



## Agenda

### Policy Committee Meeting

**Friday, March 15, 2002**

**1:00 P.M.**

**Sarasota Bradenton International Airport**

**6000 Airport Circle**

**Sarasota, Florida 34243**

**Airport Authority Boardroom**

Welcome, Introductions

Approval of Minutes from October 26, 2002 Meeting

Director's Report

Mark Alderson

- EPA Bi-ennial Review

1. Public Involvement and Education  
Proposal

Scott Carpenter

2. Proposed Technical Projects/Update

Gary Raulerson

3. Sea Grass Reporting

Gary Raulerson

4. Discussion of Proposed FY03 Work Plan

Mark Alderson

5. Results – Atmospheric Deposition Study  
and Red Tide

Kellie Dixon

6. Financial Status Report

Marian Pomeroy

Adjourn

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DRAFT

**MINUTES**

**POLICY COMMITTEE MEETING**

**Friday, October 26, 2001**

**1:00 p.m.**

**Sarasota Bradenton International Airport**

**6000 Airport Circle**

**Sarasota Florida 34243**

**Airport Authority Boardroom**

**Present:**

**Policy Committee Members**

Mr. Bo Crum, E.P.A. Reg. IV, Chief, Coastal Program  
The Honorable Richard Martin, Sarasota City Commissioner  
Ms. Ce Ce McKiernan, Dept. of Environmental Protection  
Ms. Deborah Getzoff, FDEP  
The Honorable Pat Glass, Manatee Board of County Commissioners  
The Honorable Jon Thaxton, Sarasota Board of County Commissioners  
Mr. Bruce Wirth, P.E., Director, Resource Management Department

**Management Committee Members**

Mr. Mike McNees, City Manager, City of Sarasota  
Mr. Paul Bispham, Citizens Advisory Committee  
Mr. Annon Bozeman, U.S. Army Corps of Engineers  
Mr. Mark Hammond, Manager, SWIM, SWFWMD  
Mr. George Henderson, Florida Marine Research Institute  
Mr. Charles Hunsicker, Manatee County Office of Administration  
Mr. Rob Patten, Sarasota County Environmental Services  
Ms. Felicia Robinson, U.S. Region IV  
Mr. John Stevely, Florida Sea Grant

**Sarasota Bay National Estuary Program Staff**

Mr. Mark Alderson, Executive Director  
Mr. Gary Raulerson, Senior Environmental Scientist  
Ms. Beth Muniz, Public Communications Outreach Coordinator  
Ms. Marian Pomeroy, Finance and Program Administrator

Mr. Dario Varga, Public Affairs Assistant  
Ms. Kathie Micko, Administrative Assistant

## **WELCOME, CALL TO ORDER AND INTRODUCTIONS**

Mr. Bo Crum opened the meeting at 1:00 pm. The attendees (see previous page) introduced themselves. Scott Carpenter (Clarke Advertising) and John Burg (City of Sarasota) also attended.

## **APPROVAL OF MINUTES FROM THE MAY 25, 2001, POLICY COMMITTEE MEETING**

Mr. Crum requested a motion to approve the minutes from the May 25, 2001, meeting. Mr. Martin motioned approval; seconded by Mr. Thaxton. The motion was unanimously approved by voice vote.

Mr. Crum asked that the Greenways issue, Agenda Item No. 6, be moved to Item 2.

### **1. CCMP IMPLEMENTATION UPDATE – 2002 ACCOMPLISHMENTS**

Mr. Alderson presented a Power Point presentation on CCMP implementation with an overview of the 2001 accomplishments. He stated that the program began in 1989 focusing on technical studies, early action and public outreach. Since 1995, the program has been focusing on implementing the CCMP: reducing pollution (47%), increasing wetlands and seagrass habitat, constructing reefs and the Heritage Trail.

### **2. GREENWAYS**

Mr. John Burg spoke on the 20-year Master Plan for interconnected system of parks, open space and landscape elements; that this plan will look at the park systems and how it ties together with the rest of the plan, i.e. bicycle lanes, drainage, natural features, roadways, etc. The City Departments are working with County Departments to hook up the city and boundaries. Mr. Burg also stated that they are working with the National Parks Service staff to review plans for the trails.

Mr. Jon Thaxton asked if there were many concerns about crime rate and accessibility to private properties with the trail systems that are being looked at. Mr. Burg said that it is one of the major issues of concern and every consideration is being taken.

Mr. Richard Martin pointed out that an attentive eye has been given to the entire environmental issues involved and that the mandate for the study was in the Comprehensive Plan and the Police Department has also given their ideas on the study.

Mr. Charlie Hunsicker addressed the trails connections from Hillsborough to Port

Charlotte and stated that great attention has been given to the overall plan. He also stated that Manatee County is working through a grant to bring about a new kayak trail.

### **3. FINANCIAL STATUS REPORT**

#### **a. 50-50 match**

Mr. Alderson stated that at the last meeting the Policy Committee requested that the a work group be formed to review the financial match requirements and come back with a recommendation. The work group suggested that the SBNEP should not seek additional revenues from the local governments. The program presently requires a \$340,000 match, but is expected to increase to \$510,000 in FY03. Mr. Alderson proposed to bring back a budget that incorporates the concept and idea based on the suggestions by the work group and discussions at the Management Committee this morning. The workgroup and Management Committee suggested that in-kind be used as match. The Committee deemed it unnecessary to vote on this issue.

#### **b. Reserves**

Mr. Alderson explained that the program is in excellent fiscal condition with more than \$400,000 in reserves.

#### **c. Financial Review**

Mr. Alderson provided the committee with a financial status report. Discussion was held in regard to the work involved in complying with the financial processes as required through the SWFWMD agreements.

### **4. MANAGEMENT COMMITTEE REPORT**

Mr. Alderson reported on the morning's Management Committee meeting in reference to the approval of contracts. A more detail discussion ensued on the financial aspects of the program that morning.

### **5. CITIZENS ACTION PLAN STATUS REPORT**

Ms. Muniz provided information on grant applications that were submitted via the mini-grants program; and that the Citizens Advisory Committee met to recommend the grantees. There was a total of \$9,770 available. The grants were issued to The Aquarian Quest, Sarasota County School Board, Around the Bend Nature Tours, Mote Aquarium and Marie Selby Botanical Gardens.

Ms. Muniz also mentioned that the Sarasota Bay - National Estuary Day was held on September 29, 2002, in the City of Sarasota. Boat tours of Sarasota Bay were offered to the residents of the community so that they might learn more about the bay. There was also a Habitat Restoration event at Hog Creek. Approximately 1,200 plants were planted with the help of three Girl Scout troops and other volunteers.

Ms. Muniz then discussed the various ways that the program works with other area non-profit organizations such as Mote Marine Laboratory, High School Intern Program, Booker High School Environmental Academy, and the Sarasota School of Arts and Sciences.

Ms. Muniz briefly discussed the posters and calendars designed by Clarke Advertising and introduced Scott Carpenter from Clarke Advertising and Public Relations.

Mr. Scott Carpenter gave a review of the Clarke Advertising and Public Relations "Year-End Marketing Report" and a history of the marketing strategy with SBNEP. He also explained that Clarke Advertising sends out a number of press releases regarding the different events held by the Program.

Mr. Carpenter stated that they worked with the Program to release the "State of the Bay"; scheduled interviews for Mark; organized special events such as 5K runs; coordinated sponsors; and designed the letterhead, envelopes, business cards; and the website for the Program. Clarke logged 681 management hours which translates to 17 months of work in a 12-month schedule.

## **5. PROPOSED STUDY OF HYDROLOGY**

Mr. Alderson explained a proposed study of hydrology that may be evolving. He also mentioned that a Xeriscape Ordinance will be presented to the Sarasota County Board of County Commissioners in November 2001.

Deborah Getzoff arrived at 2:50 pm.

Mr. Alderson discussed the extensive filling that is taking place in new developments; and the fill potentially is holding a substantial amount of rainfall that may not be seeping into the surficial aquifer, i.e., until the surface layer is saturated, therefore, there may be more run-off after development. Mr. Alderson further discussed local efforts to educate residents on Florida Yard design.

Discussion ensued on the need for the hydrology study. Mr. Wirth suggested that current stormwater practices appear adequate and the need for the study is questionable. Discussion was held in regard to the removal efficiencies.

The next meeting is March 15, 2002

**ADJOURNMENT** - The meeting was adjourned at 3:29 pm

**THE P.I.E.R. PROJECT:**  
OUTREACH AND EDUCATION PROGRAM

**CLARKE**

P.I.E.R. =

Protection...

Involvement...

Education and...

Restoration.



**CLARKE**

## **GOALS**

- Promote the benefits of environmental stewardship
- Increase students' environmental literacy and stewardship behaviors
- Promote SBNEP as a leader in environmental stewardship

**CLARKE**

## **STRATEGIES**

- *Create hands-on educational events and activities for children to learn about stewardship away from the classroom.*
- *Develop activities and educational materials for children to learn about stewardship while in the classroom.*
- *Develop activities and educational materials for children to learn about stewardship while at home.*
- *Develop a series of tools that can be promoted to teachers so that they understand what they can do to educate their students on environment stewardship practices and responsibilities.*

**CLARKE**



- *Develop an awards and recognitions program to honor those students who excel in environmental stewardship.*
- *Promote the organization's name, mission and programs to create top-of-mind awareness, positive perception and credibility within the community.*

**CLARKE**

### Strategy #1

*Create hands-on educational events and activities for children to learn about stewardship away from the classroom.*

#### Tactics:

Field Trips – Excursions to field locations bring textbook learning to life. Field trips should be offered to schools in different methodologies, including:

**SBNEP Paid Trips** – The Program is already considering this option through the services of Around The Bend Nature Tours. Classes could register for a specific trip on a first-come, first-served basis. Estimated budget = \$15,000 - \$20,000.



**CLARKE**

Partner-Related Trips – Several organizations, such as G.WIZ and Selby Botanical Gardens, indicated an interest in partnering with the Program. Since each organization already has a schedule full of students coming on a yearly basis, the Program could ride the “coat tails” of these established programs to present educational topics on estuary-related topics. Estimated budget = No cost expected, just time.

Restoration Plantings – The Program should develop a student-related restoration program to encourage students to take an active role in restoring the Bay’s critical natural resources. The Program could work with different schools and grade-levels to secure participation and provide materials for planting on a restoration site. Estimated budget = \$15,000 - \$25,000.

High School Intern Program – Existing partnership with Mote Marine that will give students a look at local marine life and habitats while discussing environmental issues and factors. Student teams will receive an assignment to design and build a filtration system. Estimated budget = No cost expected, just time.

**CLARKE**

Environmental Academy – Existing partnership with Mote Marine for the students of Booker High School. Students will look at various marine plants of Sarasota Bay and other waterflow sources. Estimated budget = No cost expected, just time.

Sarasota School of Arts and Sciences – Existing partnership with Mote that targets sixth graders and discusses topics such as Sarasota Bay, estuaries, freshwater, stormwater flow, marine plants and animals. Estimated budget = No cost expected, just time.

CareFree Learner – The Program should establish a grant that would allocate money to schools wanting to go on the CareFree Learner, which is the Sarasota High School Marine Biology Department’s popular floating classroom. Students learn about the function of wildlife, mangroves, and other coastal plants in the shoreline ecosystem. While targeted for sixth-graders, it could be expanded to other grades if money was made available to cover the cost of the floating class. Estimated budget = \$10,000 - \$15,000.

**CLARKE**

Excursion Grants – The Program should establish a grant that would allocate money to schools wanting to go on educational field trips that otherwise would be missed because of limited budgets. Money could be used for busing or entrance expenses. Field trips could consist of canoeing, camping, state parks, nature trails, etc. Estimated budget = \$5,000 - \$10,000.

Moonlight with the Manatees – Proposed partnership with Mote that allows students to learn about manatees during a sleep-over at Mote. The Program has been asked to send a representative to speak to the students about Sarasota Bay and its impact on manatee life. Estimated budget = No cost expected, just time.

Bookworm Program – Program would buy books about science or environmental science and donate them to libraries for check-out or to science teachers to use in their lessons or for student check-out. Program should assemble a committee to review what books are available and which ones best suit the strategic goals and objectives of the Program. Estimated budget = \$1,000 - \$2,500.

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Heritage Trail – The Program should establish a grant that would allocate money to schools wanting to go on educational field trips to sites on the Heritage Trail. Money could be used for busing and/or entrance expenses. Estimated budget = \$5,000 - \$10,000.

**CLARKE**

## **Strategy #2**

***Develop activities and educational materials for children to learn about stewardship while in the classroom.***

### **Tactics:**

**Education Road Show** – The Program should obtain an exhibit of an estuary setting that can be taken to schools for hands-on demonstrations and learning. Each quarter, a Program representative can take the exhibit to the classroom and discuss a particular topic using the exhibit as a visual aid. The topic can be tied to a section of the Guidebook (see teacher section below) or a new topic that the Bay is encountering at the present moment. May include corresponding brochure on topic. Estimated budget = \$10,000 - \$15,000.

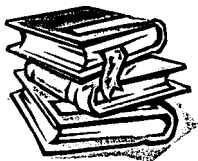
**Environmental Literacy Display** – The Program should create a poster that promotes a stewardship message of the month. The poster would be sent to teachers (elementary and science), who would hang the poster in their science lab area. Poster would also allow the Program to promote its name and its Web site address. Estimated budget = \$5,000 - \$10,000.

**CLARKE**

**P.I.E.R. PROJECT Science Club** – The Program should develop a science club devoted to increasing students' environmental literacy and stewardship behaviors. Targeted for junior to high school science classes, the Club could be marketed to existing Science Clubs and offer education and activities on estuary and environmental topics. Estimated budget = \$2,500 - \$5,000.

**Mini Grant Extension** – While the Program already has the Grants Program, it should extend the distribution to cover project costs associated with science projects at schools or for the P.I.E.R. PROJECT Club. Estimated budget = \$15,000 - \$20,000.

**Video Presentation** – The Program should slightly revise and duplicate the video it produced in the late 90s and distribute it to all science teachers in the two county area. The information contained in the video is still relevant and would make a good visual aide for teachers and students to learn about environmental stewardship and Florida Yard principles. Estimated budget = \$5,000 - \$10,000.



**CLARKE**

### **Strategy #3**

***Develop activities and educational materials for children to learn about stewardship while at home.***

#### **Tactics:**

**Activity Guide** – The Program should develop a guide of environmental and estuary-related activities that the student, and his/her parents, could perform at home. From making their own water gauge to looking for a specific plant, the activity guide could be a great opportunity for students to teach their parents about environmental stewardship. Estimated budget = \$15,000 - \$20,000.

**Web Site Student Section** – The Program should create a special section on their Website to include student-related activities that they can do on their own – or with their parents – to learn more about the environment around them. Estimated budget = \$5,000 - \$7,500.



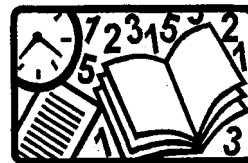
**CLARKE**

### **Strategy #4**

***Develop a series of tools that can be promoted to teachers so that they understand what they can do to educate their students on environment stewardship practices and responsibilities.***

#### **Tactics:**

**Guidebook** – The Program should develop an educational manual for distribution to teachers. The Guidebook, in a three-ring binder format, would contain news and information the teacher could use to teach their students on environmental stewardship. Guide could probably be purchased from outside source rather than creating something from scratch. The Guidebook may be customized to the grade level of the teacher. Contents could include suggested topics, handouts, Internet resources, and contact names at the Program. Estimated budget = \$10,000 - \$15,000.



**CLARKE**

**Onsite Workshops** – The Program should participate in school workshops, which would allow the Program to show the teachers what they can teach their students during science class. The Program could also offer to hold its own workshop after hours in the school for interested teachers. Estimated budget = No cost expected, just time.

**Field Workshops** – The Program could host a field workshop to show teachers what they can teach their students during their next field trip. The workshop could be held at Selby or at a restoration site, such as Quick Pointe or Durant Park. Estimated budget = \$1,000 - \$2,500.

**Web Site Educator Section** – Similar to the student section, the teacher section will offer tools that they can use to instruct their students on estuary-related topics. It could include a suggested curriculum, stories on teacher successes, fun activities to try and links to other educational sites. Estimated budget = \$5,000 - \$7,500.

**Quarterly Newsletter** – For teachers who don't have time, or the resources, to have Internet access, the Program should create a quarterly newsletter to provide news and information they can use in the classroom. Estimated budget = \$2,500 - \$5,000.

**CLARKE**

### Strategy #5

*Develop an awards and recognitions program to honor those students who excel in environmental stewardship.*

#### Tactics:

**P.I.E.R. PROJECT Science Club Contest** – The Program could hold a contest pitting different Clubs against each other to solve a particular Bay environmental issue. Winners could receive a plaque, which could be hung in their science lab, and personalized certificates of merit. Estimated budget = \$1,000 - \$2,500.



**Award Sponsorship** – The Program could sponsor an environmental science award at a local or state science fair competition. Sponsorship award could include money, free internship and/or plaque. Estimated budget = \$1,000 - \$2,500.

**CLARKE**

**Photo Contest** – The Program could hold a contest for upper elementary classes, such as fifth graders, that would ask students to take snapshots of estuary-related subject and create a unique collage using the photos. The Program would provide a list of suggested sites to visit. Winners get a certificate of merit and a pizza party for their class. A different class would be selected for the next year. A camera company, who might jump at the chance to participate in the program, could possibly supply the disposable cameras. Winning photos or collages could be posted on the Program's Web site. Estimated budget = \$1,000 - \$5,000.

**Coloring Contest** – The Program could hold a contest for lower elementary classes that would ask the students, such as second graders, to draw and color an estuary-related subject. The Program would provide a list of sites the students could visit along with their parents as well as a list of plants or animals they could draw. Or the Program could post a picture on the Web site and have children print it out and color it. Winners get a certificate of merit and a pizza party for their class. Winning pictures could be posted on the Program's Web site. Estimated budget = \$1,000 - \$2,500.

**CLARKE**

#### **Strategy #6**

***Promote the organization's name, mission and programs to create top-of-mind awareness, positive perception and credibility within the community.***

##### **Tactics:**

**Sticker Program** – The Program should design a sticker to be used at all partner locations for distribution to children. The sticker would cross promote the P.I.E.R. PROJECT Program and its partner, as well as contain a Program mascot, such as a dolphin. Preliminary discussions with the Partners indicate strong support for this idea. Estimated budget = \$5,000 - \$7,500.

**SBNEP Brochure** – The Program needs to develop a cost-effective brochure that can be distributed to all audiences during community events, partner locations (such as brochure racks) and field trips. Estimated budget = \$5,000 - \$7,500.

**CLARKE**

**SBNEP Calendar** – The Program should re-print its calendar for distribution to all Manatee and Sarasota county classrooms. The calendar could be re-designed for just the 2002 calendar year (instead of the 18-month version printed this fall) and be sent with a letter introducing the Program, its services and its desire to partner with the teachers. Estimated budget = \$2,500 - \$5,000.

**Fairs/Exhibits** – The Program should schedule exhibits for each of its partners locations, such as a display at Mote, Selby and G.Wiz. The display would allow the Program to pass out literature, increase awareness of its programs and answer questions people may have. In cases where Program representatives cannot “man” the tables, a Program volunteer can fill in. The Program should also participate in community events, such as parades and fairs, to increase awareness of its services. Estimated budget = \$1,000 - \$2,500.

**CLARKE**

**Corporate Sponsors** – The Program should contact the major businesses in Manatee and Sarasota counties in an attempt to raise their awareness of environmental issues and how they (as a business) can help. The Program can ask each business to sign on as a business sponsor in return for their support in educating their employees (and their children) about environmental stewardship topics. Unlike other organizations that are asking for financial contributions, the Program would be asking only for their cooperation in distributing messages. Sponsors could receive payroll stuffers and brochures and they, in return, could have employees join the Program's volunteer roster for support in restoration plantings (which their children could participate in). Other programs could also evolve as the Program discusses philanthropy ideas with the sponsor. Estimated budget = No cost expected, just time.

**CLARKE**



## **Residential Florida Yards & Neighborhoods Education / Marketing Program**

FROM: Scott Carpenter, Senior Account Executive Public Relations

CLIENT: Sarasota Bay National Estuary Program

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### **Goals:**

- Promote the benefits of environmental stewardship
- Promote how the Florida Yards Program positively affects Sarasota Bay
- Increase resident's environmental literacy and stewardship behaviors
- Promote SBNEP as a leader in environmental stewardship

### **Audience:**

- Manatee and Sarasota county residents
  - Homeowners
  - Apartment / Multi-Housing Owners and Managers

### **Strategy #1**

*Develop promotional and educational materials for residents to learn about stewardship and how they participate via Florida Yards & Neighborhoods guidelines.*

### **Tactics:**

**Direct Mail** – The Program should create a direct mailer promoting the benefits of Florida Yard concepts on Sarasota Bay. Mailer would encourage residents to use guidelines found in FYN Guide. The mailer, either a post card or small brochure, would be sent to all residents in Sarasota and Manatee counties who:

- Obtain building permits
- Call the extension office for FYN information
- Obtain home improvement loans

To obtain the names of the residents, the Program will have to form partnerships with local banks and government offices.

**Advertising** – The Program should create promotional advertisements about the effects of every day resident items that impact the Bay, and how the FYN program helps save the Bay. Program could be limited to a single television station, which a spot would have to be produced, and the two daily newspapers, which an ad would have to be created.

**Education Road Show** – The Program should obtain an exhibit of a yard setting that can be taken to community organizations for hands-on demonstrations and learning. As needed, a Program representative can take the exhibit to an organization (community, business meetings) and discuss a particular topic using the exhibit as a visual aid.

### **Strategy #2**

*Partner with a media source to help with generating awareness of the Program's FYN mission and support.*

#### **Tactics:**

**Media Sponsorship** – In lieu of a financial contribution, a media source could donate airtime and print ad space to help generate awareness of the mission with their viewers, listeners and/or readers. An affiliation with the Herald Tribune/SNN 6, for example, would provide awareness through free PSAs, stories and announcements. People could be directed to call the Extension office or the Program.

### **Strategy #3**

*Partner with local business to help with generating awareness of the Program's FYN mission and support to their employees.*

#### **Tactics:**

**Environmental Literacy Display** – The Program should create a poster that promotes a stewardship message of the quarter. The poster would be sent to business partners, who would hang the poster in their break room and cafeteria areas. Poster would also allow the Program to promote its name and its Web site address.

**External Communications** -- For partners who send out a monthly invoice, a promotional stuffer could be inserted to alert people to the Program's FYN campaign. Stuffer would contain the Program's mission, a phone number for interested people to call and the Web address. The same message can also be communicated through the partner's external / internal newsletter(s).

#### **Strategy #4**

*Partner with local yacht clubs to help with generating awareness of the Program's FYN mission and support to their members.*

##### **Tactics:**

**Environmental Literacy Display** – The Program should create a poster that promotes a stewardship message of the quarter. The poster would be sent to yacht club partners, who would hang the poster in their meeting areas. Poster would also allow the Program to promote its name and its Web site address.

**External Communications** -- For clubs who send out a monthly newsletter, a promotional stuffer could be inserted to alert people to the Program's FYN campaign. Stuffer would contain the Program's mission, a phone number for interested people to call and the Web address. The same message can also be communicated through the partner's Web site, if applicable.

#### **Strategy #5**

*Partner with local home centers, such as Lowes or Home Depot, to help with generating awareness of the Program's FYN mission and support to their customers.*

##### **Tactics:**

**In-Store Signage** – Place a free-standing poster display in the front entrance of the store that visually promotes the mission. Poster would have the logos of the Program, FYN and the participating home center.

**Collateral/Rack Brochure** - Create an educational brochure about FYN practices and its effects on the Bay for placement in home center brochure racks and by check-out counters. The brochures would be jointly produced with the home center and contain the logos as mentioned above.

**Education Road Show** – Variation of tactic in strategy #1. In this case, the Program could take the exhibit of a yard setting to various home centers for hands-on demonstrations and learning. The Program could set up a booth outside the store and discuss the benefits of FYN to customers as they pass by.

SBNEP Mini-Proposal Ranking  
November 30, 2001 TAC Meeting

Rank*	Proposal Number**	Title	# of Votes***
1	13	Artificial Reef Project	18
1	14	Building Oyster Reefs	18
3	8	Determine the Degree of Nitrogen (N) Loading to Sarasota Bay from Different Components of Residential Areas	16
4	3	Long-term Water Quality Monitoring in Phillippi Creek	13
5	4	Identification and Restoration of Estuarine and Freshwater Wetlands	11
6	1	Sarasota Bay Integrated Water Resource Evaluation	10
7	6	Identify Water Quality Control Retrofits for Urban Stormwater and Outfall Sampling	8
8	10	Algal Baseline Data	2
8	17	The Role of Humans in Mortality Patterns of Sarasota Bay's Resident Bottlenose Dolphins	2
10	9	Investigate Stormwater Mitigation and Management Influences of Various Stormwater Retention System Designs	1
10	15	Manatee Use of Sarasota Bay Waters	1
12	7	Relationship between Weather and Development	0
12	11	Pressure Treated Wood Impacts on Water Quality	0
12	12	Water Quality Effects of Copper as an Herbicide	0
12	16	Analysis of Wetland Transplanting	0
N/A	2	(combined into 3)	
N/A	5	(combined into 6)	
Total number of Votes			100



Protecting Our Water Heritage

Votes accounted for by Top 5: 76

Votes accounted for by Top 7: 94

\*There was a tie for first place, so no second place exists

\*\*Refers to numbering system in Mini-Proposal Handout

\*\*\*Since there were a total of 100 Votes, number of votes is also percentage of votes

Please contact Gary Raulerson, SBNEP, with any questions at:  
941-359-5841 or Gary.Raulerson@ci.sarasota.fl.us



**Protecting Our Water Heritage**

**Mini-Proposals for Consideration to Continue Implementation of the  
Comprehensive Conservation and Management Plan (CCMP)**

The "alphabet soup" following each title refers to the various segments in the CCMP as detailed in a previous hand-out to the TAC. If you need a copy of that hand-out or of the CCMP itself, please contact Gary E. Raulerson at [gary.raulerson@ci.sarasota.fl.us](mailto:gary.raulerson@ci.sarasota.fl.us) or 941-359-5841.

**1) Sarasota Bay Integrated Water Resource Evaluation (WW 1.2, WW 2.5, SW 1.1, SW 2.0, WL 1.3, FL 3.1)**

Significant changes in freshwater flows to the Sarasota Bay estuary have occurred during the last century. The predominant changes have been the conversion of natural upland and wetland communities to urban land uses including residential and commercial development and agriculture. With these land use changes, alterations in the timing, duration, and volume of freshwater inputs to Sarasota Bay have occurred which may have significant effects on estuarine biota (fish, invertebrate, and vegetation) and productivity.

A number of projects are currently underway or planned including a number of flood storage ponds (detention), stormwater conveyance improvements, Aquifer Storage and Recovery wells, brackish water treatment/disposal, septic tank replacement/wastewater collection system construction, reclaimed water transmission/distribution, and regional distribution of surface water supplies.

Also, pervious surfaces like porous concrete, porous rubber pavement, and various loosely aggregated materials have been developed to allow a certain degree of infiltration, minimizing stormwater runoff. Compacted fill dirt is conceptually known to decrease rainwater infiltration and increase stormwater runoff. However, the impact of these surfaces is limited by lack of data. Investigation of their effects in actual situations could allow decision-making that could minimize total stormwater runoff and decrease the destruction of natural systems during the construction of additional stormwater retention systems.

This project would: 1) evaluate the combined effects of development, stormwater management, water supply, and wastewater effluent disposal activities on the ecological resources of Sarasota Bay and its tributaries; 2) analyze the major tributaries and

freshwater seeps entering Sarasota Bay to estimate the changes in hydrologic characteristics that have occurred during the past several decades; 3) Evaluate current and proposed water resource projects, their relative inputs and withdrawals from various sources, and an analysis of their potential impacts (e.g., salinity changes, effects on oligohaline-dependent vegetation/biota) on the ecological health of the estuary; 4) determine the influence of various pervious and impervious surfaces in urban developments on soil hydrology and stormwater runoff. The results of the analysis would include a series of recommendations for restoring more natural flow patterns or, at a minimum, reduce peak flows and pollutant (e.g., nitrogen) loads in tributaries to Sarasota Bay that have been impacted by development.

## **2) Impacts of Treated Wastewater on Sarasota Bay Tributaries (WW 1.2, WW 3.1, WW 4.0)**

Investigate the water quality impacts of Bahia Vista MHP wastewater plant on Phillippi Creek. A suspected strong influence on water quality, if proven, would help facilitate the complications of getting this non-franchise facility connected to a County utility.

## **3) Long-term Water Quality Monitoring in Phillippi Creek (WW 1.2, WW 2.5, WW 3.1)**

Sarasota County has embarked on a multi-phased septic tank replacement program to reduce wastewater-related pollution in the Phillippi Creek watershed. Unfortunately, there are few, if any, active water quality monitoring stations in the creek that could be used to evaluate the long-term effects of the program on reducing nutrient and pathogen loads and improving water quality. Also, methods to identify various sources of fecal pollution (wildlife vs. human) have recently been developed which could be used to further assess microbial-related water quality improvements and reductions in potential health risks associated with bodily contact with the creek. This project would consist of a long-term water quality monitoring program at a series of stations along the main stem of Phillippi Creek as well as major tributaries that represent the various phases of the septic tank replacement program. Trends in concentrations of various water quality parameters (nutrients, BOD, salinity, dissolved oxygen, fecal coliform bacteria) would be evaluated annually, in conjunction with the completion of wastewater treatment improvements, to determine the overall impact of the program on improving water quality in the creek. Concentration data could be compared and evaluated with respect to existing state water quality standards, and if flow measurements are taken during sampling, estimates of load reductions could be calculated.

## **4) Identification and Restoration of Estuarine and Freshwater Wetlands (WL Action Plan Goal)**

The CCMP identifies intertidal habitat loss as one of the major problem areas for Sarasota Bay. Approximately 39% of intertidal habitat has been lost throughout the bay. The stated goal for the Sarasota Bay region is to increase intertidal wetlands by approximately 18 acres per year (equal to 1% of the total amount of lost habitat per year). Therefore, identification of sites for restoration and implementation of intertidal restoration projects is a key component of the CCMP. The SBNEP developed an aggressive plan for restoring estuarine habitats throughout the bay area. However, a number of these projects are anticipated to be completed within the next

one to two years, and, compared to the overall impacts to the bay system, additional restoration activities are needed to enhance the productivity of critical nursery habitats which have been lost during the last century. Recent advances in technology (e.g., GIS) has allowed for rapid and more comprehensive assessments of estuarine habitats and also locating potential sites for restoration. Through the use of GIS, existing information such as the FMRI's fisheries' independent monitoring data (habitat suitability indices, fish catch data), physicochemical data (salinity, dissolved oxygen, etc.), land use (adjacent habitat types, open land vs. developed), and parcel information (owner, appraised value) can be integrated to develop a coverage of potential acquisition and restoration sites throughout the Sarasota Bay system. Identification of bay areas with poor water quality and circulation due to human impacts (e.g., dredge and fill operations) could lead to hydrologic restoration efforts and act as an aid in setting priorities for remediation. Data currently being collected for the SBNEP regarding critical nursery habitats could also be integrated to further refine optimal restoration sites. These sites could then be evaluated, ranked, and constructed given future funding opportunities. In addition, this analysis could be expanded to include freshwater wetlands that affect freshwater flows to the estuary or that serve as important foraging sites for wading bird species. Long-term monitoring of a subset of these restoration sites would be beneficial to document natural recruitment of native vegetation and wildlife utilization and to ascertain the viability of these restored systems.

#### **5) Stormwater Outfall Sediment Sampling (SW 2.1, SW 2.1.3, SW 2.1.5, SW 3.1, SW 3.2)**

Conduct sediment core sampling of targeted areas of stormwater discharge. The mouth of Hudson Bayou, Marina Jacks, 10th Street Boat Basin, marina areas and other urban outfalls would be targeted. Remediation of sites could be problematic, but defining the extent of the situation allows public awareness and administrative prioritization. The SBNEP 1992 Bay-wide data set provides a perfect comparison.

#### **6) Identify Water Quality Control Retrofits For Urban Stormwater (SW 2.1.3, SW 2.1.5, 4.1.3)**

A study could be funded to identify water quality control retrofits for urban stormwater, especially in direct discharge locations. Criteria should include low price, easy accessibility for maintenance, and a receiving water of high resource value (bays rank higher than ditches). The study should include everything needed for implementation, such as structure type, cost, and property ownership. No effort should be directed to high cost fixes, a need for more study, or a new funding initiative; instead only readily do-able suggestions should be produced.

#### **7) Relationship Between Weather And Development (SW 4.0, SW 4.1)**

Is there a relationship between weather and development? Once upon a time this area was a series of wetlands connected by seasonal sloughs interspersed with low ridges. The amount of evaporation and evapotranspiration must have been much greater. If the decrease in surface water impoundments is reducing rainfall, there could be implications for surface impoundments for land development, stormwater, and drinking water resources.

**8) Determine the degree of nitrogen (N) loading to Sarasota Bay from different components of residential areas (SW 2.0, FL 5.1)**

Recent indications are that a greater amount of nitrogen loading to Sarasota Bay occurs from stormwater runoff from residential areas than previously expected. Unfortunately, no data exists to quantify exactly which components of residential areas are the major contributors of this nitrogen. Current residential N reduction efforts tend to target home landscape fertilization. However, other influences, such as background decomposition of organic matter, cleansing of atmospheric and other N deposition to roadways, and other sources of N need to be identified and quantified in order to appropriately target educational and regulatory programs for maximum N reduction. This would need to be compared to N loading from various types of natural areas.

**9) Investigate the stormwater mitigation and management influences of various stormwater retention system designs (SW 2.1.5, SW 4.0, WL 1.3, FL 3.1, FL 5.1)**

Current stormwater mitigation systems are recognized as having certain flaws, especially regarding flushing of nutrients and disallowing groundwater recharge. Investigate the impact of different mitigation designs to determine their effectiveness in trapping nutrients and in allowing greater groundwater recharge. Some designs may not have acceptable characteristics in all circumstances, but all designs may have potential for usage under certain circumstances. Increased flexibility and effectiveness in stormwater mitigation would allow better land utilization and cleaner, less abundant stormwater entering local waterways.

