each SWPBA member state, tribe or EPA may nominate up to two (2) biologists for consideration by the SWPBA Executive Committee. Names of the nominees for the award will be kept confidential by the Executive Committee. The SWPBA primary contact(s) for each member state or tribe are responsible for coordinating the nominating process in a manner that best suits their organization. The SWPBA President may be consulted at any time concerning the nomination process, and at his/her discretion may ask the Executive Committee for clarifications or rulings on the conduct of the nomination and selection process. The intent of SWPBA is to keep the process as fair and uncomplicated as possible so that the award ceremony will be both enjoyable and a point of pride for SWPBA and its members.

The Nomination Timeline and Narrative

Nominations must be sent by the appropriate primary contact(s) via e-mail or letter to the SWPBA President by September 1st in order to provide enough time for review and selection by the Executive Committee. The nomination narrative is limited to one page and must include the nominee’s name and organization, the name, phone number, and e-mail address of the individual initiating the nomination, and a description of the nominee’s work with a focus on the criteria discussed in the following paragraph.

Award Eligibility and Criteria

The nominee must be a SWPBA Member and a full time employee of a SWPBA member state or tribe to be eligible for the award. Also, it is the intent of this award to recognize state/tribal biologists for work that is currently underway or recently completed. The criteria for selection will include factors such as the innovative nature of the work, the level of complexity, the potential for widespread application of the findings, the level of collaboration with other states/tribes/agencies, and the individual leadership

demonstrated by the biologist in their respective program. Questions concerning the award or the nomination process may be directed to the SWPBA President.

“SWPBA Lifetime Achievement” Award

Overview of the Award

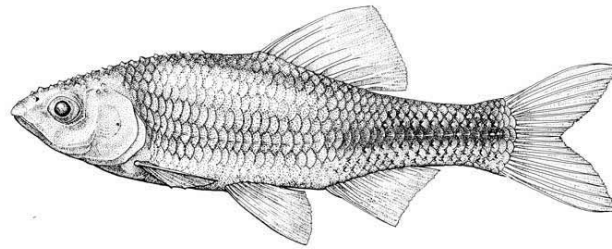
Sponsored each year by the EPA Region 4 Ecological Assessment Branch in Athens, GA, the “SWPBA Lifetime Achievement” award recognizes the long-term achievements and contributions of a member biologist (state, tribal or federal) to the science of water pollution biology. The Executive Committee of the Southeastern Water Pollution Biologist Association (SWPBA) will review the nominations and select the recipient. The “SWPBA Lifetime Achievement” award winner will receive a beautiful plaque from the EPA at the annual SWPBA meeting. An additional “rotating” plaque that lists the recipient’s name along with previous winners will be presented to their agency for display during the following year.

The Nomination Process

Each SWPBA member state, tribe or EPA Region IV may nominate one (1) biologist for consideration by the SWPBA Executive Committee. Names of the nominees for this award will be kept confidential by the Executive Committee. The SWPBA primary contact(s) for each member state, tribe or EPA Region IV are responsible for coordinating the nominating process in a manner that best suits their organization. The SWPBA President may be consulted at any time concerning the nomination process, and at his/her discretion may ask the Executive Committee for clarifications or rulings on the conduct of the nomination and selection process. The intent of SWPBA is to keep the process as fair and uncomplicated as possible so that the award ceremony will be both enjoyable and a point of pride for SWPBA and its members.

The Nomination Timeline and Narrative

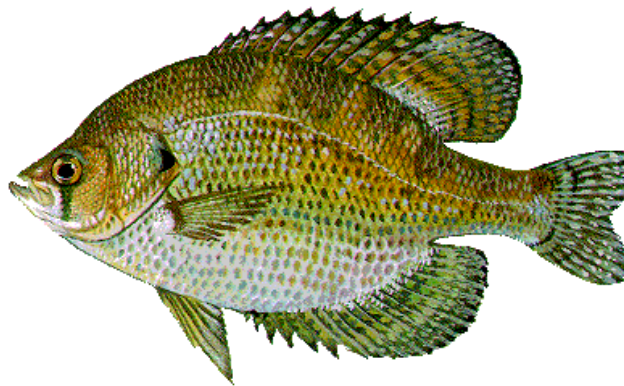
Nominations must be sent by the appropriate primary contact(s) via e-mail or letter to the SWPBA President by September 1st in order to provide enough time for review and selection by the Executive Committee. The nomination narrative is limited to three pages and must include the nominee’s name and organization, the name, phone number, and e-mail address of the individual initiating the nomination, a biographical sketch of the nominee’s scientific career, a description of the nominee’s work with a focus on the criteria discussed in the following paragraph, and at least two (2) letters of support from other water pollution biologists.



Altamaha Shiner, *Cyprinella xanura*

Copyright Gini Knight 2001

STATE UPDATES



News from Georgia

Statewide Water News

On June 21, Dr. Carol Couch, Director of EPD, issued a **level one-drought declaration** for the entire state. The declaration requires that Georgians immediately follow a more stringent outdoor water use schedule. The level one drought schedule is as follows:

- Odd-numbered addresses may water only on Tuesdays, Thursdays and Sundays-12 midnight to 10 a.m. and 4 p.m. to 12 midnight.
- Even-numbered and unnumbered addresses may water only on Mondays, Wednesdays and Saturdays-12 midnight to 10 a.m. and 4 p.m. to 12 midnight.

The Board of Natural Resources adopted Rules for Outdoor Water Use, Chapter 391-3-30 in May 2004. Under the rules, Georgians are required to follow schedules for outdoor water use during both non-drought periods and during periods of declared drought. The rules are consistent with Section 4 (Drought Responses) of the Georgia Drought Management Plan, which the Board adopted in 2003. The rules apply to any entity, and its customers, permitted by EPD for water withdrawal or for the operation of a public drinking water supply system.

On June 30, Governor Sonny Perdue announced that the state of Georgia had reached a short-term agreement with Alabama and Florida on the release of water from Georgia's conservation reservoirs in the Chattahoochee River Basin. The agreement establishes that the U.S. Corps of Engineers will release water from the reservoirs at a baseline of 5,000 cubic feet per second. It also calls for the creation of an environmental storage pool of less than five percent of the total conservation storage available in the basin reservoirs; to be used for the protection of Florida endangered species. The remaining conservation storage in the reservoirs will be preserved for meeting Georgia's needs, including water supply and recreational use. This agreement also will allow a greater portion of rains that might come over the next month to be stored in the reservoirs.

WATERSHED PLANNING & MONITORING PROGRAM

EPA National Lake Assessment Study

Kathy Methier and Liz Booth attended the National Lakes Assessment Survey Meeting in Chicago, Illinois in April 2006. Georgia has done an initial review of the Panel 1 and Oversample list of lakes, and has been following the discussions of steering committee and regional groups on parametric coverage, indicators, and methodology. Georgia is considering what level of participation will be possible. A final decision will be made once study parameters and methodology are finalized by EPA, and Georgia can accurately assess what state resources will be required to participate.

Ambient Monitoring Unit (AMU)

The AMU is in the process of filling an Environmental Specialist position for the rivers and streams chemical monitoring. The extra pair of hands are desperately needed to complete all the sampling for the modeling project this summer season as well as keeping up with the normal trend monitoring outside of the modeling project.

