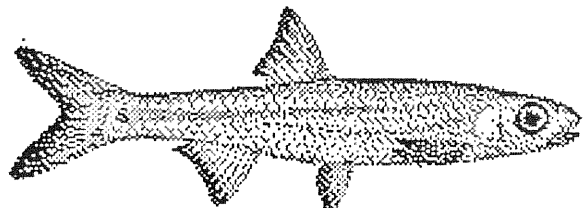
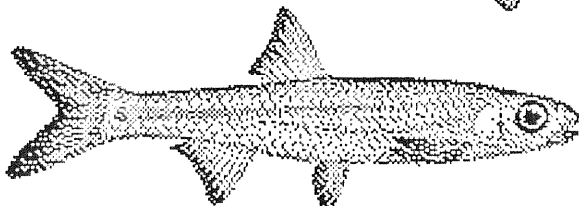
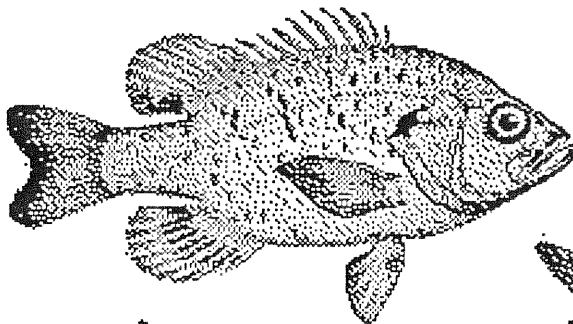
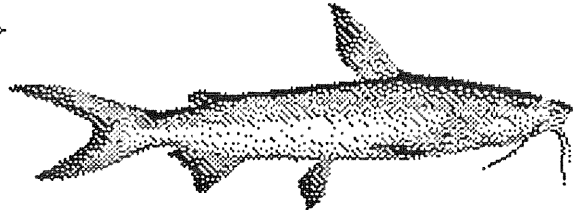
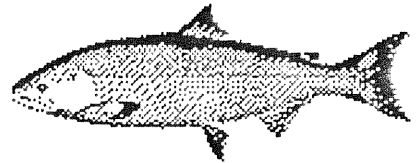
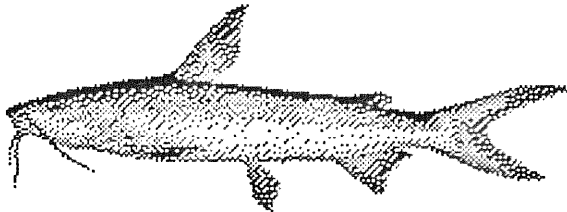
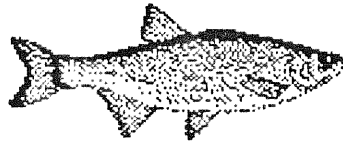
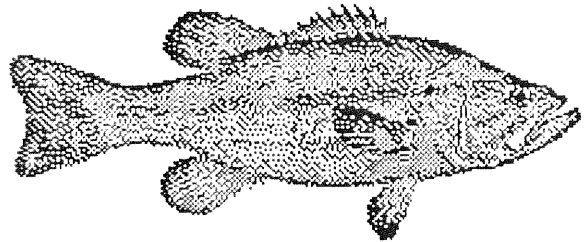


# SOUTHEASTERN WATER POLLUTION BIOLOGISTS' ASSOCIATION

NEWSLETTER  
AUGUST 1992





## TABLE OF CONTENTS

|                          | PAGE |
|--------------------------|------|
| NEWS NOTES               | 1    |
| PRESIDENT'S ADDRESS      | 2    |
| MINUTES OF 91 MEETING    | 5    |
| STATE REPORTS            |      |
| Alabama                  | 7    |
| Georgia                  | 9    |
| Kentucky                 | 16   |
| Mississippi              | 18   |
| North Carolina           | 21   |
| Tennessee                | 25   |
| EPA Region IV            | 26   |
| CONSTITUTION AND BY LAWS | 38   |



## NEWS NOTES

Summer increases both brevity and apathy with regards to newsletter contributions. We're all used to "worst case conditions". I appreciate those that took time to contribute. For those who didn't, we will try to squeeze in one more edition prior to the meeting in October. Please have your contributions to me no later than September 30.

\*The **president**, Bruce Pruitt, is looking for issues, ideas, suggested guest speakers, and other meaningful input for the meeting agenda.

\*The **secretary**, Ferne Winborne, has "dissed" us after only 11 years as a SWPBA member. The executive committee asked Corrine Wells, to serve as interim Secretary, and Corrine graciously accepted. Ferne's departing commentary may be found below.

\*The **membership list** needs updating. Please provide information on current members, areas of interest, and current addresses and phone numbers to Corrine as soon as possible. With good response we may be able to have an updated version ready by October. Corrine's number is 502-564-3410.

\*As reported in the last newsletter the **Annual Meeting** will be held at the Holiday Inn in Wrightsville Beach, N.C. Rooms are \$40 single or double occupancy, from October 26-30 if reservations are made before September 30 by calling 919-256-2231 or 1-800-532-5362. Pass the word!!!!!!!!!!

\*I have included a copy of the **Constitution and By Laws** for new members and senile veterans.

\*Good Bye SWPBA,

I finally get elected to an office and, puff, I get a new job out of NC. DEM! OK, OK! I know some of you are wondering what poor soul would hire me! Even the personnel at this new job called me deranged and I haven't even met them! What do they know, anyway? Anyway, I will be teaching teachers and K-12th graders in Wake County for the N. C. Museum of Science. (For those of you who do not know the details of N.C. geography, Raleigh takes up a good portion of Wake County.) They'll call me a curator. I say "curator of what?" Looks good on a resume though! I just wanted a chance to say "good-bye" to all of you great people (or should I say group of lunatics?!). This is what I wrote to Dave Smith in November of 1981 after my first SWPBA meeting. I guess I recognized a group of crazies right off the bat, huh Dave S.?

Anyhow....

Good-bye and Good luck!!!!!! I will miss all of you!

Keep on dancing!

Ferne

Thanks to those who contributed and please

**Circulate your copy of the newsletter!!!!!!!!!!**

Jimmie Overton



Fellow "Water Pollution Busters":

The 1991 meeting at Hilton Head was a great success!! "Hats off" to Lythia Metzmeier, Dave Chestnut, Vickie Bauer, and all those SWPBA members who presented those superb papers and lent-a-hand when needed. It is amazing to me how SWPBA meetings improve in quality from year-to-year, yet the cost to its membership has remained relatively low. Not only is this phenomenon due to the prudent, (sometimes downright "bulleest") budgetary planning of SWPBA presidents and meeting coordinators, but also due to the excellent support given by several equipment vendors such as Hydrolab, Johnston/ISCO, YSI, and Wilco. Thanks, vendors!!

I am yet to determine the exact role of a SWPBA president, so I thought I would take a close look at the contributions of past presidents. One of the most recent presidents kept losing essential clothes items in the hospitality suite. Even though I have searched the By-Laws several times, I am unable to find any special functions of a SWPBA president in the hospitality suite. However, there must be some benefits in being the SWPBA president, because Dave Chestnut's diamond earring keeps getting larger after each SWPBA meeting. By the way, what do you do with the "right ear" earring, Dave?

Seriously, I feel honored, yet humbled and undeserving to be your president for this term, so I need your support. HELP, Fern!! At the same time, I am very excited about being a part of such an innovative, diverse group, and I have a burning desire to make a major contribution to the Association. So, here's the challenge:

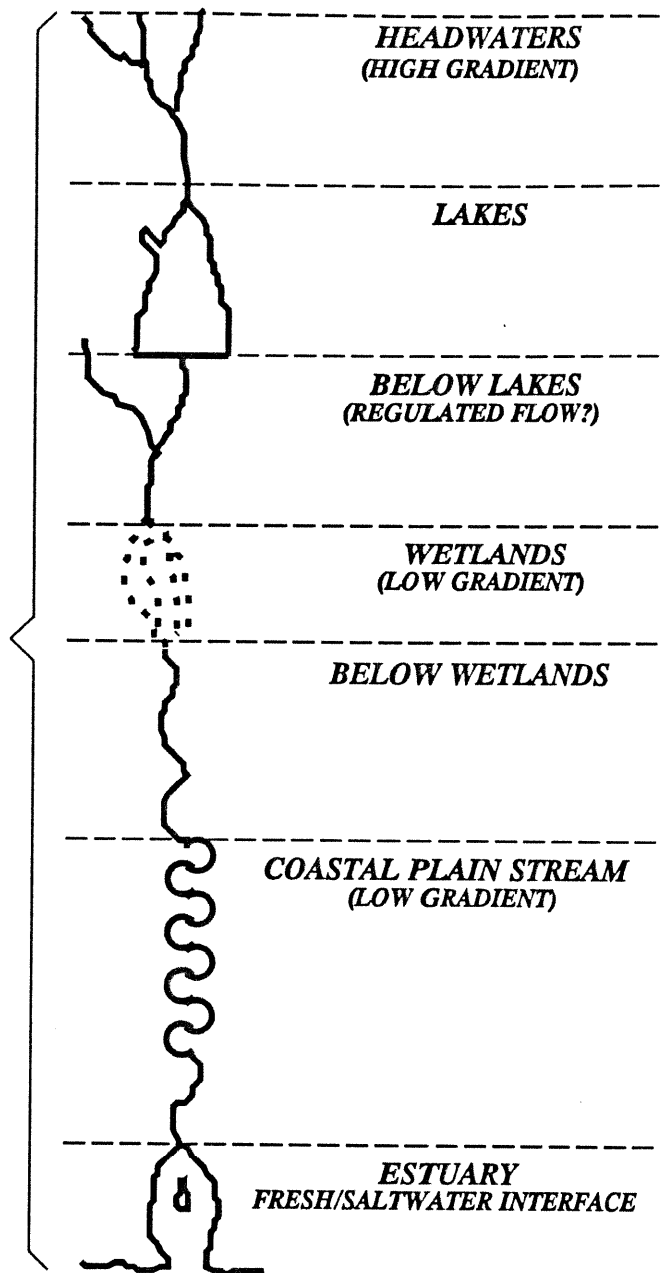
The 1970's was the decade of data acquisition and data base development. The 1980's was the decade of establishing standard methods and testing/sampling guidance based on the data base of the 70's. The 1990's will be the decade of integration and correlation of the results of various testing/sampling technology and its application to policy (i.g. What does an LC50 of 20, an EPT of 42 and a sediment mercury concentration of 35 ppm mean, and How can regulatory/policy decisions be made based on these data?). Undoubtedly, this is a much more difficult challenge than the challenges of the 70's and 80's. SWPBA has the diversity, skill, and expertise to address this task!! How would you feel about a "SWPBA Approved Sampling Protocol"? The need for whole basin studies may be the avenue to develop technical data integration, therefore whole basin studies is one of the proposed foci of this year's SWPBA meeting as follows:

# ***SAMPLING TECHNOLOGY AND ITS APPLICATION TO DIFFERENT HYDRIC SYSTEMS***

***HOW IS WATER COLUMN AND SEDIMENT SAMPLING  
FOR PHYSICOCHEMICAL/BIOLOGICAL ANALYSIS  
AND TESTING DIFFER WITH HYDRIC SYSTEM TYPE?***

## **WHOLE BASIN EVALUATION**

|                           |                    |
|---------------------------|--------------------|
| <b>EMAP, GIS</b>          | <b>LANDUSE</b>     |
| <b>STATION POSITION</b>   | <b>HYDROLOGY</b>   |
| <b>POINT &amp; NPSP</b>   | <b>GEOLOGY</b>     |
| <b>CUMULATIVE IMPACTS</b> | <b>COVER TYPES</b> |



- **WHOLE BASIN STUDIES (See Figure).** Sampling technology seems to be changing at a much more rapid pace than ever before especially new, innovation sampling methodology for whole ecoregions, watersheds, basin studies, etc.
  1. What remote sensing methods are in use to address whole ecosystem/watershed issues (i.g. cumulative impacts, changes in landuse, etc.)? What sampling position systems are in use (GPS, Loran-C)?
  2. How is watershed hydrodynamics and landuse (effect: NPSP) being incorporated into stream survey protocol? What effect does this have on trend analysis, time and location of sample stations? How does your physicochemical and biological



sampling/testing techniques vary between streams, wetlands, lakes, and estuaries?

