



F. S. E. A. NEWSLETTER

VOL. I, No. 1, SPRING 1981

EDITORIAL

In June of 1978, a group of environmental analysts met in south Florida and formed an organization which was to become the Florida Society of Environmental Analysts (FSEA). Today, we have grown to a state-wide organization and are into our third year of activity. This has taken a lot of hard work which unfortunately was undertaken by only a handful of people. A few hard workers holding together a professional society is not unusual during its formative stage. The time has come, now, for expanded membership involvement if we are to continue as a professional organization and serve the purposes for which we were established:

- o To promote the professional status of environmental analysts.
- o To promote the standards of excellence for environmental analysts.
- o To provide for exchange of information between members.
- o To provide a liaison between regulatory agencies and the membership.
- o To take a leadership role in promotion of environmental programs and legislation.
- o To evaluate new analytical procedures.
- o To promote guidelines for education and training of environmental analysts.

In addition to these stated purposes some of the proposed activities for society involvement include; certification of environmental laboratories and/or personnel; laboratory staff survey with descriptions by job title, task, training and salary ranges; and a directory of laboratory services on a state-wide basis. Each of these tasks is worthwhile and well needed, but will require a substantial effort to accomplish. FSEA can get involved if you want it to. Members of the Board of Directors will be contacting you about the degree of participation that you are willing to expend to make FSEA a success.

FSEA SUPPORTERS

In addition to membership involvement and advanced leadership, it is necessary to have financial stability in order for a society to function. One source of funds is exemplified on this page as the following have contributed to FSEA in the form of paid advertisements. We would like to take this opportunity to thank these organizations for their continued support of FSEA!

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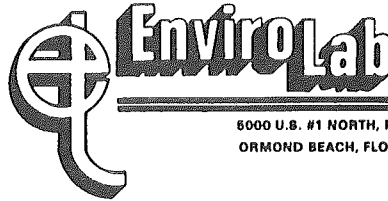


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Robert C. Heideman
President

FSEA MEETING INFORMATION

As part of FSEA's yearly activities a meeting is held in both the spring and the fall. This section includes highlights of the most recent meeting and important information about upcoming meetings.

1981 SPRING MEETING INFORMATION

The theme of the 1981 Spring Meeting is "The Analysis of Trace Metals in Water by Atomic Absorption Spectroscopy". Separate meeting announcements have already been sent out and we hope that you are planning to attend. As a reminder the meeting will be held as follows:

DATE : April 24, 1981
PLACE: : Bay Harbour Inn
7700 Courtney Campbell Causeway
Tampa, FL 33607
813/885-2541
TIME : 8:00 - 5:00 (5:00 - 6:00 social hour)

1980 FALL MEETING NOTES

In keeping with the format of past meetings, the Fall 1980 meeting consisted of a combination of technical presentations and demonstrations, a business meeting and ample time for socializing with your associates. The theme of the meeting was "Computers in the Laboratory" which included excellent presentations by Hewlett-Packard Corporation. The most important part of the business meeting revolved around the election of new officers. The following were elected as 1980-1981 FSEA Officers:

PRESIDENT

Sandra Fettes
Briley, Wild & Associates, Inc.
P.O. Box 607
Ormond Beach, FL 32074
904/672-5660

PRESIDENT - ELECT

Bill Leseman
City of Tallahassee
3805 Springhill Rd.
Tallahassee, FL 32301
905/575-5907

TREASURER

Jackie Larson
Orlando Laboratories, Inc.
3314 Bay-to-Bay Blvd.
Tampa, FL 33609
813/839-8802

SECRETARY

Linda Hoffman
Post, Buckley, Schuh & Jernigan, Inc.
2280 U.S. 19 North
Clearwater, FL 33515
813/796-7275

REGIONAL NEWS

During the formation of FSEA it was decided to incorporate a regional system into the organizational structure. The system that was developed was to have 6 Regions, each with its own Regional Director. This section of the Newsletter will be composed of information relating to regional activities.