Susan Salter is working along with other program staff to develop a schedule for continued work on the Savannah Harbor Dissolved Oxygen Criteria issue. Susan is also working along with Michele Brossett and other staff to implement nutrient criteria development plans. And as if that is not enough, Susan tackled the 2006 305(b)/303(d) data assessment and report development. She is fast learning that hard work is rewarded by acquiring more projects.

Rivers and Streams – Chemical:

Brandon Moody is very busy this summer with maintaining eight continuous water quality monitors plus weekly chemical sampling at sixteen stations in the Coosa Basin as part of the Coosa River Modeling Study. We are already seeing stream levels this year much lower than anything we encountered in the first year of the Coosa Study. In addition to the Coosa work, he is continuing to monitor eight long-term trend stations in the Atlanta Metro area and six stations located on tributaries to the northern end of Lake Sydney Lanier.

Surface water sampling personnel working out of Georgia EPD's Brunswick Regional office are continuing to monitor (when they can find water) 30 stations located in the coastal plain of southeast Georgia. They are reporting severe drought conditions with no flow in many smaller streams in the area.

Streams – Biological:

Tim Pugh, Michele Brossett, and Cody Jones are busy subsampling the samples collected this past season in the 75f (Sea Island Flatwoods) subcoregion. They are working hard to get this done, as this data will be used to refine the metrics for that subcoregion as well as in a joint/performance comparability study with EPA region IV and region IV states. They are also currently doing recon visits around Columbus, Georgia in the 65d subcoregion, for the EPA periphyton study. Macroinvertebrates and nutrient samples will also be collected at these sites. In a cooperative effort with WRD (Wildlife Resources Department), fish samples will be taken at the selected periphyton sites. Also planned, macroinvertebrates and nutrient samples will be collected at some Blue Ridge sites to help WRD determine the health of some trout streams in the area.

Another job on the table is the creation of spreadsheets that will allow consultants, and other interested parties, to easily calculate the metric scores for a stream in almost all Georgia subcoregions (the Okefenokee being the only exception).

Also in the works is the placement of our latest SOP and other procedural documents on the web. The metric spreadsheets will also be on the web as soon as they are completed and checked.

305(b)/303(d) 2004 and 2006 Report Status:

After two years of discussions between the State and EPA, Georgia's 2004 303(d) List was approved by EPA on May 18, 2006. Georgia's draft 2006 305(b)/303(d) List was sent to EPA on March 29, 2006 for draft review to coincide with a 45 day public comment period. Prior to the close of the public comment period on May 15, 2006, EPD received substantial comments on the proposed List and its assessment methodology. The majority of the comments revolved around two issues: 1) the assessment of data for chlorophyll *a* and the listing of a number of major lakes in Georgia; and 2) the removal of a number of southern Georgia blackwaters from the list based on "natural" dissolved oxygen concentrations that were established in total maximum daily loads. EPD will be holding a meeting on July 26, 2006 with those persons who submitted comments during the public comment period. After discussions are completed, the Georgia EPD plans to send a final list to EPA for approval.

Facilities Monitoring Unit (FMU)

With Calendar Year 2006 half over the Facilities Monitoring Unit (FMU) has completed workplan inspection goals for Major and Minor NPDES facilities in the River Basin Management Plan (RBMP) Basins of Focus. During the second half of the calendar year a subset of these facilities will be resampled as priorities and resources allow using targeting input from the Permitting Program and District offices.

The major priority is the second year of point-source sampling for the Coosa River Modeling Project (CRMP) which began in late June and continues through mid-October. Also, with the start of Federal Fiscal Sampling/Reporting Year 2007 in October, inspections of State-permitted Industrial Users ("Industrial Pretreatment" facilities) will begin in earnest.

Intensive Surveys Unit (ISU)

The Intensive Survey Unit is responsible for major lake monitoring in Georgia as well as special studies and stream flow gaging. In addition, the ISU coordinates the DNR fish tissue contaminant assessment project for the EPD, Wildlife Resources (WRD) and Coastal Resources (CRD) Divisions, and the annual update and publication of the DNR fish consumption guidelines.

Lake Monitoring Activities

Monthly lake standards monitoring was initiated in April on Lakes Lanier, West Point, W.F. George, Allatoona, Carters and Jackson. Additional investigative monitoring was conducted in May on Carters Lake and downstream following an algal bloom and reports of taste and odor complaints from public water supplies that withdraw source water from Carters Lake and the downstream rivers. The bloom had subsided by June.

The second quarter monitoring of the Chattahoochee and Flint basin lakes was completed in June. These are Lakes Harding (Bartletts Ferry), Goat Rock, Oliver, Andrews, Seminole, Blackshear and Worth.

Coosa River Modeling Project

The ISU is responsible for 3 modules of the Coosa River Modeling Project (Modules 4, 6 and 7), with additional responsibility for weekly monitoring of 18 of the 33 stations of Module 3. Monitoring for 2006 began in March, and segued into the intensive stage of higher frequency monitoring in June. Module plans are posted on the GAEPD website at: http://www.gaepd.org/Documents/coosa_modeling.html. Stream flows have been low due to the moderate drought, particularly North Georgia.

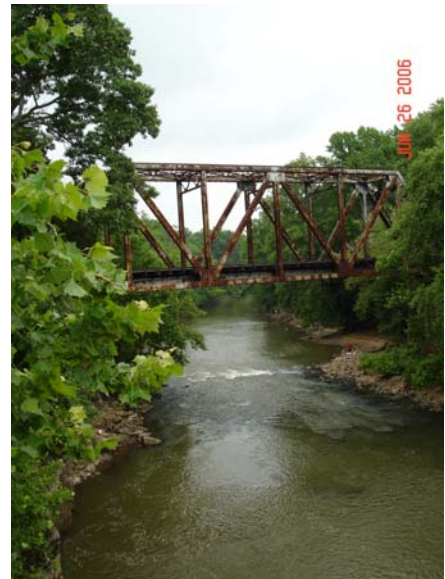


Photo: Coosawattee River below Carters Re-regulation Reservoir

Fish Tissue Assessment

The FY 07 fish tissue collections monitoring plan is in development. Part of this planning includes assessment of and reallocation of collection and laboratory resources to allow for initiating an annual subprogram to support trend analysis of mercury concentrations in fish tissue. The existing fish tissue assessment program that supports issuance of fish consumption guidance and that is based on analysis of tissue samples for 43 contaminants will continue. The mercury trend project will be conducted at selected stations statewide annually, with a designated predator species of young age. Muscle tissue of individual fish will be analyzed for mercury alone.

TMDL Modeling and Development Unit (MADU)

TMDL update:

Georgia's TMDL Development Unit made a mad rush to complete 218 TMDLs for the Altamaha, Ocmulgee and Oconee River Basins by June 30, 2006. The draft TMDLs will be public noticed and sent to EPA for review and approval.

TMDL Implementation Program

Monitoring Implementation of Total Maximum Daily Loads (TMDL) to Track Water Quality Restoration

An important objective of implementing Total Maximum Daily Loads (TMDL) is to develop TMDL implementation plans. Local governments and stakeholders use the planning process to recommend water quality-based controls, and to evaluate and track progress in reducing pollution loads and restoring water quality. Georgia EPD measures the success of TMDL implementation in the number of stream segment miles on the statewide 305(b)/303(d) List of “impaired” waters that are restored to “supporting” beneficial public use.