3. What water column/sediment quality sampling techniques are employed by your agency?
4. What data management and storage devices are you using (STORET)?

**ECOREGIONS.** What are the results of application of bioassessment to different ecoregions? Your up, Mississippi and Alabama, the rest of SWPBA wants to hear from you!

**APPLICATION OF WATER QUALITY STANDARDS TO WETLANDS.** States have been charged with developing water quality standards for wetlands by the end of FY93. I'm sure wetland standards are already in place in your state?! STATUS REPORT

- o Have your state wetlands been mapped? What classification scheme are you using?
- o What should be protected in wetlands? - Conventional stream standards, functions, values, etc.
- o Which stream standards are applicable directly to wetlands, which are not?

**NON-POINT SOURCE POLLUTION UPDATES.** Several issues need to be addressed in this area including sampling and assessment technology, regulation/policy development, and enforcement/compliance problems.

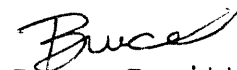
**SEDIMENT TOXICITY TESTING.** What is the latest approved methods, sample collection, sample preparation (direct or elutriate), and test species? Sediment criteria?

**BIOACCUMULATION.** What is the latest approved methods, sample collection, sample preparation, and analysis? Fish advisory locations, and levels?

**BIOCRITERIA.** STATUS REPORT

The above subjects were issues proposed by myself and several SWPBA members. If you would like to improve on this list, please contact me at the address or telephone listed below by August 21, 1992. A "Call For Papers" will be sent out no later than the end of August. In addition, if enough SWPBA members are interested, I am willing to copy and bind the abstracts for the upcoming meeting and have them available at the meeting.

Sincerely,



Bruce Pruitt  
%EPA-ESD  
960 College Station Rd.  
Athens, GA 30613-7799  
(706) 546-2420



## SWPBA MEETING MINUTES

1991

President Lythia Metzmeier expressed thanks to the state of South Carolina and Dave Chestnut for the many hours arranging this meeting. Thanks to Vickie Bauer for computerizing the membership information and keeping up with the various mailings. A special thanks was given to Del Hicks from EPA-Athens for his BBQ sales since our last meeting. He raised over \$200 dollars to help stock the hospitality room. Several vendors were in attendance with various demonstrations and literature. These included Ben Meadows, Hydrolab, Isco, Johnson, Hydrosience Consultants, Wildco and YSI. Appreciation was expressed for their participation and monetary donations.

Skip Call made a motion to approve the minutes of the last meeting, this was seconded by Jimmy Overton and the motion carried.

The publication of the SWPBA Newsletter was passed on to the state of North Carolina for a one-year term. They also accepted the invitation to be the host state for next years meeting. Lythia suggested that further thought be given to passing the newsletter on each year to the host state. No discussion of the suggestion followed.

Dave Penrose volunteered to update the summary of biocriteria development in the southeast region which currently addresses only wadeable streams to include any changes and to add a section on the status of biocriteria development for lakes and reservoirs. Steve Tedder objected to the term "position paper" and Lythia acknowledged that the same objection had been raised last year and that the Association had agreed that this term would not be used. The update of the summary will be accomplished by telephone survey and be submitted to the Region IV states for review by April 1992. A motion for this update to be completed was made by Henry Folmar and seconded by Vince Schneider. The motion carried.

A general discussion of newsletter content and number of copies mailed to each state was initiated by Vickie Bauer. Butch Younginer suggested mailing a questionnaire to each state asking for input on what the membership is interested in reading. North Carolina will contact each State by phone to verify the contact person for each State who will be responsible for supplying the newsletter articles from the states.

## NEW BUSINESS

Bruce Pruitt and Vickie Bauer were nominated for the office of president and Ferne Winborne and Corinne Wells were nominated for secretary. The floor was opened to further nominations. None were made. David Chestnut motioned to accept these nominations and Harry Gaymon seconded it. The motion carried. The new president and secretary voted by secret ballot are Bruce Pruitt and Ferne Winborne.

Cathy Matthews made the suggestion that in the future the host state may consider choosing a slightly lower profile location to hold the meeting. There was some discussion that this may allow greater participation by some states. Steve Tedder mentioned Asheville as a possibility for the 1992 SWPBA meeting, however the North Carolina coast is still a possibility.

Mike Beiser moved to adjourn the meeting and Ferne Winborne seconded the motion. The motion carried and the meeting was adjourned to the volleyball court.

## A SHORT NOTE FROM THE RETIRING SECRETARY

I would like to take this opportunity to express my appreciation to all of the membership for their cooperation in bringing our secretary position into the age of computers. Thank you for making this past year a very enjoyable one.

Vickie

Hulcher

## ALABAMA

Another hot Alabama summer has arrived and Field Operations personnel are busily working on all of the field studies so carefully planned over the past winter. So far mother nature has cooperated quite nicely--unlike last year.

### WETLANDS INITIATIVE

EPA has approved the ADEM's grant proposal for development of a State Wetlands Conservation and Management Initiative as of 7 July 1992. Work group positions are currently being filled to begin the project.

### BENTHIC MONITORING PROGRAM

This year our macroinvertebrate biomonitoring folks will be conducting 54 bioassessments and assisting with the collection of 10 more sites. Thus far we have completed the collections at 36 of the scheduled sites, including 7 stations associated with the Sand Mountain Nonpoint Source Watershed project and 10 stations in the Flint Creek NPS Watershed Project, and 15 ecoregional reference sites. Six of the reference sites have now been sampled for two consecutive years.

Two sites on the Sipsey River in the Bankhead National Forest have been assessed using habitat and macroinvertebrate multi-habitat biological assessments. This reach is being considered for the Outstanding National Resource Water (ONRW) classification.

### SPECIAL STUDIES

This year, as in previous years, several water quality demonstration studies, which attempt to document improvement of water quality attributable to new or improved wastewater treatment facilities, are being scheduled. In addition to water chemistry and aquatic macroinvertebrate data, however, this years studies will also incorporate in-stream and effluent toxicity testing. Data is scheduled to be collected on Limestone Creek at Monroeville, Klondike Creek at Ozark and Sandy Creek at Camp Hill.

Our wasteload allocation and time-of-travel program is very ambitious this year. Six time-of-travels and one wasteload allocation are scheduled to be completed twice this summer. Locations range statewide with Bayou Sara and Wolf Creek in the Mobile area; Dobbs Creek, Christian Creek, Lake Neely Henry and the Tallapoosa River in East Alabama; Lost Creek in West Alabama; and Piney Creek on the Tennessee-Alabama State Line.

### TOXICS UNIT

During the third quarter of 1992, the Toxics Unit performed 5 acute and 6 chronic tests. With the onset of the new compliance sampling year we plan to have a productive summer and fall.

Two Algal Growth Potential Tests (AGPT) have been completed on samples collected from 4 stations on Smith Lake. AGPT's are planned thru September on these stations at which time results will be compiled and reports completed.

## RESERVOIR WATER QUALITY MONITORING PROGRAM

The Reservoir Water Quality Monitoring Program Report for 1990 - 1991 was completed April 1992. Monitoring results as well as current and future monitoring/research activities for each reservoir were presented and discussed.

Water quality data were collected at a total of 30 stations from 16 reservoirs during the spring session of the Reservoir Water Quality Monitoring (RWQM) program. Data will also be collected at each reservoir during mid- to late August. This year's monitoring completes the 3 year rotation of the 38 publicly accessible reservoirs in the state. Additional funding received through the Clean Lakes Program for FY '92 has enabled the Department to conduct more intensive monitoring of Lay Reservoir and add Coffeerville and Warrior Reservoirs to the monitoring rotation.

Clean Lakes Program Phase I studies on Weiss and West Point Reservoirs continue in 1992. Grants for Phase I studies of Neely Henry and Walter F. George Reservoirs have been approved by the EPA. The studies will begin later in 1992.

Lake Water Quality Assessment Grants to the Department have been approved by the EPA and will allow reservoir monitoring activities to continue.

## FISH TISSUE MONITORING UPDATE

Analyses of all samples collected to date from our fish tissue monitoring program are complete. Levels for ten pollutants that have the potential to bioaccumulate were all near or less than detectable limits in edible portions of fish collected from 13 lakes in the state.

Pollutants checked and their detection levels included the following: chlordane, toxaphene, mercury and PCB's, 0.05 ppm; mirex, 0.03 ppm; and DDT, dieldrin, dursban, endrin and heptachlor, 0.01 ppm.

Reservoirs sampled were Weiss, Lay, Mitchell, and Jordan lakes on the Coosa River; R.E. Woodruff and Dannelly lakes on the Alabama River; Bankhead Lake on the Black Warrior; Lake Demopolis on the Tombigbee River; and Lake Martin on the Tallapoosa River. Fish were also collected from state public fishing lakes managed by the Game and Fish Division in Washington, Dekalb, Lee and Lamar counties.

The program is scheduled to continue this fall with a new electrofishing boat to make a fleet of two and we are refining our aging techniques using otoliths and catfish spines.

The data generated from this program is being incorporated into our new fish tissue database. The database is still in rough form but once it's up and running it will facilitate comparison between sampling stations and river systems over time and will also allow access by other state and federal agencies.

Water Quality Management Program  
Water Protection Branch  
Environmental Protection Division  
Georgia Department of Natural Resources

Georgia would like to say HELLO! to everyone involved in the Southeastern Water Pollution Biologists' Association. We're looking forward to contributing to the newsletter on a regular basis and becoming more actively involved in the exchange of valuable information and ideas through its use. You haven't heard much from us in past newsletters. That is about to change.

### Organization

As many of you are already aware, the Water Quality Management Program (WQMP) is contained within the Water Protection Branch of the Environmental Protection Division. A generalized organizational chart with functional responsibilities is attached (Figure 1). Supervised by Mork Winn, the WQMP is itself composed of three units: Intensive Surveys, Ambient Monitoring, and Management. We have SWPBA members dispersed throughout these units (and elsewhere). In Intensive Surveys we find Marshall Gaddis, Linda Harn, Susan Noakes, Kathy Methier, Vernon Smith, Rohini Santha, Lonnie Dorn, and Chip Cutcliff. Ambient Monitoring contains David Kamps, Bill Kennedy, Max Walker, and Michael Krough. The Management Unit is represented by Broughton Caldwell. We may be hearing from them all in the months to come. The following is an explanation of some of the responsibilities of the WQMP.

### Aquatic Biomonitoring

The Intensive Surveys Unit contains a special subunit called the Aquatic Biomonitoring Project, supervised by Linda Harn. This was assembled in 1983 when the Ga. EPD took steps to broaden its' biological assessment capabilities by acquiring the resources to conduct aquatic toxicity testing. A 24 foot mobile testing lab was obtained in 1984, and the base operation was moved to Panola Mountain State Conservation Park in 1988 where it is currently located. Here, chronic and acute static testing is performed, using Ceriodaphnia dubia, and the fathead minnow Pimephales promelas. The daphnids have been cultured since the first testing was initiated at ABP. The minnows are obtained from the U.S.EPA when needed, though in-house fish cultures will be available in the near future. Figure 2 is a summary of the testing conducted in 1992. A report is available on each test.