**10) Algal Baseline Data (SW, WW objectives)**

Current reports indicate there may be a worldwide increase in the amounts of hazardous algal blooms. Does baseline data about blue-green algae exist for Sarasota Bay? If not, is it necessary? What about the impacts of water and HAB's entering the estuary from tributaries?

**11) Pressure Treated Wood Impacts on Water Quality (SW 2.1.3)**

Concerns exist relative to the arsenic used in the pressure treatment of wood for docks and other structures near water bodies. A simple calculation of the volume of CCA already in the water (in the form of PT) and the amount of metals in that wood could be a starting point to determine potential impacts. A study of the amount of metals released by the docks and pilings could help raise interest in switching to less toxic materials. This could lead to efforts to reduce the amount of pressure treated wood used in the SBNEP study area.

**12) Water Quality Effects of Copper as an Herbicide (SW 2.1.3)**

Copper is widely used as an herbicide in stormwater ponds. It is also fairly soluble in the water column, compared to other metals. Questions exist as to the relative toxicity in the marine environment compare to freshwater habitats. More information about this issue, perhaps the amounts in use and the presence in stormwater, may help clarify the question if copper loading to the estuary is significant. This information could change pond management practices.



### **13) Artificial Reef Project (FL 1.0, FL 1.1, FL 1.3, FL 1.4, RU 4.0)**

This project will provide an effective strategy and mechanism by which the entire Bay can be enhanced with regard to hard-bottom habitat and sea-walled and other altered shorelines. A Fishery Habitat Enhancement Task Force assists in determining the best sites for artificial reef placement and appropriate construction materials within Sarasota Bay. This task force developed a comprehensive plan that outlines priority sites for reef placement. To this end, during Summer 2001, several cooperating agencies deployed five replicate sets of artificial reefs within the upper SBNEP boundaries for experimental analysis along with several clusters of reef modules primarily targeted for recreational use.

Another part of the artificial reef project would develop and deploy artificial structures specifically designed to provide juvenile fish nursery habitat within Sarasota Bay. The types of structures should considered for deployment should be evaluated with regard to their ability to function as this kind of habitat, cost effectiveness, and feasibility of their deployment ultimately being implemented on a larger, bay-wide basis by private or private-government partnership mechanisms. Some of these reef modules or grants could be made available to neighborhoods/municipalities for placement along shorelines. Permitting issues for neighborhoods and municipalities interested in "blanket" permits should be investigated. The project would also research the utility of placing reef modules within restoration projects and along developing oyster beds to decrease erosion.

All deployed habitats should be monitored to determine their quantitative (numbers of fish), and qualitative (species enhanced) effectiveness. The monitoring should include a study phase that will clearly determine if the deployment resulted in larger numbers of fish being produced, or if they largely attracted fish from nearby areas. Monitoring of these sites and comparisons with natural bay bottom habitat would provide valuable information on shallow-water artificial reefs. Educational efforts (possibly through the use of master's-level students or local dive clubs for monitoring) will also be included within this project.

### **14) Building Oyster Reefs (FL 3.2)**

Because the possibilities for creating new wetlands and mangrove stands in Sarasota Bay is limited and continued local growth will increase Bay pollution via stormwater runoff, we propose the use of the American oyster as a means to filter and purify bay water. Oysters were once common in Sarasota Bay and should be able to reestablish themselves if a hard substrate is provided. By simple cultch deposition and spat seeding, it should be possible to restore enough reef area to make a significant improvement in bay water quality.

### **15) Manatee use of Sarasota Bay waters (FL Action Plan Goal, RU 1.0)**

There is growing concern among certain interest groups that manatees will become a "tool" by which agencies will regulate (or, in some peoples' minds, over-regulate) boat access to particular inshore locations. Part of the concern stems from the perception that databases for manatees are

insufficient to justify the difficult decisions regarding human stakeholder uses of areas. Scientists at Mote Marine Laboratory have established a multi-year database (based on aerial surveys) that documents high use areas for manatees in Sarasota Bay. However, as changes occur in local habitats and in human activities therein, it would be extremely useful to: (a) continue the aerial surveys, and to focus them (to obtain a higher resolution view) in particular locations where it appears that conflicts are likely between human stakeholders and conservationists interested in area closures; (b) conduct extensive photo-identification work to better document the extent to which particular individual manatees or demographic groups (e.g., females with calves) use particular areas; and (c) initiate collection and analysis of genetic samples to both assess the extent to which "kin" groups may learn to use particular locations (and pass such knowledge to subsequent generations), and to clarify aspects of manatee reproductive biology. In addition to doing these sorts of studies, we propose doing a very focused assessment of manatee habitat use and behavior in an area (i.e., City Island grass flats) known for both its high manatee use and sporadically high boat use. The data we generate would provide useful insights into manatee biology, and they would also provide better information on which to base conservation and management decisions that affect a range of Sarasota Bay stakeholders.

#### **16) Analysis of Wetland Transplanting (WL 1.2)**

Determining the advantages of transplanting existing wetlands rather than creating new wetlands. Currently wetland creation, enhancement and restoration are widely accepted as mitigation for wetland losses associated with development. However, the benefits of transplanting existing habitats including flora, fauna and soils requires further investigation. This could be accomplished by long term monitoring of an existing transplanted freshwater wetland and comparing it to a newly constructed freshwater wetland.

#### **17) The Role of Humans in Mortality Patterns of Sarasota Bay's Resident Bottlenose Dolphins**

Bottlenose dolphins are highly-visible top predators in Sarasota Bay's ecosystem. The Bay is the year-round home to a long-term resident community of about 120 dolphins, including four generations. These dolphins have been under study for more than 31 years, resulting in data on ranging patterns, abundance, vital rates, reproductive histories, diet, health, immune system function, and environmental contaminant concentrations in blubber, blood, and milk. Complementary efforts by Mote Marine Laboratory's Stranding Investigations Program have resulted in the examination and sampling of more than 225 dolphin carcasses since the mid-1980's, from both Bay and Gulf waters of Sarasota and Manatee Counties. Preliminary findings indicate that human activities, especially fishing and pollution, may be responsible for many dolphin deaths. We propose to complete and systematically examine our stranding database for trends in dolphin mortality and pathological conditions relative to age, sex, season, location, diet, environmental contaminant data provided by other projects, and reproductive condition. This will allow us to describe the relative frequencies of causes of death (distinguishing between natural and human-induced), evaluate temporal or geographical trends in mortalities, and potentially identify patterns that may be of concern to the ability of Sarasota Bay's dolphin community to survive or thrive.

The potential negative impacts of contaminants on dolphin health and population trends have received increasing attention over the past three decades as the incidence of disease outbreaks has apparently increased worldwide and as experimental and other evidence mounts suggesting that contaminants often found in marine mammal tissues have deleterious effects on survival and reproduction in other mammalian species. Previous research and risk assessment has found variations in contaminant body burdens relative to dolphin age, sex, and reproductive status, and apparent effects of PCBs, DDT metabolites, and mercury on health and immune system function in Sarasota Bay dolphins. Because dolphins are top-level consumers, they are especially susceptible to persistent pollutants acquired through feeding on contaminated prey fish. Chlorinated hydrocarbons used in many industrial and agricultural applications and polycyclic aromatic hydrocarbons (PAHs) from petroleum runoff and boat traffic, are recalcitrant in nature and are stored in fatty tissues of dolphins where they can accumulate. With NEP support we propose to explore potential pathways of exposure to important contaminants such as PCBs, DDT/metabolites, PAHs, methyl mercury, and tributyl tin through measurement of these contaminants in the primary prey fish of local bottlenose dolphins (mullet, pinfish, pigfish, spot, as determined through previous stomach content analyses), and examination of geographical relationships between historical/current ranging patterns of individual dolphins for which environmental contaminant concentrations have been measured, and fish sampling locations. Identification of specific geographical "hotspots" may point toward remedial or preventative action relative to runoff or upstream sources. This work may also identify regions of concern relative to human consumption of fish.

Finally, we recognize that studies to date of contaminants in tissues of Sarasota Bay dolphins have examined only a few of the many chemicals believed to have deleterious health or reproductive effects. Existing funding will allow us to continue to examine the better-known contaminants in dolphin tissues, such as PCBs and DDT metabolites. With NEP support, we propose to expand the analyses to include some of the compounds of emerging importance in marine ecosystems. We will examine tissues of stranded dolphins for concentrations of such chemicals as PAHs, chlordane (historic termite pesticide) and the high use agricultural pesticide endosulfan. Knowledge of the level of occurrence of these chemicals, and correlations with specific medical and reproduction conditions in stranded dolphins will allow us to better assess risk for dolphin populations in Sarasota Bay and elsewhere, and help to guide the direction of resources toward mitigation when possible.

Sarasota Bay  
National Estuary

SARASOTA bay

Protecting Our Water Heritage

Tracking Seagrass Bed Conditions

Gary E. Raulerson

Sr. Environmental Scientist

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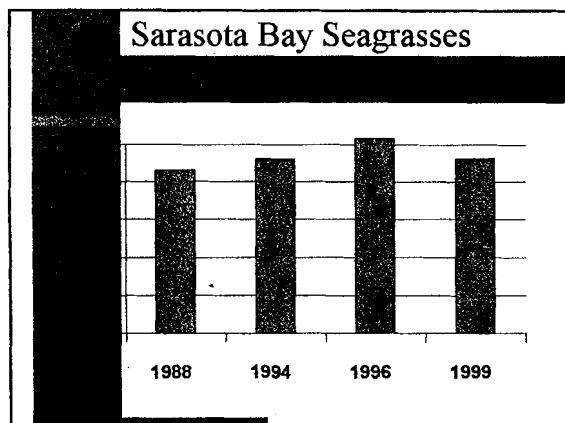
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FWMD data for continuous and patchy

relative importance?

temperature indicates increased seagrass

mass or density equals more fish

continuous beds more robust

more capable of weathering "tough times"

reference in value not emphasized in reports

Chesapeake Bay

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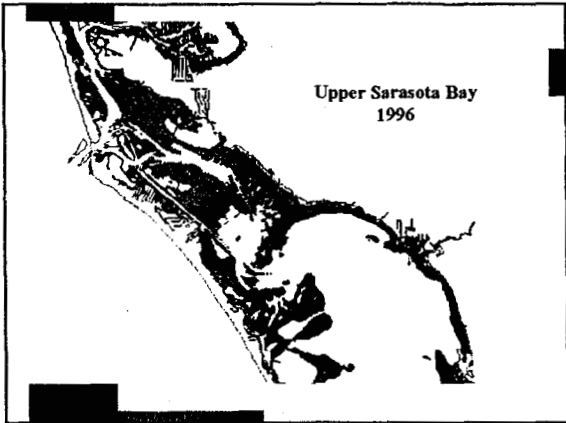
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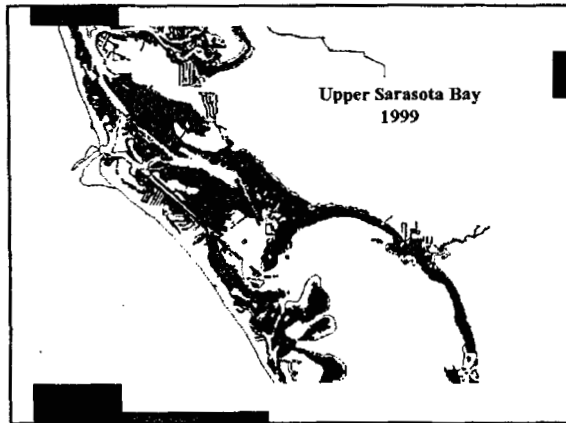
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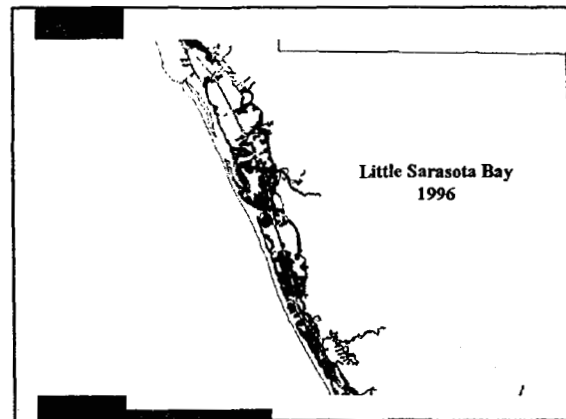
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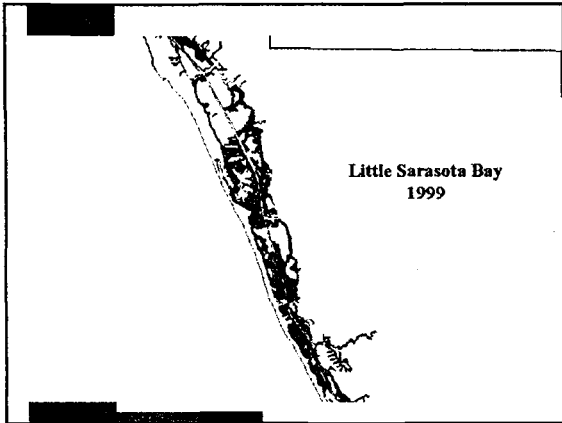
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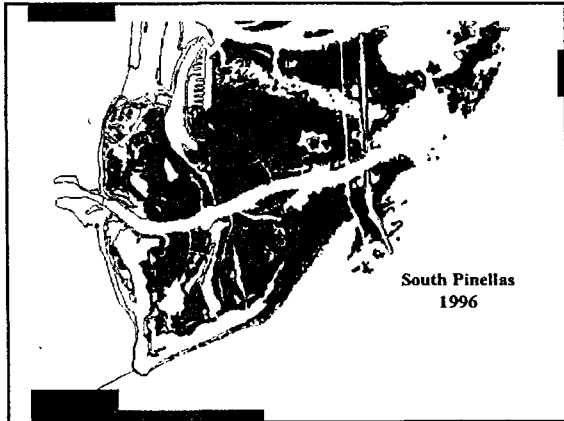
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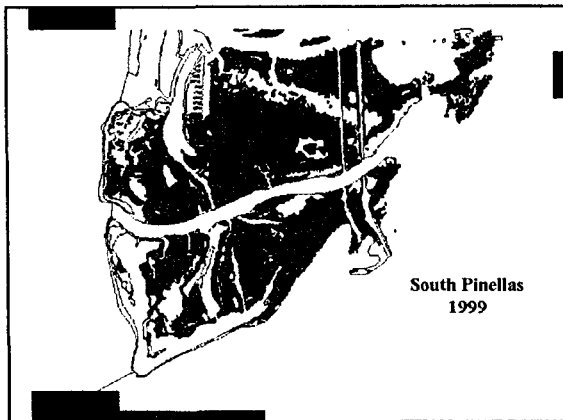
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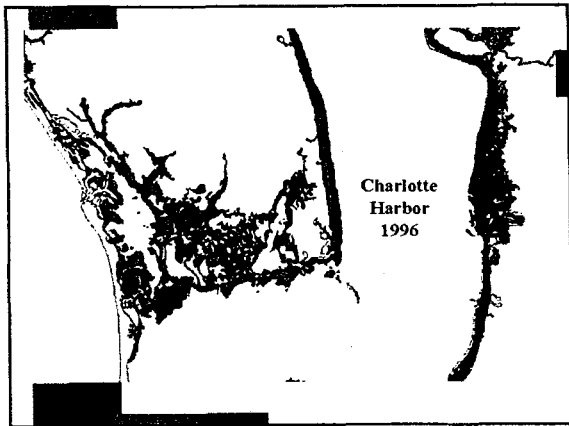
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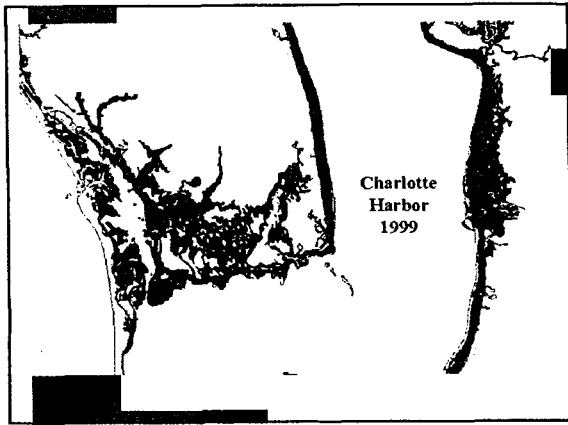
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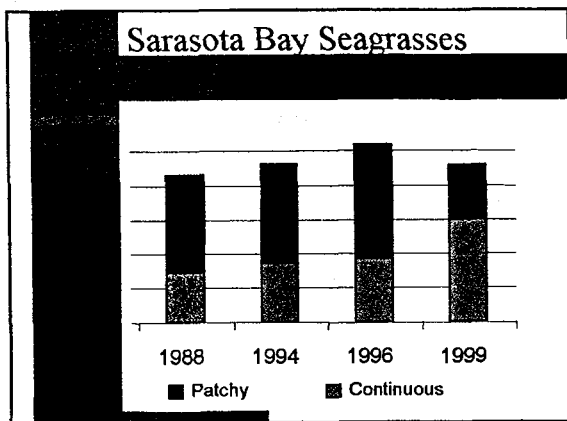
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chy is from 0-75% coverage  
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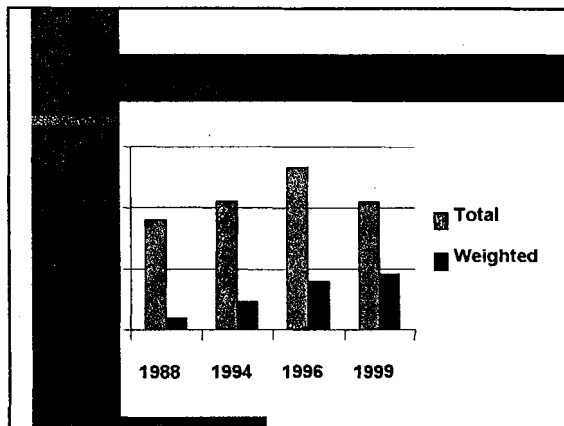
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Increase in total seagrass  
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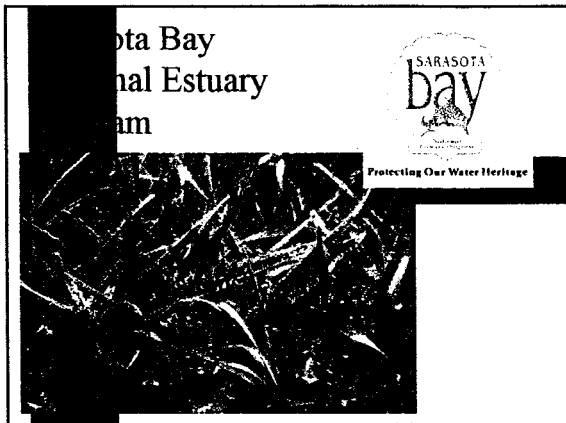
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Protecting Our Water Heritage

February 27, 2002

To: Policy and Management Committee

From: Mr. Mark Alderson, Executive Director  
Sarasota Bay National Estuary Program

*MARK*

Subject: SBNEP FY03 Annual Work Plan

Attached is the proposed Sarasota Bay National Estuary Program (SBNEP) Annual Work-plan for FY03 (Federal FY02) to be discussed at Policy and Management Committee meetings scheduled for March 15, 2002; an agenda will be forthcoming under separate cover.

The work plan includes a \$510,000 federal contribution in FY03 (an increase of \$170,000 or 50% over FY02 levels) with local and SWFWMD contributions remaining the same as in FY02. The City of Sarasota increases its overall commitment by covering the additional match (\$126,000) through a planned aquifer storage and recovery project that will eliminate the City of Sarasota wastewater discharge at Whitaker Bayou.

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The work plan contains three new initiatives for your consideration and discussion:

1. Public-school outreach addressing "hands on" environmental education (\$140,000);
2. Studies of non-point source pollution (\$200,000); and
3. Oyster Research (\$50,000).

The public school outreach and technical projects were developed in concert with the Citizen and Technical Advisory Committees this winter. A proposal is also being prepared by USGS to address the non-point source initiative; this scope of work will be mailed to you as soon as possible.

The work plan also contains continuing work in wetland restoration, artificial reef construction and public outreach and education; but does not include planned capital projects sponsored by partnering agencies.

Thank you for your review of the work-plan and continued support of the SBNEP.

Cc: Manasota Basin Board

# **SARASOTA BAY NATIONAL ESTUARY PROGRAM**

## **FEDERAL FY 02 WORKPLAN**

**(FY 03 Operating)**

### **PART 1 – ACCOMPLISHMENT AND GOALS**

#### **Introduction**

The Sarasota Bay National Estuary Program (SBNEP) Management Conference was convened in June 1989. The mission of the Program is to develop and implement the Comprehensive Conservation and Management Plan (CCMP) to restore and protect Sarasota Bay. The Policy Committee made “action now” a guiding principle of the Program and supported a variety of implementation activities early in the process; this theme has carried through implementation. The SBNEP Management Conference comprises relevant federal, state and local organizations. SBNEP staff promotes and oversees implementation, coordinates efforts among the various organizations responsible for Bay decision-making, seeks external funding and promotes public involvement.

#### **Background**

In 1989, the Program developed a technical plan of action to assess the complexity and severity of environmental problems and began to build general consensus in the community with regard to priority problems facing the Bay. The “State of the Bay Report”, released in January 1990, presented both information on the “state of knowledge” and a technical plan of action to the community.

Between 1990 and 1992, the Program funded the research outlined in the State of the Bay - 1990 report and initiated several habitat restoration and stormwater management projects; as both stormwater pollution and loss of wetlands were clearly identified as problems early in the process. The purpose of these projects was to test the effectiveness of resource management options and determine cost estimates for use in the development of the CCMP. These projects also: helped focus the attention on Bay issues; improved inter-agency coordination; provided opportunities for citizen volunteerism; and served as a mechanism for public education.

In 1993, the Sarasota Bay Program completed technical studies investigating wetlands, fisheries, bottom habitats, water and sediment quality, circulation, recreational uses, shellfish contamination, sea-level rise, and pollutant sources and loading. The technical findings were presented in the “Framework for Action” report (March 1993). The report also described potential management options for bay protection and improvement.

Since beginning the Program, emphasis has been placed on public outreach and education to involve citizens in restoring the Bay. Programs for public schools, action projects, exhibits at community events, opportunities for volunteers, workshops and publications were developed. The Florida Yards and Neighborhoods Program was one such initiative developed with the University of Florida, Florida Cooperative Extension Service that has become a statewide program.

In 1994, a series of public forums, sponsored by the league of Women Voters, was held throughout the watershed to promote the Program's findings and obtain citizen input to potential management options. Consensus was built and six (6) Action Plans were developed: Wastewater Treatment and Reclamation; Stormwater Treatment and Prevention; Freshwater and Saltwater Wetlands; Fisheries and Other Living Resources; Recreational Use; and Governance. Monitoring and research priorities were also developed for inclusion in the Comprehensive Conservation and Management Plan (CCMP).

In November 1995, the CCMP was approved by the Governor and EPA Administrator following a year of governmental and public review. In early 1996, the SBNEP began working with the community on Bay restoration. Sarasota Bay has improved dramatically since 1989:

- Nitrogen pollution has been reduced by approximately 47%.
- Sea grass coverage has increased by 8-27% (it is estimated that the Bay now supports 110 million more fish, 71 million more crabs, and 330 million more shrimp than in 1988).
- Extensive intertidal wetlands restoration projects (14) have been implemented enhancing more than 250 acres; twelve additional projects have been designed and fully or partially funded.
- Master planning has been completed for regional wastewater reuse systems with more than \$50 million in recovery systems under construction (aquifer storage and recovery has been selected as the preferred alternative for wet weather storage).
- The \$106 million sewer expansion program in Sarasota County is under construction.
- Most regional wastewater treatment plants have been upgraded to advanced waste treatment standards or equal levels of treatment with reuse.

A full listing of program accomplishments is shown in Chart A.

### **Program Accomplishments in FY 00-01**

In 2001-2002, the Program continued to implement action plan elements within the CCMP as approved by the Policy Committee in the annual budget. Within this framework, the overall goals of staff were to:

- Continue to support and coordinate CCMP implementation activities throughout the region.
- Assertively seek funding from various agencies to implement the CCMP.

### **Wastewater Treatment and Reclamation**

- Assist the local governments in meeting wastewater treatment policies outlined in the CCMP.
- Assist in developing and implementing a regional wastewater reuse system.

### **Reuse - Summary**

In FY 97, the Southwest Florida Water Management District (SWFWMD) chaired an interagency task force comprised of Manatee County, Sarasota County, City of Sarasota, Florida Department of Environmental Protection (FDEP), and SBNEP. The task force discussed options for wastewater treatment, disposal and reuse needs of each jurisdiction.

## CHART A

### COMMUNITY ACCOMPLISHMENTS SINCE 1989

1. Nitrogen pollution to the Bay has been reduced by 47% since 1990 (nitrogen pollution from wastewater treatment plants has been reduced by 80%)
2. Seagrass habitat has increased by 8-27% - 1,751 acres since 1988.
3. Saltwater wetland acreage has been increased by 8%; 26 wetland enhancement projects have been proposed and funded.
4. 20 Bay artificial reef projects have been permitted; six have been constructed since 1999.
5. An estimated 110 million more fish, 71 million more crabs and 330 million more shrimp are supported by the Bay than in 1988
6. Significant Bayfront land has been purchased.
7. The Gulf Coast Heritage Trail linking the Bay community's cultural, historical and environmental treasures has been launched and fully implemented.
8. Several watersheds have been retrofitted for improved stormwater management; decisions are pending on Hudson Bayou..
9. The Florida Yards and Neighborhoods Program has been developed recommending alternative landscapes regionally; SRQ. Co. passed an ordinance requiring FY&N on new landscapes in the County in November 2001.
10. Central sewers are being constructed in north Sarasota County (Phillippi Creek).
11. Scallops have been reintroduced to the Bay to reestablish stocks; initial efforts failed – more are underway.
12. A regional Wastewater Reuse System has been planned, funded and is under construction supported by aquifer storage and recovery as a means for preserving water resources.
13. \$3.0 million in technical studies to better understand the Bay have been completed; studies were completed in 99-01
14. A sophisticated multi-jurisdictional Bay monitoring program is in place; trend analysis is planned.
15. SBNEP staff have been directly involved in leveraging more than \$ 20.0 million for Bay restoration activities. The community has committed more than \$200 million for implementation with regional infrastructure supporting long-term protection valued at more than \$1 billion.
16. Citizens are engaged in decision making with regard to the Bay.
17. SBNEP policies have been integrated into the local government comprehensive plans.

### SBNEP INVOLVEMENT

- Secured funding and contracted to develop a pollutant loading model
- Evaluated nitrogen reduction strategies
- Assessed the condition of the Bay in relation to modeled loads
- Evaluated the impact of nitrogen reductions on Bay resources
- Established the pollutant loading reduction goals
- Assessed trends (expansion in relation to water quality)
- Conducted studies evaluating the condition and quality of existing habitat
- Secured funding and conducted studies to evaluate the extent and quality
- Assessed trends and established goals for enhancement
- Established funding sources and identified lands suitable.
- Developed the artificial reef master plan
- Tested innovative strategies for reef deployment
- Provided funding for enhanced reef creation.
- Conducted studies to provide baseline information on seagrass habitat
- Studied data as an indicator of the Bay's increased capacity to support life.
- Drafted proposals, in concert with local staff, to secure these properties.
- Initiated the Trail
- Obtained support from the National Park Service
- Developed brochures and educational materials
- Implemented road and destination sign system and auto route
- Supported the development of Environmental Utilities
- Sponsored retrofit projects for funding
- Assessed toxicity and identified sources
- Developed the Program and related educational materials
- Secured grants and funding for implementation
- Promoted research and statewide implementation
- Analyzed the bacteria data and alerted appropriate agencies
- Conducted studies on bacteria and viruses
- Participated on the multi-agency task force
- Provided technical support and funds for educational programs
- Conducted studies on spawning
- Deployed and monitored performance
- Fostered the development of the master plan; secured funding support
- Established the need for the Plan and connections to Bay quality
- Promoted the master plan with Basin Board members & SWFWMD
- Participated in the regional task force
- Evaluated wet weather storage options
- Secured funding and contracted for 40 technical studies to characterize the Bay and its resources.
- Developed protocols and assisted in establishing the regional network.
- Trend analysis continues.
- Drafted proposals and work plans
- Established a regional network
- Maintained the CAC and a network in the community
- Funded projects promoting education, community outreach and public involvement
- Most major issues in the plan have been publicly debated
- Provided Contractual and Staff Support

FY 98, the SBNEP funded projects to evaluate options for reclaiming wastewater on a large scale. Aquifer storage and recovery (ARS) was identified as the primary option for the regional recovery of wastewater. Each local government is implementing a wastewater reuse master plan supported by ASR technology.

The Manasota Agricultural Reuse System (MARS) is under construction with approximately \$28 million committed from federal, state, and local sources for construction. The system will recover 30 MGD of wastewater and offset over-pumpage of 50 MGD from the Floridan Aquifer. The system will virtually eliminate wastewater discharge in central and northern Sarasota Bay; and coupled with other projects described below in lower Tampa Bay and central Sarasota Bay.

In FY 99, the SBNEP summarized information developed through this process and prepared a report for the local governments throughout the region. Construction on the MARS system was initiated in 2001. Most elements of the regional re-use system are being funded by the Governing Board and Manasota Basin Board of the Southwest Florida Water Management District in concert with the local entities throughout the region. These projects include: central Sarasota County Reuse system, Venice ASR, Manatee County ASR, Bradenton re-use expansion, northern Sarasota County ASR, Sarasota City ASR, and the southern Sarasota County re-use system. These projects were independently developed by local staff, but are consistent with the overall goals of the NEP and master plan.

#### Septic to Sewers

The CCMP identified Phillippi Creek as the watershed most impacted by septic systems. In February 1998, the Sarasota County Commission agreed to move forward with Phillippi Creek clean up. It was agreed that each subdivision in the identified region would be assessed independently for compliance with the existing codes related to septic tanks. In FY 98, Sarasota County taxpayers made \$30 million available for construction of sewers along Phillippi Creek; Congress made \$1.5 million available in both FY 00 and FY01; continued funding is anticipated. The City of Sarasota proposed annexing areas north of Phillippi Creek that was debated in the community. In FY00, Sarasota County reviewed the data and analysis that was completed on the project using an independent contractor selected by the organizations opposing expansion. The consultants confirmed that Phillippi Creek was contaminated with fecal material and that septic tanks were the likely source.

In February 2001, Sarasota County officially initiated the sewer expansion program authorizing a \$106 million program; a bulk service agreement was signed between the County and the City in February 2002.

#### Stormwater Treatment and Prevention

- Assist in implementing and institutionalizing the Florida Yards and Neighborhoods Program; participate in statewide implementation.
- Support construction of stormwater retrofit projects in priority watersheds identified in the CCMP.
- Assist local governments in revising comprehensive plans.

### Florida Yards and Neighborhoods Program (FY&N)

A statewide initiative sponsored by the University of Florida, Institute of Food and Agricultural Services (IFAS) is presently being implemented locally. The FY&N Program is being implemented through the County Cooperative Extension Service offices (IFAS). In FY99, the SBNEP co-chaired the statewide task force to evaluate financing options. The Manatee-Sarasota area received FDEP grant funds to support a coordinator for three years beginning in 1999.

In FY 99, a management team comprised of representatives from the local governments, the University of Florida and SBNEP was formed to assist in implantation of FY&N as the grant was awarded for the FY&N Program locally. Local efforts have concentrated on the development industry with moderate results. It was determined that the current land development regulations and permitting process may inadvertently be encouraging poor development - and environmentally insensitive landscapes.

In FY 2001, a project was initiated to evaluate the land development regulations with respect to water conservation and stormwater runoff; a white paper was released in October 2001. The results suggested the Comprehensive Plans support environmentally sensitive landscapes, the land development codes do not. In November (2001), the Sarasota County Commission unanimously passed a landmark ordinance mandating FY&N concepts on all new development in Sarasota County, requiring no more than 50% turf on irrigated portions of landscapes. Manatee County is deliberating an action.

### Stormwater Retrofit of Priority Basins

The SBNEP supported the development of the Stormwater Environmental Utility (SEU) in Sarasota County in the early 1990s. Sarasota County and the U.S. Army Corps of Engineers (COE) have entered into an agreement to develop a stormwater retrofit master plan for the Whitaker Bayou watershed. A community forum was held March 24, 1999, to gather information from citizens as to their ideas and needs that could be incorporated into the final design that would not only minimize flooding, but also enhance the resource environmentally, aesthetically and recreationally. The final engineering design will be developed by the COE. It is anticipated construction could begin in 2004.

Phillippi Creek was retrofitted between FY 96-01 at an approximate cost of \$30 million.

Lead contamination was identified in Hudson Bayou, a tributary leading to Sarasota Bay. In FY2001, a study was completed to estimate the extent and volume of contamination in the Bayou. The results have been referred to the Health department to evaluate public health risk. In the interim, the health Department has signed the creek as unsafe for swimming and for eating oysters.

### Freshwater and Saltwater Wetlands

- Assist the community in restoring an average of approximately 18 acres of inter-tidal wetlands annually.

- Continue to educate the public as to the importance of our wetlands and the need to protect and enhance them.

A multi-jurisdictional task force formed in 1995 to develop a regional habitat restoration master plan – the plan included 20 sites and 20 artificial reef locations; but have increased to 31 wetland sites. The SBNEP has contracted for a Wetlands consultant to assist in: developing and finalizing conceptual plans; permitting and management activities; overseeing construction; and seeking supplemental funding for habitat restoration. FDEP and the SBNEP consultants have been the principle designers of the restoration projects.