The monitoring component of TMDL implementation plans calls for proposed or current sampling to focus on detecting sources and assessing the effectiveness of management measures recommended in the plans. Preferred monitoring activities involve collecting and analyzing samples following USEPA-approved methods and Georgia EPD guidelines. If a monitoring program is conducted in order to submit data for 305(b)/303(d) listing decisions or to report water quality restoration that may result in listing adjustments, the Georgia EPD must first accept a Sample Quality and Assurance Plan (SQAP) developed for those particular monitoring activities.

Other monitoring or surveys are also acceptable under the TMDL implementation plan for the purpose of providing general information about pollutants or identifying sources. These sampling activities may occur under the guidance of city governments, county governments, their hired consultants, RDC hired consultants, Adopt-a-Stream groups, or watershed coalitions. Purposes for performing independent sampling may include obtaining more data, targeting pollution sources, assessing preliminary effectiveness of implementation plans, or verifying the values from previous sampling events.

NON-POINT SOURCE PROGRAM

Georgia Adopt-A-Stream

New Arrival: Aquatic Macroinvertebrate Field Guide for Georgia's Streams

Over the past six months, the Georgia Adopt-A-Stream Program has been developing a new biological monitoring field guide following the recommendations of many benthologists. This information has led many volunteer monitoring programs to change the classification system of macroinvertebrates for biological monitoring. The major change to the guide is in the classification of Caddisflies. Recent studies have found that tolerance to pollution varies in Caddisflies. Research shows that the common net spinning caddisfly (Family Hydropsychidae) is more tolerant to pollutants than other caddisflies in the Order Trichoptera. The new guide divides the caddisflies into two

categories, Caddisflies and Common Net Spinning Caddisflies, based on their tolerance to dissolved oxygen levels. Another change to the guide includes combining Dobsonfly/Hellgrammites with Fishflies.

The new field guide will be more durable than ever before. It will consist of a laminated quad-folded guide that will fit into your back pocket. The guide features all new illustrations of the macroinvertebrates, including sketches of the adult form for many of the species. The new format and species descriptions will also make it easier for volunteer monitors to identify the macroinvertebrates in the field.

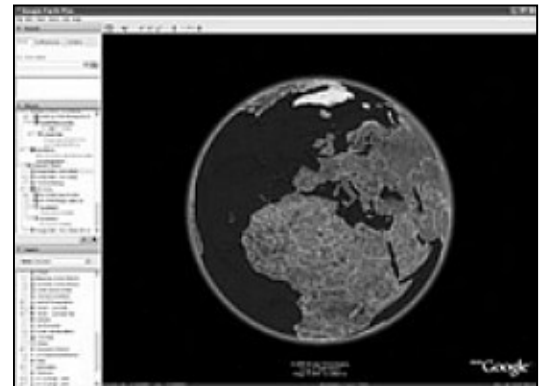
With these new changes, we are asking all of our QA/QC Certified Biological Monitors to renew their certification by January 1, 2007. This will allow all of our biological monitoring programs to be certified under the same protocols by the beginning of next year. As a token of appreciation for their monitoring efforts, all QA/QC Biological Monitors will receive a free copy of the field guide.

The guides will also be available for downloading on our website at www.georgiaadoptastream.com. Groups interested in obtaining a large quantity can contact the State Adopt-A-Stream office at 404-675-6240.

Google Earth Monitoring Data Updates

We've made some changes to the Adopt-A-Stream section on Google Earth. Now more information is bundled together in a single download. If you've already downloaded the AAS layer, all updates will be automatically linked, otherwise obtain the AAS link from our website. The bundled package includes:

- Adopt-A-Stream monitoring data for DO, temperature, pH and WQI (Water Quality Index, or the macroinvertebrate monitoring value)
- A layer with 8 digit HUC watersheds and 10 digit HUC watersheds
- A layer to view all supporting, partially supporting and non-supporting 2002 (the most recent) Water Quality Designated Uses for the Clean Water Act sections 305(b)/303(d) list
- Links to landfill sites
- Land application sites (LAS), and
- Surface mines



Separate downloadable layers found on our website include:

- Links to activate all USGS real time monitoring sites and a layer to view all USGS topological maps (can be viewed in 3D)

Clicking on “hot spots” will activate windows specific information, such as water quality data. Our advice? Play with the different layers to become comfortable creating maps and accessing information. If you’re still having trouble, contact the State Office, 404.675.1635 or 1636. Comprehensive directions including the AAS link download can be found at www.GeorgiaAdoptAStream.com

Rivers Alive

Rivers Alive, one of the South's largest waterway cleanups, is right around the corner! Last fall, from September to October, was the largest Rivers Alive to date with 24,595 volunteers collecting over 684,000 pounds of trash from 2,919 miles of waterways from the cold water streams of the northeast Georgia mountains to the large fish-filled lakes of southwest Georgia. The Advisory Board is looking to topple last year's participation by having more than 30,000 volunteers involved throughout every major watershed in the State. Additionally, the board is looking to increase the number of education events that occur along with cleanups. Dana Skelton, Education Chair, stated, “Education is key to insuring long term sustainability of Rivers Alive since through education we can get citizens to think about the impact of trash in our waterways.”

Rivers Alive is a joint program of Georgia DNR Environmental Protection Division Watershed Protection Branch’s Adopt-A-Stream program and Keep Georgia Beautiful. To find out more about Rivers Alive, visit: <http://www.riversalive.org> or contact Mitch Russell at 404.362.6536 or mitch_russell@dnr.state.ga.us . To register go to: <http://www.riversalive.org/Registration.htm> .

Hope to see you on the water this fall!

WILDLIFE RESOURCES DIVISION

Stream Survey Unit Update:

Stream Team staff are continuing to work with fish data that were collected in 2004 and 2005 from the Blue Ridge (BRM) ecoregion and hope to complete development of the fish IBI for that ecoregion later in 2006.

The Stream Survey Team is concentrating their fish-collecting sampling efforts, this field season (2006), in the Atlantic Slope and Gulf Slope drainages (except the Apalachicola) of the SEP ecoregion. This area includes parts or all of the Altamaha, Ochlockonee, Ocmulgee, Oconee, Ogeechee, Satilla, Savannah, and Suwannee watersheds.

New state records – WRD certified:



Carl Sawyer with new WRD-certified state record flathead catfish caught on the Altamaha River on June 22, 2006. The 83 pound, 54 inch catfish broke the previous record 67 lbs. 8 oz. flathead caught on the Altamaha River in 2000.



James Tyus with new WRD-certified state record blue catfish caught on the Chattahoochee River below Columbia Lock & Dam on April 1, 2006. The 67 lbs. 8 oz., 48 inch blue exceeded the previous 62 lbs. record holder caught in 1979 in Clarks Hill Lake.

STATE OF SOUTH CAROLINA

Department of Health and Environmental Control

AQUATIC BIOLOGY SECTION

Macroinvertebrate Group

Much change has occurred within our group. Harry Gaymon took a job at the SCDHEC Sumter District Office in the Bureau of Air. A native of Sumter, Harry has been making the 1 hour drive to Columbia for over 25 years, so as he nears the end of his career this will be a welcome move for him. We wish Harry all the best and will miss him here in the Aquatic Biology Section. Scott Castleberry will be serving double duties helping with both the macroinvertebrate team as well as the fish tissue program until our vacant position has been filled. Scott has been training with us in the field and lab over the past year and will be taking Dr. Morse's EPT course at Highlands North Carolina this summer.