### Trend Monitoring

The purpose of trend monitoring is to provide an insight into Georgia surface waters on a continuing basis using strategically

located stations at points of long term significance. Sampling at stations may include routine chemical, metals and organics, as well as macroinvertebrates and fish. For 1992, trend monitoring was expanded from 129 sites to 145 sites. First quarter operations were conducted on schedule and the data entered into STORET. Field work biological collections were completed in the first quarter and macroinvertebrate identification will be initiated this quarter, to be completed and summarized during the third quarter.

#### Clean Lakes - Section 314 Grant Projects

##### Jackson Lake Phase 1 Project:

A Diagnostic/Feasibility Study of Jackson Lake was recently conducted by the WQMP. Susan (Painter) Noakes was the project leader. Physical, biological, and chemical properties of the lake and watershed were studied to diagnose water quality problems and determine feasible alternatives for protection of Jackson Lake and its watershed. Lake morphometry and aerial photography was conducted to document the rate and effects of sedimentation; land use, geology, slope, and soil information was gathered to define potential sources of nonpoint source pollution; algae population dynamics and chlorophyll *a* concentrations were determined to measure lake productivity; aquatic macrophyte and fish population studies were conducted as part of a resource inventory; diel oxygen, limiting nutrient, sediment oxygen demand, nutrient regeneration, and depth profile measurements were performed to document water quality.

##### West Point Lake Phase 1 Project:

Coordinated by David Kamps, this is a joint Alabama/Georgia project. This study is being conducted under contract by LaGrange College, the University of Georgia and Auburn University. Monitoring continues on schedule and according to the approved study plan.

##### Lake Lanier Phase 1 Project:

Also coordinated by David Kamps, this project is being undertaken under contract with the University of Georgia. Monitoring continues on schedule and according to the approved study plan.

##### Walter F. George Phase 1 Project:

This project is also being conducted within the WQMP. Tim Shirah is the project leader. Baseline water quality sampling is complete. Seven lake and five tributary stations were sampled and data input into a computer data base is in progress. This includes field and lab data for 12 stations and 17 sampling dates. SOD tests were run at a number of locations over several sediment types. Special software has been used to link geographical and data base files for this project.

##### Lake Allatoona Phase 1 Project:

Coordinated by David Kamps, this project is being conducted under contract by Kennesaw State College. The final study plan was approved and contracts signed early this year. Sampling was



initiated this spring.

**Lake Blackshear Phase 1 Project:**

Coordinated by David Kamps, this project is being conducted under contract with the Lake Blackshear Watershed Association (Georgia Southwestern College). Final study plans were approved and contracts signed early this year. Sampling was initiated this spring.

**Lake Water Quality Assessment:**

This project is being conducted by WQMP staff. Marshall Gaddis is project leader. We applied and received Lake Assessment funds to conduct fish tissue sampling on the major lakes in Georgia. The University of Georgia is providing lab analysis. Seven hundred and seventy fish have been collected from 9 reservoirs and tested for metals and toxic substances. Composites of skin-on fillets from 1 to 6 fish of two species are being analyzed, with largemouth bass and catfish the targeted species. Analyses should be completed during the fourth quarter. Human health risk assessments will be conducted by the EPD human health toxicologist where possible. This is a significant effort, and when combined with other ongoing fish toxics studies (Toxic Substance Stream Monitoring and River/Stream Assessment) will comprise the largest database on toxic substances in fish available in Georgia.

**River/Stream Fish Tissue Assessment**

This project was initiated in 1991 to examine toxic substances in fish located below urban areas in Georgia. This year's site locations include the South and Flint Rivers below Atlanta, the Chattahoochee below Columbus, and the Ocmulgee River below Macon. Fish collection, lab analysis and use of data are similar to procedures described above in Lake Water Quality Assessment. Eighty eight composite fish fillet samples will be analyzed. Marshall Gaddis is project leader.

**Toxic Substance Stream Monitoring Project**

20 sites were selected for monitoring during 1992. Site selection was based on the 304(1) list and EPD program input. One sediment and 2 water samples were collected from each site during the first quarter, as well as macroinvertebrates and fish samples. Macroinvertebrate identification and fish flesh analysis are scheduled for later this summer. Bill Kennedy is our project leader.

**305(b) Report**

The 1990-1991 report includes significant new approaches and changes into input to estimates for miles of stream and lake acreage, implementation of new water quality standards, detection limits for metals, new estimates for miles of streams monitored and/or evaluated, additional use of data from local, state and federal agencies, a new section on public health worries with an

emphasis on fish kills, fishing advisories and shellfish restrictions, and expanded sections on wetlands and groundwater. The report will be complete in July. Mork Winn and David Kamps coordinate this project for the branch.

**FIGURE 1**  
**ORGANIZATIONAL CHART - WATER PROTECTION BRANCH**

| MUNICIPAL ENGINEERING PROGRAM  | MUNICIPAL PERMITTING PROGRAM   | WATER QUALITY MANAGEMENT PROGRAM  | INDUSTRIAL WASTEWATER PROGRAM  |
|--|--|---|--|
| <p>Engineering Unit</p> <p>Engineering Unit</p> <p>Computer Support Unit</p> <p>Grants Administrative Unit</p> <p>Construction Management Unit</p>   | <p>East Compliance Unit</p> <p>West Compliance Unit</p> <p>Facilities Monitoring Unit</p>  | <p>Intensive Surveys Unit</p> <p>Ambient Monitoring Unit</p> <p>Management Unit</p>   | <p>North Unit</p> <p>South Unit</p>  |
| <p>Administer the Federal Water Treatment Facilities Construction Grants Program delegated to the Division from the USEPA.</p> <p>Administer to Ga. Environmental Facilities Construction Grants Loan Program.</p> <p>Plant and specification review.</p> <p>Review of engineering reports and technical documents.</p> <p>Review of contract documents for bidability/constructability</p> <p>Evaluate State Grant Applications for Eligibility.</p> <p>Develop design guidelines and conduct literature review to keep abreast of treatment technology including development.</p> <p>Provide technical assistance to Cities with O&amp;M problems.</p> | <p>Issue NPDES and Land Application permits to municipal and privately owned water pollution control plants.</p> <p>Monitoring and enforce permit compliance</p> <p>Inspect, sample and evaluate operations and self-monitoring program.</p> <p>Issue Industrial Pretreatment Permits; overview local pretreatment program.</p> <p>Evaluate connection requests (A-95, Adequacy of Treatment Certification.</p> <p>Implement stormwater permitting program.</p> <p>Provide technical assistance to Cities with O&amp;M problems.</p> | <p>River Basin Management Planning</p> <p>Water Quality Modeling</p> <p>Wasteload Allocations</p> <p>Trend Monitoring</p> <p>Intensive Surveys</p> <p>Toxic Substance Stream Monitoring</p> <p>Nonpoint Source Management</p> <p>Water Quality Standards</p> <p>305(b) Report</p> <p>Aquatic Biomonitoring</p> <p>Clean Lakes Projects</p> <p>205(j) Projects</p> <p>Coastal Monitoring</p> <p>Major Lakes Monitoring</p> | <p>Issue NPDES and Land Application System permits to Industrial and Federal water pollution control plants (WPCPs)</p> <p>Monitoring and enforce permit compliance</p> <p>Inspect, sample and evaluate operations and permittee self-monitoring program</p> <p>Plan and specification review</p> <p>Review of engineering reports and technical documents</p> <p>401 Water Quality Certification</p> <p>Implement stormwater permitting program</p> <p>Evaluate requests for Sales Tax Exemption and Ad Valorem Tax Exemption</p> <p>Provide Technical assistance to Regional Offices on water quality issues</p> |

Figure 2

Printed

7/02/92

## AQUATIC BIOMONITORING TESTING LOG 1992

Page 1

ELST = Embryo-larval Survival and Teratogenicity Chronic  
 CSRT = Cladoceran Survival and Reproduction Chronic  
 LSG = Larval Survival and Growth Chronic  
 ASR = Acute Static Renewal  
 AFT = Acute Flow-through  
 AS = Acute Static  
 CONC = Concentrations  
 CSO = Combined Sewer Overflow  
 STR = Ambient Stream Surface Water

WQMU = Water Quality Management Unit  
 Eff = Effluent: (CL2=Chlorinated; UnCL2=Unchlor.;  
 DECL2=Dechlorinated; INF=Influent (%))  
 Mor = Mortality  
 LC50 = Median Lethal Effluent Concentration (%)  
 NOEC = No Observed Effect Concentration (%)  
 LOEC = Lowest Observed Effect Concentration (%)  
 IWC = Instream Wastewater Concentration

P.P. = Pimephales promelas  
 C.d. = Ceriodaphnia dubia  
 NA = Not Applicable  
 STATUS KEY:  
 1 = Report in Progress  
 2 = Report in Review  
 3 = Report Approved  
 I = Invalid Memo Written