The U.S. Army Corps of Engineers (COE) has completed a feasibility study for Section 1135 funding (\$7.25 million) which has been accepted by the County Commission. The U.S. Fish & Wildlife Service has provided more than \$1.5 million regionally for habitat restoration and enhancement; supplemented by \$550,000 in Basin Board and SWIM funds; the State (FDEP) has contributed approximately \$1.5 million as well. The SBNEP staff assisted Sarasota County staff with preparing a \$500,000 application to the Jacksonville Community Foundation.

Projects completed: Sarasota Bay-walk at Ken Thompson Park; Ken Thompson Park; Quick Point North and South ; Leffis Key North and South (Coquina Bay-walk) and the dredge hole; Durante Park – North and South; Selby Gardens; USF Caples campus; Sixth Street; Sister Keys and Hog Creek.

Projects nearing construction: GWIZ, 1912 School house, Perico Bayou and Crosley Mansion.

Projects with conceptual designs and nearing engineering design: Jim Neville Preserve, Palmer Point Park and the Bird Colony Islands.

Projects with conceptual designs completed: Big Edwards Island, Little Edward's Island, Skiers' Island and Snake Island.

Note: Little Edwards Island has met with significant public resistance; Sarasota County decided not to pursue construction.

### **Fisheries and Other Living Resources**

- Help market and deploy artificial reefs throughout the region.
- Assist in establishing an aquatic preserve at Sister Keys.
- Assist in developing educational materials and outreach opportunities to meet the need for improved juvenile fishery habitat.
- Assist angling organizations in developing and promoting the practice of catch-and-release.
- Assist in a scallop seeding program in areas where water quality improvements have been documented.

### **Artificial Reefs**

In 1995, the SBNEP sponsored the development of an artificial reef master plan that is presently being implemented. The plan received statewide acclaim because of its unique focus on juvenile fish and artificial reef placement inshore. The plan is comprehensive in scope and addresses



several methods to enhance juvenile fish habitat within the Bay. These methods include seawall enhancement, channel markers as habitat, dredge hole or benthic habitat enhancement, and open deep-water bay deployment. Monitoring is conducted by Sarasota County Natural Resources Department. Twenty (20) artificial reef sites have been identified: seven (7) existed in Sarasota County and were enhanced; three (3) new reefs were constructed in FY 98 by Sarasota County. In FY 01-02, the SBNEP with Manatee and Sarasota Counties constructed seven (7) new reefs in the Bay with 1200 reef balls.

In FY 01, the SBNEP has manufactured 1200 reef modules. The reefs were permitted with the assistance of SWIM-SWFWMD staff. Additional reef modules were manufactured through Sarasota County DNR; the NEP provided funds for deployment. This effort combined with the efforts already completed primarily by Sarasota County DNR staff in the Bay and Manatee and Sarasota County staff offshore may constitute perhaps the largest in-shore/offshore reef project in the United States.

#### Baywide Increases in Bottom Habitat

Sea grass coverage in Sarasota Bay increased by approximately 8 - 27% between 1990 and 1999; as a result, it was estimated that the Bay now supports approximately 110 million more fish, 71 million more crabs, and 330 million more shrimp. In FY01, it was determined that the Bay suffered a 10% decline due to effects of El Nino in 1999, by the Tampa Bay NEP; it appears that the bay has recovered from the event. In addition, approximately 250 acres of wetlands have been enhanced; and are also providing habitat to support an estimated 7.2 million fish in Sarasota Bay.

#### Bay Scallop Research

The SBNEP is currently working with the University of South Florida, Mote Marine Laboratory, and the Florida Sea Grant Extension Service to develop a scallop production and enhancement project in Sarasota Bay. Approximately 65 adult Bay Scallops were collected from Sarasota Bay in the late Summer of 1998 and were transferred to the University of South Florida where they were maintained until reproductive maturity. Spawning was induced by thermal shock and the larvae and subsequent juveniles raised in nylon bags or cages until the scallops reached a size of 17-20 mm. At this stage, approximately 25,000 juvenile scallops were transferred to the Mote Marine Laboratory. Mote maintained the scallops until they reached the size of 20 mm. In June 1999, surviving scallops were transferred to locations in the Bay near Buttonwood Harbor, Palma Sola Bay, and Sister Keys/Tidy Island in 100 cages. All three locations are situated in the northern half of Sarasota Bay where recent improvements in water quality should allow for survival, growth, and spawning of introduced scallops. The cages were placed in close approximation to each other in each location such that the success of fertilization can be maximized when the scallops spawn

Prior to deployment of the cages, surveys of natural scallop populations were conducted in each location. Mortality in the cages was 100% due to fouling. A much larger project (\$300,000) is presently being conducted by the National Oceanographic and Atmospheric Association (NOAA) testing alternative deployment methods; the NEP is providing \$15,000 to this initiative. The recent red tide outbreak in Florida has delayed full implementation of this study.

## **Recreational Use**

- Assist local neighborhood-initiated projects to enhance visual or recreational access to the Bay.
- Work with the community to develop a network of historical, environmental, and cultural assets through a Heritage Trail.
- Promote this region as "Paradise Reclaimed."
- Assist the community in developing an anti-litter campaign.

## **Gulf Coast Heritage Trail**

To address the recreational use elements of the CCMP (increase managed access to the bay and its resources), the SBNEP developed the Gulf Coast Heritage Trail (GCHT) program in FY 99. The Trail highlights the area's environmental, cultural, and historical features along the Gulf Coast. The SBNEP has worked in concert with the National Park Service and both counties' Tourist Development Councils, among others, to develop the trail system and accompanying materials. A community forum was sponsored by the SBNEP in March 1997 to gather information on prospective places of interest along the trail. A second community forum was held in January 1998 to unveil the conceptual master plan for the GCHT and gain further community input. Themes related to environmental stewardship and "sense of place" has been woven into the materials.

In FY 00-01, an auto tour guide (that provides a map and educational materials about the area) and Blueways guide were completed; roadway signs were also installed and the "Chronicles of the Florida Gulf Coast" was produced. The Blueways Guide highlights canoe and kayak launching sites; boat ramps and places to likely view dolphins, manatees and coastal birds; and includes these features as well as delineating the Intracoastal Waterway (ICW) and anchorage for overnight accommodations. The Guide promotes catch and release practices, provides information on the negative impacts of marine debris and the importance of enhancing fish habitat, and other environmental stewardship measures. Manatee County opened its canoe trail in FY 01.

A virtual tour of the area using Internet technology has been proposed using the database developed using the Gulf Coast Heritage Trail. This concept was presented to the tourist information centers for response.

## **Monitoring and Research**

- Continue to coordinate the regional ambient water quality monitoring program and review data to evaluate trends.
- Conduct additional research to determine sources of toxic substances and loading to Sarasota Bay.
- Work with regional agencies to monitor seagrass growth and coverage to determine trends.
- Establish a national monitoring site and conduct atmospheric NOx monitoring; support regional and national NOx work.

The Sarasota Bay water quality monitoring program is conducted by the local governments in the area. It follows protocols outlined in EPA's Estuarine Monitoring and Assessment Program (EMAP). The water quality monitoring program is designed to evaluate long-term changes. The EMAP water quality monitoring is supplemented with biological monitoring to assess the overall health of Sarasota Bay. The SBNEP contracted with Mote Marine Lab to evaluate system response to pollutant reduction. The findings were significant as most areas of the Bay exhibited positive water quality trends. The SBNEP completed or initiated technical research projects to further evaluate sources of nitrogen loading and toxins to Sarasota Bay in FY 01:

1. Atmospheric Deposition – evaluate the relationship between atmospheric NO<sub>x</sub> concentrations, nitrogen loading to Bay waters, and the biological impact of atmospheric deposition. This project found that nitrogen loading was about 50% of expected.
2. Toxins – Survey toxic loadings to the five priority tributaries from sub-basins, identify possible sources of these contaminants, and the prioritize the sub-basins for possible future stormwater retrofit options. Phase 1 was completed in FY 98 identifying one tributary as a substantial contributor of lead to the basin; Phase 2 addressed the remaining four priority basins; this study was completed in FY 99. Work in FY01 focused on lead contamination in Hudson Bayou. The Bayou is contaminated with a five foot thick layer of contaminated silt from the mouth of the bayou to the headwaters.
3. Residential Stormwater Runoff – This effort quantitatively compared runoff from a Florida Yard landscape to that of a more traditional residential landscape. St. Augustine grass was found to be effective at nutrient removal; whereas ornamentals could load nitrogen if inappropriately managed. Work in FY01 continued to show that well maintained turf is excellent at nutrient control; the ornamentals improved dramatically in performance.
4. Seagrass Monitoring – Seagrass coverage has increased 8-27% since 1988 in Sarasota Bay. This is largely a result of improved water clarity. This points to the likelihood that nutrient control programs recommended in the CCMP and implemented by local governments are having a positive impact. The SBNEP is presently evaluating trends in water quality and habitats in Sarasota Bay; and is re-evaluating current SAV methodology..
5. Gulf/Bay Water Quality Trends - completed in FY01. These studies documented improving trends in bay water quality; declining trends in Gulf water.
6. Atmospheric Nitrogen and Red Tide – the study found statistically significant correlations between red tide and rainfall in southwest Florida.
7. Midnight Pass Seagrass Study- this study documented a drop in sea grass coverage after closure and a strong rebound in coverage throughout the 1990's.
8. Critical Habitats – this study was delayed due to red-tide, but is presently identifying critical habitats throughout the Bay area.
9. Land Development Codes – this study suggested that the comprehensive plans support water conservation, the local land development regulation do not.

### **Public Outreach**

- Develop promotional materials to show progress in implementing the CCMP and communicate the future goals of the Program. The SBNEP released the "State of the Bay" Report in FY 2000.

- Continue to produce and distribute newsletters informing area residents about Program activities and project status.
- Participate in community activities, events, and projects to promote the goals of the SBNEP and approved CCMP actions.

The SBNEP continues to be an active participant in community events that focus on environmental stewardship and public education. The SBNEP also seeks to inform the community through newsletters and press releases.

In FY 01, the SBNEP concentrated on implementing the Citizen Action Plan 2000 (See Chart B).

### **Governance**

#### **Local and Regional Government Comprehensive Plan Consistency**

Throughout 1998, the SBNEP worked with local and regional government planning staff to incorporate CCMP concepts and recommended language into their Comprehensive Plans. The SBNEP provided significant input to the Evaluation and Appraisal Report (EAR) process in each jurisdiction. Manatee County, Sarasota County and the City of Sarasota have adopted their respective EARs approved by the Florida Department of Community Affairs (FDCA). Both the Tampa Bay and the Southwest Florida Regional Planning Councils concurred with the local government's recommended modifications. Appropriate amendments were made to the Comprehensive Plans and subsequently approved by FDCA. The SBNEP will continue to remain involved in Planning Board meetings and Public Hearings on Comprehensive Plan amendments.

In FY 01, the SBNEP initiated work to address the Land Development Code in relation to enhancing water conservation and sensitive land preservation during development; this work concluded that the SBNEP was successful in incorporating language into the comprehensive plans.

#### **Program Goals for FY 02**

In FY 02, the Program will continue to implement action plan elements as approved by the Policy Committee and as specified in the Comprehensive Conservation and Management Plan (CCMP). The Policy Committee will continue to review the Workplan annually and approve projects and budgets based on available funding.

Program Goals for 2001 include:

- Effectively support and coordinate CCMP implementation activities throughout the region.
- Assertively seek significant resources from various agencies to supplement base program funding and implement various elements of the CCMP.
- Increase efforts to educate and inform the public about the SBNEP's progress and work yet to be accomplished.

#### Wastewater Treatment and Reclamation

- Continue to assist the local governments in meeting wastewater treatment policies outlined in the CCMP.
- Continue to assist in developing and implementing a regional wastewater reuse system.

Note: The SBNEP is continuing to track sewer expansion, SWUCA and regional re-use initiatives in the region in regard to Bay restoration.

#### Stormwater Treatment and Prevention

- Assist in implementing and further institutionalizing the Florida Yards & Neighborhoods Program.
- Continue to support construction of storm water retrofit projects in priority watersheds identified in the CCMP (e.g. Whitaker Bayou and Hudson Bayou).
- Assist local governments in revising land and development codes for stormwater and other related environmental quality requirements.

#### Freshwater and Saltwater Wetlands

- Continue to assist the community in restoring an average of approximately 18 acres of inter-tidal wetlands. (twenty-six major projects are underway).
- Continue to educate the public as to the importance of our wetlands and the need to protect and enhance them.

#### Fisheries and Other Living Resources

- Continue to assist local governments in constructing artificial reefs throughout the region.
- Continue to assist in developing educational materials and outreach opportunities to meet the need for improved juvenile fishery habitat.

#### Recreational Use

- Continue to develop and market the Gulf Coast Heritage Trail and Blueways guides throughout the region, fully implementing the GCHT system throughout the area.

#### Monitoring and Research

- Continue to coordinate the regional ambient water quality monitoring and research work; evaluate data to determine trends.
- Conduct additional research to determine sources of toxic substances and loading to Sarasota Bay.
- Conduct research and produce a summary report on the effects and potential impacts of nitrogen from atmospheric deposition.

#### Public Outreach and Education

- Include the concept of “environmental stewardship” in SBNEP education and outreach materials.
- Continue to participate in community activities, events, and projects to promote the goals of the SBNEP and approved CCMP actions.

# **SARASOTA BAY NATIONAL ESTUARY PROGRAM**

## **FEDERAL FY 02 WORKPLAN (FY03 Operating)**

### **PART 2 – PLANNED PROJECTS**

#### **Introduction**

A total of seven (7) projects (for FY 2001) are recommended to further implement the Comprehensive Conservation and Management Plan (CCMP). These projects are consistent with the goals, objective and recommendations outlined in the CCMP that was approved by the Governor of the State of Florida and the U.S. Environmental Protection Agency (EPA) Administrator on November 3, 1995.

Following is a list of projects planned for FY 02 – 03 operating and associated budgets. The projects are grouped by Action Plans found in the CCMP. The SBNEP staff will assist the community and local governments in implementing various elements of the CCMP.

#### **WASTEWATER TREATMENT AND RECLAMATION**

No new projects are planned in this Action Plan. Note: The “ribbon cutting - ground breaking” ceremony on the Phillippi Creek septic to sewer expansion program was held in February 2001. A bulk service agreement was signed by and with the City of Sarasota and Sarasota County in February 2001.

#### **STORMWATER TREATMENT AND PREVENTION**

##### **SW 1. Florida Yards and Neighborhoods Program (FY&N)**

This project will further institutionalize the Florida Yards and Neighborhoods Program within the University of Florida, Institute of Food and Agricultural Sciences (IFAS), regional agencies, and county Cooperative Extension Agencies. The FY&N Program emphasizes reduction in the use of pesticides, herbicides, and insecticides; water conservation; urban and suburban habitat creation and greenways; use of slow-release fertilizers; and improved landscape design and efficient, environmentally-friendly maintenance methods.

Manatee County and Sarasota County added urban horticulture positions in FY01 and SWFWMD has funded a major community outreach initiative addressing the business community.

A statewide FYN Coordinator was hired by the University of Florida - IFAS to assist in integrating the FYN Program throughout the State's Cooperative Extension Services. The SBNEP and Manatee and Sarasota County Cooperative Extension Services have formed a management team that has been meeting since 1998 to focus and evaluate the FY&N Coordinator's work in target areas.

The University of Florida, with funding provided through FDEP, began paying for the coordinator's salary on October 1, 1999; the SBNEP supported the position between March 2001 and October 2001, but UF, via the FDEP, began supporting the salary for an additional two years beginning on October 1, 2001. Funds provided through this work plan will support outreach activities in accordance with work plans completed by the FYN Management Team. Key target audiences include developers, real estate lenders, permitting agencies, and the landscape and horticulture industry.

**FY 02: \$0 (funds will allocated from the Citizen Action Plan to support outreach)**

Funding Source: Federal and local

Lead Organization: University of Florida, Institute of Food and Agricultural Sciences; Manatee and Sarasota County Cooperative Extension Services.

Milestones:

Year-end report.

**SW 2. Florida Yard Research (Phase 3)**

This project demonstrates measurable benefits that can be achieved by adopting the Florida Yards & Neighborhoods landscape and maintenance principles. Specifically, nutrient runoff/leachate and water reduction benefits is being measured in a replicated plot design that was constructed in Phase 1. Much of Phase 1 monitoring occurred during the establishment of the plots; Phase 2 extended the monitoring period and provided for additional data analysis after establishment. These funds are expected to match State of Florida revenue to create additional plots at the Fort Lauderdale research facility or to provide additional replication at sites in the Sarasota Bay region.

**FY 02: \$0 (funds were allocated in FY01 to continue research for two-years).**

Funding Source: ~~SWFWMD~~ and local

Lead Organization: SBNEP

Milestones:

Plot modifications (if necessary) - October 2001

1. Begin monitoring - April 2001
2. Draft Report - August 2003
3. Final Report - January 2004

**SW 3. Land Development Code Review**

This project involves the preparation of a white paper addressing the land development regulations regionally and the potential issues related to promoting water conservation and environmental conservation through the land development regulations. Phase II will further evaluate the findings discovered in Phase I for possible implementation regionally.

**FY02: \$0 (continued funding from FY01 is pending approval by the Policy/Management Committee)**

Funding Source: Local

Lead Organization: SBNEP

## **FRESHWATER AND SALTWATER WETLANDS**

In FY 99, the Policy Committee approved consolidating the following three projects: Critical Nursery Habitat Identification and Monitoring (\$50,000); Habitat Restoration Assessment (\$30,000); Artificial Reef Monitoring (\$10,000). In FY 2000, an additional \$20,000 was provided for a second season of sampling; additional funding has been secured from US EPA-Gulf of Mexico Program (\$18,000) and the local governments to support the assessment.

### **WL 1. Habitat Assessment - Phase 3**

Phase 1 identifies and maps nursery areas of critical importance for sustaining recreationally, commercially, and ecologically important fish and shellfish populations and provides information for enhancing local artificial reef and wetland restoration efforts. Phase 2 provides for additional sampling. Among the parameters being assessed are water quality in and around the restoration sites, artificial reefs, and new seagrass meadows; survivability and health of flora and fauna; diversity of species utilization; spatial coverage and temporal use of the site by native marine, submerged, wetland, and upland flora and fauna species; invasive non-native species site utilization and any negative impacts, real or potential. This information will be used in the development and design of new habitat restoration projects, for siting new artificial reefs and to protect valuable habitats that benefit to Sarasota Bay estuarine ecosystem. It is anticipated that management strategies for the protection of critical habitats will emerge. Phase 3 will include: (1) evaluation of oyster and seawall habitats in the Bay and the potential for restoration and (2) an evaluation of restoration potential by segment in Sarasota Bay as discussed by the Technical Advisory Committee.

**FY 02: \$0 (additional funding was provided by the EPA Gulf of Mexico Program to complete the research)**

Funding Source: SWFWMD

Lead Organization: SBNEP

Milestones:

#### Phase 3

1. Draft Report - February 2003
2. Final Report - September 2003

### **WL 2. Wetlands Restoration and Protection - Coordination**

This project will assist the SBNEP in further identifying wetland areas for restoration and/or protection; coordinating design and permitting activities, construction management and providing graphics for presentations to citizens and various boards for approval. The selected consultant will work closely with FDEP and other agencies to insure maximum use of resources.

**FY 02: \$50,000**

Funding: SWFWMD

Lead Organization: SBNEP

Milestones:

Annual report on activities - October 2004

### **WL 3. Wetland Restoration**

This project provides for in-ground habitat restoration and management activities, possibly



including (but not limited to) exotic species removal, lagunal contouring, and revegetation with proper native species.

**FY 02: \$100,000**

Funding: SWFWMD

Lead Organization: SBNEP

Milestones:

Final Report - October 2004

**FISHERIES AND OTHER LIVING RESOURCES**

**FL 1. Artificial Reefs and Shoreline Enhancement**

This project will supplement existing funding for the continuation of artificial reef structures throughout the Bay to enhance juvenile fisheries. A Fishery Habitat Enhancement Task Force assists in determining the best sites for artificial reef placement and appropriate construction methods and materials. A comprehensive plan has been developed which outlines priority sites for reef placement. Reef deployment could include both in-bay and shoreline habitat enhancement. A subset of deployment habitats should be monitored to determine quantitative effectiveness.

Educational efforts will also be included in this project.

**FY 02: \$50,000**

Funding Source: SWFWMD

Lead Organization: Florida Sea Grant; Sarasota County; Manatee County

Milestones:

1. Progress report - December 2003
2. Final report - October 2004

**RECREATIONAL USE**

**RV 1. Gulf Coast Heritage Trail**

The Gulf Coast Heritage Trail (GCHT) was established to enhance eco/heritage while promoting stewardship and a sense of place in the community. Included in the first phase of implementation was the creation of a land-based brochure, a recreational opportunities guide for Sarasota Bay, a resource book for the boater and a road sign system to assist motorists in finding the GCHT destinations.

The SBNEP will continue managing the GCHT distributing brochures and pocket guides to Trail destinations, coordinating Trail Advisory Committee meetings, and working with the GCHT destinations to help preserve the natural, cultural and historical resources at the sites. At the end of one year, an evaluation study will be conducted to measure the success of the Program.

**FY 02: \$0 (To Be Determined by the SBNEP Citizen Advisory Committee as part of the Citizen Action Plan (CAP) and Public Education Program)**

Funding Source: Federal and local

Lead Organization: SBNEP

Milestones:

1. Evaluation and study report - April 2002
2. Revisions and reprinting of the land-based brochure - August 2002

## **MONITORING AND RESEARCH**

### **MR 1. Long-term Water Quality Monitoring Plan**

Based on EMAP protocol, a long-term water quality monitoring program was undertaken by both Manatee and Sarasota Counties. The program ensures continuity among monitoring programs for Tampa Bay, Sarasota Bay and Charlotte Harbor and provides water quality trend information.

**FY 02: \$0**

Funding Source: Local governments

Lead Organization: Manatee County; Sarasota County

Milestones:

State of the Bay - Trends Report

### **MR 2. Non-point Source Pollution**

#### **A) Sarasota Bay Integrated Water Resource Evaluation**

Significant changes in freshwater flows to the Sarasota Bay estuary have occurred during the last century. The predominant changes have been the conversion of natural upland and wetland communities to urban land uses including residential and commercial development and agriculture. With these land use changes, alterations in the timing, duration, and volume of freshwater inputs to Sarasota Bay have occurred which may have significant effects on estuarine biota (fish, invertebrate, and vegetation) and productivity.

A number of projects are currently underway or planned including a number of flood storage ponds (detention), stormwater conveyance improvements, Aquifer Storage and Recovery wells, brackish water treatment/disposal, septic tank replacement/wastewater collection system construction, reclaimed water transmission/distribution, and regional distribution of surface water supplies.

Also, pervious surfaces like porous concrete, porous rubber pavement, and various loosely aggregated materials have been developed to allow a certain degree of infiltration, minimizing stormwater runoff. Compacted fill dirt is conceptually known to decrease rainwater infiltration and increase stormwater runoff. However, the impact of these surfaces is limited by lack of data. Investigation of their effects in actual situations could allow decision-making that could minimize total stormwater runoff and decrease the destruction of natural systems during the construction of additional stormwater retention systems.

This project would 1) evaluate combined effects of development, stormwater management, water supply, and wastewater effluent disposal activities on the ecological resources of Sarasota Bay and its tributaries; 2) analyze the major tributaries and freshwater seeps entering Sarasota Bay to estimate the changes in hydrologic characteristics that have occurred during the past several decades; 3) evaluate current and proposed water resource projects, their relative inputs

and withdrawals from various sources, and an analysis of their potential impacts (e.g., salinity changes, effects on oligohaline-dependent vegetation/biota on the ecological health of the estuary; 4) determine the influence of various pervious and impervious surfaces in urban developments on soil hydrology and stormwater runoff. The results of the analysis would include a series of recommendations for restoring more natural flow patterns or, at a minimum, reduce peak flows and pollutant (e.g., nitrogen) loads in tributaries to Sarasota Bay that have been impacted by development.

**B) Determine the degree of nitrogen (N) loading to Sarasota Bay from different components of residential areas**

Recent indications are that a greater amount of nitrogen loading to Sarasota Bay occurs from stormwater runoff from residential areas than previously expected. Unfortunately, no data exists to quantify exactly which components of residential areas are the major contributors of this nitrogen. Current residential N reduction efforts tend to target home landscape fertilization. However, other influences, such as background decomposition of organic matter, cleansing of atmospheric and other N deposition to roadways, and other sources of N need to be identified and quantified in order to appropriately target educational and regulatory programs for maximum N reduction. This would need to be compared to N loading from various types of natural areas.

These studies will be initiated through the USGS Cooperative funding program. A USGS proposal is included (attachment B).

**FY02: \$200,000 (\$100,000 USGS)**

Funding Source: SBNEP/USGS

Lead Organization: SBNEP

Milestones:

1. Draft report - February 2004
2. Final report - September 2004

**MR. 3 Building Oyster Reefs**

Because the possibilities for creating new wetlands and mangrove stands in Sarasota Bay is limited and continued local growth will increase Bay pollution via stormwater runoff, we propose the use of the American oyster as a means to filter and purify bay water. Oysters were once common in Sarasota Bay and should be able to reestablish themselves if a hard substrate is provided. By simple cultch deposition and spat seeding, it should be possible to restore enough reef area to make a significant improvement in bay water quality. A subset of deployed habitats should be monitored to determine local effectiveness.

**FY 02: \$50,000 (\$33,000 SWFWMD)**

Funding Source: SWFWMD/SBNEP

Lead Organization: SBNEP

Milestones:

1. Progress report - August 2003
2. Final report - September 2004

## **PUBLIC OUTREACH**

### **PO 1. Public Outreach and Involvement (PIER)**

Several community outreach and education projects such as workshops, a video, public service announcements, participation at community events related to the environment and its stewardship, guest lectures to area schools and colleges, and presentations to community and civic organizations using slides and printed materials are planned. Outreach and education display and presentation materials will be updated as needed to reflect progress in CCMP implementation.

**FY 01: \$10,000 (to be determined by CAC)**

Funding Source: Federal and local

Lead Organization: SBNEP

### **P0 2. Citizens Action Plan (CAP)**

To increase citizen involvement, the SBNEP Citizen Advisory Committee (CAC) developed a Citizen Action Plan (CAP) focusing on educating and involving citizens in Bay-related activities and special projects to support CCMP implementation. The goal of the CAP is to create public awareness of the issues facing Sarasota Bay and increase environmental stewardship. Key components of the CAP include the Gulf Coast Heritage Trail, a revised Bay Partners community grants program, and a staff position (intern or contract personnel) to assist the CAC and Public Outreach Coordinator in implementing the CAP. The SBNEP Management Committee will approve the CAP prior to implementation. More recently, the Policy Committee requested that the Program develop "hands on" environmental education program directed at school children. The funds requested provide continuation of Action Plan implementation and the community education program (PIER) – see attachment #3).

**FY 01: \$140,000**

Funding Source: Federal and local

Lead Organization: SBNEP

Milestones:

1. Approved Citizen Action Plan - December 2002
2. Annual Progress Report - May 2002

## **GOVERNANCE**

### **GR 1. Program Administration and Operations**

Funding will provide staff and administrative support to:

- Assist the Manatee/Sarasota community in effectively implementing the CCMP;
- Continue the Sarasota Bay Management Conference structure for policy and decision making purposes;
- Communicate the CCMP and implementation progress to the public and elected officials;
- Continue to develop support and seek resources for CCMP implementation;
- Develop budget initiatives for presentation to local governments and state agencies;
- Continue to coordinate workplans and efforts with other local, state and federal agencies to achieve consistency in policy and programs;
- Provide the Management Conference with periodic progress reports;

**FY 02: \$367,925 (direct costs); \$22,075 (indirect costs)**

**Total: \$390,000**

Funding Source: EPA and local

Lead Organization: City of Sarasota

## **GR 2. Matching Funds**

The City of Sarasota is presently constructing an aquifer storage and recovery system to remove the discharge to Whitaker Bayou and the Bay. The SBNEP proposes to use these as match to the federal grant.

Funding Source: City of Sarasota

Lead Organization: City of Sarasota

Amount: \$1.5 million (\$126,000 or more for match)

# SARASOTA BAY NATIONAL ESTUARY PROGRAM FY 03 WORKPLAN

## PART 3 – WORKPLAN BUDGET SUMMARY

### Resources:

EPA	\$510,000
SWFWMD/FDEP (SWIM)	233,000
Manatee County	50,000
Sarasota County	50,000
City of Sarasota	33,000
City of Sarasota ASR	126,000 *
USGS	100,000
Interest - State Board Pool	10,000
Reserves	8,000

\$1,120,000

### Expenditures

Salaries & Expenses	\$ 390,000
Public Outreach and Education	14,000
Non-point Source Pollution	200,000
Oyster Reef Creation	50,000
Citizens Action – PIER	140,000
Artificial Reefs and Shoreline Enhancement	50,000
Wetlands - Coordination	50,000
Wetlands – Restoration	100,000
City of Sarasota ASR	126,000*

**TOTAL:**

\$1,120,000

\* REQUEST THAT UP TO \$500,000 be used as match at the discretion of the City of Sarasota and EPA

## OPERATING BUDGET

FY 03

(October 1, 2002 – September 30, 2003)

### PERSONNEL

#### Salaries:

Executive Director	\$ 81,361
Program and Financial Administrator	36,893
Public Communications Coordinator	39,244
Environmental Scientist	38,455
Senior Secretary	<u>36,827</u>
	\$232,780

#### Fringe Benefits:

Social Security	\$17,295
Medical and Dental	25,280
Retirement	19,860
Workers Compensation	2,480
Accidental Death	<u>100</u>
	\$ 65,015

Subtotal

\$297,795

### TRAVEL

#### General Staff Travel (mileage):

Staff monthly mileage	\$ 5,000
Briefings with federal and state elected officials, EPA, FDEP, and other federal and state agency staff (primarily located in Tallahassee, Atlanta, Washington, D.C.)	<u>4,000</u>
	\$ 9,000

#### Federal Outreach Support:

\$ 11,000

report on Program activities at national and international conferences; attend national and regional NEP meetings and conferences; provide assistance to other management conferences, coastal programs, and neighboring communities.

\$ 20,000

**OFFICE EQUIPMENT AND REPAIRS**

Copier Rental	\$ 3,750	
Postage Meter	2,000	
Equipment replacement necessary for move ( new telephones and furniture)	1,500*	
Maintenance and parts	300	
PC, hardware and software	3,000	
Other	<u>900</u>	
	\$11,450	\$11,450

**OFFICE SUPPLIES**

General office supplies, (paper, pens, staples calendars, computer disks, notepads, pencils, printer ribbons, copier toner, etc.)	3,700	
Other supplies (janitorial, computer, misc.)	<u>\$ 200</u>	
	\$3,900	\$ 3,900

**OTHER OPERATING EXPENSES**

Lease	\$ 24,800*	
Office building maintenance	1,580	
Utilities	0	
Postage, overnight mail, freight	2,000	
Telecommunications	3,500	
Legal notices – meetings, bids, etc.	300	
Subscriptions, dues, memberships	200	
Duplicating and printing	400	
Miscellaneous	<u>2,000</u>	
	\$34,780	\$ 34,780

**Subtotal** **\$367,925**

Indirect costs (6%) \$22,075

**TOTAL BUDGETED EXPENSES** **\$390,000**



**PROJECT PROPOSAL**

**EFFECTS OF LAND USE ON RECHARGE, WATER QUALITY, AND  
CONSTITUENT LOADS IN THE SARASOTA BAY WATERSHED, FLORIDA**

In cooperation with:

**Sarasota Bay National Estuary Program**

Prepared by Dann Yobbi  
U.S. Geological Survey  
10500 University Center Drive  
Tampa, Florida 33612

March 1, 2002

## **EFFECTS OF LAND USE ON RECHARGE, WATER QUALITY, AND CONSTITUENT LOADS IN THE SARASOTA BAY WATERSHED, FLORIDA**

### **Problem**

The Sarasota Bay watershed includes the coastal areas of Sarasota and Manatee Counties. Interstate-75 approximates the eastern boundary for the watershed. The Sarasota Bay watershed is one of the fastest growing areas in the nation. Since 1980, about 32 people per day have moved into Manatee and Sarasota Counties and by 2010, it is projected that about 688,000 people will live in both counties—a 41 percent growth rate (Sarasota Bay National Estuary Program, 1992). The watershed has undergone an increase in urbanization by the conversion of natural upland and wetland communities to urban land uses including residential and commercial development. Urban growth and related land use have a major impact on the water resources in the Sarasota Bay watershed. The urbanization has reduced infiltration to the surficial aquifer system and as a result, runoff and constituent loads from impervious areas of the watershed have increased to receiving waters. Nitrogen is the nutrient of greatest concern in Sarasota Bay and presently, stormwater runoff is one of the leading sources of nitrogen loading into Sarasota Bay. Nitrogen loads have increased by 300 percent since the early stages of urbanization in the 1950's (Sarasota Bay National Estuary Program, 1993). Estimates of nutrient loading suggest that stormwater runoff is responsible for 56 percent of the total nitrogen input into Sarasota Bay; stormwater from residential areas alone is estimated to contribute one-third of all nitrogen input to the Bay (Sarasota Bay National Estuary Program, 2000). Efforts have been made to minimize stormwater runoff and contaminant loads in urban areas by reducing wastewater pollution, improving stormwater conveyance and treatment systems in the region, constructing surface alterations including the use of materials such as porous concrete, rubber pavement, and various loosely aggregated materials, and promoting environmentally friendly landscaping with plants suited to southwest Florida's climate. The effectiveness of these restoration efforts in reducing pollutant loads and on recharge to the surficial aquifer system has not been studied.

### **Objective**

The objective of this project is to evaluate the effects of land use on recharge, water quality, to the and constituent loads in selected sub-basins within the Sarasota Bay Watershed.