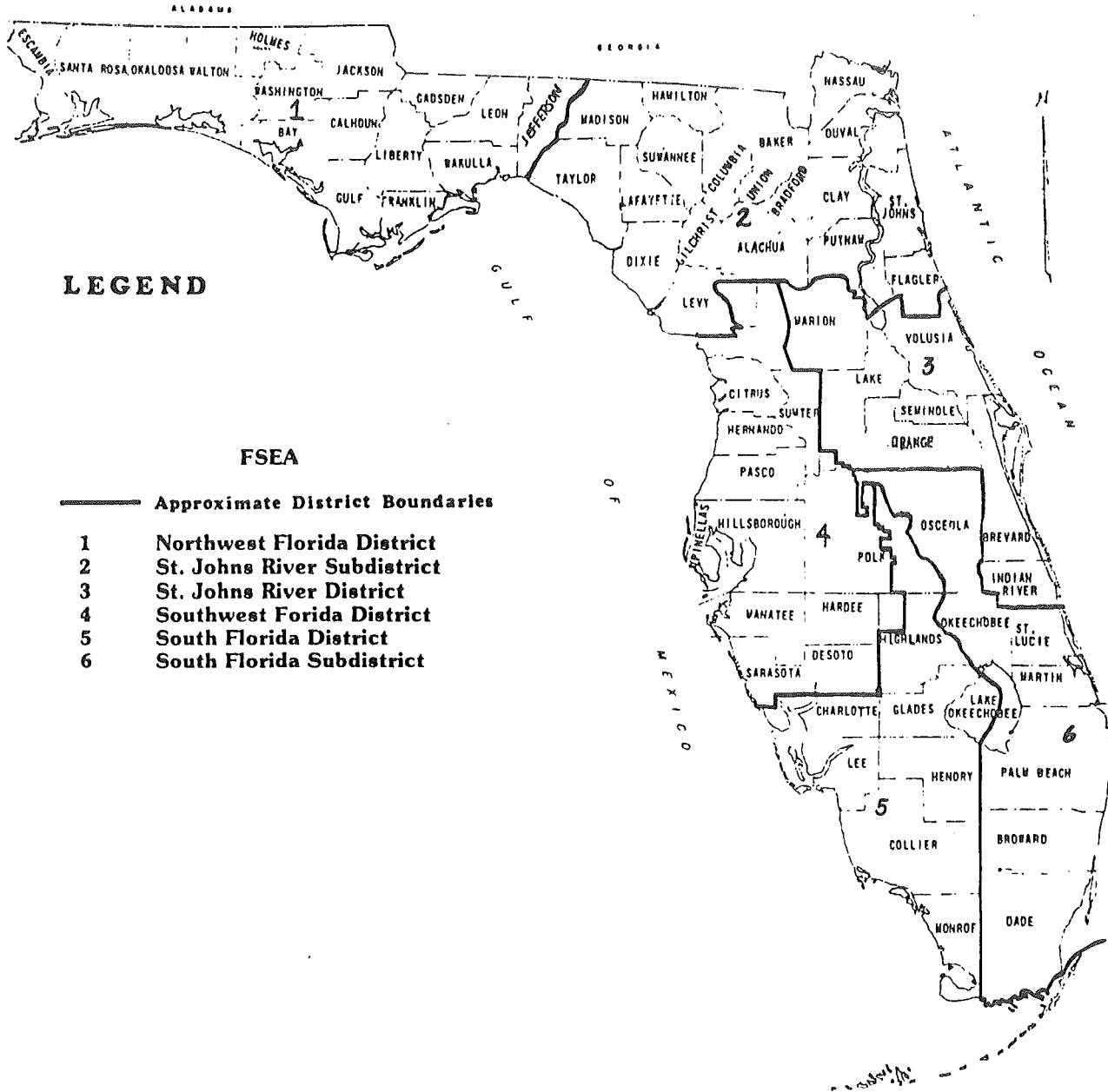
In January, the first regional meeting was held in Pensacola. Ron McAfee, as Regional Director, decided to have the meeting formatted as a seminar on priority pollutants. He felt that this would attract a large number of people to the Pensacola area, as priority pollutant analysis is an important issue. The program was sponsored by Hewlett-Packard with speakers from EPA, Hewlett-Packard and Toxicon Laboratory. Interest was excellent with an attendance of 55 people. Good Job Ron!

Activity in Region 6 has included the distribution of a questionnaire to all individuals on the Regional mailing list. A request was made for general information on proposed regional activities, as well as data to be compiled into a regional service directory. This directory would include important information on laboratory testing capabilities. Mary Lou Smith, as Regional Director feels that regional, as well as state-wide directories would be a beneficial service to offer FSEA members. Results of the survey and plans for the directory publication will be discussed at the upcoming business meeting. Good idea Mary Lou!

At press time, there are plans for a regional meeting to be held in Orlando on March 26. This meeting, in contrast to Region 1's is more of a social gathering. Allan Schreiber, Regional Director, has scheduled this meeting for a Thursday evening and guests and spouses are invited. As an additional highlight, George Gionis, the Chief Chemist from Florida Department of Environmental Regulation in Orlando, will be the guest speaker.

Meetings and activities will be scheduled for all regions, at various times during the year. It is the responsibility of the Regional Director to organize the type of activity best suited for their region's needs. It is your job to communicate with your Director to let him know what you want, since you are the ones to benefit!