| FACILITY OR WATER BODY            | STATION #; | NPDES # | WQMU       | WATER TESTED | DATES | TEST | # CONC | SPECIES | % MOR |     |     | OTHER |     |     | LC50 | NOEC | LOEC | STATUS |
|-----------------------------------|------------|---------|------------|--------------|-------|------|--------|---------|-------|-----|-----|-------|-----|-----|------|------|------|--------|
|                                   |            |         |            |              |       |      |        |         | IWC   | IWC | IWC | MOR   | MOR | MOR |      |      |      |        |
| CITY OF JACKSON SOUTHSIDE WPCP    | GA0023931  | 0501    | CL2        | 920123-29    | CSRT  | 5    | C.d.   | 64.3    | NA    | NA  | NA  | NA    | NA  | NA  | >100 | 40   | 64.3 | 1      |
| MACON-BCUSA LOWER POPLAR ST. WPCP | GA0024538  | 0591    | CL2        | 920122-28    | CSRT  | 5    | C.d.   | 7.0     | 0     | 0   | 0   | NO    | NO  | NO  | >100 | 100  | NA   | 3      |
| MACON-BCUSA ROCKY CREEK WPCP      | GA0024546  | 0591    | CL2        | 920122-28    | CSRT  | 5    | C.d.   | 7.3     | 0     | 0   | 0   | YES   | YES | YES | >100 | 30   | 60   | 3      |
| CITY OF DOUGLAS SOUTHEAST WPCP    | GA0024431  | 0703    | DECL2      | 920219-25    | CSRT  | 5    | C.d.   | 100     | 0     | 0   | 0   | NO    | NO  | NO  | >100 | 100  | NA   | 3      |
| CITY OF DOUGLAS SOUTHEAST WPCP    | GA0024431  | 0703    | CL2        | 920219-21    | ASR   | 2    | C.d.   | 100     | 5     | 5   | 0   | 0     | 0   | 0   | >100 | NA   | NA   | 2      |
| CITY OF SYLVANIA WPCP             | GA0021385  | 0114    | DECL2      | 920219-26    | CSRT  | 5    | C.d.   | 100     | 0     | 0   | 0   | NO    | NO  | NO  | >100 | 80   | 100  | 2      |
| CLEAR CR. CSO/STORMWATER CCC1R    | 1212       | 1212    | CSO        | 920331-02    | ASR   | 3    | C.d.   | NT      | NT    | NT  | NT  | NO    | NO  | NO  | >100 | NA   | NA   | 2      |
| CLEAR CR. CSO/STORMWATER CCC1L    | 1212       | 1212    | CSO        | 920331-02    | ASR   | 3    | C.d.   | NT      | NT    | NT  | NT  | NO    | NO  | NO  | >100 | NA   | NA   | 2      |
| CLEAR CR. CSO/STORMWATER CCC2     | 1212       | 1212    | CSO        | 920331-02    | ASR   | 3    | C.d.   | NT      | NT    | NT  | NT  | YES   | YES | YES | 89.8 | NA   | NA   | 2      |
| CLEAR CR. CSO/STORMWATER CCC3     | 1212       | 1212    | CSO        | 920331-02    | ASR   | 3    | C.d.   | NT      | NT    | NT  | NT  | NO    | NO  | NO  | >100 | NA   | NA   | 2      |
| CLEAR CR. CSO/STORMWATER CCS1     | 1212       | 1212    | STORMWATER | 920331-02    | ASR   | 3    | C.d.   | NT      | NT    | NT  | NT  | YES   | YES | YES | >100 | NA   | NA   | 2      |
| CLEAR CR. CSO/STORMWATER CCC1R    | 1212       | 1212    | CSO        | 920408-10    | ASR   | 3    | C.d.   | NT      | NT    | NT  | NT  | YES   | YES | YES | <50  | NA   | NA   | 2      |
| CLEAR CR. CSO/STORMWATER CCC1L    | 1212       | 1212    | CSO        | 920408-10    | ASR   | 3    | C.d.   | NT      | NT    | NT  | NT  | YES   | YES | YES | <50  | NA   | NA   | 2      |
| CLEAR CR. CSO/STORMWATER CCS1     | 1212       | 1212    | STORMWATER | 920408-10    | ASR   | 3    | C.d.   | NT      | NT    | NT  | NT  | YES   | YES | YES | 91.7 | NA   | NA   | 2      |
| CLEAR CR. CSO/STORMWATER CCS9     | 1212       | 1212    | STORMWATER | 920408-10    | ASR   | 3    | C.d.   | NT      | NT    | NT  | NT  | YES   | YES | YES | >100 | NA   | NA   | 2      |
| CLEAR CR. CSO/STORMWATER CCS10    | 1212       | 1212    | STORMWATER | 920408-10    | ASR   | 3    | C.d.   | NT      | NT    | NT  | NT  | YES   | YES | YES | 68   | NA   | NA   | 2      |
| CITY OF ATLANTA R.M. CLAYTON WPCP | GA0021482  | 1291    | CL2        | 920422-29    | CSRT  | 5    | C.d.   | 17      | 0     | 0   | 0   | YES   | YES | YES | >100 | 60   | 100  | 3      |
| CITY OF ATLANTA UTOY CREEK WPCP   | GA0021458  | 1291    | CL2        | 920422-28    | CSRT  | 5    | C.d.   | 6.9     | 0     | 0   | 0   | YES   | YES | YES | 77.5 | 30   | 60   | 3      |
| CITY OF ATLANTA SOUTH RIVER WPCP  | GA0024040  | 1291    | CL2        | 920422-29    | CSRT  | 5    | C.d.   | 7.6     | 0     | 0   | 0   | YES   | YES | YES | >100 | 100  | NA   | 3      |
| COBB COUNTY SOUTH COBB WPCP       | GA0026158  | 1290    | DECL2      | 920513-19    | CSRT  | 5    | C.d.   | 5.3     | 0     | 0   | 0   | YES   | YES | YES | >100 | 100  | NA   | 3      |
| COBB COUNTY SOUTH COBB WPCP       | GA0026158  | 1290    | CL2        | 920513-15    | ASR   | 3    | C.d.   | 5.3     | NT    | NT  | NT  | YES   | YES | YES | 35.4 | NA   | NA   | 3      |
| COBB COUNTY R.L. SUTTON WPCP      | GA0026140  | 1291    | CL2        | 920513-19    | CSRT  | 5    | C.d.   | 5.5     | 0     | 0   | 0   | YES   | YES | YES | >100 | 100  | NA   | 3      |

## AQUATIC BIOMONITORING TESTING LOG 1992

ELST = Embryo-Larval Survival and Teratogenicity Chronic  
 CSRT = Cladoceran Survival and Reproduction Chronic  
 LSG = Larval Survival and Growth Chronic  
 ASR = Acute Static Renewal  
 AFT = Acute Flow-through  
 AS = Acute Static  
 CONC = Concentrations  
 CSO = Combined Sewer Overflow  
 STR = Ambient Stream Surface Water

WOMU = Water Quality Management Unit  
 Eff = Effluent; (CL2=Chlorinated; UnCL2=Unchlor.;  
 DECL2=Dechlorinated; INF=Influent (%)  
 Mor = Mortality  
 LC50 = Median Lethal Effluent Concentration (%)  
 NOEC = No Observed Effect Concentration (%)  
 LOEC = Lowest Observed Effect Concentration (%)  
 IWC = Instream Wastewater Concentration

P.p. = Pimephales promelas  
 C.d. = Ceriodaphnia dubia  
 NA = Not Applicable

STATUS KEY:  
 1 = Report in Progress  
 2 = Report in Review  
 3 = Report Approved  
 I = Invalid Memo Written

| FACILITY OR WATER BODY        | STATION #;<br>NPDES # | WOMU | WATER TESTED | DATES     | TEST | #<br>CONC | SPECIES | % MOR |     | OTHER | LC50 | NOEC | LOEC | STATUS |
|-------------------------------|-----------------------|------|--------------|-----------|------|-----------|---------|-------|-----|-------|------|------|------|--------|
|                               |                       |      |              |           |      |           |         | IWC   | IWC |       |      |      |      |        |
| CITY OF CHATSWORTH WPCP       | GA0032492             | 1405 | DECL2/CL2    | 920513-19 | CSRT | 5         | C.d.    | 71    | 0   | NA    | >100 | 50   | 71   | 3      |
| FORT VALLEY UTIL. COMM. WPCP  | GA0031046             | 0507 | CL2          | 920610-16 | CSRT | 5         | C.d.    | 88.6  | 0   | YES   | >100 | 100  | NA   | 2      |
| CITY OF MILLEGEVILLE WPCP     | GA0030775             | 0391 | CL2          | 920610-16 | CSRT | 5         | C.d.    | 3.5   | 0   | YES   | 43.5 | <3.5 | 3.5  | 2      |
| C.W.W. SOUTH COLUMBUS WPCP    | GA0020516             | 1293 | CL2          | 920610-16 | CSRT | 5         | C.d.    | 5.1   | 0   | YES   | 70.7 | 12.5 | 25   | 2      |
| ATHENS NORTH OCONEE WPCP      | GA0021725             | 0301 | CL2          | 920715-   | CSRT | 5         | C.d.    |       |     |       |      |      |      | 2      |
| ATHENS MIDDLE OCONEE WPCP     | GA0021733             | 0304 | CL2          | 920715-   | CSRT | 5         | C.d.    |       |     |       |      |      |      | 2      |
| FULTON COUNTY CAMP CREEK WPCP | GA0025381             | 1291 | CL2          | 920715-   | CSRT | 5         | C.d.    |       |     |       |      |      |      | 2      |



## KENTUCKY

As I am sure most of you are, we have been quite busy this summer. The weather here in Kentucky has been generally not extremely hot (85 to 95 degrees F); however we have had a lot of rain. This has affected sampling activities. Following is a brief rundown by section of our activities this summer.

### Standards & Specifications Section

The Kentucky Rivers Assessment has been completed and is at the printers. The Assessment represents a cooperative, interdisciplinary effort to synthesize the multiple resources and uses of Kentucky's rivers and streams. A total of 551 streams were identified in the Assessment as having one or more significant, noteworthy attributes.

Giles is beginning a series of river basin water quality assessments. The assessments will involve the analysis of water quality data collected at our ambient monitoring stations. Informational goals to be assessed include: determination of average conditions, changing conditions, and extreme events. Water quality data analysis protocol are now being reviewed.

Cliff is busy with lake monitoring.

Terry Anderson compiled our 305b report. Kentucky was one of two states in Region IV to submit their report prior to the April deadline. Copies for public release should be available by the end of August.

### Ecological Support Section

Heavy rains have affected BMP and reference reach monitoring activities. A few days after setting multiplates and periphyton sampling devices in the Salt River basin, the basin was hit by 7+ inches of rain in one day. Early this week collection of sampling devices was halted when Ron Houpp, Lythia Metzmeier, and Allen Robinson found upon their arrival the Licking River to be high and muddy. The biologists are hoping for a week or two of rain free weather. (More storms are forecast for this weekend.)

An intensive survey of the Boone Creek watershed was completed before the rains fell.

An environmental inventory and management plan has been completed for the Bad Branch Wild River. The plan gives direction to future

preservation needs in the watershed. The Bad Branch watershed is largely owned by the Nature Conservancy.

#### Bioassay Section

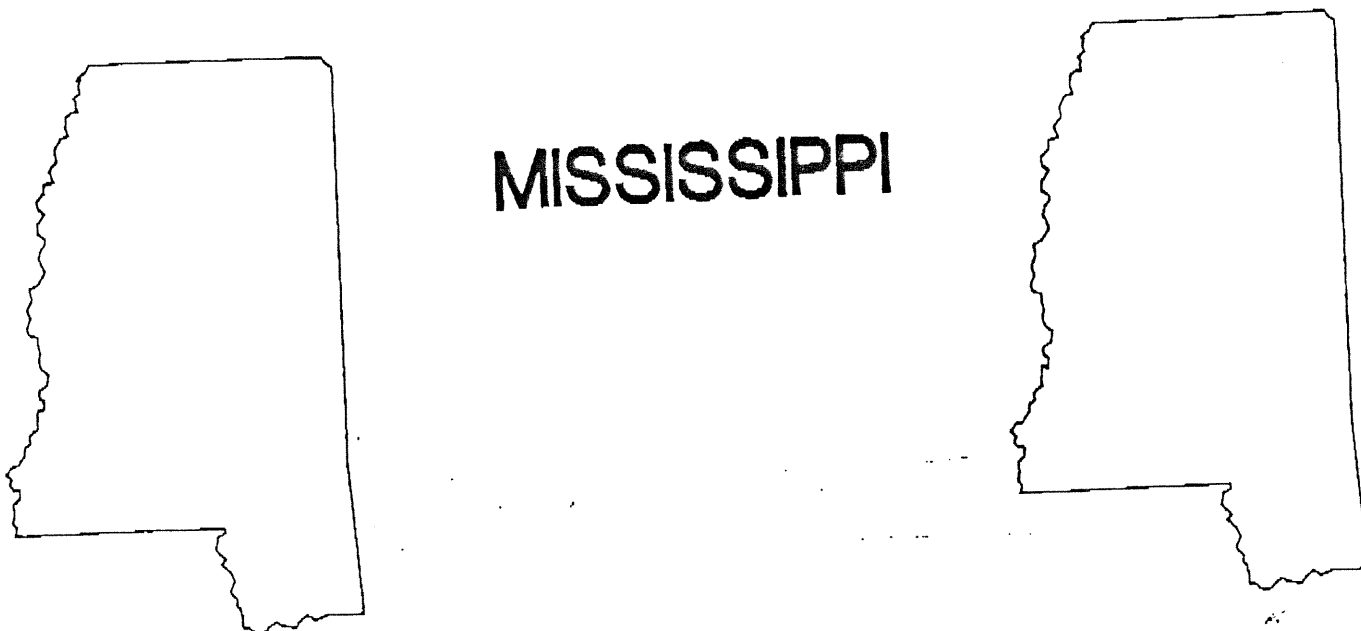
Biologists in this section have been quite busy. About 20 facilities have been tested this summer. Next week, facilities in the Kentucky Lake area will be tested.