### **Scope**

The project will investigate the hydrogeologic characteristics of the surficial aquifer system, rates of recharge to the surficial aquifer system, and the quantity and quality of stormwater runoff in

several sub-basins within the Sarasota Bay watershed. The study will take four years from the date of commencement. Available information pertaining to management efforts in southwest Florida will be evaluated and a retrospective analysis will be conducted. Information of subsurface data will be used to describe the hydrogeologic characteristics of the surficial aquifer system. Information on rainfall, streamflow, ground-water levels, and water quality will be used to describe the quantity and quality of recharge, stormwater runoff/baseflow, and constituent loads within the selected sub-basins. The project will consist of three steps or tasks:

1. Retrospective analysis and study design
2. Data collection program
3. Evaluation and report findings

### **Approach**

Assessment of the urban stormwater problem will require an extensive data collection and analysis program involving land use, ground water, surface water, rainfall, recharge, runoff, and quality of water information. The overall approach proposed for this study is to (1) conduct retrospective analysis and develop study plan, (2) install data-collection sites (streamflow, ground-water, and rainfall), (3) collect water-quality samples, streamflow, ground- and surface-water levels, and rainfall totals, and (4) determine the quantity and quality of stormwater runoff at the sites, quantify the distribution of recharge in the study area, and make a comparison between rates of recharge, hydrogeology characteristics, and constituent loads among the sub-basins. To accomplish the stated scope of work, the following approach will be used to complete the study objective:

**1. Retrospective analysis and study design:** A wide variety of research and technical studies have been conducted by various agencies in west-central Florida on nutrient loading. One of the first activities of this project will be to conduct a retrospective analysis of existing data and an evaluation of the applicability of data transfer from other watersheds. An inventory of historical and current streamflow, ground-water levels, and water-quality data will be performed. The inventory will be used to develop historical trends within the Sarasota Bay watershed. This assessment will provide the conceptual framework for this study. A field reconnaissance will be conducted and selection of the study area will be made. Land use/land cover for the study basin will be determined for the study area using GIS tools and available digital data. Current aerial photos (from controlled and verified photos) will be obtained for verification of coverages and for a secondary estimate of impervious areas.

**2. Data-collection program:** A data-collection program, including streamflow, ground water, rainfall, physiographic, and water-quality data, will be established in the study area. Test holes will be drilled in each sub-basin to define the geology and hydrology of the surficial aquifer system. A nest of surficial aquifer system wells open to various depths will be drilled and rainfall gages will be installed near the centroid of each study sub-basin. Continuous recording instruments will be installed on wells, streamflow gages, and rainfall gages. Equipment that will be used to collect data includes electronic water-level recorders, tipping-bucket rain gages, volumetric rainfall collectors, water-quality field monitors, automatic water samplers, and standard stream-gaging equipment. Water quality samples will be collected during and after selected storms to characterize the concentration of constituents in stormwater runoff. A prescribed set of study approaches and protocols for ground- and surface-water data collection, sample collection, sample handling, laboratory analysis, and quality assurance will be followed.

**3. Evaluation and report findings:** A comprehensive comparison of constituent loads, recharge rates, and hydrogeologic characteristics within the selected sub-basins of the Sarasota Bay watershed will be made. Hydrologic, hydrogeologic, and water-quality characteristics of the sub-basins will be evaluated using data collected from the established monitoring network. Rainfall/runoff relations will be developed and peak flow, base flow, and total runoff will be determined. The chemical quality will be determined and constituent loads in stormwater will be computed using the mathematical product of the concentration of the constituent and the total volume of water passing the gaging station. Recharge rates will be determined based on head relations, streamflow characteristics, and water-quality data collected during the study. Hydrogeologic maps showing thickness, geologic sections, and water-table altitudes will be prepared. An interpretative report will summarize results of the study.

### **Products**

The primary product of this investigation will be a U.S. Geological Water Resources Investigations Report titled "Effects of land use of recharge, water quality, and constituent loads in selected sub-basins of the Sarasota Bay watershed, Florida". A progress report summarizing water-quality conditions, issues of concern, and management efforts in west-central Florida will be prepared at the end of the first year. This report will provide the conceptual framework for the proposed study.

### **Personnel**

The personnel required for the project will be drawn from the WRD office in Tampa. The project will require a hydrologist experienced in surface- water hydraulics, water quality, and well

construction. The project also will require part-time assistance from a hydrologic technician (half-time) and a student (half-time) to help with data collection and construction of monitor wells.

### **Funding**

The proposed project will be conducted under a U.S. Geological Survey Joint Funding Agreement. The agreement will be between the U.S. Geological Survey and the Sarasota Bay National Estuary Program. The duration of the project is four years and the total cost is estimated to be \$1,200,000. Funding for the first year is estimated to be \$200,000.

### **TIMELINE**

The project would be conducted over a 4-year period during the period October 1, 2002 through September 30, 2006. The first year of the project will include a retrospective analysis of existing data, literature assessment, preparation of a study plan for the project, compilation of existing data and aerial photographs, and selection of study sub-basins. The second year will involve installation of streamflow gages, ground-water wells, rainfall sites, and data collection. The third year will involve collection of ground-and surface water levels, streamflow data, water quality samples, rainfall data, and writing introductory sections of the report. The fourth year will involve data evaluation, report writing and review. Preparation of report work will be a continuing work effort during each year of the project.

### **REFERENCES**

Sarasota Bay National Estuary Program, 1992, Sarasota Bay: Framework for action: Sarasota Bay National Estuary Program, 13.15.

Sarasota Bay National Estuary Program, 1993, Sarasota Bay: Reclaiming paradise: Sarasota Bay National Estuary Program, 12 p.

Sarasota Bay National Estuary Program, 2000, Sarasota Bay 2000: Sarasota Bay 2000: A decade of progress, 62 p.

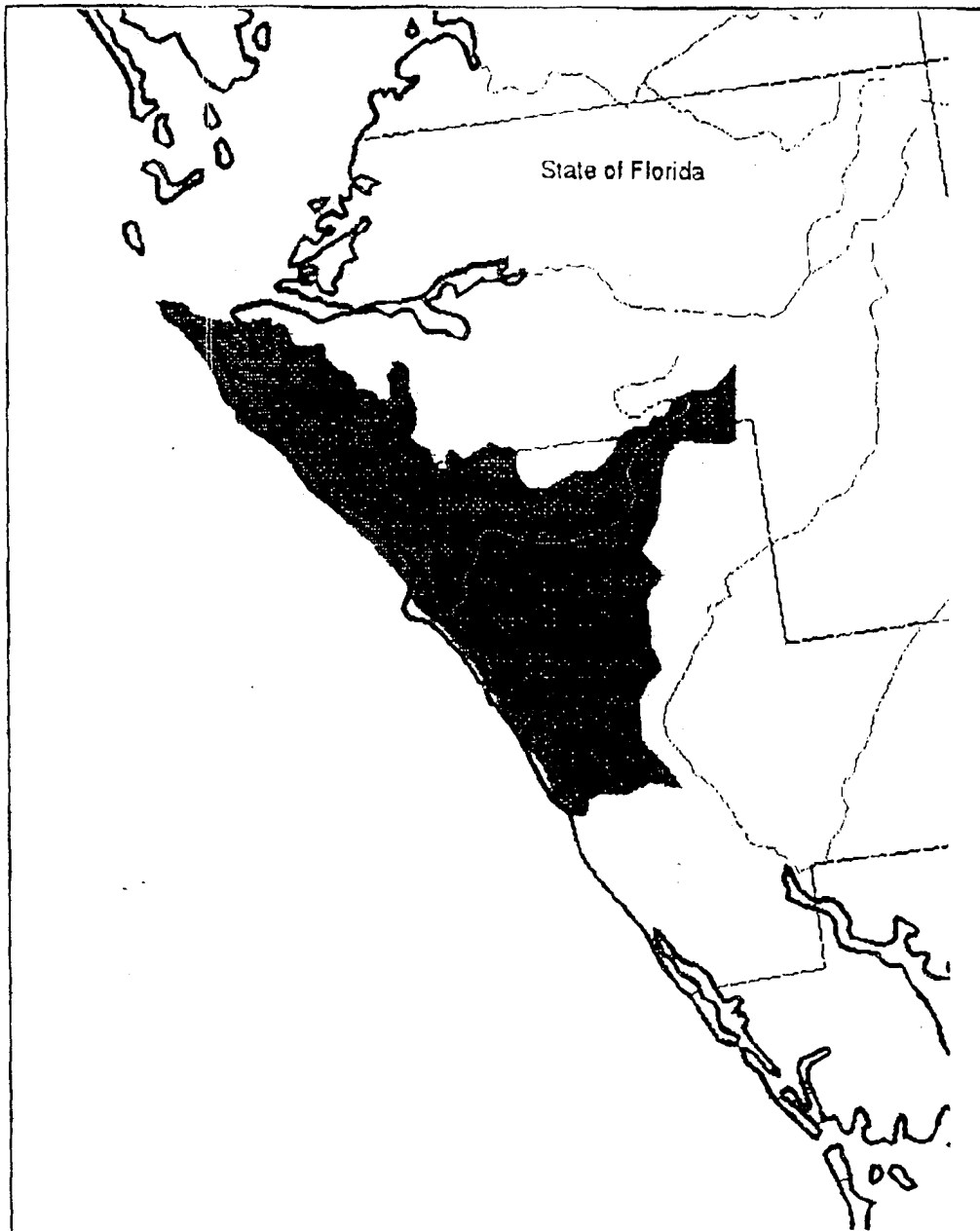
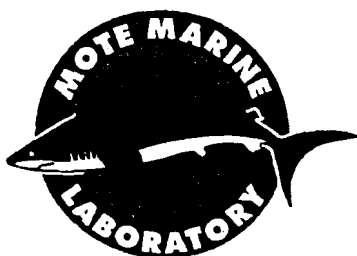


Figure 1. Location of Sarasota Bay watershed.

# **RED TIDE BLOOM DYNAMICS WITH RESPECT TO RAINFALL AND RIVERINE FLOW**



## **FINAL REPORT**

**SUBMITTED TO:**

Mr. Mark Alderson  
Sarasota Bay National Estuary Program  
5333 N. Tamiami Trail  
Sarasota, FL 34234

**SUBMITTED BY:**

L. Kellie Dixon  
Mote Marine Laboratory  
1600 Ken Thompson Parkway  
Sarasota, Florida 34236

*December 11, 2001*

Mote Marine Laboratory Technical Report Number 795

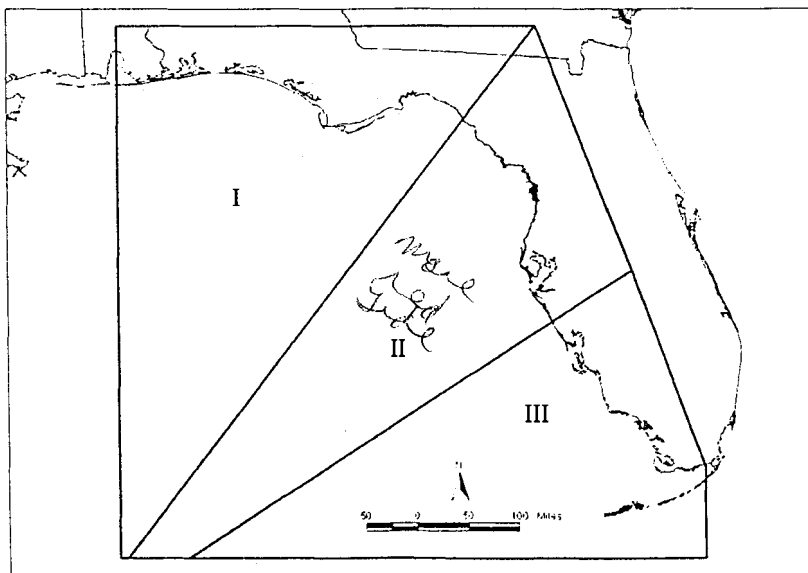
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## INTRODUCTION:

Worldwide, the incidence of harmful algal blooms is reported to be increasing in both frequency and duration. In the Gulf of Mexico, the dominant organism responsible for red tides is *Karenia brevis* and its presence has been inferred as early as 1844 (Feinstein, 1956). A number of mechanisms for the perceived increases in blooms have been proposed, including the increase in nitrogen loadings to coastal waters by both anthropogenic activities and long term climatic cycles. This report documents the procedures and results of an examination of blooms of *K. brevis* in the Gulf of Mexico for relationships to rainfall and riverine flows as surrogates for nutrient loadings, to hurricanes as a potential source of nutrients by water overturn, to selected climatological indices as surrogates for temperature or rainfall-related forcing functions, and to the atmospheric deposition of inorganic nitrogen.

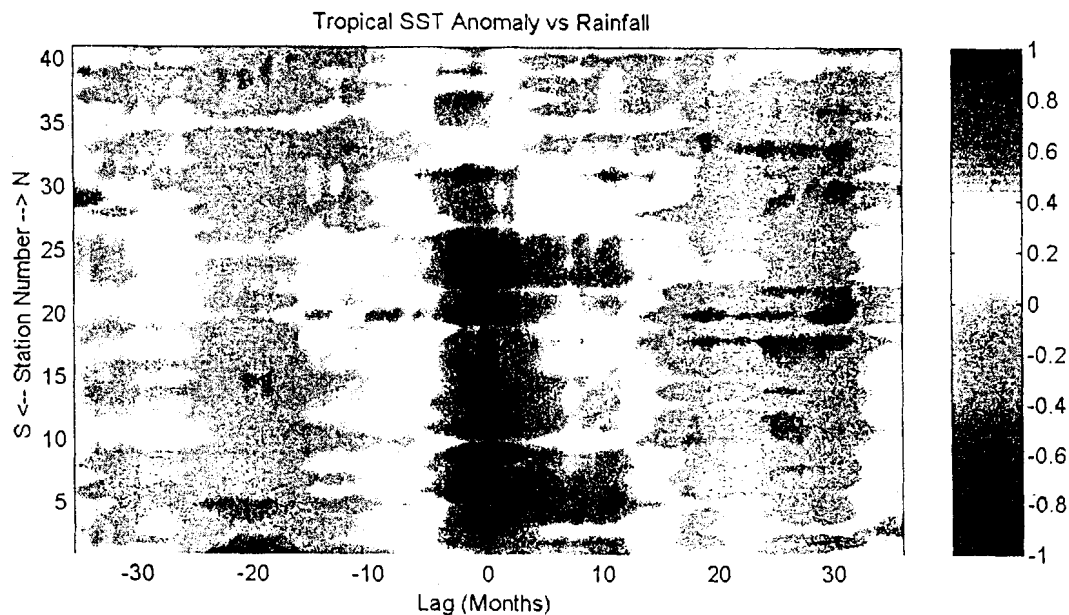
## DATA SOURCES/PROCESSING:

The core of the data to be examined was a recent compilation of data on *K. brevis* prepared by the Florida Marine Research Institute. The compilation (FFWCC-FMRI, 2001) consisted of any red tide organism counts in Florida waters from 1953 through 1998, together with associated physical (temperature, salinity), nutrient, and trace metal concentrations and represented data collected by over 50 organizations or agencies. These data from all coastal Florida waters were truncated to the Gulf of Mexico for analysis, maintaining over 44,000 samples. Since it was likely that processes which induce or maintain a bloom may vary geographically, and since red tide initiations more frequently been observed off of the southwest Florida coast (Feinstein, 1956), red tide data sets were spatially binned into three geographic regions (**Figure 1**). Data reduction included a quality assurance review for missing or inconsistent units. All nutrient data were transformed to  $\mu\text{g-atom/l}$  or  $\mu\text{mol/l}$  basis. Additional categories of presence/absence of *K. brevis*, and nutrient ratios were computed. In some instance, soluble and total inorganic parameters were combined to provide a longer term data set. [There are other data sets (some quite substantial) with records of nutrients or physical parameters, but they were not included in the compilation unless cell counts for *K. brevis* were conducted.]



**Figure 1.** Study regions within the Gulf Of Mexico.





**Figure 44.** Compiled normalized cross-correlations of the Tropical SST Anomaly against rainfall. Stations are roughly ordered from north (41) to south (1).

## SUMMARY:

*Karenia brevis* concentration data in the Gulf of Mexico between 1953 and 1998 were obtained from a recent FMRI data rescue project and analyzed for correlation with rainfall and flow records as surrogates for nutrient loadings, and against atmospheric deposition of nitrogen, hurricane and tropical storm incidence, and a variety of climate indices. The study area was divided into three sub-areas and each was analyzed separately since the incidence of red tides in Florida waters, and possibly potential forcing factors, varies regionally. Available data (>44,000 records) were binned into monthly time steps by region. As *K. brevis* data originated from a variety of sources, and as sampling effort clearly varied over the study period, cell concentration data were reduced to presence/absence. Of the 552 months addressed, data were available by region and month in 756 of the total of 1656 region-month bins. *Karenia brevis* was assumed to be absent in those instances where data were missing. Region 1, to the north, was minimally sampled, apparently only in response to detected blooms, while Region 2 was sampled the most. From presence/absence, duration parameters were computed for *K. brevis*, i.e. in how many of the next  $n$  months was *K. brevis* reported within the region. Durations were computed at 3, 6, 12, and 24 months to improve normality of distributions. All analyses determined significance levels after adjusting for serial correlation within the various data sets.

Region 1 blooms typically followed the presence of *K. brevis* in Region 2, while Region 3 blooms either developed simultaneously or lagged blooms in Region 2 by a month. Occurrences in Region 1 were relatively minimal, while *K. brevis* was most frequently observed in Region 2, with almost as many positive observations in Region 3. Periods of low *K. brevis* occurrence in Regions 1 and 3 were also periods of low sampling effort. Fortunately, sampling effort in Region 2 has been high

and samples confirmed a period of generally low *K. brevis* occurrence in 1969. In general, 1956-1960 and 1994-1998 represent periods of extended red tides.

The state could be separated into two rainfall provinces, with semi-annual cycles in the north and an annual cycle for the central and southern stations. Periods of maximum rainfall were coherent across the state, as were rainfall anomalies (monthly means removed), although correlations declined with increasing distance between stations. For anomalies, lack of significance in cross-correlations at lag other than 0 months indicated no dominant short term periodicity. Rainfall data were approximately stationary over the study period.

*Karenia brevis* duration over the next three months in Region 2 was significantly correlated with rainfall at a number of stations from Tarpon Springs to Punta Gorda. If causal, the effects were relatively immediate, with highest correlations at 0 and 3 months lag of *K. brevis* from rainfall. Relationships were not as pronounced between *K. brevis* in Region 2 and northern rainfall but were similar in phase. The analysis of rainfall anomalies, while with no significant results, also indicated that *K. brevis* persists as long as 10 months beyond a rainfall anomaly. There were no significant results for Region 1, and it should be noted that correlations were higher (although again not significant) for southern rainfall stations than for northern stations in close proximity. *K. brevis* in Region 1 also lagged rainfall at southern stations by a number of months and may argue for advection rather than initiation of the bloom within Region 1. In Region 3, correlations of *K. brevis* with northern rainfall were poor, and were higher with the southern rainfall stations, although few were statistically significant.

Flow data could also be separated into two hydrological provinces. Northern rivers recorded flow maxima in March and April, while rivers including and south of the Withlacoochee River typically received flow maxima in August-October (approximately 6 months out of phase from one another). Flow data were also highly non-stationary, with rivers within a region having roughly similar behaviors. Again a number of significant correlations existed for Region 2 *K. brevis* duration and riverine flow. *Karenia brevis* lags flows in northern rivers by approximately 6 months and is significantly correlated with flows in a number of southern rivers at lag=0 months. The relationship between flow and *K. brevis* seemed somewhat disconnected based on potential travel times between northern rivers and Region 2. Temperatures may be inadequate to support blooms during the periods of high discharge from northern rivers, however, and the delay may reflect time for coastal waters to warm. Region 1 *K. brevis* had little relationship to southern rivers and only slight (non-significant) correlation with northern rivers. Similarly, Region 3 *K. brevis* duration experience the highest correlations with flow from southern rivers, including some of statistical significance, while correlations were reduced with northern rivers. No results of significance were obtained from deseasonalized flows or when the data set was reanalyzed for the period for which Caloosahatchee River flows were available.

The data set was also reanalyzed for the periods for which atmospheric deposition data were available (1978-1998 and 1983-1998). The only significant results were for *K. brevis* in Region 2 and a deposition site in Alabama. The lack of geographical coherence between *K. brevis* and sites in closer proximity argues that atmospheric deposition of nitrogen is not a direct or dominant factor in *K. brevis* blooms. Hurricane and tropical storm incidence, measured as the sum of the wind speed squared within the month, were generally uninformative, as were correlations of *K. brevis* with a

variety of climate indices. Interestingly, the Tropical SST Anomaly was significantly correlated with almost all rainfall sites south of Tarpon Springs, at zero and longer lags. Despite this result and the correspondence of *K. brevis* with rainfall at southern sites, *K. brevis* was not significantly correlated with the Tropical SST Anomaly.

The results of these analyses cannot be considered conclusive. While every effort was made to normalize data by transformations or by computation of duration parameters, not all transformations were successful. In addition, the most normal of the duration parameters for *K. brevis*, were also the parameters for which no significant results were obtained. The parameter which recorded the most significant results was the 3 month *K. brevis* duration parameter, the most non-normal of all. In an effort to compensate for these violations of normality and any impact on computed significance, confidence intervals were conservatively determined by adjusting for serial correlation in the data. Assumptions of *K. brevis* absence when no data were available can also be criticized, but no more conservative assumption was immediately apparent. These analyses are most valuable for the indications of linkages that they provide, fully realizing that the occurrence of *K. brevis* is undoubtedly a multi-variate response of a living organism and one which is unlikely to be neatly reduced to a few physical or chemical forcing factors.

Despite these caveats, a number of useful observations or generalities emerge. The occurrence and duration of *K. brevis* was highly regionalized, as were the apparent linkages to rainfall and flow. Region 2 recorded the most significant correlations with potential forcing functions and was clearly the area (within this study) of highest activity. Those factors which were significant were, in general, geographically coherent, i.e. southern regions responding more positively to southern rivers and rainfall, less so to northern rivers and rainfall. *Karenia brevis* in Region 2 was significantly correlated with rainfall and flows from central and southern regions of Florida. Lags were short if any, indicating relatively immediate effects, provided the link is causal and not the result of some controlling, but unknown third factor. Patterns of *K. brevis* in Region 1 can be explained by a combination of advection from Region 2 and flows to the region occurring when temperatures are inhospitable to *K. brevis*, although this is admittedly speculative. *Karenia brevis* in Region 3 was similar in occurrence and linkages to that in Region 2, with some shifting of the rivers and stations for which higher correlations were obtained to those closer to the region. Direct deposition of inorganic nitrogen in rainfall did not appear to play a primary role in fostering and maintaining blooms, although this result makes no statement about other components of atmospheric deposition. Climate indices, while demonstrated to be influential on rainfall patterns in the central and southern regions of the state, were not significantly correlated with long term patterns of *K. brevis* duration.

**SBNEP FINANCIAL REPORT 02/28/02**

<b>A. EPA</b>	131-351,131-354								
<b>Revenues</b>									
Revenue Account 131-351-000-331397-000000									
Total Grant as of 9/30/01	\$340,000								
Total Program Outlays to Date	\$90,969								
Available Funds	\$249,031								
<b>Obligations</b>									
<b>1. Operating FY02</b>				<b>Budget</b>	<b>Encumbered</b>	<b>Actual</b>		<b>Balance</b>	
Salary & Exp.				\$365,973	\$0	\$144,893		\$221,080	
Indirect Costs				\$22,168	\$0	\$9,237		\$12,931	
Sub-Total				\$388,141	\$0	\$154,130		\$234,011	
							\$234,011		
<b>2. Carry Over Projects</b>									
<b>A. EPA - GMP</b>	100% Fed.		<b>Carry Over</b>	<b>Budget</b>	<b>Encumbered</b>	<b>Actual</b>		<b>Balance</b>	
Revenue Account 131-354-001-331397-002037									
Habitat Assess	131-354-001-002037		\$360	\$360	\$0	\$360		\$0	
Sub-Total (A.)				\$360	\$0	\$360		\$0	
							\$0		
<b>B. SWFWMD - FY99/00</b>									
			<b>Carry Over</b>	<b>Budget</b>	<b>Encumbered</b>	<b>Actual</b>		<b>Balance</b>	
<b>Atmospheric Deposition- Water Quality</b>									
131-352-001-002019			\$19,229	\$19,229	\$0	\$19,180		\$49	
Revenue Account 131-352-001-337311-002019									
<b>Scallop Enhancement</b>									
131-352-001-002040			\$13,960	\$13,960	\$0	\$13,892		\$68	
Revenue Account 131-352-001-337311-002040									
<b>Habitat Assessment</b>									
131-352-001-002037			\$31,294	\$31,294	\$17,867	\$13,330		\$97	

SWFWMD - FY00/01			Carry Over	Budget	Encumbered	Actual		Balance	
Wetland Coordinator									
Revenue Account 131-352-010-337311-002015			\$2,316	\$2,316	\$0	\$2,316		\$0	
131-352-010-337311-2015									
SWFWMD - FY01/02			Carry Over	Budget	Encumbered	Actual		Balance	
Gulf/Water Quality & Sea Grass									
131-352-001-002054			\$40,000	\$40,000	\$0	\$0		\$40,000	
			\$10,000	\$10,000	\$0	\$0		\$10,000	
Revenue Account 131-352-001-337311-002054									
Revenue Account 131-352-000-389000-002054									
Habitat Assessment									
131-352-001-002037			\$20,000	\$20,000	\$20,000	\$0		\$0	
Revenue Account 131-352-001-337311-002037									
Wetlands									
131-352-001-002015			\$55,048	\$55,048	\$2,390	\$7,448		\$45,210	
Revenue Account 131-352-001-337311-002015									
Subtotal carryover			\$191,847	\$191,847	\$40,257	\$56,166		\$95,424	
SWFWMD - FY02/03	\$233,000			Budget	Encumbered	Actual		Balance	
Wetlands									
131-351-002-002015				\$150,000	\$0	\$0		\$150,000	
Revenue Account 131-351-002-337311-002015									
Habitat Assessment									
131-351-002-002038				\$33,000	\$0	\$0		\$33,000	
Revenue Account 131-351-002-337311-002038									
Artificial Reefs									
131-351-002-002049				\$50,000	\$0	\$0		\$50,000	
Revenue Account 131-351-002-337311-002049									
Sub-Total (B.)				\$424,847	\$40,257	\$56,166		\$328,424	
							\$328,424		

<b>C. Other Projects</b>			<b>Carry Over</b>	<b>Budget</b>	<b>Encumbered</b>	<b>Actual</b>		<b>Balance</b>		
<b>(Cash, Sarasota County, Manatee County, City)</b>										
Project Contingency	131-351-001-000000		\$4,880	\$4,880	\$0	\$0		\$4,880		
FY&N	131-351-002-002013			\$20,000	\$0	\$8,000		\$12,000		
FY&N	131-351-001-002013		\$13,108	\$13,108	\$0	\$8,000		\$5,108		
FY&N Research	131-351-001-002014		\$30,000	\$30,000	\$7,500	\$0		\$22,500		
FY&N-Research	131-351-002-002014			\$30,000	\$0	\$0		\$30,000		
Bay Partners NEP	131-351-001-002022		\$9,770	\$9,770	\$4,715	\$5,055		\$0		
Newsletter NEP	131-351-001-002025		\$9,812	\$9,812	\$0	\$0		\$9,812		
Public Outreach	131-351-001-002026		\$4,596	\$4,596	\$0	\$4,596		\$0		
Sister Keys Aquatic Preserve	131-351-001-002029		\$10,000	\$10,000	\$0	\$0		\$10,000		
Hog Creek Habitat Restoration	131-351-001-002030		\$5,000	\$5,000	\$3,000	\$2,000		\$0		
Habitat Assessment	131-351-001-002038		\$7,000	\$7,000	\$7,000	\$0		\$0		
Hab Rest Assess	131-351-001-002048		\$9,558	\$9,558	\$9,450	\$0		\$108		
Citizens Action Plan	131-351-001-002053		\$33,445	\$33,445	\$2,930	\$8,916		\$21,599		
Citizens Action Plan	131-351-002-002053		\$27,000	\$27,000	\$0	\$5,563		\$21,437		
LDC Review	131-351-002-002047		<u>\$20,000</u>	<u>\$20,000</u>	<u>\$0</u>	<u>\$0</u>		<u>\$20,000</u>		
<b>Sub-Total</b>			\$184,169	\$234,169	\$34,595	\$42,130		\$157,444		
							\$157,444			
SBNEP Special Events	131-353-000-000000			\$1,000	\$63	\$237		\$700		
SBNEP Special Events	131-353-001-000000		<u>\$450</u>	<u>\$450</u>	<u>\$450</u>	<u>\$0</u>		<u>\$0</u>		
			\$450	\$1,450	\$513	\$237		\$700		
<b>Sub-Total</b>				\$235,619	\$35,108	\$42,367		\$158,144		
							\$158,144			
<b>Remaining Revenues</b>										
EPA	\$249,031									
EPA/GofM	\$360									
FDEP	\$0									
SWFWMD	\$328,424									
Manatee Co	\$50,000									
Sarasota Co	\$50,000									
Sarasota City	\$0									
Cash	<u>\$482,111</u>									
<b>Total</b>	\$1,159,926									

Obligations/Projects										
EPA	\$234,011									
EPA -GMP	\$0									
SWFWMD	\$328,424									
Other	\$158,144									
TOTAL	\$720,579									
Revenues-Obligations		\$439,347								
Outstanding Reimbursements										
				Description						
\$19,180	131-352-001-002019			Being processed by SWFWMD						
\$13,330	131-352-001-002040			Being processed by SWFWMD						
\$1,125	131-352-001-002015			Being processed by SWFWMD						
\$2,249	131-352-001-002015			Being processed by SWFWMD						
\$675	131-352-001-002015			Being processed by SWFWMD						
\$890	131-352-001-002037			Being processed by SWFWMD						
\$37,449	Total									
\$360	131-354-001-002037			Being processed by EPA						
\$35,243	131-351-000-000000			Being processed by EPA						
\$35,603	Total									
-----										
\$73,052	Outstanding Reimbursements Total									

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# Bradenton HERALD

Saturday • MARCH 9, 2002

Manatee County's No. 1 Newspaper Since 1922

25 CENTS

## Perico Bayou greenway to lend a hand to nature

**KEVIN O'HORAN**  
Herald Staff Writer

**BRADENTON** — A little spit of land jutting into Perico Bayou is in for some big changes.

A \$166,000 project would restore native plant life to the 1,100-foot strip

just north of Manatee Avenue and add some man-made plumbing to help nature push water into and out of the shallow bay.

And, if work on The Estuary — a 450-home development — gets churning again, it could be the site of a pedestrian-bicycle bridge connecting

northwest Bradenton and Perico Island.

"One condition for approval of that development plan was to provide a greenway (to Perico Island), where people can cross over through the

**PERICO TO 10A**



GRANT JEFFERIES/The Herald

A Great Blue Heron takes flight in the area of Perico Bayou.



## PERICO FROM 1A

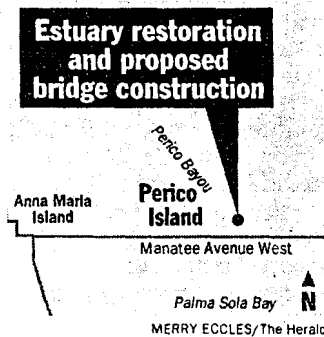
bridge," said Misti Servia, a planner with Manatee County.

First, though, officials will focus on restoring a bit of native Florida to the area. Returning the site to near-natural condition, they say, provides animals, marine life and even people with another haven in a fast-developing area.

The project, expected to kick off in four to six months, teams a passel of agencies, including Manatee County, the Sarasota Bay National Estuary Program, U.S. Fish and Wildlife Service and the Southwest Florida Water Management District.

"They may need all the helping hands to restore the land, which once served as a roadway to Anna Maria Island and still holds a water pipeline to the barrier isle.

Exotic plants have taken control of the soil, crowding out native species. Work crews will spend weeks uprooting the invaders, moving earth around to create a more natural setting and then replanting natural vegetation.



They'll also zero in on the land bridge itself, which spans about 80 percent of the bay's width and chokes off the natural tidal flow that otherwise would nourish mangroves lining the shores.

"The flow helps wash out toxics that naturally occur in anoxic sediments (near mangroves)," said Gary Raulerson, senior environmental scientist with the Sarasota Bay National Estuary Program. "And, it brings in nutrients."

Mangrove stands ringing Perico Bayou south of the land strip already show the effects, he added, their growth and vitality stunted compared to mangroves elsewhere.

To get the flow going again, the project calls for installing two

48-inch-diameter culverts in the erstwhile roadway. Tides could readily wash through the culverts, into the bay's recesses, and even beyond to Palma Sola Bay.

But to add the culverts, work crews will have to move the island water line, pushing it about 3 feet deeper into the ground and adding a reinforcing layer above it.

"There might be an interruption in (water) service for a night," Raulerson said.

All told, he added, the project should take about two to three months once work starts. But that doesn't include the people-pedal span, which would come as part of building The Estuary's 693-acre golf course, nearly 450 homes and a restaurant.

That project has stalled, with builders saying permitting times have slowed their progress. And that leaves the bridge up in the air, as it were.

"That will be up to the developers and the county," Raulerson said.

**Kevin O'Horan**, environmental and higher education reporter, can be reached at 745-7037, or at [khoran@bradentonherald.com](mailto:khoran@bradentonherald.com).

THURSDAY, MARCH 7, 2002

# Area counties seek share of water tax money

By VICTOR HULL

victor.hull@heraldtribune.com

SARASOTA — Southwest Florida counties don't want all the tax money going into tapping new water supplies spent on Tampa Bay.

Regional water managers are already spending nearly \$200 million to keep up with the water needs of a ceaselessly growing Tampa Bay. That includes nearly \$85 million to subsidize construction of one of the world's largest sea water desalination plants.

The money comes from property taxes the Southwest Florida Water Management District levies across 16 counties, including Charlotte, Manatee and Sarasota.