Our summer sampling is now in full swing and we will be working in the Saluda-Edisto basin in 2006. We will also be participating in the joint compatibility study and will be sampling 5 streams in NC and 5 in SC along with the North Carolina staff.

As the chair of the Local Arrangements Committee for the 2007 North American Benthological Society I remain extremely busy attempting to arrange this large meeting. As many of you know the NABS meeting will be held here in Columbia beginning 03 June 2007. I would like to see as many EPA Region IV staff as possible come to this meeting to represent the southeast. If you have not been to a NABS meeting, you owe it to yourself to attempt to come now that the meeting is relatively close to home for most of you. James Glover, Senior Scientist GloverJB@dhec.sc.gov

Nonpoint Source Monitoring Team

We continue to do our monthly sampling for bacteria in the Catawba watershed as well as in the upstate region. We recently began two projects that will be ongoing for at least one year: a study on the Congaree River and a study on three tide creeks in Charleston county. Both of these studies are being done to try to determine sources of bacteria. Along with all of that, we will soon be underway on our bug sampling for the 303d list. We certainly have a busy summer ahead!

Phycology Program

We hope that all is going well with our colleagues across EPA Region 4. In the Phycology Department at SC DHEC, the activities have been pretty much of the routine variety thus far this summer. After working many years in the environmental field and observing some of the natural and man-made events that have occurred in our Region 4 recently, we have come to believe that routine can be good, however.

In 2006, District staff are collecting chlorophyll samples at 113 lake and estuarine stations once per month May through October for the Ambient Monitoring Program. These samples are then forwarded overnight to Columbia where they are processed and analyzed here in our Aquatic Biology Lab. An additional 50 estuarine stations are being sampled for chlorophyll once during the summer for the South Carolina Estuarine and Coastal Assessment Program (SCECAP).

From the monitoring stations for chlorophyll, selected samples are being preserved for phytoplankton analyses. Samples are selected for phytoplankton analyses based on sites where there is a continuing need for phytoplankton data because of known water quality problems. Samples from sites where historical information on the phytoplankton community is lacking may also be preserved for analyses.

Fish kills have not been especially numerous to date in 2006. This may be due to a lack of rain, at least through May, which promoted more water column stability without sudden changes in environmental factors such as dissolved oxygen concentration, pH, salinity, ammonia and/or hydrogen sulfide levels, etc. Some of these factors can be related in some way (under specific weather conditions) to algal blooms whereas others will not be, of course.

We have finally completed a GIS-based series of maps depicting chlorophyll *a* concentrations in estuaries. Most sampling in South Carolina estuaries has been conducted using a probability-based monitoring design since 1999. Data covering the period 1999-2005 have been included in the mapping. The maps should give a good indication of the spatial coverage of sampling locations in South Carolina's estuaries while providing a quick means to identify areas of interest relative to chlorophyll concentrations.

The "Field Manual for the Investigation of Fish Kills" for SC DHEC is being updated, and naturally the phycologist has some contributions to make to this document. Most of the review and updating of the Manual is centered on the fairly extensive section that addresses "Harmful Algal Bloom (HAB) Response."

That's all we have for now everyone and we will be looking forward to talking or working with you on something in the future.

NORTH CAROLINA DIVISION OF **WATER QUALITY**

Environmental Sciences Section/Biological Assessment Unit **January through May 2006**

Stream Fish Community Assessment Program

During the first half of 2006, the stream fish community assessment program sampled 97 sites, stretching from Cherokee County in the extreme southwest corner of the state to Scotland County in the Sand Hills to Surry County in the Northern Piedmont. Use Attainability Studies, reclassifying streams for more stringent water quality protection, will be conducted in July 2006 for two watersheds in the French Broad River Basin and a fact sheet on the methods for reclassifying a stream segment to trout waters was developed. Collaboration with professors at North Carolina State University continues with presentations to students in Limnology and Biology of Fishes classes. External assistance/outreach programs continue with the Pigeon River Native Fish Species Reintroduction Project, Carolina Madtom Recovery Project, NCSU's Urban Fish Response Project, USGS's (Raleigh, NC) Urban Intensity and Fish Responses Project, North Carolina State Museum of Natural Sciences' revisions to the Endangered, Threatened, and Rare Fishes of North Carolina, and the Museum's and Roanoke College's study on the distribution, abundance, and life history characteristics of the undescribed Carolina Redhorse Sucker. Web pages for the fish community program were updated and are current through December 31, 2005 (NCDWQ's Fish Community Database (<http://www.esb.enr.state.nc.us/NCIBI.htm>), NCIBI Scores and Ratings (<http://www.esb.enr.state.nc.us/IBIrate.htm>), and Native and Exotic Freshwater Fish in North Carolina (<http://h2o.enr.state.nc.us/esb/BAU.html>)). The QAPP for the stream fish community assessment program has undergone three versions and will hopefully be sent to Region 4 by the end of June 2006.

Fish Tissue

The DWQ statewide survey for organic pollutants in fish tissue will be conducted for the fourth and final year during 2006. The survey is intended to further assess the character of pesticide contamination throughout the state. The survey is intended as a Tier 1 type study whose primary goal is to identify mainstem inland waterbodies where organic contaminants exceed specified human health screening values for edible fish. Sites where contaminants are identified would require more intensive follow-up sampling. Staff members will collect a top predator and bottom feeding species at each of 11 sites throughout the Little Tennessee, French Broad, Watauga, and New basins.

DWQ continues to assist the NC Department of Health and Human Services (DHHS) and USEPA in the collection of fish samples from Crabtree Creek in Raleigh. Further sampling was requested to augment studies performed by EPA and to further delineate

current PCB advisories in the watershed. At present DHHS has posted an advisory for Brier Creek, Little Brier Creek, Lake Crabtree, and Crabtree Creek, from Lake Crabtree to where it enters the Neuse River. Staff will collect largemouth bass and catfish samples from six additional stations throughout the Crabtree Creek watershed and Neuse River.

Fish Kills

DWQ has so far received eight reports of fish kills across the state. These events have involved a total of around 8,000 fish. Further information on the fish community, fish tissue, and fish kill programs can be found at: <http://www.esb.enr.state.nc.us/> or by contacting Bryn Tracy, Mark Hale, or Jeff DeBerardinis at (firstname.lastname@ncmail.net).