In May, the culture facility was torn down and disinfected. This cleanup was necessitated by an infection of Mycobacterium marinum (fish handlers disease). New fathead stock was obtained from the Newtown facility.

#### Nonpoint Section

Work activities continue for the Bear Creek (mining), Mammoth Cave, Salt River - Taylorsville Lake, and Fleming Creek (agriculture) nonpoint projects.





### MISSISSIPPI HAPPENINGS

Our ambient biological monitoring program is in full swing. Thus far, we have concentrated our efforts on re-sampling the sites given us by EPA as part of the AL/MS Reference Site project (more on that below), and in the ecoregion known as the Mississippi Valley Loess Plains. So far we have examined over 40 sites new to our program, in hopes of expanding our database and locating additional least impacted sites upon which to derive biological criteria.

Wrightsville beach is in the back of our minds, however and we hope to be able to send several of our staff.

### UPDATE ON OUR NEW LAB

Our new biology lab is progressing nicely, and might even be completed according to schedule! If that is the case we biologists will be housed in the new facility by October of this year. We've already begun packing!!

### OUR NEW EMPLOYEES

Last newsletter we reported on the addition of new employees to our biology staff. We have hired one person. Beaurocratic \*%\$ (rhymes with quit) have prevented us from filling the second position, but finally we have been given the green light to fill this slot as well. So a big SWPBA hello to Richard D. Peets, a Mississippi native. He received his B.S. in biology from Mississippi College where he studied under Bill Stark; and recently completed his M.S.

at the University of Southern Mississippi. Working with Dr. David Beckett through the Waterways Experiment Station, Richard's thesis is titled "Density and Composition of Macroinvertebrate Communities on three species of Aquatic Macrophytes in Lake Seminole, GA." He has been a NABS member since 1988, and brings to our lab a good knowledge of chironomid and oligochaete taxonomy. WELCOME!

#### ALABAMA/MISSISSIPPI REFERENCE SITE PROJECT

Participants in this project from the MS OPC Lab, AL DEM and EPA have met in mid April in Montgomery to plan the final steps toward completion of the project. An additional joint-sampling exercise was conducted, and reports were presented on the selected reference sites. We attempted to use our maps to choose some preliminary sites in the Southwestern Appalachians (which have been divided by Omernick into two subcoregions) and the Mississippi Valley Loess Plains. As mentioned before, we have spent a great deal of our field effort this year in the Loess Plains checking out our sites. One site with definite potential is Caston Creek. Wholly contained within the Homochitto National Forest, this stream is excellent potential all along its watercourse to serve as a reference site for whatever drainage basin size is needed. Some progress has been made toward identification and analysis of the samples collected as Mississippi's commitment to this project. Seven of the proposed sites have been identified and analyzed thus far. This represents 50% of the total sites sampled as a part of this project. Final delineation of the ecoregions/subregions and development of a database upon which biological criteria can ultimately be based will take some time.

#### FISH TISSUE MONITORING

##### CASSIDY BAYOU INVESTIGATION

After review of the existing database of toxaphene levels in this waterbody, it was determined that levels of toxaphene in Cassidy Bayou are declining. It was further recommended that the money set aside for restocking the bayou be released for that purpose.

##### DIOXIN IN THE LEAF AND PASCAGOULA RIVER BASINS

We currently have advisories in place on the Leaf and the Escatawpa Rivers, both of which have been recently updated. The Leaf River advisory recommends limiting consumption of catfish larger than 22 inches from the mouth of Tallahala Creek to the Pascagoula River, a distance of approximately 45 miles. The Escatawpa River advisory covers 12 miles from I-10 to the Pascagoula River and applies to catfish, buffalo, and mullet. The Escatawpa River was sampled as scheduled in May with 29 samples

being collected and shipped to the analytical lab. The first of the Leaf River collections is also complete. Sixty-six fish samples are in the process of being sent to the analytical lab.

#### MEETINGS ATTENDED

Billy Justus, Richard Peets, and Mike Beiser attended the NABS meeting in Louisville at the end of May. Henry Folmar and Mike Beiser attended the "Workshop on water quality standards and criteria" presented by EPA and held in New Orleans, June 10-12. Mike presented a progress report on the AL/MS ecoregion project at this meeting.



## North Carolina

### BENTHOS

#### Recent Activities

The benthos group is in the middle of our usual frantic summer collections, with most people out in the field every other week. This year's collections focus on the French Broad, Catawba and Tar river basins. We are attempting to assess all major tributaries, including some current evaluation of all known pollution problems. The Tar River basin contains some estuarine areas, and we hope to use Larry Eaton's methods to help rate these sites.

#### **Dischargers**

Ferne Winborne looked at the effects of a spray field (Mallinkrodt) on a small tributary of the Neuse River. The spray field was not working properly, causing large amounts of the sprayed water to simply runoff into this small stream, and severely affecting the invertebrate fauna.

The Pigeon River below Waterville dam receives only tributary flow, i.e., most of the river flow (with Champion Paper's effluent) is bypassed around this area. Recently, however, some of the normal river water was allowed over the dam to test the effects of greater flow on fish habitat. Dave Penrose sampled this part of the river before (3/92) and after (4/92) the flow test to look for any acute toxicity. No change was found, possibly due to the occasional prior release of lake water during high flows.

#### **Methods and Biocriteria**

Larry Eaton continues to work on biocriteria and sampling methods for estuarine areas. A promising technique for low salinity areas is to tabulate the percent deformities for Chironomus larvae. Low salinity areas usually have very low diversity, therefore the usual bug-counting is not as useful. The percentage of mentum deformities is proving to be a good technique for finding areas with high sediment metals, although there may be other sources of pollution which also cause such deformities. We have also started a project (in conjunction with the bioassay group) where larvae are reared in the lab in sediments containing various metal concentrations.

Neil Medlin is still working on a study of swamp streams. Collections in May already showed a sharp drop in taxa richness relative to winter samples; we will also be collecting summer samples in selected swamp streams. This study is plagued by a large amount of site individuality.

Neil also is acting as our expert on designation of "critical habitat" for threatened and endangered species. Areas designated as critical habitat become eligible for High Quality Water designation. There is currently much debate about what criteria should be used to determine critical habitat.

Dave Lenat is working on a new set of tolerance values for a Hilsenhoff-type biotic index. We are looking into getting this list published by JNABS.

#### **Citizen Monitoring**

Dave Penrose helped with a workshop conducted at Duke Power company for 20 citizen groups. As part of this workshop, volunteers were trained to collect invertebrates and to identify critters to the family level. Over 47 sites in the Catawba River basin will be sampled, with a final report prepared by the Western Piedmont Council of Governments.

"To my mind a river is alive. Reason about as I will, I can never make it otherwise."  
Bradford Torrey, A Ramblers Lease, 1889

"...The site of a sail and the sniff of low tide roils the shallows of my civilization and stirs the elemental ooze at the bottom of me."  
Dallas Lore Sharp, 1926

#### Taxonomy

"Little localized powers, and little narrow streaks of specialized knowledge, are things men are apt to be conceited about. Nature makes us very wise; but for this encouraging principle how many small talents and little accomplishments would be neglected!"  
Oliver Wendell Holmes, The Autocrat of the Breakfast Table, 1857

#### **New and/or rare critters**

1. Chironomidae  
-Wendell Pennington's group found a single specimen of Fittkauimyia from the North East Cape Fear River, New Hanover County, April 1991. We have confirmed this ID, which is a large range extension. All prior records in the US have come from Florida (Hudson et al. 1990)  
-Parachironomus n. sp.?, Beech Swamp, 5/92.
2. Odonata  
-Telebasis byersi, Bynum Mill Creek, Edgecombe Co., 5/92.

#### **New keys**

1. Daigle, Jerrell. Florida damselflies (Zygoptera): a species key to the aquatic stages. State of Florida, Dept. Environmental Regulation Technical Series 11(1): 1-11. This wonderful little key features marginal drawing of the gills, *immediately adjacent to where each of the 44 species keys out*.
2. Vineyard, R.N. and G.B. Wiggins. 1992. Systematics of the Caddisfly genus Neophylax McLachlan. Still hard to use.
3. John Epler has completed his key to Florida midges (we still have not received copies), and we hope he will be able to do a similar publication on NC/SC midges.

"A man may learn a deal of the genera from studying the specific, whereas it is impossible to know the specific by studying the general."  
Marjorie Rawlings, Cross Creek, 1942

#### Miscellaneous

1. Personnel changes - Ferne Winborne is leaving the benthos group after serving eleven years; she is taking a teaching position with the NC Museum of Natural History. Ferne will be greatly missed by both the North Carolina staff and by SEWBPA members throughout the southeast. We welcome Nancy Guthrie, who comes to us from the Durham Museum.
2. New Publication:  
Mulholland, P.J. and D.R. Lenat. 1992. Streams of the southeastern piedmont, Atlantic drainage. In: Hackney, C.T., S.M. Adams, and W.A. Martin, eds. Biodiversity of Southeastern United States - Aquatic Communities. pg. 193-231. This book also contains chapters on mountain and coastal plain streams, although each of the three chapters tends to reflect the specific interests of the authors.

3. NABS 1993. The 1993 North American Benthological Society's annual meeting will be held in Calgary, Alberta. At this meeting, Dave Penrose (NC) and Mike Beiser (MS) have been asked to prepare a special session that deals with the development and implementation of biocriteria. The session will hopefully include a speaker from Headquarters (George Gibson), Tetra Tech (Mike Barbour), and several Canadian provinces. We would like to include several speakers from Region IV. Please give it some thought and contact either Dave (919-733-6946) or Mike (601-961-5183).

4. The Bioassessment Group regularly has openings for positions in both the macroinvertebrate and phytoplankton sections. We are not hiring for a specific position at this time, but we would like to have applications on file for the next time. If you are interested in working in North Carolina, call (919-733-6946) or send a resume to Trish MacPherson (DEM Water Quality, 4401 Reedy Creek Road, Raleigh NC 27607). All correspondence will be treated as confidential.

## **PHYTOPLANKTON**

The phytoplankton group is now back up to full staff, with the addition of Steve Kroeger and Ginny Coleman (Karen Lynch and Greg Price are still here). Steve has a broad work experience (NC DOT Wetlands group, Savannah River Ecology Lab and Wisconsin DNR to name a few) to go with his master's degree in botany. Ginny is completing her thesis work at NCSU for a master's degree in botany and has been working with Dr. Burkholder there on a variety of aquatic systems including estuaries and freshwater reservoirs. Lisa Williams got married and moved to New Jersey in May. Even at full staff, we have a tremendous backlog of samples and are looking at ways to get caught up (oops, dropped another one. Darn! ).

All phytoplankton data for the Neuse River basin was summarized for our basin assessment report, we are still working closely with NCSU on the new toxic dinoflagellate, work will soon begin for our final report on the Albemarle-Pamlico chemical and biological data, and work is continuing on evaluating phytoplankton communities of reference lakes throughout the state.

## **AQUATIC TOXICOLOGY UNIT**

The Aquatic Toxicology Unit has recently completed a chemical and toxicological characterization of water treatment plant discharges looking at supply water type (ground vs. surface), process type (filtration, alum/polymer flocculation, reverse osmosis, softening, etc.). Results of this study will be used to guide parametric coverage by soon to be released general permits for these facilities. In general, the facilities spanned the range of toxicity with chlorides and aluminum being implicated as possible toxicants, at appropriate facilities in general, and zinc, manganese, and iron being possible toxicants at individual facilities. Contact Larry Ausley with questions about study results.