Recently, a major Tampa Bay public water utility began lobbying

**"I don't want to see our tax dollars bail out Tampa Bay with a second desal plant."**

**SHANNON STAUB,**  
Sarasota County commissioner

the district for more money to help build a second desalination plant. Construction on the first, a 25 million-gallons-per-day facility on Tampa Bay, should be done later this year.

The proposal alarmed officials from Charlotte, DeSoto, Manatee and Sarasota, who say they, too, need tax money for building to help avert a future water shortage.

The issue surfaced at a meeting Wednesday of representatives from

the four counties, which together control a utility that pumps water from the Peace River. They want the district to help pay for expanding the Peace River utility, as well as other new, unidentified sources.

Meeting as the Peace River-Manasota Regional Water Supply Authority, the officials agreed to send a letter about the issue to the water management district.

District leaders have stressed for the last few months that, after having addressed a water crisis in Tampa Bay, they plan to turn their attention to the south. They have promised to devote more of the tax money they collect to water supply development in Southwest Florida.

Local officials want that commitment in writing.

"I don't want to see our tax dollars

bail out Tampa Bay with a second desal plant," said Sarasota County Commissioner Shannon Staub. "If we don't get a little aggressive, (political) pressure on the water management board is going to be intense."

Water management district spokesman Michael Molligan said Southwest Florida officials needn't worry. He said the district board has stated its plans to help Southwest Florida, where overpumping is endangering ground water resources. The district has declared the region the "Southern Water Use Caution Area," or SWUCA.

"The need in the SWUCA is going to outstrip the need in Tampa Bay over the next several years," Molligan said. "We're going to be shifting a lot of our resources down there," Molligan said.

# Salty creek gets fresh start

Water managers clean up Shell Creek by partially plugging wells that were dug too deep.

By VICTOR HULL

victor.hull@heraldtribune.com

The unwelcome minerals showed up in the water early last year at the height of Florida's record-breaking drought. Flowing through ditches and streams, they accumulated in a reservoir on Shell Creek near Charlotte Harbor.

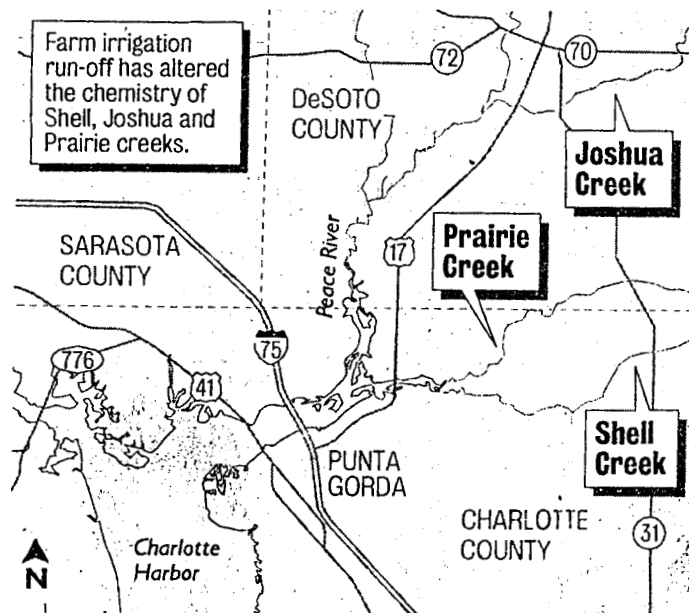
Regional water managers didn't know where the salty stuff was coming from but knew it shouldn't be there and that it threatened Punta Gorda's drinking water supply.

Eventually the source was

determined: farms in DeSoto and Sarasota counties.

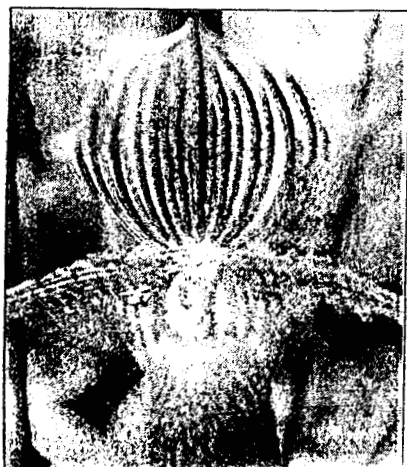
And now Southwest Florida Water Management District officials say they've come up with a program that will not only save Shell Creek from damage by irrigation runoff but also help citrus growers increase crop yields while reducing their demand for ground water.

"It's a tremendous story," said Gene Heath, assistant executive director for the district, which regulates water re-



STAFF MAP/JACOB DENISON

PLEASE SEE CREEK ON 2B



## A living jewel

A gem among orchids, the rare and endangered Paphiopedilum rothschildianum was collected in 1984 on Mount Kinnabalu in Malaysia by a Selby Botanical Gardens scientist. Selby orchid grower Diana Folsom, below, raised this plant, which recently earned a gold medal at the

SUN. 1  
SAT. 9  
921-776



ARMANDO SOLARES



STAFF PHOTO / ARMANDO SOLARES / armando.solares@heraldtribune.com

Bill Kakritz tests the quality of water at various depths in the Shell Creek reservoir in Punta Gorda. Tests like these are conducted once a month. Other tests are conducted every two hours daily.

## Water managers clean creek by partially plugging wells

CREEK FROM 1B

sources across a 16-county area, including Charlotte, Manatee and Sarasota.

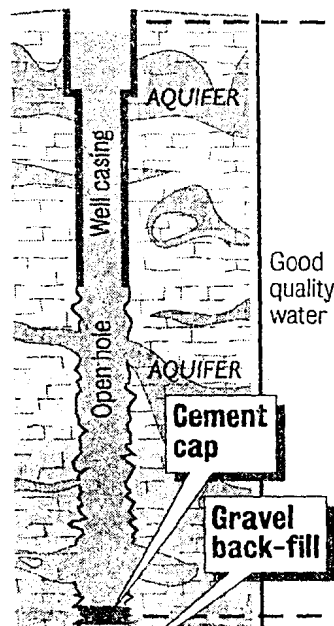
Not everyone agrees. Environmentalists say it's a story of the district's abysmal failure to protect precious water resources, through dawdling and coddling of the growers. They argue that the agency could have achieved the same result sooner by forcing the growers to cut off the pumps.

### Culprit: Irrigation

It took scientists awhile to figure out what was happening in Shell Creek, which runs from eastern Charlotte County into the Peace River.

During the height of Florida's three-year drought, the level of chlorides — minerals leached from rock formations underground — spiked in a reservoir formed behind a dam on

Cross section showing how regional water managers back-plugged wells that had been drilled too deep. The plugs prevent the poor quality water from getting into surface supplies.



promising that district officials think the quality of water draining across hundreds of square miles in the Shell, Prairie and Joshua creek basins will improve.

That will not only save Punta Gorda's water supply, but improve the Peace River, which provides drinking water to more than 100,000 people in Charlotte, DeSoto and Sarasota counties.

Farmers and the aquifer should benefit, too. Growers won't have to keep pumping water to flush the salts through the soil.

The water managers have allocated \$325,000 to fix dozens more wells.

As a side benefit, officials and farmers agree that their previously adversarial relationship has improved.

"I think this is an example of something that goes right," said district board member Pam Fentress.

Shell Creek, exceeding the maximum considered acceptable by state regulators.

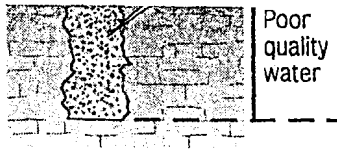
The reservoir, which also gets water from Prairie Creek, serves as the drinking water source for Punta Gorda. And while not toxic, high chloride levels make water taste bad. Because surface streams like Prairie and Shell don't normally have high chloride levels, Punta Gorda's water treatment system isn't equipped to remove the minerals.

Presence of the chloride meant that ground water was somehow infiltrating the creeks.

The source was irrigation runoff. The problem intensified because of the lack of rainfall, which normally would have diluted the ground water runoff.

The runoff was also affecting another nearby stream, Joshua Creek, which empties into the Peace River near a regional public water utility.

Left alone, the chloride build-up could force Punta Gorda to alter its utility system or find a new supply for its 18,000 customers. Either option would be expensive.



STAFF GRAPHIC/JACOB BENISON

### Definite results

But the district didn't order the farmers to cut off their pumps. Instead, they offered to help pay grove owners who voluntarily tested their wells and fixed those spewing low-quality salty water.

The repair involves finding the well depth where good water quality ends and poor quality begins. Wells drilled into the saltier low-quality zone are filled with gravel and cement until they tap only fresh water — a process called "backplugging."

Six wells have been fixed so far. In one, chloride dropped from 4,880 to 64 milligrams per liter.

The results have been so

### On the Net

To see video clips from the wells that have been fixed, go to [heraldtribune.com](http://heraldtribune.com)

### A dissenting voice

But Becky Ayeach, president of the Environmental Confederation of Southwest Florida, said the accolades are misplaced.

The district helped cause the problem by pushing farmers to drill extra-deep wells to save higher quality water for public drinking supplies, she said.

And the district has had problems with too much farm irrigation runoff in other areas, including the Flatford Swamp in Manatee County, where excess water has killed thousands of trees.

The agency should force farmers to eliminate runoff and deny them permits for more ground water pumping, not fix their problems at taxpayers' expense, she said.

"I think the district should enforce its rules," said Ayeach, whose organization is a coalition of 33 environmental groups in seven counties. "The rules say pumping isn't supposed to cause off-site impacts and that the use will be efficient. If you're changing the water chemistry in a stream because of runoff, you either change your practices or you don't get a permit."

# Environmentalists oppose bills

THE ASSOCIATED PRESS

TALLAHASSEE — Opponents of legislation making it more difficult for citizens to challenge government decisions say it is a threat to 30 years of environmental rights, but developers contend it's necessary to end what they say is harassment.

Environmentalists are stepping up their campaign against a quartet of bills as two of the measures near a House vote, possibly later this week.

"Citizens are the watchdogs of the environment," Sierra Club lobbyist Susie Caplowe said Tuesday. "We should have the right to challenge poor decisions by government."

Environmentalists used that right to stop plans by Florida Power & Light Co. to burn a high-sulfur mix of tar and water called orimulsion in 1998. It also has been used to oppose offshore oil drilling and landfills.

Two bills, one in each chamber, would amend Florida's Environmental Protection Act of 1971 to prohibit citizens from requesting administrative hearings or other procedures to challenge state and local government decisions they believe harm the environment.

Bill Hunter, president of the Association of Florida Developers, is supporting the legislation (HB 819 and SB 270) sponsored by Rep. Gaston Cantens, R-Miami, and Sen. Jim King, R-Jacksonville, because "it's good for business."

## The bills' effects

Here's how bills pending in the Florida Legislature could affect the rights of citizens to challenge decisions by state and local governments:

### SB 270 and HB 819:

- Amends Florida's Environmental Protection Act of 1971 to prohibit citizens from instituting, initiating, petitioning for or requesting an administrative proceeding.

- Removes the authority of the governor and Cabinet to review certain water management district orders and rules.

### SB 280 and HB 257:

- Raises the cap on attorneys fees and costs that can be awarded to a "prevailing small business party" from \$15,000 to \$50,000.

- Requires a petition to cite specific rules or statutes affecting a case.

- Requires an administrative law judge to set deadlines for discovery and the identification of expert witnesses and their opinions if any party so requests.

— The Associated Press

"It eliminates the harassment from people who are not substantially affected by a particular project," Hunter said.

The Florida Home Builders Association and Florida Chamber of Commerce also are among the legislation's supporters.

A person affected by a government decision, environmental or otherwise, could still seek redress under the state's Administrative Procedures Act, but another pair of bills (HB 257 and SB 280) would make that more difficult and expensive.

One of the bills (HB 257) by Rep. Joe Spratt, R-Labelle, also is awaiting action by the full House. Its companion (SB 280) by Sen. Ken Pruitt, R-Port St.

Lucie, won approval Tuesday from the Senate Government Oversight and Productivity Committee.

The two bills would require citizens to file more information to back their claims and to do it faster. They also would raise a cap on lawyer fees and costs that a losing party could be ordered to pay from \$15,000 to \$50,000.

"If you don't have all your legal mumbo-jumbo together you could get hit with attorney's fees," Caplowe said. "It's really shutting us out of the process."

Cantens' bill to bar environmental appeals by unaffected citizens has cleared all House committees and next will be considered by the full chamber.

# One blue crab neighborh

Will the blue crabs know?

That was my question last week as the city approved plans for some major improvements of the bay's shoreline between the 6th Street canal and a planned "Belvedere" (fancy name for a viewing area) at the end of Boulevard of the Arts.

Wrapping around G.WIZ in one direction – where it will stabilize the shoreline – and the headwaters of the canal in the other, the project includes sidewalks, boardwalks, a new canoe/kayak launch and, eventually, even another bridge across the canal. The money, about \$110,000, is coming via grants from Sarasota County, the Southwest Florida Water Management District and the city.

But will the blue crabs know? Twenty years ago I ran a couple of family blue crab traps at the mouth of that canal, just outside the boat channel, and catches were usually tasty and always interesting. Capt. Jonnie Walker says there used to be a good spring at the headwaters of the canal, up behind what's now the Symphony building, giving the canal flowage. But with the saltwater intrusion into the aquifer in that area these days, the spring is gone.

Sarasota Bay Program Senior Scientist Gary Raulerson explains that permitting of the new project is just getting under way, but he doesn't anticipate any problems

## BOB ARDREN Sarasota Waters



with that and construction should be started in about six months.

What makes this project special to me is that it's another example of people access that allows the likes of you

and me to get up close to the shoreline and into the mangroves – a very special place on the southwest coast of Florida. Some other examples of that opportunity you might find fun to explore are the boardwalk at South Lido Park, the new one at Ken Thompson Park, along with Quick Point and Durante parks on Longboat Key.

And the blue crabs? Well here's hoping they don't mind the upgrading of their 6th Street – oh excuse me, Boulevard of the Arts, neighborhood.

### LIFE IMITATING ART?

A few years back there was an outrageous fight scene in the Carl Hiaasen book "Skin Tight" in which the hero saved his life by running a bad guy through with the bill of a mounted swordfish.

# Manatee adapts to building codes

**PAT KELLY**

Herald Staff Writer

**NATEE**—Local building codes be swept away Friday with the implementation of a new statewide building code, threatening to toss builders, inspectors and homeowners into a period of adjustment and re-education.

The new codes, passed during the legislative session, attempt to bring the best of the mishmash of state, county and local regulations.

Although some builders are complaining about a lack of information coming from the Manatee

County Building Department, county officials say inspectors are ready for the transition.

The code changes were set to go into effect Jan. 1 of this year. But the adoption was delayed three months to allow builders and county inspectors more time to understand and prepare for the changes.

Some of the more important code modifications involve new wind-speed testing standards for windows and doors, product certification for impact-resistant glass and storm shutters, tougher roof shingles, and increased termite

**CODES TO 10A**

## CODES FROM 1A

treatments and roof inspections.

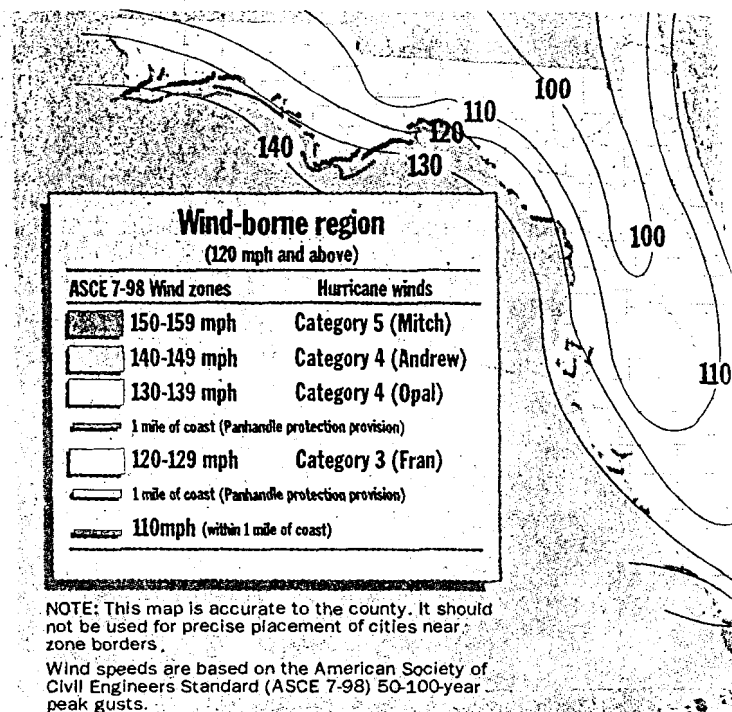
The county is hiring seven new inspectors to handle the increase in code enforcement, freeing three inspectors to concentrate solely on roofing inspections, building department official George Devenport said.

Although some confusion about the new codes is expected, there will be no grace period for enforcement, he said.

"As with any transition to a new code, there will be a transitional period," Devenport said.

### Tough transition

To help home builders and other professionals better understand the changes, the Florida Home Builders Association launched a training program more than a year ago. About 200 local industry officials attended one such session in Manatee County in September 2001.



RON BORR

## IMPORTANT CHANGES

■ In areas classified as a wind-speed zone of 120 mph or more, there will be new testing standards for windows and doors that include water resistance tests, and tests, mandatory load deflection tests and structural tests.

■ In wind-speed zones of 120 mph or more, structures must be either designed to withstand internal pressure or the outside envelope is breached, or windows and doors must be protected by installing impact-resistant storm shutters. And the products must be certified they can be used in the state.

■ In wind-speed zones of 110 mph or more, roofs must be used that have been tested to withstand higher wind pressures.

■ The new code requires three soil treatments for termites. Previous codes required only one. The code also imposes certain limitations on the use of wood to the ground in new home structures.

■ The new code also requires an additional roof inspection to be conducted at the 50-75 percent completion stage.

throughout the state, each tailored to local conditions.

The new code will establish stringent criteria for local amendments and require a statewide review every three years. Local changes could be

tests are booked wide," he said.

Windows and doors are critical to any building, especially near coast where wind force is high. New designs will



But Richard Reynolds, president of R.G. Reynolds Homes and a code expert with the Home Builders Association of Manatee County, said many builders have been disappointed with the response from the county building department.

"We are still getting information late," he said.

Reynolds said builders first learned from building department officials Feb. 13 that they would now be required to perform a soil compaction test — at a cost of \$165-\$250 — and an elevation survey — at a cost of \$200.

"They just popped that on us," he said.

The code is hundreds of pages long, and misinterpretations could cause a delay in building plans and make a dent in pocketbooks. The new code will force many builders to change the way they design and build homes.

"I know this new code is going to be a tough transition," Devenport told a packed house of builders and contractors recently at the Home Builders Association of Manatee office. "There will be problems, but we will work through them."

### **Old, patchwork system**

Part of the problem with the old system was that it had developed into a patchwork of regulations in constant flux with amendments and local interpretations.

After the devastation left behind by Hurricane Andrew in August 1992, Florida conducted a study of building codes and found the ordinances were inconsistent throughout the state.

According to Jack Glenn, director of technical services for the Florida Home Builders Association, there may have been as many as 468 local building codes scattered

thrown out if they are not adopted for statewide use.

Builders will have to prove windows and doors meet the wind standards of the new code. They also will undergo additional inspections for roof supports and nailing patterns.

The new code not only will affect new home builders. Any homeowner who wants to remodel a home must adhere to the new regulations. The trigger is the permitting process. Any new construction that requires a permit will have to meet the code, Devenport said.

"It will affect many people immediately," Reynolds said.

Local amendments to the existing code pertaining only to Manatee County will no longer be in effect, Devenport said. There will be additional requirements placed on builders for termite control. There will be extra inspections and changes in the way inspections are conducted.

For example, there will be additional roofing, door and window inspections, and new swimming pool inspections for plumbing and electricity. There will be new "graspability" requirements for stairway handrails and new requirements about where windows can be located in a bathroom.

### **Making adjustments**

Reynolds said another concern is that manufacturers might encounter problems adjusting their products to meet the new codes.

"I think we are well-prepared," he said. "But I don't think the building department is prepared, and I don't think the manufacturers are prepared."

Reynolds said laboratories that test materials are already working overtime.

"People who conduct these

consider the impact of indoor air pressure on a home's structure if a window or door fails in high winds.

At the heart of the code are new wind zone designations based on projected wind speeds during hurricanes, according to Dave Ellwanger, vice president of IBA Consultants Inc., an expert in wall, roofing and waterproofing with offices in Sarasota, Miami and Boca Raton.

Most of Manatee County, from the coast to about midpoint, lies in the 120-130 mph designation area. The rest of the county is covered under the 110-120 mph designation, with only the extreme northeast corner falling under the 100-110 mph designation.

Even with the new requirements, Reynolds said the pace of new home construction should not slow in Manatee County. Many builders applied for permits in advance. The new code should have only a marginal financial impact.

"We've been building to a pretty tight code anyway," he said.

Reynolds said although there has been a "spirit of cooperation" between the building industry and county inspectors during the run-up to the change, some confusion remains just days before the changeover.

He said there is concern among some builders the local building department might develop subtle interpretations of the new code that builders may not be aware of, all of which could affect plan requirements, construction practices and inspection procedures.

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**Pat Kelly**, *New Homes* editor/writer, can be reached at 748-0411, ext. 4500, or at [pkelly@bradentonherald.com](mailto:pkelly@bradentonherald.com).

# Trust for Public Land may facilitate railway deal

A non-profit organization that specializes in real estate deals for public purposes may act on Sarasota County's behalf to acquire the 13-mile railroad corridor between State Road 72 and Venice.

"We've met with representatives of The Trust for Public Land," said Frank Domingo, the county's general manager for public works planning. "It has the legal expertise to make a deal like this work. A letter will be sent to the county commission that explains everything."

County negotiators have met independently with CSX Transportation and Seminole-Gulf Railway to structure a deal for the corridor, but negotiations bogged down.

Momentum was lost when Terry Gilbert, a county project manager, was recalled to active duty as a lieutenant colonel attached to the U.S. Army Corps of Engineers. Last October, Gilbert was assigned to the Pentagon after the terrorist attacks in New York City and Washington, D.C., and he won't return until next year.

CSX Transportation in Jacksonville holds title to the railroad right-of-way, while Seminole-Gulf Railway in Fort Myers leases it to operate freight trains.

The county has coveted the 100-foot-wide ribbon of land for more than a decade, but been repeatedly rebuffed by owners with long-term business interests.

There is \$8.5 million of local option sales tax revenue available for purchase of the

corridor. The county wants to construct a linear park for bikers, hikers and joggers.

Since 1972, The Trust for Public Land has helped protect more than 1.4 million acres in 45 states by cutting deals that have created expansive recreation areas, historic homesteads, small city parks and other public spaces.

It has been active in Florida. One of its many ongoing projects is to help create an 8-mile-long Miami River Greenway through blighted urban areas. The John S. and James L. Knight Foundation recently contributed \$2.5 million help the historic African-American Overtown community on the north side of the river and the Hispanic East Little Havana neighborhood on the south.

On a smaller scale, the Trust recently purchased 23 acres on Moultrie Creek near St. Augustine to protect an archeologically significant site threatened by development. It will hold ownership of the property while St. Johns County secures a Florida Communities Trust grant to leverage the purchase through a local bond issue.

"We've met with Mr. Domingo and members of the county staff," John Garrison, a Trust agent based in Palmetto, said. "It sounds like the county needs a fresh approach."

If empowered to act on the county's behalf, The Trust for Public Land would attempt to buy the 13-mile corridor from CSX and Seminole-Gulf, then convey it to the county for the purchase price plus

closing costs.

"We have previous experience working with CSX at other locations in Florida," Garrison said. "They are tough negotiators, but we've been successful in the Jacksonville area."

Prior to Gilbert's departure, the county's negotiating team anticipated presenting a report with options for the commission's consideration in January. It isn't ready.

"We've really tried to make this work," Domingo said, "but it looks like we could use outside help. CSX is now asking for a bit more than we anticipated."

In 2000, a Naples firm that appraises unique properties such as railroad rights-of-way issued a report that concluded the corridor was worth about \$10 million.

The appraisal was larger than initially anticipated, and slowed negotiations while the county explored various mitigating factors in the land's actual value.

A linear park is one way to land bank for either a limited access north-south highway or a passenger rail system, although county officials deny such plans.

Seminole Gulf is currently operating slow freight trains along the corridor under the first of three 20-year leases it obtained from CSX Transportation in the mid-1980s.

The Trust for Public Land is headquartered in San Francisco. It employs more than 400 agents throughout the country. Garrison was assigned by the Tallahassee office to become the first agent in

## HIGHLIGHTS

▼ Sarasota County has been attempting to purchase an old 13-mile railroad corridor.

▼ It wants to construct a rails-to-trails linear park for bikers, hikers and joggers.

▼ Negotiations with CSX Transportation and Seminole Gulf Railway have stalled.

Southwest Florida.

"My wife and I had been living in the Virgin Islands," he said, "but she took a job in St. Petersburg. I've known of the Trust for many years, so it worked well. This office has been open for 10 months."

Sarasota County has experienced a string of recent successes by turning over complicated land transactions to The Nature Conservancy, a large non-profit organization that specializes in habitat protection.

Parcels identified by an Environmentally Sensitive Lands Oversight Committee have been purchased through negotiated agreements brokered by the Conservancy. Outside grants have helped leverage county funds.

"We are very similar to The Nature Conservancy," Garrison said. "The difference is that the lands we help acquire are used for public purposes such as parks and greenways."

# Lack of gray water lines cloud project

BY JACK GURNEY

Sarasota County's decision to omit gray water irrigation lines from its \$104 million Phillippi Creek Septic Tank Replacement Program is already coming back to haunt the decision-makers.

On Tuesday, the county commission discussed the politically touchy subject when it approved a \$3.5 million contract to install sewer lines and equipment south of Bay Street between U.S. 41 and Little Sarasota Bay.

"It causes me discomfort knowing that we won't be laying gray water lines," Commission Chairman Nora Patterson said. "If we're really serious about the way we irrigate, we have to make that kind of investment."

Warren Wagner, the county's utilities general manager, explained that money and providing an adequate supply of treated wastewater are unresolved policy issues that must be addressed.

"It would be perfect if we were further down the road with our plans for gray water," he said. "We have to work through the funding. In a year, or so, we may be ready."

County Administrator Jim Ley assured the commissioners that there will be many visible neighborhood improvements when the project finally breaks ground.

"You'll see sidewalk replacements, street overlays and landscape enhancement," he said. "We'll have new utility customers on line by the end of this year."

But that didn't satisfy the commissioners who believe gray water irrigation lines should be installed when public streets are being dug up to lay sewage collection lines.

"This is obviously a missed opportunity because of timing," Commissioner Jon Thaxton said. "We're not going to go back five years from now and dig up these

## HIGHLIGHTS

▼ Sarasota County sells and distributes treated wastewater for irrigation purposes.

▼ But gray water lines for irrigation were excluded from the Phillippi Creek sewer project.

▼ Many Florida communities now install the lines to provide residential irrigation.

streets again. When, in our future plans, will we lay these lines?"

Wagner repeated that there are two outstanding questions that must be answered. "How will we fund this?" he asked. "And will there be an adequate gray water supply?"

Patterson suggested there is a third policy issue, fairness, that should also be addressed. "Gray water will go to new developments that have irrigation lines," she said. "I'd like it to be available for our older neighborhoods."

In fact, the commissioners have nobody to blame but themselves for failing to deal with the gray water line issue during their discussions about replacing north county septic tanks.

"There is nothing in the septic tank replacement program to provide reuse water," Ed Goscicki, the county's former public works director, explained a year ago. "It was never discussed as part of the Phillippi Creek program."

Over the next 10 years, the county will replace an estimated 14,000 septic tanks with a sewage collection system in an eight-phase construction program.

The long-awaited project will break ground next month in several established neighborhoods situated west of Phillippi Creek, the county's largest drainage

basin.

It will cost more than \$9,000 to replace each of the septic tanks with sewer service, a daunting figure the commission wrestled with throughout the planning process.

Before his departure, Goscicki estimated that building a parallel system of gray water lines next to sewer lines would cost an additional \$1,600 to \$3,000 per installation.

Questions raised by the commissioners at Tuesday's meeting may spur utility officials to refine those estimates and present gray water irrigation alternatives for future construction phases.

"You've heard our concerns," Commissioner Paul Mercier said. "Our older neighborhoods might want to use irrigation water."

About 1,800 single-family residential customers - mostly in Palmer Ranch - currently buy treated wastewater from the county for lawn irrigation. Treated wastewater is piped to their homes through separate

SEE GRAY LINES,  
PAGE 6A

## **GRAY LINES** FROM PAGE 1A

rate reuse lines – called gray water lines – that were installed when their communities were developed.

The county also sells treated wastewater to a dozen condominiums and 15 golf courses. It distributes about 5 million gallons every day.

St. Petersburg received a U.S. Environmental Protection Agency grant in the late 1970s to install some of its early reclaimed wastewater lines for irrigation.

Over the last 20 years, the city has con-

tinued to install reclaimed wastewater lines to about 10,000 homes and businesses. Most of the city's customers are single-family homeowners.

New customers pay an assessment fee of between \$800 and \$1,200 plus a connection fee of \$300. They receive an unlimited supply of reclaimed wastewater for \$10.36 per month.

State law requires that water lines be separated from sewer lines or reclaimed wastewater lines. But it does not prohibit sewer lines and reclaimed wastewater lines from being installed next to each other.

# State gives county guidelines on Midnight Pass

## HIGHLIGHTS

- ▼ Florida environmental permits are necessary for an inlet restoration project.
- ▼ Key agency officials have agreed to work with the county on critical issues.
- ▼ One of the primary concerns is whether a restored coastal inlet would be stable.

### BY JACK GURNEY

Florida environmental officials have tentatively agreed to work cooperatively with Sarasota County if a dredging project to restore the Midnight Pass coastal inlet is pursued.

On Feb. 21, several agreements were reached in a six-member county delegation meeting hosted by the Department of Environmental Regulation.

The most important were: 1) a willingness to consider mediation if the county pursues permits to restore the pass; and 2) a promise to provide written comments on new scientific study data.

"They agreed to put into writing the technical issues that need to be fleshed out," County Commission Chairman Nora Patterson said. "This will allow us to answer their questions. We got our next assignment."

On Tuesday, the commission directed a letter to be sent to the state that expresses both gratitude for the meeting and anticipation of written comments which provide a guideline for moving forward.

Before Midnight Pass became unstable and was sealed in 1983, natural forces such as currents, tidal flow and winds caused it to slowly migrate north and south.

One of the state agency's primary concerns is whether the county attempts to harden portions of a restored inlet with concrete walls or rock revetments to keep it stable.

"They want the county to show them



REBECCA WILD BAXTER

Midnight Pass as it is today looking west from The Pointe condominium.

how a restored Midnight Pass would be kept stable," Patterson said, "without hardening at the throat."

The county delegation also included Administrator Jim Ley, Deputy Administrator David Bullock, Environmental Services officials Rob Patten and Chuck Walter, and West Coast Inland Navigation Director Chuck Listowski.

Joining them was Tom Walker, who headed up the \$225,000 Camp, Dresser and McKee engineering study as a consultant to the county. The study concluded that a \$5.5 million restoration project was technically feasible. The state agency's representatives included Deputy Secretary Allan F. Bidwell and Beaches and Wetland Resources Bureau Chief Mike W. Sole.

In 1992, the agency denied the county's previous bid to restore Midnight Pass. The county appealed the decision, but lost before an administrative hearing judge.

Bullock's notes from the Feb. 21 meeting summarize other state concerns, among them nearby beach erosion if the pass is restored and evidence of water quality deterioration if it remains closed.

Casey Key beachfront property owners are concerned that shoreline erosion would be exacerbated by a dredging project to restore Midnight Pass and have threatened to sue if such a project is pursued.

Conversely, many Little Sarasota Bay area residents believe that water quality has badly deteriorated since the 1983 closure due to an absence of tidal flushing.

Precautions would have to be taken to keep a restored Midnight Pass open and stable in one fixed location so that it wouldn't threaten nearby homes.

One option would be regular maintenance dredging to put shifting sand back in place. But the cost might be too politically expensive for the county commission.

Another would be some type of hardening, such as rocks or concrete, that would hold the inlet in place. But the environmental price might be too high for state officials.

"I suggested that the state already permits shoreline hardening in front of beachfront homes," Patterson said. "They said that there's a big difference between another set of Venice Jetties and some seawalls. They're right."

**Other action**

The city commissioners also Monday:

**AUTHORIZED PUBLIC NOTICE AND COMMENT ON A NEWTOWN GRANT**

The commission authorized advertising an amendment to transfer \$85,000 to the Newtown Community Center renovations and begin a 30-day public comment period. The money is left over from a Community Development Block Grant project that installed sidewalks and improved alleys in north Sarasota. The balance would be matched with money from the penny sales tax revenues to renovate bathrooms and the pool at the center.

**AUTHORIZED GRANT AGREEMENTS FOR HABITAT RESTORATION**

The U.S. Fish and Wildlife Service has agreed to spend \$20,000 to help pay for two habitat restoration projects known as Perico Bayou and Cortez Schoolhouse. The project is part of a larger effort by the Sarasota Bay National Estuary Program in coordination with local municipalities for habitat restoration throughout Sarasota Bay. The commission approved the grant agreements between the city and estuary program.

**AGREED TO SEEK STATE APPROVAL TO AMEND THE LAND USE PLAN**

The commission approved forwarding a petition to the Florida Department of Community Affairs to amend the land use plan to allow for additional uses under the metropolitan/regional classification. A group of developers want to develop property at the entrance of the Sarasota-Bradenton International Airport, north of University Parkway and east of Airport Circle. But the current Sarasota Future Land Use Map does not allow professional offices, entertainment, commercial, church or retail uses at the airport, which the developer is considering.

**ADDED HISTORIC PRESERVATION TO THE COMPREHENSIVE PLAN**

The city adopted an ordinance to amend its Comprehensive Plan to include the new Historic Preservation Chapter.

— Compiled by Patty Allen-Jones

# Bush keeps 3 on water board

STAFF REPORT

Gov. Jeb Bush has reappointed three people to the 11-member board that regulates Southwest Florida water resources.