Benthos

The benthos group has been very busy since the beginning of the year with samples collected at 178 sites through May. Most benthos work in spring is for special studies and the following were completed:

Environmental Enhancement Program (EEP) Sampling:

Tar River Basin EEP at 8 Locations
Hiwassee River Basin EEP at 12 Locations
New River Basin EEP at 11 Locations
Yadkin River Basin EEP at 7 Locations

TMDL Sampling:

Yadkin River Basin TMDL at 9 Locations
Catawba River Basin TMDL at 14 Locations

Swamp Basinwide Sampling:

Lumber River Basinwide Swamp Samples at 14 Locations

Non-Swamp Basinwide Sampling:

Yadkin River Basinwide Samples at 10 Locations

Special Studies: Regional Office Requests:

Yadkin River Basin Regional Office Requests at 7 Locations
Lumber River Basin Regional Office Requests at 3 Locations

Special Studies: EPA Region IV Comparability Sampling:

Comparability Studies at 3 Locations in NC and 3 in TN

Special Studies: ORW Reclassification Sampling:

Savannah River Basin ORW Reclassification (Horsepasture River) at 11 Locations
Neuse River Basin ORW Reclassification (resamples on the Eno River) at 5 Locations

Special Studies: Small Streams Sampling:

Piedmont Small Streams—Samples at 22 Urban and Reference Streams

Mountain Small Streams—Samples at 16 Urban and Reference Streams

Sandhills Small Streams—Samples at 14 Urban and Reference Streams

Special Studies: NPDES Sampling:

Tar River Basin NPDES Sampling Completed at 4 Locations

Chowan River Basin NPDES Sampling Completed at 3 Locations

Neuse River Basin NPDES Sampling Completed at 2 Locations

SWPBA Update

Kentucky

Personnel News –

Jessica Schuster started off the summer with a husband and a new last name! Congrats to Jessica Schuster Maina!

Mike “Stretch” Compton has left Division of Water to seek greener pastures in Texas. He is the third employee of the Water Quality Branch that has moved to Texas in the recent past. Stretch goes to pursue a job in Risk Assessment. Best of luck to him!

TMDL Section:

The TMDL Section has recently expanded by two positions. Charles Noble and Scotty Sharp are Environmental Technologists stationed in the Madisonville Field Office Building. They are responsible for collecting data on 303(d) listed streams in the western half of KY. They will initially collect water quality data on streams impaired by pH, metals, and total dissolved solids in Hopkins County. They will also assist in the collection of data at ambient sites in the Green/Tradewater Basin Units.

The Biologists (Danielle Rogers and Jessica Maina) have begun pathogen sampling on several watersheds. Data collection will continue until the end of the primary contact recreation season (Oct. 31). Jessica and Danielle analyze the samples in-house for E. coli. They have also been busy collecting macroinvertebrates at many of the TMDL sites with impairments of the aquatic life use.

The Modelers (Eric Liebenauer and Joe Ferguson) have both written their first draft TMDLs for pathogens using load duration curves. These TMDLs are currently in review by Division of Water staff and will be sent to public notice after revision. Joe plans to attend WASP training at EPA Region 4 later this summer.

The draft 2006 Integrated Report has been compiled. Volume II of KY’s integrated report contains the 303(d) information. Danielle, Jessica, Eric, Joe, Ann Fredenburg (TMDL Supervisor) and Lisa Hicks (Environmental Scientist), along with several staff from other sections, were involved in the production of this volume. We anticipate that Volume II will go to public notice in a few weeks.

Ecological Support Section:

The crew from ESS are busy trying to sample streams in the Tradewater and Green River Basins, help out with gathering TMDL discharge information and collect nutrient

information. We are currently down to 4 biologists, 1 Wild Rivers guru, 1 lab scientist (formerly known as a microbiologist) and our notorious supervisor. Interviews will soon be under way for an ichthyologist in attempt to fill the void left by Mike Compton's departure.

We currently have 2 summer interns working with the Branch. Shaydn Bathon and Eric Ripberger have graciously agreed to spend their summer working with all of us. We have had them out collect discharge information, seining for fish, sorting bugs and hauling around all sorts of equipment. Shaydn comes to us from Transylvania University in Lexington, KY and Eric from Eastern Kentucky University in Richmond, KY.

Standards and Specifications Section:

The Standards and Specifications section has been in high gear since April. The Probabilistic Monitoring program has stayed on track with spring sampling completed in May and summer sites well under way. This year we are working in the Green and Tradewater River basins, where there is a lot of agriculture, gas and oil wells, and open pit coal mining. We have found a few relatively natural areas, one that included watching 6 river otters come charging out of their den directly across from our worksite this week. We also managed to squeeze in a few lakes monitoring trips in May.

Randy Payne has been involved in the National Lakes sampling initiative, as well as spending most of his time working on the 305(b) portion of the Integrated Report to Congress. He also attended a STORET workshop with Gillian Miller in Atlanta.

Water Quality Certification Section:

Water Quality Certification welcomes new staff member Alan Grant. Alan comes to us from Risk Assessment. The whole Certification team is working hard and didn't have time to write a summary for this newsletter. They will update us in the fall.

Watershed Management Branch Nonpoint Source Section:

The NPS Section is currently working on watershed monitoring reports for the Upper Licking River and Obion Creek projects. Data is being analyzed and reports are coming together. The field season is well underway and the NPS Section has been sampling the Sinking Creek watershed in Laurel County. Water chemistry data as well as biological data has been gathered as the season has progressed since January of this year. This monitoring will continue for the rest of 2006 and used in a watershed assessment of Sinking Creek. Monitoring has wrapped up in Obion and Wilson Creeks and data is being analyzed currently.

Florida's Update

FDEP Biology Section – Tallahassee

In conjunction with other state agencies, we are developing field collection methods and lab analyses for blue-green (cyanobacteria) algal blooms. Associated SOP's and other documents that will be posted on our website soon.

We are also analyzing samples and data for a project that will be used to revise our dissolved oxygen criterion, as well as, assist in nutrient criteria development. Macroinvertebrate and algal samples (both periphyton and phytoplankton) from all over the state and from a wide variety of water body types including lakes, canals, and streams.

News from Tennessee

Summer 2006

Monitoring

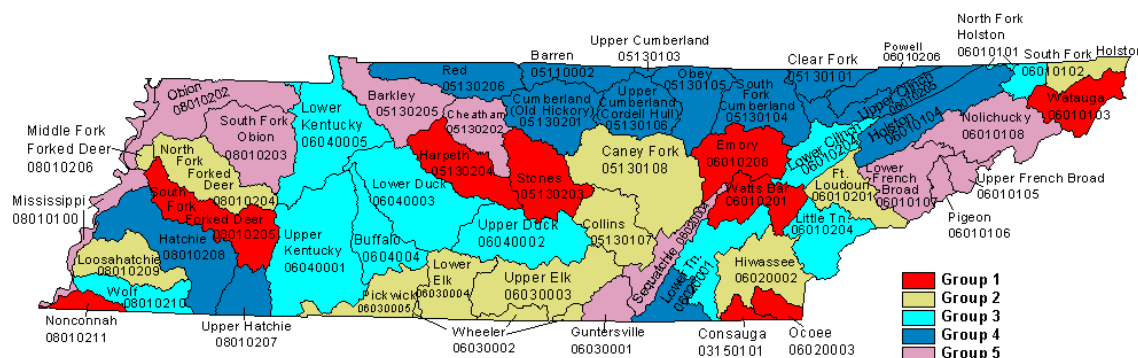


Figure 1: Watershed Cycle Monitoring Groups

The division of Water Pollution Control continues the watershed monitoring approach. Group 5 watersheds monitoring has just been completed ending the second 5-year cycle. The majority of the chemical analyses has been completed and uploaded to STORET. Analyses of the biological data are ongoing. The third cycle begins with Group 1 watersheds in July, which is the start of the state of Tennessee's fiscal year. Antidegradation assessments are conducted as needed generally in response to requests for new or expanded NPDES and ARAP permits. Since permit requests generally cannot be anticipated, they do not follow the watershed cycle.