We have recently completed revisions of our own testing methods as well as those required for certified laboratories in response to the publication of EPA's fourth edition acute testing manual. Comments on proposed modifications were solicited from the certified lab community before final method changes were proposed to the DEM Director. Call Matt Matthews or Phil Bethea with questions about these modifications.

Thom Mistele has resigned as group leader of the Toxicity Evaluation Group. Thom is returning to UNC to add an MBA to his collection of Masters degrees. Thom's supervisory skills, statistical wizardry, organization, and wit will be missed. We are currently having a difficult time finding any significant number of applicants qualified to fill this position as we are asking for education and experience necessary to satisfy those of a Biological Laboratory Supervisor under our biolab certification regs.

We are also seeking to fill an Environmental Biologist I position with an individual experienced in TIE/TRE procedures who can design, implement, interpret and report these studies as well as handle special studies and experimental cultures.

In the near future we hope to be recruiting for an Environmental Specialist I position to fill that vacated by Daniel Rowe in April as well as another one to evaluate TIE/TRE plans submitted by permittees. The former position will review all incoming aquatic toxicity compliance testing reports submitted by permittees as well as reviewing proposed biocide uses in cooling water permits.

---

"Truly the human eye is nothing more than a window, of no use unless the man looks out of it"

Bradford Torrey, Birds in the Bush, 1885

UP FROM THE EGG:  
THE CONFESSIONS OF A NUTHATCH AVOIDER

Bird watchers top my honors list.  
I aimed to be one, but I missed.  
Since I'm both myopic and astigmatic,  
My aim turned out to be erratic,  
And I, bespectacled and binocular,  
Exposed myself to comment jocular.  
We don't need too much birdlore, do we,  
To tell a flamingo from a towhee;  
Yet I cannot, and never will,  
Unless the silly birds stand still.  
And there's no enlightenment in a tour  
Of ornithological literature.  
Is yon strange creature a common chickadee,  
or a migrant *alouette* from Picardy?  
You rush to consult your nature guide  
And inspect the gallery inside,  
But the bird in the open never looks  
Like its picture in the birdie books--  
Or if it once did, it has changed its plumage,  
And plunges you back into ignorant gloomage.  
That is why I sit here growing old by inches,  
Watching the clock instead of finches,  
But I sometimes visualize in my gin  
The Audubon that I audubin.

Ogden Nash, 1956



TENNESSEE DEPARTMENT OF HEALTH  
Aquatic Biology Section, Environmental Laboratories

And then there were five ... Any biologists out there want to move to Tennessee? We have two vacancies (which are froze till further notice) and are desperately in need of bug people.

We have had four promotions since last you heard from us. That's not bad for five people. Dan Murray is now a Biologist II, Donna Wingfield is the Biologist III in charge of Benthic Monitoring, Lyle Mason is the Biologist III in charge of Toxics Monitoring and Debbie Arnwine is Section Manager in charge of paper pushing.

We are getting our feet wet (among other things) in wetland criteria sampling this summer. Does anyone have suggestions for ways to keep from sinking up to your chin in swampmuck? We thought about snowshoes (I can't wait to see the face of purchasing personnel when they get that request). We also need a good water moccasin repellent.

We are winding up two years of baseline sampling of bugs and fish for 4 nonpoint source projects this summer. We are going to miss wading through acres of cow manure. Now begins long hours chained to a scope. Does anyone know a good Ephemeropteran key? We will begin a new nonpoint source project in the Clinch/Powell watershed this fall. Ecoregion references are critical for nonpoint source work so if anyone shares regions with Tennessee and has any information on unimpacted watersheds we would appreciate the help. Mississippi has been very helpful with information on the Wolf River which we are using as a reference stream for a crop runoff project in the Mississippi Valley Loess Plains ecoregion.

September will see us collecting fish on 21 reservoirs for the Clean Lakes Program. We get to go to some pretty places for a change. To offset that, we will continue monitoring the Mississippi River since those darn fish still insist on showing up contaminated.

If anyone has answers to our questions or wants to transfer to a state with pretty mountain streams please call us at 615/262-6327

Till next time: Debbie Arnwine, Donna Wingfield, Lyle Mason, David Stucki and Dan Murray.

## ECOLOGICAL SUPPORT BRANCH ACTIVITIES, FEBRUARY 1992

### Branch

The Branch is actively involved in developing a Regional IV strategy to evaluate the mercury contamination in South Florida.

### Toxics Evaluation Section

1. Phyllis Meyer and the ESAT staff collected Corbicula (Asiatic Clams) from unpolluted streams to be analyzed for use as a source of "clean" animals in future superfund field studies.
2. Through meetings, review of contractor-generated study plans, a conference call, and a draft ESB work plan, Alan Auwarter, Ron Raschke, Jerry Stober, Russ Todd, and our ESAT staff provided input to the Sangamo site RPM, Craig Zeller, toward an on-going ecological investigation in Lake Hartwell. The study is focusing on PCB contamination in the Twelve-Mile Creek arm of the lake. ESB will conduct part of this investigation in Mid-April.
3. Alan Auwarter conferred with Charles King, Ciba-Geigy RPM, concerning details and start-up date for an ecological investigation of a flood plain site on the Tombigbee River. This study may begin in late April or in May depending on the timing of the river retreating from flood stage.
4. Dan Scheidt and Phyllis Meyer, with the help of the ESAT team, completed the report of an ecological assessment of the Murry site in Tennessee. Drainage from this landfill is causing significant, localized impacts on one or more nearby creeks. Effects normalize by the time the creek(s) reach the larger Shoal Creek.
5. Alan Auwarter helped to host a delegation of Czech environmental scientists who visited a few university and EPA laboratories in mid-February.
6. Alan Auwarter coordinated with Randy Dominy, a Region IV superfund RPM, to provide demonstrations in laboratory and field aspects of ecological evaluation for a national meeting of superfund RPM's to be hosted by Region IV during the week of March 16.
7. Jerry Stober is working with Coastal Programs and Contractor on the development of a contaminant in fish database for Region IV states.
8. Jerry Stober presented EMAP/South Florida Initiative briefing to headquarters EMAP on study planning objective and to OPM staff.

9. Jerry Stober reviewed Sangamo and Aberdeen superfund site study reports and provided comments on development of a Region IV ecological risk guidance document.
10. Jerry Stober commented on the Public Health Plan for the Gulf of Mexico Program--specifically human health fish advisory protocol.
11. Jerry Stober began organization of an Interagency Meeting to demonstrate an EMAP-like approach to mercury studies in South Florida, then deferred until later in spring.

#### Marine/Wetlands and Water Quality Section

13. Don Schultz assisted SCS in re-establishing vegetation in the McMichael constructed wetland in Putnam County. This is a part of our non-point source pilot project.
14. Tom Cavinder and Hoke Howard met with personnel from TVA, WMD, and AL-DEM in Decatur, Alabama to initiate proposals for Water Quality monitoring of the Flint Creek Watershed. This project is envisioned to last several years with development of non-point source control strategies and subsequent measurement of effects to water quality.
15. Tom Cavinder participated in a water quality workshop in Marathon, FL. Water quality management strategies are being developed and implemented as part of the Florida Keys National Marine Sanctuary legislation.
16. Candace Halbrook contacted all state EMAP-NCS coordinators regarding lake selection for the 1992 National Lake Survey. Forms are being mailed out along with conversion of lat/long coordinates. Candace also participated in a conference call with regional coordinators, Washington D.C. and Corvallis discussing more details of this effort.
17. Ron Raschke reviewed a document for DOJ entitled "DER information review and determination of class II violations in The Everglades." Comments transmitted via telephone to the SFWMD. (FLAP literature review and analysis continues.)
18. Ron Raschke reviewed for EMAP-Corvallis "EMAP surface water resources overview of statistical design of lake selection." Comments sent to S. Paulsen.
19. Russ Todd and Bobbi Carter met with Haines Johnson and Butch Register to discuss status of reconnaissance efforts on mitigated wetlands for issued COE 404 permits. Based on the reconnaissance trips, we will be continuing our efforts to evaluate mitigation sites to develop criteria by which to approve/disapprove future mitigation proposals.

20. Tom Cavinder and Hoke Howard traveled to Decatur, AL to tour Flint Creek Watershed and meet with staff of AL Dept. of Envir. Management, TVA and Atlanta, EPA to discuss monitoring of watershed for Watershed Initiative project.
21. Ron Weldon and Hoke Howard traveled to Tuscaloosa, AL to meet with staff of non-point and mining section, AL Dept. of Envir. Mgmt. on the coal bed methane industry, active discharge sites and production facilities were toured; proposed discharge sites on the Sipsey River were also seen.
22. Archie Lee worked with UGA personnel on a special study to collect sediment samples from Lake Lanier, West Point Lake and Chattahoochee River for metals analysis. Study objective is to determine and distinguish background metals concentrations from anthropogenic concentrations.

#### ECOLOGICAL SUPPORT BRANCH ACTIVITIES, MARCH 1992

##### Marine/Wetland and Water Quality Section

21. Mark Koenig, Bobbi Carter and Archie Lee conducted a reaeration study on the South River to compare the krypton noble gas method with the established radioactive krypton method. If the comparison studies are successful, the Region will have a reliable and economical method of determining reaeration capacity of streams for waste load allocation modeling.
22. Hoke Howard, Bruce Pruitt and Tom Cavinder conducted a dredge and fill enforcement investigation at the J. O. Sims Site in Northern Alabama. The case has been referred to EPA by the COE. Hoke Howard completed enumeration and identification of macroinvertebrates from Sims Project.
23. Mel Parsons and Bruce Pruitt travelled to West Broward County Florida to take soil samples in the advanced I.D. area and in water conservation area 3A. The samples were analyzed for metals, phosphorous and organic content. Results of these analyses will also be used as part of our Everglades Mercury study.
24. Mel Parsons and Bruce Pruitt met with the Wetlands Planning Unit to continue formulating a wetlands assessment technique for Region IV.
25. Mel Parsons and Candace Halbrook met with the Corps of Engineers, Georgia DNR, Georgia EPD, U.S. Fish and Wildlife and EPA Wetlands Planning Unit in Atlanta for a scoping meeting concerning the South Dougherty Plain advanced I.D. ADID work should begin on this site in the near future.

26. Don Schultz sampled Rooty Creek basin and McMichael farm creek to establish nutrient contents and eutrophication condition. Don also assisted SCS in replanting joint grass in the McMichael and Keys wetlands.
27. ESD personnel, assisted by WMD personnel, conducted biological, sedimentological, and chemical characterization of the Ft. Pierce Ocean Dredged Material Disposal Site (ODMDS) during the period March 11-17, 1992. The work also included a sediment mapping survey using UGA, Center for Applied Isotope Studies, personnel and seafloor sampling equipment. The purpose of the work was 2-fold: (1) to determine if any significant impact has occurred at the existing interim ODMDS, and (2) to characterize a new area toward which the interim site will be shifted to protect hard bottom biological communities. Project personnel included: David Smith, Jake Weaver, Candace Halbrook, Phyllis Meyer, Bruce Pruitt, Mel Parsons, Russ Todd, Philip Murphy and Don Lawhorn from ESD; Gary Collins, Rol Ferry and Drew Kendall, WMD; Ed McLean, Hdqt.
28. Philip Murphy participated in a meeting in Charleston with the S.C. Wildlife and Marine Resources, U.S. Fish and Wildlife Service, EPA, WMD, and the Corps of Engineers. The purpose of the meeting was to discuss the status of existing environmental studies and ocean dumping activities at the Charleston ODMDS and to develop plans for ESD, ESB and SCWMD personnel to develop a comprehensive long-term monitoring plan for the ODMDS and surrounding area.