Ronnie Duncan, 44, Watson Haynes, 49, and Janet Kovach, 40, were each appointed to new four-year terms that begin today on the Southwest Florida Water Management District governing board.

Duncan, chairman of the board, is a Tarpon Springs businessman who is president of The Duncan Companies, a commercial real estate consulting and development firm. He's been on the gov-

erning board since 1999.

Haynes of St. Petersburg is executive director of The Pinellas Bridge and vice president of the Tallahassee-based Windsor Group. He, too, has been on the board since 1999.

Kovach of Riverview is community affairs specialist for C.F. Industries, a phosphate company. She was appointed to the governing board in 2000.

The water management district covers 16 counties, including Charlotte, Manatee and Sarasota.

It controls water use, regulates wetlands and is charged with preventing flooding and protecting the region's rivers and streams, among other duties.

## City to hold forums on parks, trails

SARASOTA — City officials will hold three public forums this week on proposed parks, open space and a trails master plan.

The first forum will be tonight at the Newtown Community Center, 1845 34th St. All of the meetings begin at 6 p.m.

The second forum will be Wednesday at Mote Marine Laboratory's Goldstein Marine Mammal Classroom, 1600 Ken Thompson Parkway. The third will be Thursday at the Mobile Home Park Auditorium, 2100 Laurel St.

The draft plan includes recommendations to improve parks and provide a system of pathways for bikes and pedestrians.

**PART I**

# Assisted sodicide: Why you should stop loving your lawn

Formal lawns were popularized in Britain beginning in the 18th century. In that country of mild climate and evenly spread rainfall, grass does very well. The British penchant for lawns was brought into this country, where in the northeast and other parts of the country grass also can thrive.

It is estimated that more than 25 million acres are planted in lawns in the U.S. Unfortunately, the desire for lawns has been transported into climates

where they do not do well naturally, such as the desert Southwest and much of Florida.

Southwest Florida has a climate that includes both warm/dry and hot/wet periods and soils that do not hold moisture and are not naturally fertile. Consequently, grass does not do well unless irrigated during hot dry periods and fertilized and treated with pesticides.

These inputs have become increasing-

ly expensive to the homeowner monetarily, and perhaps more importantly, expensive to the environment. For instance, it is estimated that the majority of nitrogen getting into Phillippi Creek and then into Sarasota Bay comes from fertilized lawns rather than from septic tanks. Most homeowners are not willing to apply such inputs and consequently their lawns are not aesthetically pleasing. Nevertheless, they still have to mow them or have them mowed. This is costly both to the homeowner and to the environment as gasoline burnt in mowers adds to urban air pollution. Estimates are that a typical lawn mower emits more than 10 times as much polluting hydrocarbon than does the average car.

A second problem with grass is that it does nothing about shading the house. House shading is extremely important in this climate since it can dramatically reduce air-conditioning costs.

The above are good reasons for you to reduce the area of grass surrounding your property. Reducing grass is only part of the solution, however. Clearly, the previously grassed area must be planted with trees and shrubs in order to obtain the maximum benefit. The west side of your house especially needs shading to keep the afternoon sun from heating it up.

We suggest that you draw up a plan for gradually removing your grass where you think it is practical and replacing it with other vegetation. If you are watering and/or fertilizing your grass, stop doing it

## DAN WALTON Going Native



in the area that you wish to kill well before you begin. A good time to reduce your lawn is in April and May when rainfall is limited and the temperature has begun to increase. In a particularly dry year, much of the plant material will have already died.

Some people are daunted by the idea of removing their lawn, because of the effort involved, and also sometimes because they are concerned about what their neighbors may think. For both these reasons, it is advisable to do it over a period of time. One way is to gradually expand the size of any planting areas that you already have. Another is to remove grass from around trees and shrubs to the drip line as grass will inhibit their growth by effectively competing for moisture and nutrients.

In the next installment I will discuss methods of removing your grass.

▼ Dan Walton has a Ph.D. in plant physiology and was a post-doctoral fellow at the University of Texas, Plant Research Institute. Initially working in technical and environmental studies, he later taught at the university level. He is part owner of Florida Native Plants Inc.



# Owners offered incentives to clean up contamination

BY JACK GURNEY

Several Sarasota County landowners are seeking tax credits and other benefits through a 1997 Florida law that provides financial breaks for cleaning up environmental contamination.

The program rewards property owners who voluntarily step forward at the local level to work with enforcement agencies and rehabilitate their polluted parcels.

On Feb. 12, the county commission unanimously agreed to establish a program that would allow for the designation of "brownfield" sites and establish incentives for economic redevelopment.

Sharon Tarman, a county development coordinator, explained to the commissioners, "A brownfield is generally an industrial or commercial property where expansion or redevelopment is complicated by contamination."

Some of the incentives in the program include a \$2,500 bonus for each new job created as a result of the cleanup, low interest loans, tax breaks, fewer require-

ments for zoning changes, flexible parking standards and site design assistance.

There was no commission discussion about the policy of providing rewards and incentives for either property owners or business owners who are in violation of federal and state pollution laws.

David Gerard, who coordinates brownfields programs for the Florida Department of Environmental Protection's district office in Tampa, said the overriding issue is making damaged parcels economically viable.

"This is essentially a community driven program through which owners go to their local governments for designations," he said. "It is for owners who are motivated to address their environmental problems."

Three north county industrial sites have been voluntarily submitted as pilot projects that could become eligible for the various rewards. All currently have open files with state environmental officials.

They are the Loral Building at 100 Cattlemen Road, Peterson Manufacturing

Company at 155 Cattlemen Road, and the former Worman Electronics plant at 75 Packinghouse Road.

L3 Communications currently leases the Loral Building to manufacture data recorders. Previous owners spread residue from metal plating compounds and organic solvents on an 18-acre portion of the property.

Federal and state authorities have worked for many years with a succession of plant owners to clean up the site. Portions have been successfully rehabilitated.

Peterson Manufacturing makes small metal parts from brass, aluminum, steel and stainless steel. Prior to 1976, it routed hazardous waste through a settling tank into an absorption pond. A cleanup plan was approved last August.

Worman Electronics previously packaged products such as computers, televisions, video cassette recorders, chemicals and wiring devices through a process that produced hazardous sludge.

## HIGHLIGHTS

▼ A 1997 Florida law provides tax breaks and other carrots for environmental cleanup.

▼ The program known as "brownfields" requires cooperation from local governments.

▼ Sarasota County has agreed to try the program with three volunteer land owners.

In 1997, a groundwater assessment of the site was conducted that detected several contaminants, and follow-up tests were conducted last month. A cleanup plan for the parcel has yet to be approved.

"Outlines for cleanup processes that result from participation in the brownfields program are very similar to our typical enforcement cases," Gerard explained. "The difference is that the brownfields program is voluntary."

# Cleaning Lake Hancock could aid Charlotte Harbor

By TOM PALMER

N.Y. TIMES REGIONAL NEWSPAPERS

BROOKSVILLE — Cleaning up Lake Hancock and raising its level could be a cost-effective solution to improving the quality of water flowing into Charlotte Harbor via the Peace River and maintaining adequate river flow, regional water officials said Wednesday.

The idea is being discussed as the Southwest Florida Water Management District's Governing Board considers ways to deal with future water shortages while protecting the region's environmental resources.

A committee empaneled by the Polk County Commission this week proposed ways to restore the 4,519-acre lake southeast of Lakeland. The panel estimates the price tag at \$86.6 million.

"Maybe we should do what we can do to put the pieces together to solve what everyone agrees is a major problem," said board member Ron Johnson.

Dave Tomasko, a scientist in the water agency's Surface Water Improvement and Management Section, said water flowing from Lake Hancock is the biggest contributor to nitrogen pollution in Charlotte Harbor. A restoration project to remove nitrogen from the lake water would be more cost-effective than any other pollution-control action elsewhere in the basin, he said.

A proposal that Swiftmud

officials also presented to the County Commission this week included raising the level of Lake Hancock at least 12 inches to store water and to release it gradually into the Peace River via Saddle Creek to maintain the river's flow.

The river's average flow has declined over the past 75 years as ground water levels dropped, and because of a combination of heavier water consumption from the aquifer and changing rainfall patterns. During last year's drought, portions of the river between Bartow and Fort Meade went dry.

Sonny Vergara, Swiftmud's executive director, said engineering and political questions must be dealt with. He said water officials have to be prepared to deal with ways to release water during wet periods, such as hurricanes, to avoid unnecessary flooding.

And they have to make it clear what the purpose of the project is.

"If Polk County or anyone else upstream wants to store water to create some kind of ownership claim, we have to make sure they understand that the water is being stored in the interest of the river and to make a distinction between that and the interests of downstream users," he said.

But the Lake Hancock restoration and other projects are more than technical and political challenges. They also will require a substantial amount of money.

Over the next 20 years, Swiftmud officials expect to be responsible for coming up with \$1.3 billion to finance their share of projects that will increase the amount of water available in their 16-county region.

Much of that effort will be in an eight-county area known as the Southern Water-Use Caution Area, which includes most of Polk.

The work will be designed to reverse declines in river, lake and aquifer levels through increased conservation and development of alternative sources ranging from desalination to capturing rainwater.

Swiftmud officials said they hope they will be able to do it without raising property taxes. Under state law, the district can levy no more than \$1 per \$1,000 of taxable value. In the Peace River Basin, which includes the section of the district in Polk County, the tax rate is 61.7 cents per \$1,000, which has remained unchanged since 1993, when it jumped from 41.8 cents per \$1,000 to fund.

Member Ed Chance said he doesn't think the water agency can pledge not to approve a tax increase.

"We might be looking down the road at a slight tax increase and that may be the way to go," he said.

Another aspect of the proposal would involve getting the basin boards to allocate more of their budgets to the effort.

# State gets poor grade for handling runoff

SWT  
2/28/2

By TOM BAYLES

tom.bayles@heraldtribune.com

A Washington-based coastal watchdog group gave Florida a D grade Wednesday for its efforts to keep polluted runoff from farms and timber operations out of the shoreline ecosystem.

"Florida is not even trying to deal with this problem in a state where the beaches are so important to the public," said Jackie Savitz, director of the Coast Alliance, a nonprofit group concerned about development along the nation's shores. "This is a major source of pollution."

In 2000, more than 11,000

beaches nationwide closed or had a pollution advisory posted, an 83 percent increase over two years ago. The group said 80 percent of Americans live within 10 miles of a polluted lake, river or coast.

The Coast Alliance's report cites fertilizer and pesticide runoff as the biggest offenders, but dredging harbors, building beaches and running marinas also contributes sediment, silt and human waste to the mix.

Savitz said those contaminants are responsible for killing marine life, fouling waterways and closing beaches.

"The state of Florida is be-

PLEASE SEE RUNOFF ON 2B

# State gets dismal grade for runoff

RUNOFF FROM 1B

hind the curve in having safeguards in place to protect water quality," said Glenn Compton, director of Manasota-88, a local environmental group. "We agree with the D, and that's unfortunate."

Water-quality problem: plague Southwest Florida:

■ The Sarasota County Health Department found high levels of enterococcus bacteria at the North Jetty Beach on Casey Key in August 2000 and closed the beach for a day. Tests showed elevated levels of bacteria — fecal coliform — that threaten public health. Since Venice rigorously monitors its sewer system, health officials believe the most probable sources of the bacteria were septic tanks.

■ In Charlotte Harbor, growth, phosphate mining and agriculture are threatening fish and wildlife habitats. A three-year federal study of the crucial ecosystem completed in 1999 didn't produce any major solutions to the harbor's problems.

■ A septic tank replacement program in the neighborhoods flanking Phillippi Creek in Sarasota has been ongoing for years. And although lead is still high in at least one tributary, the Sarasota Bay National Estuary Program has been documenting a recovery in the bay's sea grass beds during the same time.

Florida environmental groups have been fighting the state in court for years over pollution in hundreds of creeks, rivers, lakes and bays. They accuse the state of dodging a federal requirement to adopt a priority list of polluted waterways for cleanup.

State officials insist they're trying to come up with a list based on sound scientific data to help Florida spend its limited money more wisely.

Scientists with the Florida Department of Environmental Protection spent Wednesday afternoon reading the alliance's report, titled Mission Possible II, and had initial concerns about the validity of its findings.

"This report is fraught with inaccuracies and it's just plain wrong in most cases," said Lucia Ross, a DEP spokesman. "They are not scientists, and they don't really seem to know what we are doing in Florida."

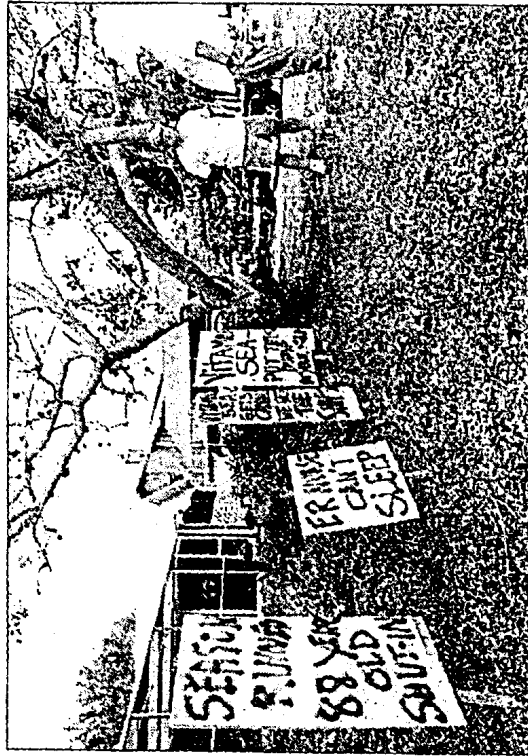
Coast Alliance rated four states this year, its second such ranking of the effectiveness of certain states in dealing with coastal pollution. Massachusetts earned a B+, Delaware got a B, and Ohio was given a C.

Louisiana got a D last year, putting Florida on par with a state with some of the worst coastal pollution in the nation.

Staff writer Victor Hull contributed to this report.

# Bay residents upset over dredging noise

Bay Beach residents Jeff Reuter, left, and Walt Bucklin stand in Reuter's front yard in Bay Beach in west Manatee County, where signs protesting the noisy dredging work are on display.



STAFF PHOTO / ROD MILLINGTON / rod.millington@heraldtribune.com

By ALEX NEWBERRY

[alex.newberry@heraldtribune.com](mailto:alex.newberry@heraldtribune.com)

MANATEE COUNTY — Residents of a west county subdivision are miserable about the dump trucks, earthmovers and dredging equipment running through their neighborhood from dawn till dusk.

Dredging in North Sarasota Bay about a mile east of Cortez Village was supposed to take three weeks, but the project has stretched into three months.

"My mother is homebound, and she used to sit on the lanai in this weather and enjoy the afternoon," said Bay Beach resident Jeff Reuter. "She's just miserable. She wants to get out of here."

PLEASE SEE DREDGING ON 2B

# Residents upset over noisy project

## DREDGING FROM 1B

Since November, workers have been deepening a channel coming in from the Intracoastal Waterway so that boaters from several shoreline subdivisions will have better access to the water.

Bay Beach residents have no problem with the dredging, only with the equipment that is disposing of the dredge material.

Trucks and earthmovers rumble around the site along 46th Avenue West, less than 100 feet from homes.

Officials said they looked for other places to store the dredge material, or spoil, but couldn't come up with an alternative. Leffis Key is too far away.

"I appreciate that it's noisy during the day," said Tom Ewing, project manager for part of the operation. "We're really sorry for the inconvenience, but there's nothing we can do."

The Army Corps of Engineers and the state Department of Environmental Pro-

tection permitted dredgers to use a vacant 1-acre lot in the Bay Beach subdivision to temporarily store spoil.

A pile of dark-brown muck about 10 feet high now covers the lot. It doesn't smell, and dust has not been a problem.

The pile is then scooped into heavy dump trucks and taken away for use as fill material.

The West Coast Inland Navigation District and homeowners from several subdivisions — Mount Vernon, Coral Shores, Bay Beach and Paradise Bay — helped pay for the dredging.

The work is months behind schedule and only halfway done. Officials blame regulations protecting the bay for the delays.

If they could, they said, they'd use a larger dredge to make the work go faster.

As it is, residents are probably doomed to more noise and disruption through June.

"I think they're justified in their complaints," said Jim Wedel, one of the project managers. "But it's going to benefit an awful lot of people."

# Environmentalists give Florida a 'D'

**KEVIN O'HORAN**  
Herald Staff Writer

**BRADENTON** — Florida merits only a D grade for its efforts to contain pollution from agricultural runoff, stormwater and other "nonpoint" sources, according to a report released Wednesday by two environmental groups.

The report, Mission Possible II, blasts the state for not doing more to keep pesticides, fertilizers, oil, solvents and more from spilling off fields and roads and into bays, rivers and lakes.

"If factories released as much pollution as industrial agriculture, forestry and development, they might

have their permits revoked," said Jacqueline Savitz, executive director of Coast Alliance, a report author. "Yet discharges from these nonpoint sources remain essentially unregulated."

Coast Alliance, a nonprofit organization based in Washington, D.C., reviewed efforts to control the runoff pollution in Florida, Ohio, Massachusetts and Delaware. Only the Sunshine State's grade slid in below average.

The report, dismissed by state leaders as lacking scientific footing, looked at whether states meet the

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**FLORIDA TO 13A**

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## **FLORIDA FROM 1A**

goals of the 1990 Coastal Non-point Pollution Control Program. The federal act directed states to reel in pollution from sources other than factories, businesses and other readily identifiable targets.

Coast Alliance issued two previous reports looking at the issue — including Mission Possible in 2000 — but didn't review Florida. This go-round, they argued state leaders had not done enough.

Specifically, they contended the state lags in efforts to control runoff from farms and cities, doesn't prevent erosion from forestry operations and does too little to protect wetlands.

"We think our state deserves the grade it got," said Glenn Compton, chairman of the local watchdog group

ManaSota-88. "We're just really far behind in trying to address runoff issues."

"The state of Florida severely underfunds its Department of Environmental Protection, and their hands (at DEP) are tied when it comes to enforcement."

DEP officials offered a different take.

"Who is Coast Alliance?" asked Lucia Ross, a department spokeswoman. "They are not a scientific organization. They are just groups of individuals and environmentalists who have gotten together and have thrown out this arbitrary grade of a D, with no evidence, no scientific backup."

Ross conceded some problems highlighted in the report, such as containing pollution from nonpoint sources. But, she added, DEP leaders continue to work on

those issues.

"Many waters do remain impaired," Ross said, "which is why DEP put forth an impaired waters rule, which was deemed acceptable by the National Academy of Sciences."

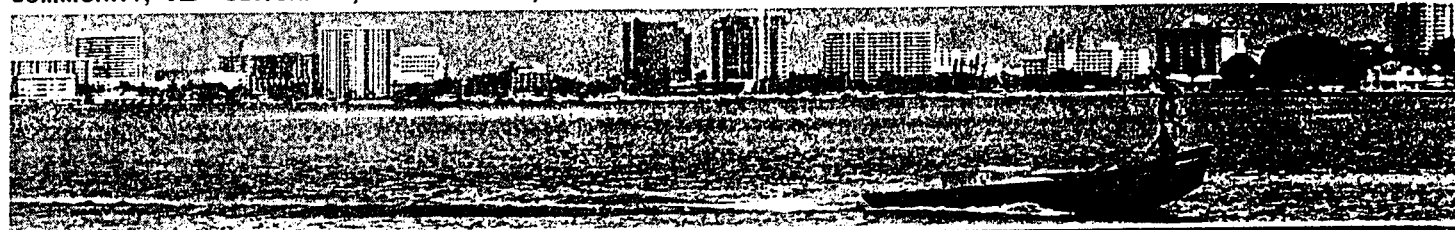
"We're getting there little by little, every day. And we can say that here at DEP, we can say that with some authority because we have science on our side."

Small consolation, Compton said.

"Mission Possible II shows that the state needs to do more or our water quality problems will continue," he said. "There needs to be more of a priority than it has been on the part of DEP."

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**Kevin O'Horan**, environmental and business reporter, can be reached at 745-7000, or at [khoran@bradentonherald.com](mailto:khoran@bradentonherald.com).



## Community

### Losings

### idents Day

TA COUNTY — City offices, schools, post offices, institutions and businesses will be closed today for Day.

and community will be closed. A County Area will operate.

y of Sarasota and county, pickup of recyclables will be.

and recyclables at Key will be today instead of

Ridge Landfill on Monday, administrative will be closed.

### y offers free children

TA — The Academy of American Culture books to children at its culture

giveaways are

# Report cites concerns over sludge

The EPA can't ensure that humans are safe from recycled waste, but has cut money and staff.

STAFF REPORT

DESOTO COUNTY — Just as officials here are backing off efforts to ban sludge, a federal investigation has found that the stew of recycled human waste may be more dangerous than previously thought.

The inspector general of the Environmental Protection Agency says the government can't ensure that humans are safe from the

viruses, bacteria and toxins contained in sludge.

And despite growing safety worries, the EPA has cut money, staff and oversight since allowing sludge to be used as fertilizer in the 1990s, the investigation found.

"The agency can neither investigate nor keep track of all of the complaints of adverse health effects that are reported," the internal watchdog wrote in a draft report obtained by The Associated Press.

"There are indications that more research is needed on risks to human health from

PLEASE SEE RISKS ON 2B



FILE PHOTO / ROD MILLINGTON / rod.millington@heraldtribune.com

Mari Hollingsworth and her son V.C. Hollingsworth IV, 11, are fighting the dumping of untreated waste sludge in fields near homeowners.

## Sarasota gets a bronze



## Smaller counties guarding water

The less populous areas are looking to protect



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# Federal report cites concern that sludge poses health risk

## RISKS FROM 1B

pathogens in sludge," the draft states.

More than 4 million tons of recycled wastewater sewage are spread on rural and suburban properties across America each year.

In Florida, much of the state's sludge ends up in DeSoto County, where it is used as fertilizer for citrus crops and cattle fields. After years of complaints from residents that the sludge was making them sick and polluting the area, including pristine Horse Creek, the county last year banned the least-treated sludge, known as Class B.

But the main sludge hauler in the county, Azurix — a subsidiary of Enron — sued, claiming the ban usurped federal laws allowing sludge. A federal judge agreed and overturned the ban.

Azurix and the county are trying to work out a settlement agreement. The two sides are scheduled to meet Monday to discuss terms of the settlement.

The agreement would allow sludge, but regulate it. Currently DeSoto has no laws regulating sludge.

Former DeSoto County resident Mari Hollingsworth said the EPA report verifies what she already knows — that sludge is dangerous. Two of Hollingsworth's children were

hospitalized after sludge was dumped near her DeSoto County home, and she has been fighting to ban sludge in DeSoto ever since.

"I think people are finally starting to realize what's going on, especially the EPA," said Hollingsworth, who now lives in Charlotte County. "It's time to stop pointing fingers and figure out what to do about sludge. I don't want other families to have to go through what me and my kids lived through."

The EPA has asked the National Research Council, a panel of distinguished scientists, to study any possible health concerns related to sludge recycling, but has no evidence it is unsafe.

"We have thousands of workers in sewage treatment plants and handling biosolids all the time, every day. We have tens of thousands, if not hundreds of thousands, handling raw manure. There is no evidence these people are any sicker than the general population," said Mike Cook, the EPA's director of wastewater and management.

With tougher clean water and air rules and declining land-fill space, during the 1990s the government approved the use of sludge as fertilizer on fields. It is most commonly spread on rural and suburban properties, especially farms.

There are two forms of sludge — the less common is so heavily treated that it is not believed to contain any detectable poisons. The other and more common recycled sludge is treated but still contains bacteria, viruses, toxins and parasites.

The harmful substances can include salmonella, typhoid, dysentery, hepatitis, rotaviruses and tapeworms.

Sarasota, Manatee and Charlotte counties combined produce more than 6,000 tons of this minimally treated sludge a year. Sarasota sends most of its sludge to DeSoto. Manatee had been sending its sludge there until November, when it began disposing of it in Manatee. Charlotte dumps its sludge on a farm that straddles the Charlotte-DeSoto county line.

The inspector general report comes amid growing concerns among some states, communities and federal scientists that using sludge as fertilizer may not be as safe as thought.

Those concerns have prompted several counties in California, Florida and Virginia and more than 60 towns in Maine, Massachusetts, New Hampshire and Pennsylvania to place restrictions or bans on sludge recycling.

Staff writer Scott Carroll and The Associated Press contributed to this report.

## Less populous counties seek to protect water

### DISPUTE FROM 1B

approval by the Florida Legislature.

But it could put the district, which controls water resources across a diverse, 16-county

ber Greg Reynolds of Highlands County. "I feel very strongly about this."

Charlotte County's representative on the panel, Rufus Lazzell of Punta Gorda, didn't object, saying, "We're all here to

## Ecstasy cache seized

By MORGHAN MARTELL

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CHARLOTTE COUNTY

# Phosphate project turns sour

Polk County's promising Tenoroc preserve has fallen victim to toxic compounds and metals

**KEVIN O'HORAN**  
Herald Staff Writer

**AUBURNDAL** — It has been widely hailed as a success story, a sterling effort that two decades ago reclaimed strip-mined phosphate lands and converted them to a state preserve attracting thousands each year.

In reality, Tenoroc Fish

Management Area in Polk County may be closer to a horror story, the land tainted by high levels of radioactive compounds and health-threatening metals like arsenic and lead, according to a federal study.

"The park employees are very aware of it," said Danon Moxley, Tenoroc manager. "Just like anyone who looks at the report, obviously there is some

concern on their end and mine. I work out here, too."

That report, a draft version penned a year ago by the U.S. Environmental Protection Agency, notes a host of potentially toxic compounds found throughout the park in concentrations noted as "elevated" and of "concern." And officials believe the findings warrant a closer look at current and former mine sites across the state.

Though stopping short of labeling Tenoroc a danger, the 57-page report calls for a deeper investigation of the

risks workers, visitors and residents face from a slate of dangerous chemicals found in soil, sediment and water at the site.

One of those chemicals — radium-226 — was detected in soil and groundwater at levels up to 25 times higher than the EPA guideline used to gauge the cancer risk at Superfund sites.

Also found at the site were heavy metals like arsenic, cadmium,

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**PHOSPHATE TO 16A**

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## PHOSPHATE FROM 1A

chromium, nickel, selenium and zinc, in concentrations at least three times that in nearby untainted areas.

While Moxley said the areas in question are limited, and either off-limits to or not easily accessible to visitors, the findings raised eyebrows outside the park.

"At Tenoroc, there are significant health concerns," said Glenn Compton, chairman of ManaSota-88, a watchdog group founded in Manatee County.

Those concerns may extend beyond Tenoroc, he added, since the chemicals may move from water on the site into creeks and rivers or even into the groundwater tapped just four miles away for Auburndale's drinking supply.

Compton has called for EPA, or Florida's environmental or wildlife agencies, to conduct an in-depth study of the Tenoroc tract.

And the draft EPA report echoes that call. It just downplays the dangers for the 20,000 who visit the park each year or the 60,000-plus people who live within four miles of Tenoroc.

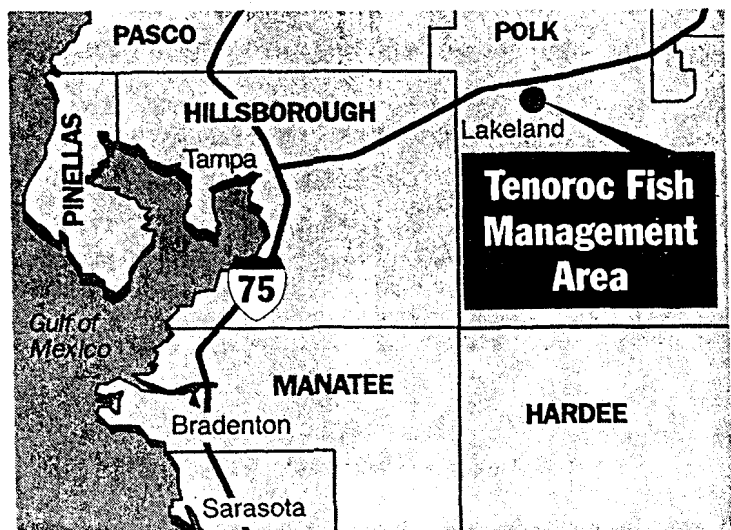
"We feel pretty comfortable that we're so far below (safety) thresholds on recreation use that it would be OK," said Brad Jackson, an EPA project manager. "It's just that we're so close to the industrial (use) threshold, and for the residential threshold, we're above it."

Those concerns prompted Jackson to call for the deeper study, a study EPA then would use as a framework for reviewing other phosphate-related sites in Florida.

Those sites include areas like the abandoned Piney Point phosphate plant in Manatee County, but also include 13 parks, camps and fishing areas, as well as a half-dozen golf courses.

None of the recreation sites is in Manatee County, but mining operations and proposals such as Wingate Creek, Four Corners, Ona and Pine Level — all partially or wholly in the county — often contain recreation as a potential future land use.

"Because of the large number and the scope of the sites," Jackson said, "we're working



MERRY ECCLES/The Herald

on a regional guidance to make sure we do these projects consistently."

Tenoroc, a 6,000-acre sprawl of scrub and prairie nestled between Lakeland, Polk City and Auburndale, likely would serve as a solid frame there. The land had been mined for decades for its rich reserves of phosphate ore, used to make fertilizer products.

By the late 1970s, those reserves had dwindled, mining had slowed and reclamation of the mining pits, clay settling ponds, separating areas and more had neared an end.

In 1982, Borden Chemical Corp. officials donated the land to state leaders, who set it up as a state park. The Tenoroc label came as homage to the first company to mine the land, flipping around Coronet Fertilizer Co.

A decade later, the park became a fish management area, after Florida's natural resources and environmental protection agencies merged. Today, the Florida Fish and Wildlife Conservation Commission oversees Tenoroc.

A staff of 10 — including two who live on Tenoroc grounds — keeps the site open and ready for the streams of visitors who come to test their angling skills in five fishing pits stocked with largemouth bass and other sport fish, Moxley said.

But no one had tested the fish for poisoning — at least, not for the record, according to the EPA report. And precious little testing has been done of the grounds and waters.

The few reliable tests at

Tenoroc came as part of EPA's preliminary site investigation. The roughly three dozen samples gathered for that study contained a slew of metals, pesticides, solvents and radioactive compounds.

Most fell well below state or federal standards for protecting visitors who may spend a day or even a week at Tenoroc, Jackson noted. But for workers, especially those who live on the grounds, the danger escalates.

"That's where we sort of get into a gray area," Jackson said. "We can't really answer one way or another, based on the data we have now."

Which means going back to Tenoroc to get more data — more locations, more samples, more testing, more risk studies.

The decision on whether to go back, though, likely won't come for a while. Jackson continues to work with higher-ranking officials at EPA and in a number of states, putting together a framework for phosphate site investigations.

"We can't really go any further in saying where we're heading or what we're leaning toward," he said. "That's something they've got to decide."

"Hopefully, it will be worked out in the next few months."

**Kevin O'Horan**, environmental and higher education reporter, can be reached at 745-7037, or at [khoran@bradentonherald.com](mailto:khoran@bradentonherald.com).

# Schooner battered by financial storm

A sailing science lab for Sarasota County students is forced to leave Sunday.

By AMY DICKINSON  
STAFF WRITER

A 72-foot sailing science lab for Sarasota County students will be leaving before the end of the month because of money problems and because it can't find permanent dock space.

Aquarian Quest's schooner was supposed to move south to Venice and continue hosting field trips through April. But the nonprofit group says it has been forced to leave Feb. 24.

"We've accomplished pretty much everything that we've wanted to; it's just that it's going to be a lot shorter than we've hoped," said Joe Jacobson, who helped create Aquarian Quest. "There were a lot of groups scheduled for March

and April that won't be able to participate."

Aquarian Quest needs about \$20,000 now to continue paying its lease on the schooner. Without a place to dock the schooner, and without vital funds to keep the program afloat, Aquarian Quest has no choice but to discontinue the program until fall, Jacobson said.

Over the past month, hundreds of students from Sarasota schools paid \$18 each to sail on the schooner and learn about aquatic life and navigation through hands-on activities.

The school district worked with Aquarian Quest to develop a field trip that would complement classroom lessons. Now, the boat will be moved back to its home port in Destin.

Aquarian Quest had hoped to dock at Marina Jack near downtown Sarasota.

"It came down to one place that's most suitable and easiest to get to — that is Marina Jack," Jacobson said.

However, in order to dock there, the group needed a special permit that could take months to obtain.

Aquarian Quest officials are still seeking sponsors to donate dock space and money to keep the boat open for field trips.

For more information, call 586-3223.

# City officials protect watershed resources

Development on the rural land surrounding the river concerns local government authorities

**TIM W. McCANN**  
Herald Staff Writer

**BRADENTON** — Protecting the drinking water supply for years to come remains a top priority with Bradenton officials.

City officials plan to monitor development on the 59-square-mile Braden River Watershed, the largely rural area in Manatee and

## INSIDE

■ One more vote will clear path for outdoor drinking in downtown Bradenton **5C**

Sarasota counties surrounding the river.

Described as gently sloping terrain with a high potential for runoff, city officials say they have seen less stormwater flow into the watershed during the past several years. That could be a result of retention ponds built as a state requirement to reduce direct

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**WATERSHED TO 5C**

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## **WATERSHED** FROM 1C

discharge from developments into the Braden River. But the ponds also collect stormwater headed for the river.

In a presentation to City Council members Wednesday, Larry Frey, assistant planning director, and Seth Kohn, who oversees environmental issues for the public works department, described challenges and goals in monitoring the city's drinking water.

Although Planning Director Jerry West credited Manatee County staff for keeping the city informed on various issues regarding the watershed, he added that "there's been so much development, we thought it would be a good idea to check and see if the reservoir is protected the best it can be."

Challenges include maintaining the quality and quantity of the water supply. West estimated new developments on the watershed use nearly 6 million gallons of water per day from retention ponds for irrigation — water that, theoretically, would eventually seep through soil and into the river.