Nashville Field Office Update:

NFO is wrapping up its monitoring efforts in the Lower Cumberland watershed, the target watershed during this year's cycle. This is a large geographic area which includes the mainstem Cumberland River from the Old Hickory Lock and Dam, down to the Kentucky State Line, and of course all the tributaries which drain into it. It encompasses nearly the entire Nashville urban region, as well as some of the most rural areas in the NFO region. Unfortunately, since most of our monitoring is centered on impaired waterbodies, we spent more time in concrete ditches than forested brooks this year.

Over 100 benthic macroinvertebrate screening (Biorecon) surveys were conducted over the last fiscal year, ending in June, as well as a score of intensive surveys of reference streams and other special projects. Around 60 chemical monitoring stations were established and sampled on a monthly basis for a variety of parameters - nutrients, solids, and pathogens primarily.

In addition, some special studies involving multi-week continuous monitoring of oxygen levels were performed at several sites to aid in TMDL model development and load allocation for some major point source dischargers.

Beginning July 1, we launch into our new monitoring year, in this cycle working within the Harpeth and Stones River basins. These two basins are located to the south and east of Nashville, and are rapidly being consumed by the ever-increasing suburban sprawl surrounding the city. Since adopting a 5-year watershed cycle, this year will represent the third intensively-focused monitoring effort for these watersheds. It will be interesting to see what trends are emerging from comparisons of data points collected over the last decade.

New Publications and Web Updates

Tennessee Division of Environment and Conservation website has been updated and is easier to navigate. The main home page website address is <http://tdec.net>. Several new publications and online services are available.

- The 2006 305(b) Report on The Status of Water Quality in Tennessee has been completed and is available on our website at <http://tdec/wpc/publications/2006305b.pdf>.
- The Draft 2006 303(d) is available for public comment through August 3, 2006. It is posted on TDEC's website at http://tdec/wpc/publications/2006_303d.pdf.
- Tennessee's Quality Assurance Program Plan for 106 monitoring is posted on the division's website and is available at http://tdec/wpc/publications/QAPP_106monitoring.pdf.
- Water Quality Standards General Water Quality Criteria revisions are under way. The proposed changes are posted on the division's website at http://tdec/wpc/publications/2005Draft1200_04_03.pdf.
- A list of identified high quality waters is posted on the division's webpage at <http://tdec/wpc/publications/hqwlist.pdf>.
- An interactive map of water quality maintained by the University of Memphis has been updated to include current water assessments. A link to this site is available on the department's water page or directly at web link at <http://gwidc.memphis.edu/website/dwpc/>

Special Studies

- **Method Performance/Data Comparability Workgroup**

This summer Tennessee in partnership with the other EPA Region IV states are collecting biological samples at selected sites to test macroinvertebrate bioassessment method and data comparability. Each agency will conduct joint bioassessments at 1-2 reference reaches and 1-3 “test” reaches with agencies that share the same Level III or Level IV ecoregion. Tennessee biologists have collected joint samples with North Carolina biologists in the Southern Igneous Ridges and Mountains (66d). Joint sampling with Kentucky is scheduled for July in the Western Pennyroyal Karst (71e).

- **Probabilistic Impounded Streams Study**

Fieldwork and analyses for the 2003/2004 study of randomly selected streams located downstream of impoundments has been completed. Currently data analyses are underway. The report will describe macroinvertebrate chemical, geomorphology, periphyton abundance, and habitat on streams below 75 small impoundments across the state. The goal publication date for this report is September 2006.

Alabama Highlights

Usually in June, biological and chemical monitoring is in full swing. However, this is a very unusual June for ADEM. We moved into our new facility (office and lab space) mid-June – right smack dab in the middle of our monitoring season. We have been struggling with the logistics of getting water samples shuttled to our satellite laboratories in Mobile and Birmingham as our Montgomery laboratory shut down in early June and will be down through the end of July. Our bioassessment sampling has been interrupted by a statewide drought, so our biologists are laboratory-bound with plenty of samples to identify. We've set up interim ID stations until our microscope room is fully functional. All in all, though, the move went off pretty much on schedule with no major catastrophes. We were all sort of reluctant to leave our old EPA buildings. Sure, the ones without a tarp roof leaked a little, but they were in a great little compound which has been our home since the early '90s. Have to say though, our new labs are going to be really nice!

New Folks

We've recently hired two new folks – **Sreeletha Kumar** and **Aaron Goar** - that have been assisting with our macroinvertebrate bioassessment sampling. They've been hanging in there in the Alabama heat and humidity – not an easy thing to do! Hope that you all will get a chance to meet them at the SWPBA meeting this fall.

ADEM's Monitoring Strategy

Many of you may remember that ADEM revised its monitoring strategy during 2005. It is comprised of several programs, but our activities during April-June have focused on the Rivers and Streams, Rivers and Reservoirs, Ambient, and Targeted Monitoring Programs. Each year, a Surface Water Quality Monitoring Plan is developed, and monitoring conducted for each of these programs is coordinated under the Rivers and Streams Monitoring Program (wadeable) and the Rivers and Reservoirs Monitoring Program (nonwadeable). A table summarizing the activities conducted April-June for each program is included.

River and Streams Monitoring Program (RSMP)

2006 RSMP: During 2006, monitoring conducted by the Environmental Indicators Section (EIS) has focused on the Escatawpa, Mobile Bay, Tombigbee (EMT) River Basins in accordance with ADEM's basin rotation schedule. During the 3rd quarter, the EIS collected samples at 103 locations, primarily located within the EMT. These activities are summarized in the Rivers and Streams Water Quality Monitoring Program Table. Data entry and QA of data collected since March 2006 continues. To date, physical characterization and in situ data from 240 site visits have been transferred to ADEM's Central 2006 Surface Water Quality Monitoring Plan ACCESS database. Laboratory data from 79 site visits were downloaded from the LIMS database. These

records are currently being QAed by EIS personnel for transfer into ADEM's Central Database.

This year, we cut back on the number of macroinvertebrate and periphyton surveys normally scheduled from ~125 to ~70 due to the move. Forty-four of 70 have been completed. We are in a fairly severe drought here in Alabama and during the past few weeks, we've been running into more and more sites that are no longer flowing. We plan to sample what can still be sampled next week. During spring of 2007, we will sample all 2005 and 2006 stations located within our Blackbelt region and any 2006 stations that could not be sampled due to drought conditions. In the meantime, we have plenty of samples to ID.

2003-2004 RSMP Reports: A final revision of the Results of ADEM's 2003 §303(d) and Reference Reach Monitoring Report was completed, with the report currently undergoing a final internal review. The report summarizes results of intensive chemical sampling and habitat and macroinvertebrate biological assessments conducted at 24 ecoregional reference reaches and eighteen §303(d) stream segments. The EIS is also currently revising the first draft of the *Surface Water Quality Screening Assessment of the Southeast Alabama River Basins – 2004 – Part I. Wadeable Rivers and Streams*. The report summarizes results of screening-level habitat and macroinvertebrate biological assessments conducted at sixty-two stream reaches at risk to impairment from rural nonpoint sources.