#### Toxics Evaluation Section

29. Alan Auwarter toured the Bay/Peak/Reeves Superfund sites in Tampa to assess the impact of cessation of local and municipal spray field activities on the hydrology of wetlands previously studied. This information is needed to finalize the Bay/Peak/Reeves Wetland Impact Study and to assist the WMD in reaching decisions concerning the fate of these site-associated wetlands.
30. Alan Auwarter toured the Kassouf-Kimerling site with the Remedial Project Manager (RPM) to record presence of bald eagles nest near the project site and to begin to plan for the impact of this active nest on planned site remedial activities.
31. TES hosted the ecological portion of a Region IV demonstration of capabilities for those attending the Fourth Annual meeting of Superfund RPMs.

32. Ron Weldon and Kay Millar provided technical assistance to Kathy Methier, Lonnie Dorn and Rohini Santha of GAEPD on culturing and toxicity testing methods.
33. Jerry Stober prepared a study plan for Mercury Contamination in the Everglades Ecosystem. Jerry Stober and Del Hicks briefed the Deputy RA and ESD Director on study plan. Jerry also travelled to RTP to brief Rick Linthurst on Mercury Study Plan and to define EMAP assistance.
34. Dr. Stober continued to work with Coastal Programs and Contractor on the development of a contaminants in fish database for Region IV states.
35. Dan Scheidt participated in a site visit to Pensacola Naval Air Station, Florida March 4-6 along with 16 people representing EPA, Federal and Florida Natural Resource Trustees, the Navy and their contractors. This was a preliminary visit for the purpose of planning ecological assessment work plans for the numerous operable units and sites. A trip report was submitted to the RPM March 20.

#### ECOLOGICAL SUPPORT BRANCH ACTIVITIES, APRIL 1992

##### Marine/Wetlands & Water Quality Section

36. Phil Murphy, Mark Koenig, and Del Hicks met with staff of the Metro Denver Wastewater Reclamation Facility in Denver, Colorado. The purpose of the meeting was to review current water quality sampling and modeling efforts on the South Platt River, identify data gaps, and decide additional study requirements. The ESD staff followed up this meeting with proposals for sediment demand, diel dissolved oxygen assignments, and stream reaeration measurement.
37. Mark Koenig, Russ Todd and Archie Lee traveled to Pensacola, Florida to conduct a reaeration study on Eleven Mile Creek. Results of this study will be used to verify the accuracy of our procedure for determining reaeration rates.
38. Hoke Howard and Tom Cavinder conducted a water quality survey of Flint Creek near Decatur, Alabama. This initial survey, conducted during week of April 6, will serve to guide development of a comprehensive monitoring plan for the Flint Creek Watershed by EPA, TVA and ADEM.
39. Hoke Howard attended a 2-day meeting on the development of pilot ecoregion reference sites. ORD-Corvallis with support from ESB, WMD and the states of Alabama and Mississippi are working toward the development of ecological reference site

information. The goal is to ultimately establish biological criteria in state standards.

40. Tom Cavinder and Mark Koenig met with representatives of Proctor and Gamble (P&G) and their consultants to discuss wasteload allocations for the P&G paper mill which is located on the Fenholloway River at Perry, Florida. ESB will participate in a water quality model calibration study scheduled for the week of May 25 by providing SOD and reaeration measurements.

#### Toxics Evaluation Section

41. Dan Scheidt, Jerry Stober, and Bill McDaniel traveled to South Florida April 20 and 21 for a helicopter orientation of the Everglades, evaluating Everglades soil coring field methodologies, and assessing clean methods for mercury analysis at Dr. Ron Jones' Florida International University laboratory.
42. Ron Weldon conducted PAI's on Research and Analytical Laboratories, Inc. and Duke Power Company located in Kernersville and Huntersville, North Carolina, respectively. These laboratories conduct toxicity testing for NPDES permittees.
43. Staff coordinated ESD project efforts at the Sangamo-Western project site, including 1) siting in Phase II GPS sampling stations in conjunction with Bechtel staff and project RPM, 2) planting bivalves for uptake analysis and sampling plankton and benthics and Twelve Mile Creek biological drift in conjunction with ESAT biologists and project RPM, and 3) attempting low (1 to 10 ppb) PCB detection limits with ASB lab for biological tissues and drift samples.
44. Staff coordinated pilot study for Munisport with project RPM involving investigating feasibility and efficiency of air stripping to ammonia and other contaminants from pH-adjusted groundwater. Pilot plant effectiveness was monitored with ASB chemical analysis and toxicity testing.
45. Coordinated and finalized comments from EPA and ESAT biologists on the USGS draft report (currently, the Water Resources Investigation Report No. 92-XXXX) Assessment of Water Quality, Sediment Chemistry and Biological Conditions of streams near an abandoned creosote plant, Jackson, Tennessee. This USGS report was prepared in cooperation with the U.S. EPA Region IV Superfund Office, and ESD-ESB-TES was a major contributor to the planning and implementation of the biological investigation.

46. Alan Auwarter and Dan Scheidt took several steps this month towards finalizing biological work at Aberdeen Superfund Sites, Aberdeen, North Carolina. This included a planning meeting in Atlanta with the project RPM and ETAG coordinator, conceptualizing remaining studies, updating a temporary, RPM on site investigations and planning introductory walk-through of the site for Mr. Mark Sprenger of the EPA-ERT in Edison, New Jersey. ERT will be offering comments and lending their expertise in terrestrial assessment. This is expected to lead to a joint ERT-ESD terrestrial assessment of the more contaminated sites.
47. Bill Peltier prepared test conditions and test acceptability tables for the EPA/COE Testing Manual for the "Evaluation of Dredge Material Proposed for Discharge in Inland and Near Coastal Waters." Also, the same was done for the EPA/COE Regional Implementation Manual that is to be used for evaluating dredge materials proposed for discharge to the ocean.
48. Bill Peltier prepared presentation to be given May 11-15, 1992 in Amsterdam at the 2nd European Conference on Ecotoxicology. The topic will be USEPA's Whole Effluent Testing Program. Similar presentations will be given to staff at the Organization for Economic Cooperation and Development in Paris and French Institute of Agricultural and Environmental Engineering Research in Lyon, France.
49. Jerry Stober met with Rick Linthurst and Dan McKenzie at RTP to present overview of Mercury study plan for South Florida and to plan EMAP planning assistance. Jerry Stober briefed Air Programs Branch in Atlanta as well as ESD staff managers on Mercury study plan. Jerry Stober met with Ron Jones at FIU and Mike Soukup at Everglades National Park regarding plans for Mercury studies. Took helicopter recon trip around Everglades to test several soil samples in a variety of habitats. The South Florida Task Group and Florida DER (Richard Harvey, Roxanne Dow and Tom Swihart) in Tallahassee were briefed on Mercury study plan. Continued development of Mercury study plan for Everglades ecosystem.

#### ECOLOGICAL SUPPORT BRANCH ACTIVITIES, MAY 1992

##### Marine/Wetland and Water Quality Section

50. Tom Cavinder, Dave Smith, Philip Murphy, Mark Koenig, and Archie Lee traveled to Perry, Florida to conduct reaeration and sediment oxygen demand studies on the Fenholloway River. Results of these studies will be used in evaluating the permit renewal of the Proctor and Gamble pulp and paper mill in Perry, Florida. Currently, the Fenholloway River, as a



result of this highly demanding discharge, has the lowest classification (class V) in the State of Florida.

51. Hoke Howard and Ron Weldon are proceeding with biological evaluations of Chattanooga Creek. A field investigation was conducted in May and others are planned for June and July.
52. Philip Murphy and personnel from the UGA Center for Applied Isotope Studies conducted a sediment mapping survey of the Wilmington, North Carolina Ocean Dredged Material Disposal Site (ODMDS) during the period May 4-7, 1992. Information obtained from the survey will depict the distribution of dredged material associated with the site and will become the basis for a biological impact survey to be conducted aboard the OSV Anderson by ESB personnel during September 1992.
53. ESB personnel, assisted by three persons from the Water Division conducted water quality, sedimentological, and biological sampling at the Savannah ODMDS during the period May 9-13, 1992. Survey data will be used to assess water quality and biological changes which may exist at the site as a result of ocean disposal of dredged material.
54. Philip Murphy, working in conjunction with Dr. Bob van Dohla of the South Carolina Wildlife and Marine Resources Research Institute, completed the draft Comprehensive Site Monitoring Plan for the Charleston ODMDS. The draft was distributed to the EPA Coastal Programs Unit in Atlanta, the Charleston District COE, U.S. Fish and Wildlife Service, Charleston Office, and the SCWMRD for review and comment. When final, the plan presents the monitoring strategy and various tasks to be conducted at the Charleston ODMDS over a three to five year period to identify and/or avoid impacts to water quality and biological resources associated with the ODMDS area. The work is anticipated to be joint effort between EPA, COE, SCWMRD, and other agencies and organizations associated with use of the site and resource protection.
55. Don Schultz attended a demonstration and meeting of the Piedmont Soil and Water Conservation District where he and other Ecological Support Branch personnel were awarded plaques for their assistance in wetland work.

#### Toxics Evaluation Section

56. Bill Peltier prepared the final changes to the EPA short-term chronic toxicity test methods for Effluent testing of freshwater and marine organisms. Methods are to be published this summer.

57. Bill Peltier gave two presentations at the 2nd European Conference on Ecotoxicology held in Amsterdam, The Netherlands. Consulted with staff members at the Organization for Economic Cooperative Development (OECD) in Paris on EPA Whole Effluent Test Methods. In Lyon, France, EPA's Water Quality based Toxics Control Program was presented to staff members at the French Government laboratory for Ecotoxicology.
58. During the week of May 24, Bill Peltier hosted a Ms. Elenita Goldstein from Sao Paulo, Brazil. Ms. Goldstein is a biologist from the state of Sao Paulo Water Pollution Authority in charge of the Ecotoxicology Program. She spent time with most of the ESB staff discussing the EPA toxicity testing program and other related ecological assessment approaches conducted by branch personnel.
59. Dan Scheidt and Ron Raschke met with Florida and federal interests at Wakulla Springs, FL May 11 to provide assistance with technical concerns regarding Everglades ecological monitoring and nutrient enrichment impacts.
60. Kay Millar conducted acute and chronic toxicity tests with daphnids, fathead minnows, mysid shrimp and silverside minnows on samples of final effluent from Jacksonville Suburban Utilities--Holly Oaks and San Jose, Appalachicola WWTP, Graceville WWTP, and Georgia Pacific, Florida.
61. Kay Millar provided technical assistance on culturing and toxicity testing of aquatic organisms to UGA Environmental Health Science classes, Grove Scientific Laboratory of Orlando, Florida and Elenita Goldstein of Brazil.
62. Phyllis Meyer continued work on Sangamo Superfund site. Collected cages set out for bioaccumulation studies and prepared samples for lab analysis.

#### ECOLOGICAL SUPPORT BRANCH ACTIVITIES, JUNE 1992

##### Marine/Wetland and Water Quality Section

63. Delbert Hicks, Jim Davee, and Archie Lee attended the STORET modernization conference held in Atlanta on June 9th and 10th. Headquarters is conducting meetings with the Regions to compile their input and suggestions on upgrading and improving the STORET data base system. The meeting was very productive and it appears that STORET will become more user friendly and menu driven making it easier to store and retrieve data.
64. Hoke Howard and Ron Weldon deployed Hester - Dendy multiplate samples at Chattanooga Creek. Macroinvertebrate data

from this sampling effort is part of the ecological assessment for the Chattanooga Creek Initiative.