Officials hope to address non-compliance with development orders, evaluate standards to identify weak measures and replace them with stringent ones, and more.

"To me if there ever was an issue that doesn't have jurisdictional boundaries, it's potable water," Councilman James Golden said.

Mayor Wayne Poston said he believes this to be the first time the city has designated officials to monitor the Braden River Watershed. The land covers the area from the Bill Evers Reservoir dam upstream through southwestern Manatee County.

The city's monitoring plans go a step beyond a cooperative agreement it expects to enter with Manatee and Sarasota counties and the Southwest Florida Water Management District for a watershed management program. Bradenton council members endorsed the city's participation in the program, which the water district expects to consider Feb. 26.

The program consists of field surveys, floodplain analysis, surface water assessment, a watershed evaluation and management plan, and recommendations for best practices regarding water resources.

The four entities through this year and next expect to share the roughly \$1 million cost of the project, with the

water district paying up to \$484,500. The city expects to pay \$50,000 this year and \$90,200 next year for a total of

\$140,200. Manatee County is kicking in \$178,300 and Sarasota County expects to pay \$66,000.

# Tampa Bay sees invading mussels

KEVIN HORAN  
Herald Staff Writer

**TAMPA BAY** — A dollop of butter, a smattering of garlic and a splash of wine may prove the most useful tools in controlling Florida's latest invaders.

Collecting green mussels for the dinner table may wind up as the best way to rein in an exotic species that already fouls the waters from Tampa Bay to Charlotte Harbor, according to University of Florida scientists.

"Since green mussels appear to be spreading rapidly," said John Stevely, a marine extension agent with the school's Sea Grant program, "allowing commercial harvest would help control their abundance in local waters and generate some additional income



UNIVERSITY OF FLORIDA

Patrick Baker of the University of Florida collects green mussels from the Gandy Bridge in Tampa Bay.

for Florida's commercial fishing industry."

Researchers want to make sure the green mussel doesn't become the latest in a long line of exotic species befouling Florida. Cooking the clam cousins, they say, could be the quickest and cheapest way to keep the nuisance critters in check.

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**MUSSELS TO 11A**



## MUSSELS FROM 1A

Already, green mussels have flourished in the Sun-coast's warm waters, uninvited guests that have taken root much like their zebra mussel cousins did in the country's cooler climes a decade ago before spreading out.

Zebra mussels first appeared in the United States a little more than a decade ago, arriving in ballast water or clinging to ships. They now flourish from the Great Lakes to New Orleans, officials say, clinging to piers, pipes and more.

Unchecked, green mussels likely would follow that lead and spread the family around Florida, researchers say.

Scientists have kicked off a \$447,000 study of the state's latest invaders, native to the Indian Ocean-Pacific Ocean region but already with a firm foothold in the Caribbean Sea.

Early in the research effort, much like the early

stages of the bivalve invasion, scientists say they already see ample evidence that green mussels may prove difficult to combat.

The invaders seem unfazed by the flatworms, snails and crabs that prey upon local mussel populations, said Patrick Baker, an assistant professor with the university's Institute of Food and Agricultural Sciences.

And, though the green mussels can grow to more than 3 inches long, they have shown ample ability to pile up on most any place they can put a foot down, especially on the crab traps and clam bags used by bivalve harvesters.

"It's not uncommon to find 1,000 adult green mussels per square foot," Baker said.

Which has some scientists eager to turn the tables. If the green mussels stack up on the harvesters, they reason, send the stacks to the stove, the fate of many a green mussel in Asian countries.

Getting to that stage here will require clearing some

hurdles. Researchers still have to show that the green mussels don't pack up poisons or parasites floating through the waters, which would make them unsafe to eat.

They'll have to show that harvesting doesn't give the greens a leg up on local species or the clam industry. They'll have to educate would-be consumers on the greens, easily confused with green-lipped mussels from New Zealand.

And they'll have to get a go-ahead from state regulators, of course.

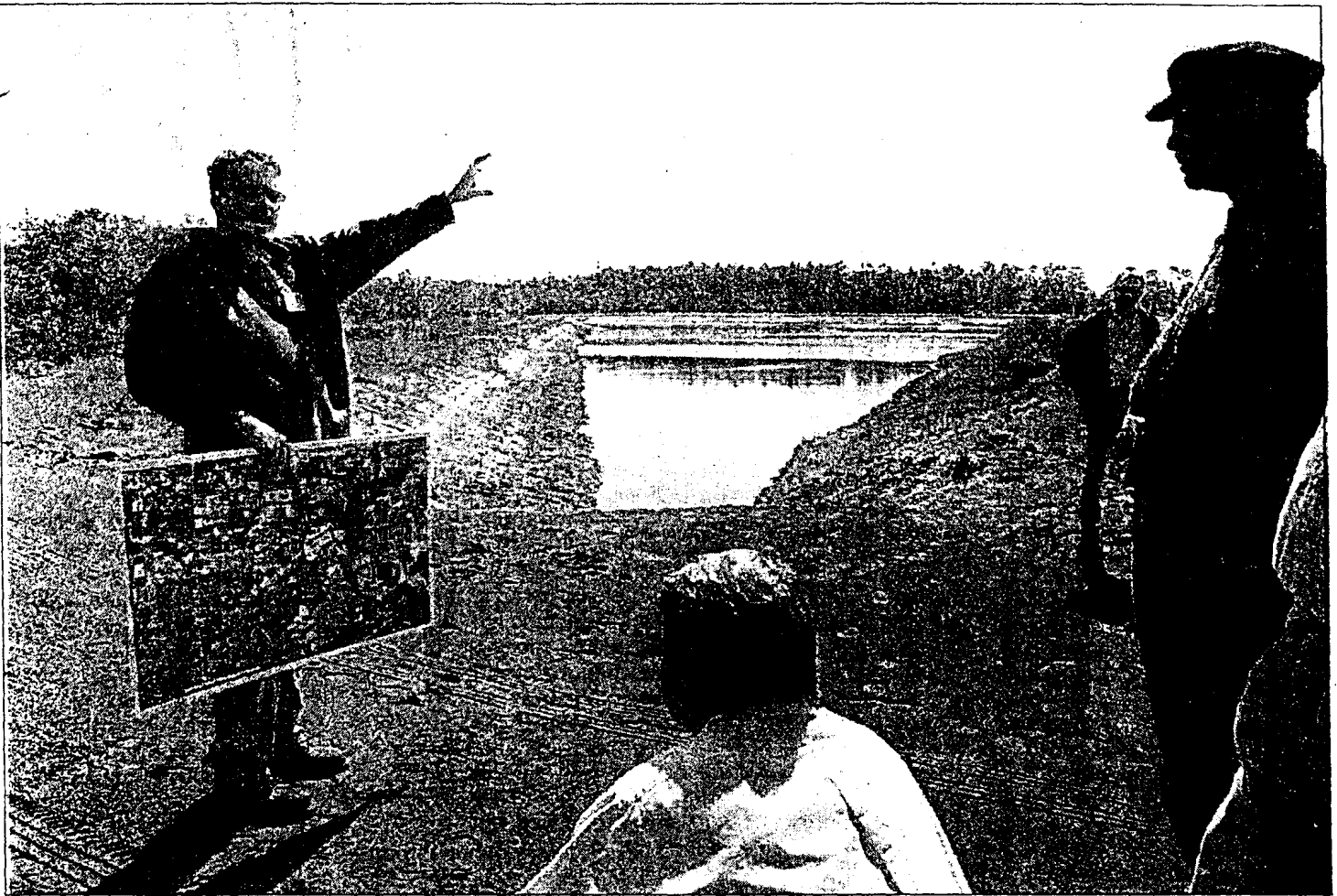
In the meantime, the almost-appetizers continue to stack up around Tampa Bay, a harvest-in-waiting or a nightmarish invasion in the making.

"It's too early to say how much of a problem the green mussels will become in Florida," Baker said.

"However, the mussels are already quite abundant, covering pilings on bridges, fouling water intakes at power plants and interfering with clam production."



## EXPERIMENTAL RECYCLING SYSTEM



STAFF PHOTO / THOMAS BENDER / thomas.bender@heraldtribune.com

Brian Armstrong points to a reservoir that is part of an elaborate water recycling system that is being tested on John Falkner's farm.

# Project is good news for swamp

By VICTOR HULL

victor.hull@heraldtribune.com

**MANATEE COUNTY** — With laser-guided precision, tractors level the gray, sandy earth at Classie Farms, part of the routine preparations for another spring vegetable crop.

But this spring is hardly routine for Classie Farms, a 9,230-acre agricultural operation southeast of Bradenton.

Besides the normal crops of tomatoes, cucumbers and peppers, the family-owned farm will also produce the first results from an experimental \$4 million recycling system for irrigation water.

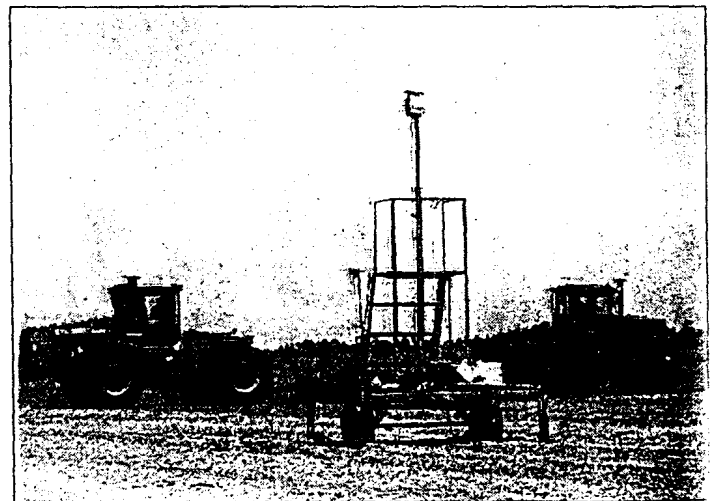
The system could help save a vital wetland, revolutionize farming practices across the region and relieve stress on Southwest Florida's critical ground water supplies.

"This is the future," said E.D. "Sonny" Vergara, executive director of the Southwest Florida Water Management District, after he inspected the system Friday.

Vergara and other water managers say the system will be expanded to other farms if it proves successful.

It has two potentially far-reaching benefits. First, it

PLEASE SEE FARMS ON 8B



A laser, center, sends a beam to graders leveling the earth at John Falkner's Classie Farms in southeastern Manatee County.

# sota

COMMUNITY, 6B OBITUARIES, 8B WEATHER, 10B

A family outing down the Myakka River  
STAFF PHOTO / BERT CASS



BUNE / WEDNESDAY, FEBRUARY 13, 2002

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## State judge rules that net ban is unconstitutional

The judge says the 1994 ban violates rights of commercial fishermen who proposed a new net.

THE ASSOCIATED PRESS

TALLAHASSEE — A state judge has ruled a regulation implementing the 1994 net fishing ban violates the constitutional rights of commercial fishermen who have proposed a new kind of net.

Circuit Judge N. Sander Sauls said the ban is too broad.

"It is well settled that the right

to a means of livelihood is a fundamental right and while it may be subject to proper and reasonable exercise of governmental power it may not be completely taken away," Sauls wrote.

Voters seven years ago approved a constitutional amendment outlawing gill nets — meshes that snare fish by the gills — from state waters, which extend nine miles off the

Gulf Coast and three miles off the Atlantic coast.

The amendment also bars any kind of net bigger than 500 square feet in inshore and near-shore waters, which stretch three miles into the Gulf and one mile into the Atlantic.

To enforce the constitutional ban on gill nets, state fisheries regulators said a gill net was any net that had a mesh size greater than 2 inches.

That was the provision challenged by Panacea fishermen and bait-shop owner Ronald

Crum. Sauls agreed with Crum that gill nets cannot be defined without considering how they are used and how much of the haul they produced is actually caught by being entangled in the nets.

Crum said the ruling would help fishermen who aren't able to handle hand-tossed nets, which are allowed under the amendment, including older fishermen, women and fishermen with physical disabilities.

"It's a great victory for people who have a lot of limita-

tions," he said.

But a lawyer for the Florida Fish and Wildlife Conservation Commission said that Sauls' ruling wipes out half of the amendment.

"He's given them license to use gill nets as long as they're under 500 feet," said Jonathan Glogau, an assistant attorney general representing the wildlife board.

Glogau filed a notice of appeal Tuesday, which means that the effect of Sauls' ruling is stayed.

# Manatee officials eye mine's water-use permit

**KEVIN HORAN**  
Herald Staff Writer

**BRADENTON** — An idled phosphate strip mine in eastern Manatee County may help satisfy the area's growing thirst.

County officials are considering buying the Wingate Creek mine, once held by the now-defunct Mulberry Corp. chain, to gain control of the water-use permit for the property.

"These are the kinds of things we have to explore," said Pat Glass, a county commissioner, "and we are exploring them."

They'll need to explore quickly and finance fast. The sprawl of scrub and prairie lands that make up the mining site will head to a public auction likely within two months, creditors say, part of foreclosure actions on Mulberry debts.

The former phosphate player walked away from its financial obligations in February 2001 when company leaders said they lacked money to run the 3,100-acre mine, two phosphate plants — including the Piney Point site — and other operations.

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**MINE TO 5C**

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## MINE FROM 1C

That left officials with Credit Agricole Indosuez, a French financing firm, looking for a buyer, and likely looking in the range of the \$10 million to \$12 million price county officials shelled out in 1988 for a similar-sized mine near Lake Manatee.

Ponying up the cash then helped protect the county's main drinking water supply by limiting activity around the lake. A deal now likely would have that goal, too, but also would give the county first crack at up to 6.4 million gallons each day of drinkable water.

Nu-Gulf Industries Inc., a subsidiary of Mulberry, held a permit from the Southwest Florida Water Management District to pump that much water daily from a local aquifer — the equivalent of a slow-moving, underground river.

Mining crews used the water to blast phosphate ore loose from a mixture of sand, clay and rocks scraped from Wingate Creek site.

But county leaders say the aquifer the company tapped into for financial gain is the same source they use to help supply water to hundreds of thousands of county residents and the area's array of businesses and industries.

With more people and companies flowing into the area every year, county officials see the Nu-Gulf water as a way to meet growing demands.

"We believe that there continues to be capacity in that

"With all the water there, that's nothing to sneeze at, nothing to overlook."

**Pat Glass**

*county commissioner*

aquifer for public supply, and we continue to be interested," said Charlie Hunsicker, Manatee County's ecosystems administrator.

Interest alone may not get the land or water, though. Water district leaders say they can't shift the water-pumping permit into Manatee's name unless the county buys the land and local leaders show the need for the water.

The latter of which should prove little problem to prove.

"In all likelihood, they could probably demonstrate (the county will have) a need in the next 10 years," said Scott Laidlaw, water use regulation manager for the district's Sarasota field office.

County crews also will have to demonstrate to the county commissioners the value of spending millions on the mine. But the chance to tap the Nu-Gulf water and address a growing need, along with adding another layer of protection, may prove too good to pass.

"That land offers real potential," Glass said. "With all the water there, that's nothing to sneeze at, nothing to overlook."

# Aquarian Quest is leaving Sarasota

## LACK OF DOCK SPACE AND PERMITS CITED

BY BOB ARDREN

Aquarian Quest, the 72-foot schooner sailed to Sarasota to teach environmental lessons to school children and give them experience of being "under sail," is leaving.

But it hopes to be back. And although a majority of the city commissioners said Monday they hope that is true, clearly not everyone in Sarasota joins in those dreams.

Joe Jacobson of the Aquarian Quest told the *Pelican Press*, "We'll be heading out," after city staff and the city commission announced Monday that no exception would be made for the boat to operate here without the permits specified by the city's zoning code.

Over the past two weeks, the boat has taken hundreds of Sarasota County school children aboard for sails on Sarasota Bay, but it could not find a home slip. Marina Jack allowed it to use a dock there a few times as did the Sarasota Sailing Squadron, but no permanent spot could be found.

Sarasota County government offered to install some pilings to allow the Aquarian Quest to tie up alongside the seawall in downtown Island Park, but the city ruled that couldn't be allowed without the proper permits. And those permits can take

months to obtain.

Meanwhile, owners of other charter boats at Marina Jack protested to the city commission Monday, claiming the Aquarian Quest was unfair competition. "It almost seems like two boats," Le Barge owner Winston Spurden said. "Educational and commercial. It seems inappropriate they're trying to skirt all the rules and regulations."

This came after Jacobson, supported by a half-dozen friends and members of his organization, came before the city commission and was told there is no room for his boat in Sarasota. All of the commissioners lauded his work on behalf of the environment, but said they had to "play by the rules," and wished him well.

Jacobson said later that his lease on the Daniel Webster Clements, a 47-passenger replica of a traditional gulf coast schooner, comes up for renewal Feb. 13 and he plans to return the boat to its north Florida owner by then. "I think the boat will be heading out," Jacobson concluded.

"Actually we accomplished a lot of our objectives in this pilot phase of the project and we hope to come back in October - and hopefully be able to find dock space."

# Preservation has price in Manatee

## Developers are tough to outrun, outbid

By ALEX NEWBERRY

[alex.newberry@heraldtribune.com](mailto:alex.newberry@heraldtribune.com)

MANATEE COUNTY — Manatee County is in a race with developers. Open lands and potential park spaces are fast disappearing beneath homes, offices and roads.

Along the Manatee River between Palmetto and Lake Manatee, more than 6,000 homes are planned for a 10-mile stretch of subdivisions.

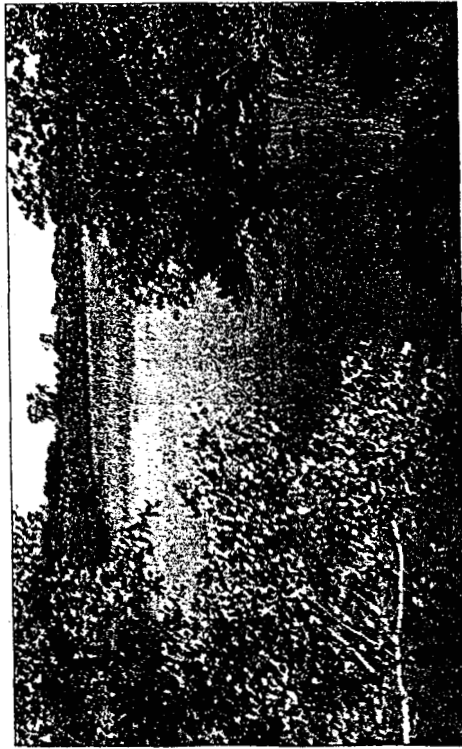
Standing out here now, the eyes relax and focus on nothing close. It's quiet, save for the rustling of saw palmetto fronds. Dark, moss-draped oaks dot the prairie. Nearby, it's wet under-

foot. A wall of tawny reeds presents an impenetrable wall to all but the winged or web-footed.

Subdivisions have recently sprung up with names like River Wilderness, Mossy Hammock and Flamingo Cay. They echo the county's rural heritage but bear little resemblance to what the land looked like before development.

While builders battle over the pristine acreage, the Environmental Lands Management and Acquisition Advisory Committee (ELMAC) is hoping to save some of the county's

PLEASE SEE ELMAC ON 10A



STAFF PHOTO / THOMAS BENDER / [thomas.bender@heraldtribune.com](mailto:thomas.bender@heraldtribune.com)

A Manatee County program is devoted to buying and preserving wetlands such as these along the Braden River east of Bradenton.

# Officials working to sell city treatment capacity

BY JACK GURNEY

A deal tentatively struck last summer is still on hold. It would allow Sarasota County to purchase up to 1.75 million gallons of daily sewage treatment from the City of Sarasota.

"It's not done, but we're getting closer," Bill Hallisey, the city's public works director, said. "We should have something ready for both commissions within the next 60 days."

The decision to pursue an interlocal agreement was endorsed by both the city and county commissions at a joint workshop meeting last summer.

A long-term agreement would support the county's \$104 million plan to replace 14,000 septic tanks with sewers in the Phillippi Creek drainage basin.

The opportunity to buy treatment would spare the county from constructing a new

plant for utility customers who live just outside the city's northern and eastern boundaries.

It could also provide between \$1.2 million and \$1.3 million a year for the city, which could be used to upgrade infrastructure and retire utility bond debts.

The consensus to sell the county treatment capacity did not come easily. Several city commissioners wanted to hold treatment capacity as an annexation bargaining chip. But former City Manager David Sollenberger convinced them that opportunities previously available to annex communities such as South Gate and Pinecraft were no longer realistic.

"We've been working on a method for calculation of service," Hallisey explained. "It will be a straight rate per 1,000 gallons of treatment, plus a fixed monthly fee for service."

The monthly fee would help the city

retire outstanding utility bonds and that portion of the debt already paid off by city customers through their monthly bills.

"Our 12th Street plant cost \$25 million to build," Hallisey said, "and the county would like to purchase 17 percent of its capacity. It would be a win-win deal for the city and county."

The term of such an interlocal agreement would probably be for 20 years with two 10-year extensions, subject to approval by both commissions. If such a deal fell through, the county would have to either build a new treatment plant or expand one of its existing plants at an estimated cost of more than \$8 million.

The second phase of the county's sewer program is scheduled to begin later this year and provide service to about 1,100 homes and businesses located west of Lockwood Ridge Road and south of DeSoto Road.

## HIGHLIGHTS

▼ Sarasota County would purchase up to 1.75 million gallons of treatment capacity a day.

▼ The City of Sarasota could realize between \$1.2 million and \$1.3 million a year.

▼ Utility officials were told last summer to work out details for an interlocal agreement.

About \$2 million is budgeted for the design work and \$10 million for construction. The figures are based on the county buying treatment capacity from the city.

If approved, the deal would also allow the county to provide treatment for the third phase of its sewer program in the South Gate and Pinecraft communities.

# Project on Central looks like love-in with the city

BY BOB ARDREN

Just last month the city was threatening Harvey Vengroff but now they appear to be the best of friends.

er clause in the contract selling him the previously city-owned site for his project.

Vice Mayor Mary Quillin and Commissioner Mary Anne Servian vote against the action.

business start-ups and operations," the press release said.

"Five to six new businesses will include the following: high tech and Internet communications; a long distance telephone

changes substantial enough to require another round of approvals and, in the meantime, Vengroff's building permit expired.

That triggered a hearing before the city commission very early on the morning of

# Shoreline variances lead to requests for seawalls

BY JACK GURNEY

Every time Sarasota County rubber stamps another variance that allows property owners to build near the shoreline, it further jeopardizes the public's right to walk along beaches.

About 4.5 miles of the county's coastline is currently lined with seawalls or rock revetments, many of which impede pedestrian access rights.

The number grows when property owners build new beachfront homes, or add to existing homes, then buy more county permits to build seawalls or rock revetments.

"It's a slow steamroller that the public is on the losing end of," County Commission Chairman Nora Patterson conceded. "We've built ourselves into this position."

Sarasota County is one of only two Florida coastal counties that has adopted a Gulf Beach Setback Line, which is supposed to prohibit construction close to the water's edge. Brevard County is the other.

The setback lines in Brevard and Sarasota were originally established by the state, but abandoned by the legislature in 1978 when it established a Coastal Construction Control Line to protect the environment.

Brevard and Sarasota counties legally adopted the former state lines and administer regulations that sell variances for

both residential construction and shoreline hardening structures such as seawalls and rock revetments.

"If property owners can't get local approval for shoreline hardening, the state will not contravene and issue permits for seawalls or rock revetments," Florida Beaches and Coastal Systems Administrator Gene Chalecki said.

"When counties adopt beach setback lines, there is an assumption the public must operate landward of them," he explained. "That's what setback lines are."

According to Chalecki, the state operates out of a different rulebook to protect dunes and shoreline vegetation when it issues permits for construction seaward of its Coastal Construction Control Line.

"Our standards do not prohibit construction," he said, "but the work must meet minimum standards. A new house must be built on pilings and properly elevated."

On Jan. 22, Patterson raised the issue of Sarasota County's policy of selling shoreline variances that inexorably lead to the construction of seawalls or rock revetments.

"Big, expensive structures are being built," she told the county commission, "then these property owners come back to us for hardening of the shoreline."

Patterson suggested that beachfront property owners should have to stipulate the risk is theirs when they apply for build-

ing permits, and that they waive eligibility for seawalls and rock revetments.

Assistant County Attorney Steve DeMarsh hastily cautioned Patterson that "circumstances change" along the shoreline and suggested it would be difficult to legally enforce such a stipulation.

The *Pelican Press* twice attempted to reach DeMarsh for an explanation of why such a stipulation couldn't be enforced by the county. He did not return the calls.

Public access to beaches is an issue the county commission must confront every time it considers another variance petition for either beachfront construction, seawalls or rock revetments.

Casey Key residents currently threatened by shoreline erosion near the island's midpoint may be next in line to request shoreline hardening variances.

Last year, when the county commission considered new rules to make beachfront property owners provide public access easements if they repair seawalls, many protested it would violate their privacy.

The commission backed off and softened the rules so that easements would only be required for expensive repairs that exceed 50 percent of a structure's value.

After giving away shoreline public access rights for many years, the county commission recently found a legal mechanism that allows it to reverse course and

## HIGHLIGHTS

▼ Beach erosion threatens expensive houses that are built near the water's edge.

▼ Owners flock to Sarasota County officials for permission to harden the shoreline.

▼ There are currently more than 4.5 miles of seawalls along the county's coast.

require public easements.

A historical legal concept called the Public Trust Doctrine addresses the "lateral beach access" issue and the public's right to walk unimpeded along shorelines. The right to walk "waterward of the mean high tide" stems from English common law. It has been adopted by Florida and 47 other states.

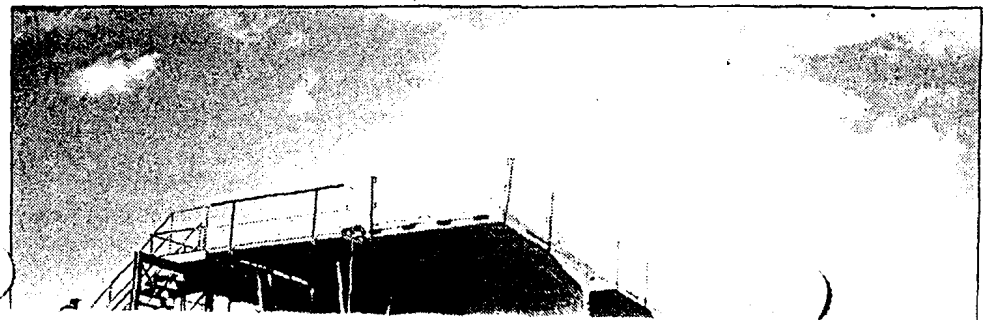
Assistant County Attorney Alan Roddy introduced the commission to the doctrine. As a result, property owners must provide public access easements when they receive county variances to build new seawalls or rock revetments.

Public access over seawalls or rock revetments adheres to state law, the county's comprehensive plan and the county's gulf beach setback ordinance.

## Work continuing at good speed on Ringling Bridge

BY GIL WA...

Then each pair of caissons was joined  
the water line by a platform 32 feet by 1...





# Second parcel of Grassy Point under contract

By Diana Bogan  
*Islander Reporter*

The city of Holmes Beach is ready to proceed to closing on a second parcel of Grassy Point. City Treasurer Rick Ashley confirmed that an 11-acre parcel north of the 22-acre core parcel purchased in October is under contract with the state.

If the purchase of the 11-acre parcel goes through, the city will own the land from Mike Norman Realty on East Bay Drive east to the water and north to the condominiums, said Ashley.

The Grassy Point acreage is pristine mangrove wetlands on the bayfront south of the Anna Maria Island Bridge and opposite Walgreens on East Bay Drive.



Florida Communities Trust has been handling the process of making offers to land owners and negotiating prices.

Holmes Beach lofted the project in 1998, the FCT approved Holmes Beach's application for \$847,917 in early 1999 and deadlines were extended repeatedly, partly because of problems within the process itself.

Jan. 27 is the final deadline for the grant and, according to Ashley, the city would need to reapply for grant money to pursue any remaining parcels. Therefore the 11-acre parcel under contract is likely the last parcel the city will purchase.

The city originally had an interest in a parcel beginning at 29th Street and running along the water, which Ashley said the city will not be able to obtain, as well as another small lot that has been under negotiation. Ashley admits "anything can happen" before the deadline, however. If the small lot still under negotiation doesn't come through, it will not affect the project as a whole.

Ashley said the core parcel that has already been purchased and the 11-acre parcel currently under contract are not easily accessible, which prohibits plans to develop it.



## Manatee official reels in outdoors award

HERALD STAFF REPORT

Charlie Hunsicker, a 25-year veteran of local government who now serves as the county's ecological systems administrator, was honored Saturday as the 2002 Manatee County Outdoorsperson of the Year.

Hunsicker received the prestigious Crosthwait Award during the 26th annual Florida Fishing College at the Manatee Convention and Civic Center.

The Herald organizes and sponsors both the College and the award, which recognizes individuals, groups or agencies who contribute to

### IN SPORTS

■ A whole page dedicated to the Florida Fishing College. **12D**



outdoor recreation activities with an emphasis on conservation or environmental issues.

A committee of previous Crosthwait winners and newspaper executives selects the annual winner.

Hunsicker's ability to secure

**AWARD TO 14A**



ALEX DIAZ/The Herald

Charlie Hunsicker, Manatee County's ecological systems administrator, is the Manatee County Outdoorsperson of the Year.

## **AWARD FROM 1A**

federal and state funds to purchase property for recreational use, such as the 22,000-acre Duette Park, the Emerson Point project and the Rye Wilderness Area, was cited as the determining factor, said Herald publisher Mac Tully.

"Two decades ago, there was a strong anti-hunting and recreational-fishing sentiment in the county, fighting any use or even access to lands being purchased for preservation and to protect the drinking water supply," Tully said. "From the start,

he showed that whatever uses for those lands would eventually be decided on, he was on the side of keeping them environmentally healthy.

"The bottom line is that many communities have large tracts of publicly owned lands. Thanks to Charlie Hunsicker, Manatee residents can use theirs while still preserving them in a near-natural state."

Hunsicker holds a bachelor's degree from Wisconsin and a master's degree from Florida State. He is married (Susan) with two daughters (Kate, 13, and Krista, 9).

His outdoor activities involve hiking and camping with his daughters, both as an Indian Guides leader and all over the state on family expeditions.

■ ■ ■

The Fishing College also awarded Bradenton dermatologist Jack Jawitz with an engraved plaque, thanking him for almost two decades of work conducting free skin cancer screening clinics for attendees.

"The College is all about helping anglers," Tully said. "There really can be no higher service than to save their lives. Dr. Jawitz has done that."

## **DISTRICT APPROVES FUNDS FOR LANDSCAPE EDUCATION PROGRAM**

The Southwest Florida Water Management District Governing Board has approved funding for the Sarasota County Florida Yards and Neighborhoods Program.

The program is a cooperatively funded effort between Sarasota County and the district's Manasota Basin Board.

Most counties where this program is held focus on educating homeowners. In Sarasota County, the program focuses on

educating homeowners, builders and developers.

The education programming is conducted through the Sarasota County Extension Service office in conjunction with the University of Florida Institute of Food and Agricultural Sciences. Program participants receive information and education about proper landscape design, installation, irrigation and maintenance to reduce water consumption and information on the

improper use of household pollutants such as pesticides and fertilizers.

Landscaping and irrigation accounts for 30 to 50 percent of water used by the average household. By learning to plant water-wise plants, residents can use 20 to 50 percent less water.

The project is expected to cost \$165,011. Sarasota County will receive up to \$80,661 in financial assistance from the district's Manasota Basin Board.

# State support for sewer project still high area priority

BY JACK GURNEY

By stubbornly refusing to take no for an answer, Sarasota County believes it will eventually secure state financial assistance for its \$104 million Phillippi Creek septic tank replacement project.

"We're asking for \$3 million this year," State Rep. Nancy Detert (R-Venice) said. "I feel the request will be better received than it previously was."

Detert, who is Sarasota County's delegation leader to this year's session of the Florida Legislature, knows exactly who she has to convince that the money is justified.

Florida Gov. Jeb Bush has twice vetoed grants that were approved by the legislature, most recently killing a \$500,000 allocation last spring. The reason he gave was that county residents who stand to benefit from the installation of central sewer service are affluent enough to pay for it themselves.

"I don't think many of Florida's laws are based on personal income. That's a poor litmus test," Detert said. "The reason given for that veto was a complete surprise."

The county has supplied local legislators with a list of priorities, such as \$3 million to pay the state's share of costs to run the courts, but central sewer system funds top the list.

"There are some affluent areas in the Phillippi Creek drainage basin," Bill Broughton, the county's legislative lobbyist, conceded, "but there also many two-bedroom, one-bathroom homes and mobile home parks."

To make the county's case, data that describes all the affected neighborhoods has been forwarded to the Florida Department of Environmental Protection.

## HIGHLIGHTS

▼ Florida Gov. Jeb Bush has twice vetoed grants to help pay for the Phillippi Creek sewer project.

▼ The county will install a \$104 million sewer system over the next 10 years.

▼ Congressional support is predicated on matching grants from the state.

"State Rep. Nancy Detert will be our point person," Broughton said. "State Sen. Lisa Carlton (R-Osprey) will help behind the scenes, but all the senators have agreed not to submit member projects this session."

While this could be a tough year to secure grants for local projects due to a tight economy, Detert believes that Bush might change his mind and look favorably on money for sewers.

During last year's special session to cut \$1 billion out of the state budget, Detert sponsored a bill to delay an intangibles tax break for 18 months and save \$130 million. Bush endorsed the tax cut delay, which was supported by moderate Republicans and most Democrats. Whether he pays back Detert for taking the lead on a politically divisive issue in her own party remains to be seen.

Detert refused to speculate on whether she holds a political chip that could be repaid by Bush. All that she would say is, "Sometimes it pays to be nice."

So far, the state's refusal to help with the county's septic tank replacement project has shifted the financial burden to 14,000 property owners who are directly affected.