Summary of Rivers and Streams Water Quality Monitoring Program activities, April-June, 2006.

Study	Station Visits	Chemical Samples ^a	Biological Assessments ^b	In situ Measurements ^c
Ambient Trend Monitoring	56	166	108	504
Reference	14	48	30	125
Targeted Monitoring (§303(d)/TMDL/UAA)	206	550	398	7762
Clean Water Partnership Requests	0	0	0	0
Probabilistic Basin Assessment	144	394	312	1250
Total	420	1158	848	9641

a. Chem. Assessments = Iced + Sulfuric + Nitric + Filtered Nitric + Dissolved Reactive Phosphorus + Ultimate BOD + Atrazine + SW8141 and 8081A pesticides + 8270C Semi-volatiles + Metals.

b. Biol. Assessments = Macroinvertebrate + Periphyton Chlorophyll a + Diatoms + Filamentous Algae + AGPT + Water Column Chlorophyll a + fecal coliforms+ Fish IBI.

c. In situ measurements = (Habitat Assessment + Air Temp + H2O Temp + DO + Conduct. + pH + Turbidity+Flow) x # of station visits

Rivers and Reservoirs Monitoring Program (RRMP)

RRMP 2006: Sampling began for the project *Surface Water Quality Screening Assessment of Rivers, Reservoirs, and Tributary Embayments of the Tombigbee, Mobile, and Escatawpa River Basins*. Monthly sampling, April-October, is currently being conducted at 37 Tombigbee River, reservoir, and embayment sites.

Compliance monitoring of certain reservoirs for established lake-specific nutrient criteria was initiated in April 2006. Compliance monitoring of Smith, Bankhead, Holt, Oliver, Tuscaloosa, Warrior, Purdy and Inland Reservoirs began in April. Monthly sampling of twenty stations on these reservoirs will continue through October.

Reporting: A final draft of the report *Water Quality Assessment of the Southeast Rivers and Reservoirs 2004* was reviewed during 3rd quarter. Internal review of the document has been completed and report completion is expected during 4th quarter.

**Summary of Rivers and Reservoirs Water Quality Monitoring Program
activities, April-June, 2006.**

Study	Stations Sampled (Stations x Sampling Events)	Chemical Samples*	Biological Samples*	In situ Measurements* *
Basin Intensive Survey	111	351	118	3752
Compliance Station	60	198	66	5896
Biennial Critical Period***				
303d				
Ambient Trend Monitoring	15	45	30	740
Total	186	594	214	10388

*Chem. samples/station = Iced + acid + orthophosphorus. Duplicates and blanks included.

*Biol. samples/station = chlorophyll *a* + fecal coliforms + AGPT. Duplicates and blanks included.

**In situ measurements/station = (# profile measurements x parameters) + secchi + photometer + turbidity

***Biennial Critical Period = August only sampling

Emergency Response (ER)

The EIS is also responsible for emergency response conducted by ADEM Montgomery Branch. In summary, the EIS has responded to one bonfire-sized tire burning and five spills related to tractor trailer (4) or train (1) accidents. In total, approximately 175 gallons of diesel fuel, an unknown amount of 35% calcium chloride, and 98 tons of sodium chlorate from the accidents were contained and removed from the sites.

MISSISSIPPI PROGRAM

HIGHLIGHTS

Another hurricane season and the big question here in Mississippi is . . . will we or won't we? We are hoping it is the latter. We have been able to resurrect some important studies along the gulf coast, namely beach monitoring, storm water sampling on the Back Bay of Biloxi, fish tissue sampling for dioxin. We have completed the initial data collection for the development of a fish IBI for the Delta region of the state, and are set to begin additional data collection in non-wadeable streams to complete the study plan that Hurricane Katrina caused us to cancel last year. Once again, our staff will participate in the National Coastal Assessment.

Phil Bass's Retirement



As was announced in the last issue of the newsletter, Phil Bass, Director of the MDEQ Office of Pollution Control, retired in April of this year. Phil has taken a position with the US EPA as the State Policy Coordinator for the Gulf of Mexico Program Office, and

is based at the Stennis Space Center on the Mississippi coast. A retirement reception was held in Phil's honor and included a proclamation from Governor Haley Barbour, a resolution from the Mississippi Legislature, praising Phil for the years of dedicated service that he gave to the state of Mississippi and a token of appreciation from Weyerhaeuser Corporation. Several speakers highlighted Phil's many accomplishments and successes while at MDEQ.

As a finale to the formal presentations, past SWPBA President Mike Beiser finally got to present Phil with the SWPBA Lifetime Achievement Award. Phil later remarked that this award from his peers was most meaningful. It was also announced at the reception that one of three species of amphipods recently discovered by MDEQ Biology Section staff members, would be named for Phil as *Synurella bassi*.

Farewell

Gloria Tatum is retiring as the Chief of the Field Services Division after 30 years with MDEQ. Gloria joined the agency in 1976 after earning a B.S. Degree in biology from Jackson State University. She worked in the wet chemistry and microbiology sections of the laboratory, before being named Assistant Laboratory Director in 1981. In the mid 1990's Gloria moved to the Air Division where she initiated and developed Mississippi's Lead Abatement Program. In 2002, Gloria returned to the Field Services Division when she was named Chief of the Division. In this role, Gloria was instrumental in reengineering the Division, and upgrading staff salaries. During this time she also served a dual role as the agency's Environmental Justice Coordinator. We will miss her tireless efforts on behalf of MDEQ and the Field Services Division, and her calming demeanor at controversial public hearings.

Welcome

Brian Alford is the new biologist for the Mississippi Department of Environmental Quality's North Regional Office in Oxford. Brian comes to MDEQ from the Department of Wildlife and Fisheries at Mississippi State University, where he is finishing his doctoral degree in fisheries management. Recently, Brian conducted the field research for MDEQ as part of the EPA National Wadeable Streams Assessment, and he has incorporated this information into his dissertation research at MSU. The title of his dissertation is "Local-and landscape-scale environmental characteristics associated with centrarchid fisheries resources in Mississippi wadeable streams". Brian is a native of Vicksburg, MS and earned a Bachelor of Science degree in biological sciences from the University of Southern Mississippi. Following graduation, Brian was a zebra fish aquaculturist for a Microbiology lab at the Duke University Medical Center in Durham, NC. Then, as a research assistant at North Carolina State University in Raleigh, he conducted field research, assessing the impacts of road crossings on freshwater mussels

in the Upper Cape Fear River drainage. Brian later received his Master of Science degree from the University of Southern Mississippi in environmental biology, where he compared prey selectivity by darters on chironomid taxa at two scales of chironomid classification. The title of his thesis is “Selective predation among four sympatric darter species on larval chironomids from a southern Mississippi stream.

Those of you who attended last year’s SWPBA meeting got a chance to meet Brian. We welcome him to MDEQ and SWPBA!