REGIONAL BOUNDARIES



LEGEND

FSEA

— Approximate District Boundaries

- 1 Northwest Florida District
- 2 St. Johns River Subdistrict
- 3 St. Johns River District
- 4 Southwest Florida District
- 5 South Florida District
- 6 South Florida Subdistrict

DISTRICT 1

Ron McAfee
 City of Pensacola
 P.O. Box 12910
 Pensacola FL 32521
 904/436-4318

DISTRICT 2

Roger Yorton
 CH2-M Hill
 P.O. Box 1647
 Gainesville, FL 32602
 904/377-2442

DISTRICT 3

Allan Schreiber
 Environmental Analysis & Design, Inc.
 4720 N. Orange Blossom Trail
 Orlando, FL 32804
 305/295-4131

DISTRICT 4

John Post
 Southwest Florida Water Management District
 5060 U.S. Hwy 41 South
 Brooksville, FL 33512
 813/796-7211

DISTRICT 5

Jack Thomas
 Florida Keys Community College
 Key West, FL 33040
 305/296-9081

DISTRICT 6

Mary Lou Smith
 South Florida Water Management District
 111-113 SW Park Street
 Okeechobee, FL 33472
 813/763-3776

ALTERNATIVE TEST PROCEDURES

One of the more difficult tasks of laboratory personnel is to keep up with changing analytical procedures. The purpose of this section is to provide information on alternative test procedures. In order to be successful, everyone should contribute by sending the Newsletter Committee Chairman any new procedures that they have incorporated into their laboratory routine.

CHEMICAL OXYGEN DEMAND, manual colorimetric method (Methods for Chemical Analysis of Water and Wastes EPA-600/4-79-020 Method 410.4)

Scope and Application

1. This method covers the determination of COD in surface, domestic and industrial wastes.
2. The applicable range of the manual method is 20 to 900 mg/l.

Summary of Method

1. Sample, blanks and standards in sealed tubes are heated in an oven in the presence of dichromate at 150°C. After two hours, the tubes are removed from the oven, cooled and measured spectrophotometrically at 600 nm.

Sample Handling and Preservation

1. Collect the sample in glass bottles if possible. Use of plastic containers is permissible if it is known that no organic contaminants are present in the container. Samples should be preserved with sulfuric acid to a pH of 2 and maintained at 4° C until analysis. Maximum holding time 28 days.

Interferences

1. Chlorides are quantitatively oxidized by dichromate and represent a positive interference. Mercuric sulfate is added to the digestion tubes to complex the chlorides.

Apparatus

1. Drying oven, 150° C
2. Culture tubes, 20x150 mm with teflon-lined screw cap
 - a. Wash all culture tubes and screw caps with 20% H₂SO₄ before their first use to prevent contamination. Trace contamination may be removed from the tubes by igniting them in a muffle oven at 500° C for 1 hour.
3. Spectrophotometer, 600 nm
4. Muffle furnace, 500° C.

FSEA ACTIVITY IN FW&PCOA ANNUAL SHORT SCHOOL

Once again, FSEA will be participating in the FW&PCOA (Florida Water and Pollution Control Operators' Association) annual short school, to be held in Gainseville August 31st to September 4th. We will be responsible for conducting an entire course in advanced laboratory training and management. This is an excellent opportunity for you to participate in this annual state-wide program. Your services are needed for classroom instruction and laboratory exercises. Contact Linda Hoffman (FSEA Secretary) for details.

ALTERNATIVE TEST PROCEDURES (cont. COD Method)

Reagents

1. Digestion Solution: Add 10.2 g $K_2Cr_2O_7$, 167 ml conc. H_2SO_4 and 33.3 g $HgSO_4$ to 500 ml of distilled water, cool and dilute to 1 liter.
2. Catalyst Solution: Add 22 g Ag_2SO_4 to a 4.09 kg bottle of conc. H_2SO_4 . Stir until dissolved.
3. Stock potassium acid phthalate: Dissolve 0.850 g in 800 ml of distilled water and dilute to 1 liter. 1 ml = 1 mg COD
 - a. Prepare a series of standard solutions that cover the expected sample concentrations by diluting appropriate volumes of the stock standard.

Procedure

1. Add 10 ml of sample to 20x150 mm culture tube.
2. Add 6 ml of digestion solution (Reagent 1) and mix.
3. Add 14 ml of catalyst solution (Reagent 2) down the side of culture tube.
4. Cap tightly and shake to mix layers.
5. Place in oven at 150° C for 2 hours.
6. Cool, allow any precipitate to settle and measure intensity in spectrophotometer at 600 nm. Use only optically matched culture tubes or a single cell for spectrophotometric measurement.

Calculation

1. Prepare a standard curve by plotting absorbance values against known concentrations of standards.
2. Compute concentration of sample by comparing sample response to standard curve.

Analyst Notes (Courtesy of Ron McAfee)

1. Use new culture tubes
2. Lower levels may be obtained with different concentration of reagents.

TO:

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