65. Hoke Howard, Don Schultz, and Del Hicks met with SCS, Oconee R C & D, and ASCS representatives on a proposed constructed wetlands for a swine operation near Watkinsville, GA.

66. Hoke Howard, Don Schultz, and Tom Cavinder met with Don Surrency, Plant Materials Specialist, and Allison Krohn, Landscape Design Engineer, from SCS on further discussions on the proposed constructed wetlands for the Jay Campbell Swine Operation near Watkinsville. Specific topics for discussion were monitoring plans, design considerations of the wetlands treatment system, and aquatic plant selection and planting times for the wetland cells.

67. Hoke Howard, Mark Koenig, Bruce Pruitt, and Mel Parsons conducted a wetland assessment/water quality study of the Beaverdam Swamp near Huntsville, Alabama. This site has been selected as a wetlands advanced identification (ADID) site.

68. In preparation for the small impoundment sediment phosphorus exchange study, Ron Raschke and Bobbi Carter assembled new domes, gathered equipment, and conducted rate studies in Lakes Oglethorpe and Chapman. With the low detection procedure for TP used by the analytical support laboratory, it appears that dome incubation times of 4-6 hours will be satisfactory. Sampling began on Lake Chapman the week of June 27th.

69. Ron Raschke reviewed 316(a) predictive analysis of SCE & G's D. Williams Station near Charleston, SC. Comments sent to WMD expressed concern about possible thermal block during critical periods of migration.

70. Mel Parsons, Bruce Pruitt, Hoke Howard, and Mark Koenig, along with Rosalind Moore of EPA Atlanta, Robert Willis of US Fish and Wildlife, and Susan Weber of The City of Huntsville, conducted an intensive Water Quality and Sediment Survey of the Beaverdam Spring Wetland System in Huntsville, AL.

#### Toxios Evaluation Section

71. Ron Weldon visited Browns Ferry Aquatic Research Center, Athens, AL to observe aquatic toxicity testing with mussels with TVA personnel.

72. Jerry Stober met with Marshall Hyatt and Water Division representatives on a review of a fish consumption study planned for Alabama.

73. Jerry Stober presented Hg study plan to EMSL-Cin. Anal. Chem. to enlist their help in the development of QA/QC ultra trace level and special ion methods for Hg analyses using clean techniques. He continued to finalize study plan for mercury in the Everglades (eg. frame materials, sampling strategy, protocols, etc.)

74. Jerry Stober presented a talk on Non-Regulatory Risk Reduction through the Fish Contamination Program at Workshop on Water Quality, Standards/Criteria and related programs in New Orleans, sponsored by Office of Water and Office of Science and Technology.

75. Jerry Stober attended 1992 Regional Risk Assessor's meeting in Dallas, Texas and presented a talk on EMAP and how it is being applied to the Hg problem in the Everglades.

76. Bill Peltier worked with Region IV permit writers in developing whole effluent toxicity testing requirements for two Florida power plants. NPDES limits were derived for the use of bromine as a biocide in their cooling towers.

77. Bill Peltier continued working with the COE South Atlantic District's contractor, Dr. John Valentine, on the COE/EPA's test species selection criteria, test conditions and test acceptability criteria for the Regional Implementation Manual (RIM). The RIM will be used for the testing of proposed dredge materials to the ocean and is scheduled for completion during 1993.

78. Bill Peltier developed for EPA, OW, OTS, language and criteria for selection of test species for use in the National 404 "Evaluation of dredge material proposed for discharge to inland and near coastal waters - Test Manual". Coordinated the development of Tables of summary test conditions and test acceptability criteria for species selected for use in the Test Manual. The Test Manual is in draft review within the COE and EPA.

79. Bill Peltier developed an agenda for an NPDES Performance Audit Inspection Workshop (PAI) to be held in Athens, August 5th and 6th. Organized logistical needs for the workshop with the Athens ERL, SAIC, and OWEC HQ. Attendees will be from Regional and State compliance and biological testing staff. The workshop will be the first of approximately 5 conducted in other Regions during FY93.

80. Bill Peltier reviewed, for the Tennessee Department of Conservation, discovery responses and information from Bristol, TN. POTW and Nashville/Davidson County's appeal on biomonitoring analyses and whole effluent toxicity limits provision of their

NPDES permit. Their appeal is to be heard in the fall of 1992 and Region IV staff are to be expert witnesses for the State.

81. Phyllis Meyer, Dan Scheidt, and Alan Auwarter completed reconnaissance of the Macon County, North Carolina landfill in order to assess impact the landfill is having on area surface waters. June 18-19, Scheidt, Meyer, and Maudsley (ManTech) completed sampling of surface water and sediment for toxicity testing and determination of contaminants.

82. Dan Scheidt attended a site scoping of Homestead Air Force Base, Florida concerning the Ecological Risk Assessment required by CERCLA. The meeting was attended by representatives of the Air Force, USFWS, NOAA, NPS, USACE, FDNR, FDER, SFWMD, Dade County, and Air Force contractors.

83. Dan Scheidt attended a site scoping of Cecil Field Naval Air station, Jacksonville, Florida concerning the ecological risk assessment required by CERCLA. The meeting was attended by personnel from the U.S. Navy, USFWS, USGS, NOAA, FDER, FDNR, FHRS, and Navy contractors.

84. Meyer and Scheidt visited Carolina Sandhills NWR, South Carolina and McKinney Lake National Fish Hatchery, North Carolina for the purpose of locating a suitable reference lake. Meyer and Scheidt placed Hester-Dendy artificial substrates out June 30 - July 1 at McKinney Lake (the reference lake) and Pages Lake.

85. The ESAT laboratory conducted 23 toxicity tests on samples from the Macon County Landfill. The landfill is suspected by conservation/recreation groups as contributing contamination to the Chatooga National Wildlife and Scenic River system.



The Constitution and By Laws of the Southeastern  
Water Pollution Biologist Association  
CONSTITUTION

Article 1. NAME. This association shall be called the Southeastern Water Pollution Biologists Association (SWPBA).

Article 2. PURPOSE. The purpose of the Association shall be to promote further understanding of the aquatic biological communities and the impact of pollutants on the aquatic ecosystems and to provide a medium for exchange of appropriate information among the membership.

Article 3. MEMBERSHIP. Membership shall be restricted to Water Pollution Biologists whose programs are funded through the Region IV Environmental Protection Agency.

Article 4. ANNUAL MEETING. An annual meeting of the membership shall be held in one of the eight states in Region IV of EPA. The manner of choosing the host state of the next years meeting will be to offer the meeting in the following order: Mississippi, Georgia, EPA-Athens, South Carolina, North Carolina, Kentucky, Tennessee, Florida, and Alabama. A state will either offer to accept or refuse the meeting. Upon refusal, the next state in order will entertain the offer, until the host state is confirmed. The time of the meeting shall be at the discretion of the host state with the agreement of the members of the Executive Committee.

Article 5. OFFICERS. The officers of the Association shall be a President and a Secretary. At the annual meeting consenting nominees (3 maximum for any office) shall be voted on by a secret ballot with the majority vote recipient being declared winner. The officers shall hold office for a term of one year, and their terms of office shall not be coterminous. The terms of the officers shall begin at the close of the annual meeting which they are elected.

Article 6. ACTIVITIES. The Association shall be organized and operated exclusively for scientific and educational purposes, and shall not be organized or operated for profit. No substantial part of the activities of the Association shall consist of carrying on propaganda, or otherwise attempting to influence legislation. The

Association shall not participate in, or intervene in, any political campaign on behalf of any candidate for public office.

Article 7. DISSOLUTION. The Association may be dissolved following a poll of the entire membership, conducted at the direction of the Executive Committee, in which two-thirds of the mail ballots received within 30 days of issuance support the dissolution.

Article 8. RATIFICATION AND AMENDMENTS. The constitution shall become effective upon ratification by a two-thirds vote by the member agencies present at the annual meeting and may be amended by a vote of two-thirds of the member agencies present at the annual meeting, providing a quorum is present, or in an emergency, by two-thirds of the members responding to a mail ballot within thirty days of issuance.



## BY-LAWS

Article 1. ANNUAL MEETING. The annual meeting will normally be held in the fall of each year and will include a business meeting and the exchange of appropriate information. The presence of two-thirds of the member agencies shall constitute a quorum, and the business meeting will be held according to Robert's Rules of Order.

Article 2. ELECTION OF OFFICERS. The President and Secretary shall be elected by a majority of the member agencies present at the annual meeting by a secret ballot. Each office shall not have more than 3 nominees which will be selected by the Executive Committee. An unexpired term of President or Secretary shall be filled by majority vote of members responding within 30 days to a special mail ballot. In emergencies, interim appointments can be made by the Executive Committee.

Article 3. OFFICE OF PRESIDENT. The President shall be responsible for planning and organizing the annual meeting, and shall appoint a Local Arrangements Program Chairman. He shall appoint three (3) members to the Executive Committee, one of whom must be a member from the host state. He shall make other appointments that he deems necessary and shall serve as chairman of the Executive Committee. He shall preside as chairman of the annual meeting.

Article 4. OFFICE OF SECRETARY. The Secretary shall be responsible for keeping the minutes of the annual meeting, the printing and distribution of ballots, and the normal correspondence of the association. The Secretary shall disseminate the annual meeting agenda as appointed by the Executive Committee. No later than three (3) months after the annual meeting, the Secretary shall distribute to all of the members of the Association copies of the annual meeting minutes and a roster of attendance at the meeting. The Secretary shall also serve as a member of the Executive Committee. The Secretary shall furnish incoming officers with a copy of the Constitution and By-Laws.

Article 5. EXECUTIVE COMMITTEE. The Executive Committee shall consist of the officers of the Association and the three committee members appointed by the President, one of who must be from the host state. No member can be appointed to the Executive

Committee more than three consecutive years. The President shall preside as chairman of the Executive Committee. The Committee shall meet prior to the annual business meeting and review all amendments to the Constitution or By-Laws and major motions to be presented at the annual meeting, if any. The Committee shall serve as a steering committee to decide the main points of discussion and presentation at the annual meeting. The Executive Committee shall decide the order and length of the paper to be given. It shall make recommendations concerning the policies of the Society. The Committee shall be responsible for notifying the members of the Society of the vacancies in elected offices and to solicit nominations for these offices. After reviewing the nominations, the Committee shall select a maximum of 3 consenting nominees for each office and place their names on ballots to be distributed by the Secretary. The ballots received in 30 days will be opened and counted by the Secretary, and interim officers will be announced by mail.

Article 6. PROGRAM CHAIRMAN. The President shall preside as Program Chairman, and shall be responsible for preparing the call for papers, scheduling, appointing chairman for each session, and preparing the program for printing.

Article 7. LOCAL ARRANGEMENTS CHAIRMAN. The Arrangements Chairman shall normally be associated with the agency hosting the annual meeting. The Arrangements Chairman shall be responsible for securing adequate facilities to properly host the annual meeting. Responsibilities will include reserving rooms for formal meetings, social gatherings, and the banquet; securing audiovisual equipment required; arranging the banquet, coffee breaks, and luncheon facilities, providing registration receipts; advising members on lodging; arranging transportation, and serve to make the planned activities run smoothly. The Arrangements Chairman shall work closely with the President to achieve this goal.

Article 8. RATIFICATION AND AMENDMENTS. The By-Laws shall become effective upon ratification by two-thirds of the member agencies present at the annual meeting or two-thirds of the members replying within 30 days to a mail ballot. Proposed amendments shall be submitted to the Executive Committee two (2) months before the annual meeting, and voted on at that meeting with a two-thirds vote of a quorum of member agencies present at the annual meeting or by a mail vote.