We are pleased to announce the appointment of **Natalie Guedon** as Assessment Section Chief within the Field Services Division. She comes to us after seven years in the Surface Water Division of MDEQ. Thanks to her leadership, the section was able to complete the 2006 305(b) report by the April 1 2006 deadline. She would like to express thanks to the interdivisional team that worked together to complete this task: Valerie Alley, Adrien Carol-Perkins, Ann Porter, Brad Segrest and Jeff Thomas, along with countless other people within the agency who gathered data and submitted comments on the report. The Mississippi 2006 305(b) report and addendum are available for download at the following website:

http://www.deq.state.ms.us/MDEQ.nsf/page/FS_SurfaceWaterQualityAssessments/OpenDocument

HURRICANE KATRINA

As an agency, the MDEQ still has a very heavy involvement in Katrina-related activities. The work of the biologists, however, has not been as heavy as it was immediately following landfall. In the last newsletter, we reported on several activities in which we biologists were involved, and provided a list of future attractions. This list is repeated, and a status is given below:

- EPA Region 4 Report on the soil and sediment samples at eight coastal facilities is now on the Region IV website
- EPA/ORD is analyzing their data and a report is pending
- USGS is planning a series of publications including the bacteria and water quality monitoring in MS. These reports are available through USGS at <http://pubs.usgs.gov/ds/ds174/>.

Field Activities

Non-wadeable Rivers and Streams IBI Development Study

All of the benthic samples collected during 2005 have been processed. Taxonomy of the benthics and phytoplankton is underway. All chemical analyses of water column samples collected during 2005 have been completed. Due to Hurricane Katrina and the massive fish kills it brought to the Pascagoula River, we still have 22 sites to sample to complete

this project. It is our intention to develop a macroinvertebrate-based IBI as well as a phytoplankton-based IBI for assessment of the data.

National Coastal Assessment

Currently we are working under a 2-year contract that is a follow-up to the 5-year original project known as the National Coastal Assessment program. For these 2 years, 2005 and 2006, the number of sites was cut in half to 25 each year for the state of Mississippi. The sampling effort last year went well and was completed one week before Katrina devastated the area. Unfortunately, there was not time enough for analysis to be completed, and most of the stored samples, some waiting for shipment and some just for analysis, were lost either literally or due to lengthy power loss. An effort was made to recover anything salvageable from these samples. Also, EPA mounted a sampling effort designed very much like that of NCA without trawl sampling and with several microbial elements added. This effort covered the Mississippi Sound and west to the Lake Bourne, LA area. Results of this sampling are to be compared with historic NCA findings.

Beach Monitoring

Sampling for MDEQ's beach monitoring program was temporarily put on hold due to Hurricane Katrina. Our contractor, the Gulf Coast Research Laboratory (GCRL) suffered major damage due to the storm. The entire facility lost the majority of their buildings and countless equipment needed for analysis of samples. Despite all of this, they managed to get back to sampling all of the beaches along the Gulf Coast by mid-October 2005.

Currently, all of the beaches along the MS Gulf Coast are closed due to marine debris in the water. Until the US Coast Guard and MS Dept of Marine Resources contracts out marine debris removal and jobs are completed at beach sites, the beaches will remain closed to swimming. Sections of sand in Harrison County (Biloxi, Gulfport, Pass Christian, and Long Beach) have been opened to the public by the Harrison County Sand Beach Dept.

Current data and status of all beaches monitored in Mississippi can be seen at our website, www.deq.state.ms.us and then follow the link to Beach Advisories.

Back Bay Storm Water Project

This project is a measure of pollution inputs into the Back Bay of Biloxi from storm water. It was another of our many efforts that had to be suspended after Katrina. It was reinstated in May 2006 to capture samples from the "contact period". Unfortunately, we are experiencing an exceptional drought, and have been unable to get into the field to collect samples.

Mississippi Welcomes Florida to Their Streams

Early in June Donald Ray, Lawrence Donelan, Frank Butera, and Kate Johnson from Florida DEP joined Barbara Viskup, Emily Cotton, and David Barnes in three streams located in Ecoregion 65f along the eastern side of Mississippi. This was for a joint side by side macroinvertebrate sampling methodology comparison. Due to the restriction of staying within ecoregion 65f and near the Alabama border, the three streams which were sampled consisted of three black water streams ranked good, fair, and poor because of the habitat. Initial comparison of the habitat assessment scores showed that while the methodology was slightly different the scores were very similar. We hope to go to Florida during our index period to sample. They want us to bring barbeque from **THE SHED** since the place was closed while they were here.

Mississippi Alluvial Plain IBI Development Study

After hurricanes Katrina and Rita caused this effort to be scrubbed in 2005, the Corps of Engineers Engineering Research and Development Center (ERDC) in Vicksburg initiated sampling of the fish community in the highly impacted Mississippi Alluvial Plain Ecoregion during May and June. The USGS conducted discharge measurements and collected water samples for analysis. All samples are now in the laboratory for chemical analysis and taxonomy. It is our goal for this project to develop a fish-based IBI for assessment of these waters.

Nutrient Criteria Development Projects

We have completed data collection for development of criteria for lakes and reservoirs, estuaries, and wadeable streams, and are now in the analysis phase. The Lakes Subcommittee of the Nutrient Criteria Task Force met in June and is beginning to look over the collected data.

Estuarine Nutrient Criteria Development Study

The final report for the first portion of our Estuarine Nutrient Study has been completed. This study was a collaborative effort with the University of Southern Mississippi Gulf Coast Research Laboratory. Twenty- eight sites across the Mississippi Gulf Coast were sampled quarterly over a 2 year period. Aside from general parameters such as dissolved oxygen, water temperature, pH, and salinity, water samples were collected and analyzed for total Kjeldahl nitrogen, nitrate + nitrite, total phosphorous, total suspended solids, total ammonia and chlorophyll *a*. As expected the majority of the nutrients analyzed were low with spikes occurring near discharges and industrial areas such as Bayou Casotte.

The rest of the study included two 24-hour sampling periods. One occurred during a period of high-flow and the other during a low-flow period. A total of nine sites were

sampled. Six deep water sites and three wadeable beach stations were sampled every six hours for 24 hours. Six data sondes were also deployed at the deep water sites over the 24 hour period. At present we are working checking the data and beginning the final report.

Due to the historic information that we had on these sites prior to Hurricane Katrina, the initial 28 sites were sampled again in October 2005 following the storm to assess any impacts. We are also in the process of checking this data prior to writing the report.

Natural Resource Damage Assessments

Bayou Casotte/Bang's Lake Spill

MDEQ biologist Barb Viskup continues to lead this effort, which much assistance from the Mississippi Department of Marine Resources to calculate monetary damages of the lost resources. Negotiations are underway to scale appropriate restoration.

Fish Tissue Monitoring Program

PCB's in Lake Susie

In March of this year, MDEQ fishery biologist Al Gibson assisted a consulting firm in the sampling of fish from Lake Susie (an old oxbow of the Little Tallahatchie River in north central MS) for PCB analysis. This lake is currently under an advisory for PCB contamination. Fish collected were split between MDEQ and the consultant's lab. Comparisons of the data are underway.

Dioxin Monitoring in Coastal Water Bodies

In response to concerns regarding potential dioxin contamination in the vicinity of a chemical plant, MDEQ biologists collected fish from several sites along the Gulf Coast. Samples were collected from St. Louis Bay, Point Aux Chenes Bay and the tidal portion of the Wolf River. Results are pending.

Ambient Fish Tissue Monitoring

The MDEQ continues to actively sample fish for ambient monitoring purposes. Thus far in 2006, a total of 7 sites have been sampled. It is anticipated that a total of 25 sites will be sampled for tissue monitoring.