Early projections by project

SEE PRIORITIES, PAGE 2A

Ed Windanc  
formed at A  
Sarasota Co  
of the even

statesman-like approach to politics" in Tallahassee this year in hopes of avoiding some of the extremely bitter feelings that marked the last two special sessions - even within the Republican party. "We're trying not to be so parochial when it comes to prioritizing - and that's tough to do," Carlton said.

"That's extremely tough because some things are really important back home."

Old Tallahassee hands have long

described the legislative sessions as "living on toothpicks," because of both the ever-available supplies of lobbyist-provided snacks - often on toothpicks - and the time pressures that require you to eat them if you're going to eat at all.

But this year all the hard choices, political dangers and chances of being down-right redistricted out of a job will probably make that "living on toothpicks" feel more like sleeping on a bed of nails.

## **PRIORITIES** FROM PAGE 1A

officials estimated that property owners would pay about \$5,000 of the more than \$9,000 it will cost to provide sewer service to each site.

If the state sits on the sidelines throughout the project, which is scheduled to unfold in phases over the next decade, the price tag for each owner could jump to about \$7,000.

Congressman Dan Miller (R-Bradenton) has twice come through with \$1.5 million federal grants to help buy down the cost of sewers for property owners. For the last two years, Congress has approved the funds through what is known as the VA/HUD/Independent Agencies Appropriations Bill.

There is a strong concern that Miller's influence will be sorely missed if he does not run for another term. He has suggested this will be his last year in Congress.

Since 1991, the county has been under a state order signed by late Florida Gov. Lawton Chiles and the cabinet to replace septic tanks that pollute surface waters.

State officials previously determined the county's comprehensive plan was out of compliance because it failed to adequately address the pollution caused by seepage from septic tank drainfields.

The county has pledged \$28 million from the local option 1 cent sales tax to help reduce the cost for septic tank owners who will receive sewer service.

In addition, the county has lobbied for \$18 million in federal funds and \$18 million in state funds to help lower the project's overall cost. The balance would be financed with low-interest state loans.

The county's project will break ground this year when pipes are laid west of Phillippi Creek, south of Bay and Bee Ridge roads and north of Proctor Road. A second phase will follow that provides sewer service for homes and businesses located west of Lockwood Ridge Road and south of DeSoto Road.

Some other county priorities for this year's legislative session include school and water concurrency rules, a registered nurse for each public school and cameras at major intersections to catch violators.

# Damaged trees may not survive dredging project

BY JACK GURNEY

Sarasota County employees are taking emergency measures to save a stand of old Phillippi Estate Park oak trees damaged by a nearby dredging project.

The threatened trees are located along the south bank of Phillippi Creek where dredged bottom soil has been piled on a corner of the mansion grounds.

Salt from the dredged bottom soil has drained through a system of protective barriers and soaked into the ground where the old oak trees are rooted.

"A number of the trees are stressed," Roger Rasbury, a county project manager, said. "This has occurred during the dredging. You can draw your own conclusions."

The damaged trees are being irrigated with fresh water every other day in an attempt to preserve them until the dredging project is completed sometime in March.

## HIGHLIGHTS

▼ Saltwater from dredged bottom soil has damaged old Phillippi Estate Park oak trees.

▼ The dredged bottom soil has been heaped up on the mansion's northeast grounds.

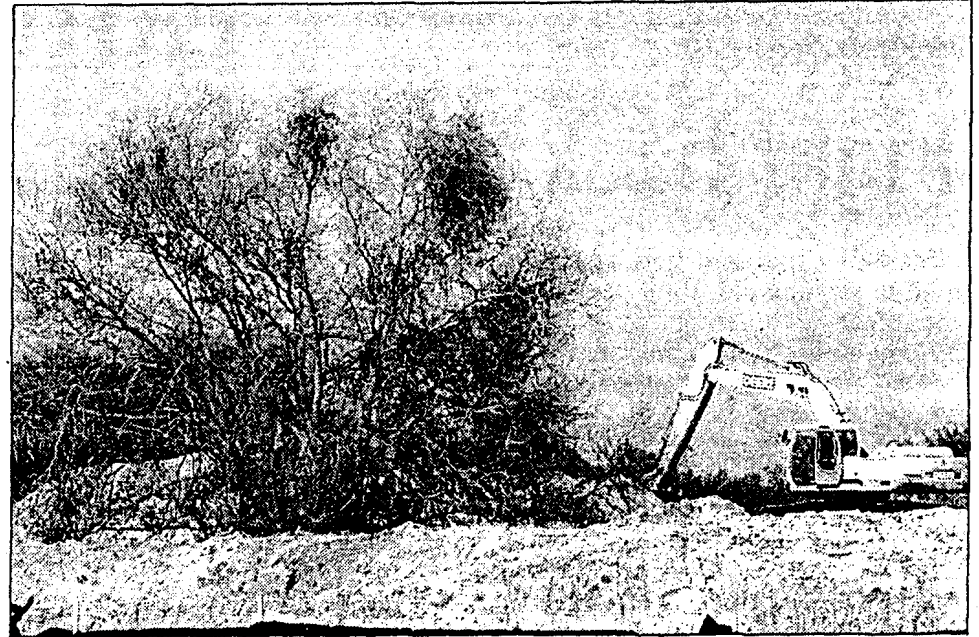
▼ A restoration program may be necessary when the dredging project is completed.

"We won't be able to determine for a couple of months whether these trees will survive," Rasbury said. "They certainly have been impacted."

Subaqueous Inc., a Fort Lauderdale dredging firm, is being paid \$1.2 million to dredge Phillippi Creek under a contract

▼ ROGER RASBURY, COUNTY PROJECT MANAGER

"We won't be able to determine for a couple of months whether these trees will survive. They certainly have been impacted."



REBECCA WILD BAXTER

Salt leeching from silt dredged from Phillippi Creek is killing oak trees in Phillippi Estate Park.

administered by the West Coast Inland Navigation District. The Navigation District is a regional agency headquartered in Venice that maintains the Gulf Intracoastal Waterway. Its authority extends to nearby waterways and coastal inlets.

"A mitigation plan may be undertaken when the dredging is completed," Rasbury said. "The county will look to the Navigation District if a restoration project is necessary."

John McCarthy, the county's parks and recreation manager, said the entire staging area could be upgraded when the dredging crew finishes its work and the dirt piles are removed.

"There was some rubble and debris left along the banks many years ago," he said, "probably when the state built a U.S. 41 bridge over Phillippi Creek."

The plan would remove debris, replant

creek's south bank.

"We might even build a wooden fishing platform just west of the bridge," McCarthy said. "A lot of people like to go fishing around that area."

The dredging crews have so far removed more than 20,000 cubic yards of bottom soil from Phillippi Creek. They will clear about 40,000 before the project is finished.

When the soil heaped up on the park grounds has dried, trucks either haul it to the county landfill or stockpile it for fill beneath new homes and road projects.

Oyster beds near the mouth of Phillippi Creek have been cleared by hand and relocated to several nearby sites along the waterway. They are being closely monitored.

The project will help improve navigation up and down the creek, plus provide flood control in low-lying neighborhoods by

# Midnight Pass question to go to state

**BY JACK GURNEY**

A Sarasota County delegation will meet with top-level state environmental officials in the next 60 days to discuss the realities of a Midnight Pass restoration project.

On Tuesday, the county commission unanimously accepted a Florida Department of Environmental Protection invitation to convene a "pre-permit" application meeting.

"They'll discuss issues the state would have with such a project," said Rob Patten, the county's environmental services director, "and tell us if there are any fatal flaws."

The commission's unanimous decision to accept the invitation brought a round of enthusiastic cheers from a pro-restoration audience in attendance.

"Closing Midnight Pass in 1983 was environmental vandalism," Eleanor Kahn, president of the Pelican Cove Environmental Club, said prior to the commission's vote.

"It created a null zone in Little Sarasota Bay that lowered its salinity, resulted in fecal contamination and caused serious environmental problems."

Patten told the commission three critical issues need to be resolved: 1) whether permits can be obtained; 2) whether a restored inlet would be stable; and 3) what a restored pass would cost to maintain.

"I've asked three coastal consultants what they would charge to provide this information," he said, "and received estimates of from \$125,000 to \$300,000."

Commissioner Shannon Staub suggested that a meeting with state environmental permitting officials would specifically identify what information the county needs to obtain.

"This would be a logical first step without spending a great deal of staff time and additional money," she said. "We'd be told



what information is required."

"That's similar thinking to mine," Patten said. "I've called the state's chief of beaches and shore systems. He asked to see a copy of our consultant's report."

In 2000, the county received a \$225,000 report with recommendations from Camp, Dresser and McKee, an engineering firm, that conducted a Midnight Pass restoration feasibility study.

The report concluded that a \$5.5 million restoration project was feasible, but suggested that some shoreline hardening would be necessary to keep it from migrating.

"I'm delighted," Commissioner Jon Thaxton said. "We need to get answers from the horse's mouth, rather than hire consultants who take sidetracks."

Commissioner David Mills made it clear he does not want any members of the county environmental staff who are opposed to restoration at the state meeting.

It was agreed that Commission Chairman Nora Patterson, County Administrator Jim Ley, Deputy Administrator David Bullock and Patten would lead the delegation.

"I'd also like to take the West Coast Inland Navigation District director [Chuck Listowski]," Patterson said. "He obtained permits to dredge Phillippi Creek when our staff indicated it wasn't possible." The commission agreed.

One of the issues that will have to be addressed with state officials is whether shoreline hardening will be necessary to prevent a restored pass from migrating.

Thaxton, who is not a restoration supporter, asked Patten, "Is there anything in the Camp, Dresser and McKee report that says Midnight Pass will stay open without hardening?"

When Patten answered no, Patterson quickly retorted that Thaxton's question was leading. "Is there anything that says it wouldn't stay open?" she asked. Again, Patten answered no.

It has been almost two years since Camp, Dresser and McKee submitted a massive report to the county that provides both historical analysis and conclusions.

The commission initially grappled with

**SEE PASS, PAGE 4A**

## al News

### **PASS** FROM PAGE 3A

the findings, then passed it off to the U.S. Army Corps of Engineers and a citizens Coastal Advisory Committee for reviews.

In 1990, the commission struck out in its only previous attempt to restore Midnight Pass when state environmental officials refused to issue dredging permits.

The Camp, Dresser and McKee report addresses many of the concerns raised by the state when permits for the previous restoration effort were refused.

It includes valuable new information provided by the Danish Hydraulic Institute and Mote Marine Laboratory, including a computer model of tides and currents.

Thaxton suggested that the county wasted five years when it didn't directly attempt to answer the state's objections and, instead, employed a consultant.

"I'm glad you're supportive of a meeting with the state that seeks to get permits," Mills chided Thaxton. "There is a great deal of information in the consultant's study that the state is looking for."

Also critical to any Midnight Pass project is the Army Corps, which has funds

for habitat restoration if it can be proved that previous dredging caused damage.

Because the Army Corps was the lead agency on the Gulf Intracoastal Waterway project, the county wants it to acknowledge that dredging may have destabilized the inlet.

On Oct. 17, the Army Corps, in a lengthy letter that sums up its review of the Camp, Dresser and McKee study, spelled out what the county must do to obtain federal assistance.

While the Army Corps listed a series of concerns about the report and conclusions, it also admitted that dredging may have impacted the inlet. The review acknowledged that a spoil deposit island created near Midnight Pass when the Gulf Intracoastal Waterway was dredged may have led to the inlet's demise.

While the Army Corps identifies the spoil deposit island as Bird Key, it is actually part of what is now recognized as the Jim Neville Marine Preserve.

"I don't think the Army Corps' review was negative," Patterson said, "because it inferred that the spoil island may have caused the closure. If we can move along the path to permitting, the Army Corps may provide funding."

# Water panel to set limits on pumping

By VICTOR HULL

Victor.hull@heraldtribune.com

BROOKSVILLE — Before the end of the year, Southwest Florida's water managers plan to try to solve one of the region's most complex, enduring and significant problems: excessive pumping of vital ground water supplies.

The Southwest Florida Water Management District voted unanimously Wednesday to set rules limiting how much water can be pumped from the stressed Floridan aquifer, the underground source of much of the water used for farm irrigation, industry and public supply.

Too much pumping is causing salt water from the coast to gradually seep inland, contaminating the freshwater aquifer that provides hundreds of millions of gallons of water daily.

At the same time, the water man-

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PLEASE SEE RULES ON 8A

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# Water managers to set rules on pumping from aquifer

## RULES FROM 1A

agers agreed to set new limits on how much water must remain in the upper Peace River and in 21 Central Florida lakes to keep the environment healthy.

The rules have potentially far-reaching impact for virtually every resident across an eight-county area, including Charlotte, Manatee and Sarasota counties, affecting the rates utility customers pay and where users, from private homeowners to big citrus growers, get their water.

They will also affect the health of a variety of natural resources, including wetlands, rivers, lakes and streams.

"This is a long journey," said Tom Dabney, a Sarasota County developer who is one of 11 members on the board that runs the district.

"Some people aren't going to be happy with us. But the fact is, we have to deal with the issue of saltwater intrusion and future supply."

The process is certain to be controversial, just as it was a decade ago, when the agency tried unsuccessfully to cut back ground water pumping.

Rules proposed in the mid-1990s provoked a legal fight

that dragged on for years and ended in a stalemate. Environmentalists sued to overturn the proposed regulations on the basis that they were too lax, while farmers, cities, counties and other users claimed they were too stringent.

District officials hope for better results this time.

Armed with scientific studies and the experiences of the previous failure, the agency's leaders said they're optimistic about their ability to craft rules that will protect the environment and ensure that enough water is available to meet Southwest Florida's growing demands.

They promised to work with water users and to consult extensively with the public through a series of workshops and public hearings.

Ronnie Duncan, chairman of the district's board, said he doesn't foresee a repeat of the bitter fights that marked the agency's previous effort to solve ground water overpumping. But he said he expects any rules adopted to be challenged in court.

"We're going to have to be creative," said Duncan. "If it means we've got to build more supply sources to maintain the environment, we're going to

have to do that."

District officials emphasized that they don't have answers yet to how the ground water problem will be solved. A tentative timetable calls for new rules to be proposed in March or April. After public debate, they could be adopted by fall.

At issue is water use in the Southern Water Use Caution Area, which includes Charlotte, Manatee, Sarasota, DeSoto, Hardee and Polk counties, and portions of Hillsborough and Highlands.

Scientists determined several years ago that too much pumping from the Floridan aquifer was causing saltwater contamination. The pumping has also deprived the Peace River and several lakes of water that used to keep their levels higher.

State law requires the district to set minimum flows needed to keep rivers and streams healthy, and minimum levels required to prevent damage to aquifers and lakes.

If pumping causes flows and levels to drop below the minimum allowed, a recovery plan must be adopted to fix the problem. The flows and levels have to be based on scientific studies, which must be reviewed by a panel of experts and can be legally challenged.

The district has issued permits allowing about 1.35 billion gallons of ground water pumping daily in the water caution

area. Officials estimate that's about twice as much as the aquifer can safely yield.

Actual use is substantially lower: about 700 million gallons a day.

Still, that's too much use to prevent saltwater intrusion.

Cutting back on ground water use will require the creation of substitute supplies such as recycling waste water and tapping surface sources such as rivers.

Duncan said the district will help pay for development of new supplies, just as it has spent tens of millions of dollars to help cities and counties around Tampa Bay reduce harmful ground water pumping by helping pay for construction of a new sea water desalination plant.

The district, which regulates water resources across a 16-county area, levies a property tax to help pay for new water supplies. It is helping pay for the expansion of a regional public water utility on the Peace River, as well as projects to help farmers recirculate their irrigation water.

"I think there's going to be a diverse set of strategies. There's no silver bullet," Duncan said. "But the probability of a solution is very, very strong." Others are more cautious. Mary Ann Gosa, a representative of the Florida Farm Bureau Federation, said there seems to be less acrimony than in the 1990s, but added, "I just don't have a feel for how it's going to end up."

## Seeking closure

*Inquiry on permit a logical step in Midnight Pass process*

**T**he Sarasota County Commission nudged the Midnight Pass debate toward closure Tuesday, voting to ask state regulators what it would take to obtain a permit to open a new pass.

The commissioners' decision represented a logical step in a long, complex process intended to produce adequate information about the costs and benefits of opening the pass or leaving it closed. But the move doesn't mean the county is, or should be, committed to opening the pass; there simply isn't enough information available to justify such a commitment.

When the county sought a permit to open the pass in 1991, state officials said "no." Their answer might still be the same but now, at least, the county has more information about the potential impacts of dredging a pass between Siesta and Casey keys.

Engineering consultants Camp, Dresser &

McKee recently studied the feasibility of re-opening the pass. Although the study has shortcomings — as pointed out by the U.S. Army Corps of Engineers, the local Coastal Advisory Committee and county staff — it enables the county and state regulators to ask and answer informed questions.

Among the questions that lack satisfactory answers: How could a pass be stabilized without structural reinforcement? What are the capital and maintenance costs of a pass project? Would opening the pass impose net gains or losses on the marine environment?

Commissioners and the public should recognize that, even if DEP says the project might qualify for a permit, the county would still have an obligation to assess the costs, liabilities and benefits of opening the pass. That assessment can't occur until the county hears, from the source, whether permitting is even a possibility.

# Study outlines land to protect

**NICK MASON**

Herald Staff Writer

**MANATEE** — More than 1,400 parcels in Manatee County are worth protecting as conservation land, based on a preliminary study by a consultant to the Manatee County Environmental Lands Management and Acquisition Committee.

URS Corp. of Tampa presented its six-month study showing there is plenty of environmentally sensitive property for county commissioners to consider buying out-

## INSIDE

■ Other events of the county commission. **3C**

right, buying only development rights, acquiring easements, imposing development restrictions or working with landowners to conserve.

"Most of the high-ranking lands are along the coast, along current water bodies and in the east and southern portions of the county," URS representative Debra Childs told commissioners.

Only 16 parcels not in conservation, including 15 lots in Palm Aire neighborhoods and a roughly 10-acre parcel near Lake Manatee, scored at the highest level worth protecting based on habitat rarity, habitat quality,

## LAND FROM 1C

water protection and proximity to existing conservation lands.

The second-highest grade was given to 1,387 parcels, and many of them could eventually become the focus of purchase and protection efforts similar to past projects known as Emerson Point Conservation Park on Snead Island, Duette Park, Crosley Estate along Sarasota Bay, Riverview Pointe in northwest Bradenton and the old Cortez schoolhouse.

"I think our journey is rooted in our past," Charlie Hunsicker, the county's ecosystems administrator, told commissioners. "Our future can be more of those things. It's our obligation to leverage money we have to continue to do it as we did in our past."

The study was being done last September when county commissioners endorsed the concept of asking voters to approve a special property tax dedicated to purchasing, maintaining and using environmentally sensitive lands. With the first round of prospects identified, commissioners are expected later this year to decide how much property tax would be levied and for how long and frame a question to be placed on the November general election ballot.

Commissioner Jonathan Bruce asked Tuesday whether Hunsicker and the environmental committee expect to identify specific properties

that might be purchased during a campaign to convince voters to approve the tax.

"To a much lesser degree than asking voters to trust us," Hunsicker said.

Hunsicker said some sites can be identified because property owners have approached the county about selling their property, but most potential sites should not be revealed to avoid speculators buying tracts and raising prices eventually charged the county government.

"I think we'll resist the temptation to identify all the ones we'll go after," he said.

Hunsicker and Arlene Sweeting, the environmental committee's chairwoman, received permission from commissioners to start a second phase of the study by contacting landowners, visiting the properties and evaluating their condition and potential worth as conserved land. But commissioners warned them not to make any commitments or raise hopes too high.

"Keep it light and informal," Chairwoman Amy Stein said.

# Island preserve grows by 11 acres

**CARL MARIO NUDI**  
Herald Staff Writer

**HOLMES BEACH** — The Holmes Beach City Commission approved a purchase agreement Tuesday for 11 acres adjoining the Grassy Point Preserve.

City Treasurer Rick Ashley told commissioners timing was important because the final day to spend the funds from a state grant to purchase the property is Sunday.

The 11-acre parcel is to the north of 24 acres already comprising the preserve, a stretch of land containing marsh grass and mangroves.

Roseate spoonbills and scores of other coastal wetlands species call the park home, which is south of Manatee Avenue, along East Bay Drive. City officials want to protect the area.

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**PRESERVE TO 4C**





## PRESERVE FROM 1C

from development and would like to add nature trails, boardwalks and educational signs.

The original 24 acres of the preserve was purchased in September after more than two years of planning and negotiations.

Because of a confidentiality clause to protect the negotiations, the purchase price of the property cannot be disclosed until all the papers have been signed, Ashley said.

Mayor Carol Whitmore reminded commissioners that approving the purchase of the property will require money from the city to implement the master plan.

"There are ongoing costs," Whitmore said, "but we have 10 years to complete the plan."

Local environmental groups say the acquisition of the property means a lot in the way of ensuring water quality in Anna Maria Sound and Sarasota Bay, and also affording the public nature-based recreation opportunities.

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**Carl Mario Nudi**, government reporter for Palmetto and the islands, can be reached at 745-7027 or at [cnudi@bradentonherald.com](mailto:cnudi@bradentonherald.com).



MERRY ECCLES/The Herald

# Opportunity docks

*Schooner's cargo includes dreams and knowledge*

**O**ppportunity docked Sunday at Marina Jack's in Sarasota, when the Daniel Webster Clements, a 72-foot wooden sailing ship, arrived from the Panhandle port of Destin. She brought to Southwest Florida an experience as different from personal watercraft or paddle-wheel dinner boats as one can imagine, but one that was routine for the pioneers who settled coastal towns.

Before there were paved streets and highways — and long before the Intracoastal Waterway — wooden schooners like the Clements traded up and down the coast. They transported passengers, pigs and produce from Cedar Key to Tampa to Key West, stopping off at any settlement with water sufficiently deep to float them.

The Clements' cargo is no less vital to the future of the coast. In addition to carrying passengers on sunset cruises, executive

retreats and other voyages, the Clements traffics in dreams and knowledge.

The schooner's operators contract with school districts to introduce the next generation of adults to the physics of sailing, the math of navigation and the biology of the life that swims beneath her planked hull.

The Aquarian Quest, a Sarasota-based nonprofit group dedicated to environmental education and advocacy, secured a grant from the Sarasota Bay Estuary Program to bring the Clements to Sarasota. Individual schools have held fund-raisers to afford the experience at no cost to the districts.

And if, during her voyage, the Clements picks up her skirts and glides before the wind with all sail billowing, the pupils will learn why a ship named Daniel is called a "she." They'll experience beauty and grace — in itself a worthwhile lesson.

# NAUTICAL CLASSROOM and navigational lessons for seaworthy students.

By CHRIS DAVIS

chris.davis@heraldtribune.com

SARASOTA — Fourth-grader Zach Deaterly knows his way around a sailboat.

But Thursday's class trip on the "Daniel Webster Clements" was something special.

The 72-foot sailboat is a replica of the schooners that plied Gulf coast waters in the late 1800s and carried the citrus and sugar crops to market. And, if being a floating history lesson weren't enough, the 53-foot deck is packed with navigational and environmental lessons that can't be taught in a classroom.

Zach's first lesson? "Plankton is really small."

"I've sailed out here in an 8-footer," the Pine View School for the Gifted student said, "but never in something that's 72 feet. I just find it fun."

Besides, Zach points out as an afterthought, "we got to miss a test at least."

If Aquarian Quest has its way, students from Tampa Bay to Charlotte Harbor will be missing classroom tests for hands-on lessons for years to come.

The nonprofit group rents the Daniel Webster and has formed a partnership with Sarasota schools, including Pine View, Booker High and Southside Elementary, to provide field trips through April. Organizers plan to have the boat back in Sarasota next fall, and then start working with school districts to the north and south.

Nancy Friedland, one of the Pine View teachers who took her class Thursday, said she plans to incorporate activities

Pine View School student Cassie Doyle, above, reacts to the results of a test of the amount of oxygen in the water of Sarasota Bay on Thursday afternoon as parent Jeff Deaterly of Nokomis and her classmates look on. The Daniel Webster Clements schooner of Destin sailed around the bay while students learned about navigation and marine biology from Aquarian Quest members.

from the boat in a variety of school subjects back on campus.

"I just think it's a real interdisciplinary approach being aboard this ship; it kind of af-

fects your senses. It's not just sitting in a classroom reading from a book."

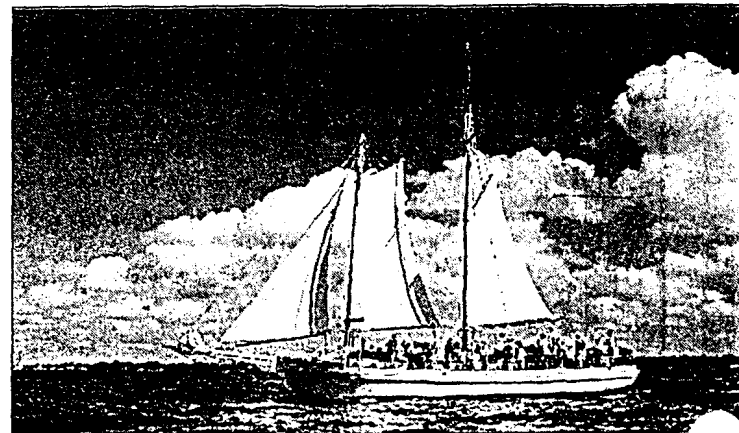
Bob Killian, one of the Aquar-

PLEASE SEE NAUTICA

JB



STAFF PHOTOS / MICHAEL BARRIENTOS / michael.barrientos@heraldtribune.com



Pine View School student Zachary Morrison looks through a hand bearing compass to get a land fix position on Thursday afternoon.



STAFF PHOTO / MICHAEL BARRIENTOS

## Young students hoist sail for a voyage of knowledge

NAUTICAL FROM 1B

ian Quest organizers, said the group chose its schooner because of its historical significance to Southwest Florida.

"This was the source of communication for all of the settlements along the Gulf coast," Killian said. "A schooner like this one would pull up to the dock at (Historic) Spanish Point and load up with citrus and sugar cane."

On the three-hour trip, students move from station to station, hunched over magnifying glasses at one, watching local sea life at another.

As the boat sails through Sarasota Bay, students learn how to navigate with a compass and parallel rules. They learn how to check water quality and mea-

sure the amount of oxygen in sea water.

"The purpose is to help change the planet and save the environment," said Kara Antinarelli, a New College student who works as an intern on the boat. "It starts young when they get so excited over things."

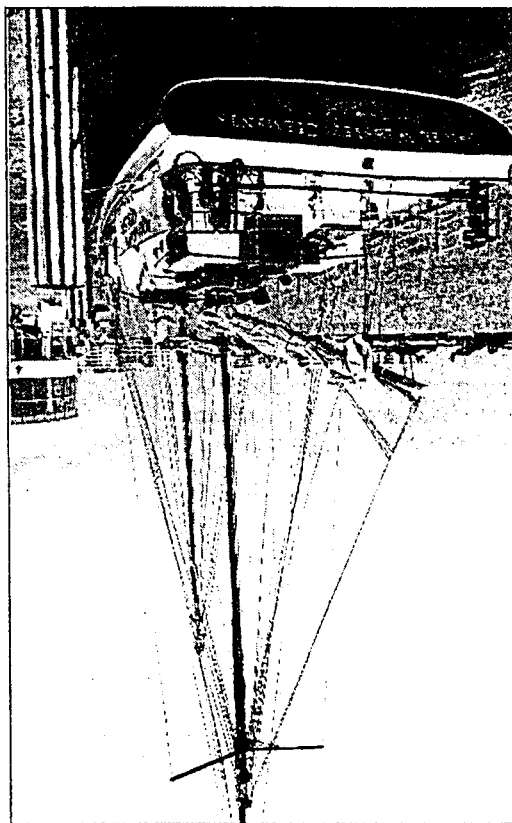
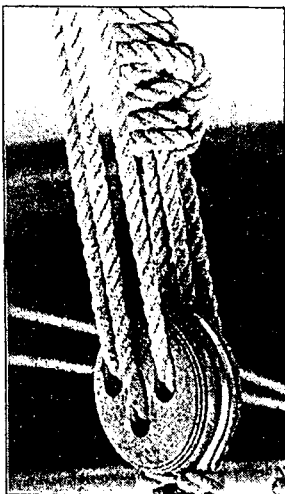
Parents must pay \$18 per student for their children to go on the field trip. But Aquarian Quest is seeking corporate sponsors and other income to reduce that cost or eliminate it.

Aquarian Quest offers overnight and longer trips. The group charters the boat to adults, as well, to help support its educational effort for children.

For more information, call 586-3223.

# Schooner visits

Scott Hooper, above, furls the main sail of the Daniel Webster schooner docked at Marina Jack's in Sarasota. The ship, a replica of a Biloxi schooner used to fish for oysters around the turn of the last century, will be used by The Aquarian Quest, a nonprofit group, as a floating classroom to teach environmental science, seamanship and living history. Sunset, three-hour, full-day and overnight educational sails will be offered. The group says the vessel will remain in Sarasota until April. At right, a deadeye helps support the mast.



STAFF PHOTOS / MICHAEL DIEMER / mikediemer@heraldtribune.com

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# Weevil may curb melaleuca

Charlotte may turn  
the bugs loose on  
populations of the  
invasive tree.

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By LAWRENCE WISE

lawrence.wise@heraldtribune.com

**CHARLOTTE COUNTY —**  
A tiny Australian weevil has officials hoping they can rid the county of a big Australian nuisance — melaleuca.

Charlotte County Environmental Services is mulling over the feasibility of introducing the melaleuca snout weevil to populations of the invasive tree on county land.

Other counties in Southeast and Southwest Florida — including Collier and Lee counties — have successfully

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PLEASE SEE BUG ON 2B

# Weevil may curb invasive melaleuca

BUG FROM 1B

curbed the growth of melaleuca using the weevil, said Paul Pratt, a research entomologist for the United States Department of Agriculture in Fort Lauderdale.

Sarasota and Manatee counties have not yet tried using the bug to help eradicate melaleuca trees on their land.

After a two-year study to verify the weevil would not kill other Florida plants, the insect was released in 1997, Pratt said.

"It's extremely popular," he said. "People are calling us all the time to release it."

Currently, Charlotte County uses a combination of tree cutting and herbicide to get rid of the invasive trees that crowd out native plants.

"It's fairly easy but it's time-consuming," said Donny Bernhagen, field operation foreman for Charlotte County Environmental Services.

Bernhagen said the county has not determined how much it would cost or when the introduction of the weevil would begin. A good test area would be a 22-acre site near the county's

landfill, he suggested.

Melaleuca was first introduced as a forestry crop around 1900, and later was spread throughout south Florida as a landscape ornamental, according to the Department of Environmental Protection Web site.

The tree thrives in south Florida's subtropical climate and damages native ecosystems in the process.

Scientists have detected the weevil in Broward, Collier, Dade, Glades, Lee, Palm Beach and St. Lucie counties. The insects move about a mile a year, as long as they can find more trees on which to feed.

The bugs do not usually kill melaleuca, but they stunt the plant's growth and weaken its ability to survive frost and other natural forces.

New stands of melaleuca will not grow in a treated area, Pratt said.

Adult weevils feed and reproduce on the tree's leaves.

Jeff Webber, environmental specialist for Sarasota County, said he felt the method was too experimental.

Melaleuca grows most

densely in the more southern zones of Florida, where curbing its growth has become a crucial issue.

Webber said Sarasota County wants to ensure the weevil will not spread to other kinds of plants. Eventually, the county may move toward using the weevil method to control its melaleuca problem, he said.

Manatee County has less of a problem with melaleuca, so county officials have not looked at the feasibility of introducing the weevil there, said Danny Smith, Manatee's conservation lands division manager.

Smith was familiar with the weevil research and said the method should work well in Charlotte County.

Other species of insects may also be used to fight the invasive tree, and melaleuca isn't the only invasive plant scientists hope will be killed by an introduced insect.

Bugs are already used to eradicate hydrilla, a plant that clogs Florida's freshwater systems. Similar biological methods are being researched to fight other exotic species.

# Florida House can save money and energy

The Florida House, Sarasota's model eco-home and landscape, has just opened a new display room. The addition was built to showcase the latest environmental products and procedures. Although the design principles for the house and landscape have not changed over time, there have been many new methods and materials developed over the past seven years, and we felt we needed to have a dedicated space where we could demonstrate some of the latest technologies. We will have three or four new displays each year to educate our citizens about state-of-the-art "green" building and landscaping ideas.

The first exhibit on energy efficient lighting will be on display through Thursday, Jan. 10. Lighting was selected as the first topic because it is an easy and effective way for consumers to save energy, no matter where they live or what their lifestyle. The recent national "Change a Light, Change the World" campaign encouraged every household to make their next light an Energy Star compact fluorescent. These bulbs provide the same amount of light (lumens) as traditional, incandescent bulbs, but they use less than a quarter of the energy and last up to

## BETTY ALPAUGH Guest Column



10,000 hours. That's seven years of normal household use.

In addition to the direct energy savings, compact fluorescents also save energy and money by reducing the need for air conditioning. The new compact fluorescents do not produce heat – or "burn hot" – like conventional incandescents, so for every dollar you save in electrical costs, you save an additional 30 cents in air conditioning costs as well.

By looking for the Energy Star label when shopping for lights and appliances, consumers are assured of achieving at least 30 percent greater energy efficiency.

In addition to individual consumer savings, there are other important benefits. Everything we can do as a nation to reduce our energy consumption, and the need for new power plants, helps to reduce our dependence on foreign oil, and that, as

Martha would say, is a very good thing.

The next display will be about solar energy and will open to the public on Jan. 24. It will cover solar water heating, solar pool heating and photovoltaic systems.

Since the Florida House project opened on Earth Day in 1994, it has welcomed over 85,000 visitors from all over Florida, the nation and the world. Every single day of the week, someone tells me how lucky we are to have such a facility here. Sarasota is fast becoming known across the state and the nation for its commitment to conservation and sustainability.

In just the past month, the City of Orlando and the University of Louisiana at Lafayette have sent delegations to see the Florida House because they are beginning to plan similar projects. Even if you've "been there, done that," make a point to drop by and see the new display room, as well as the many new features that have been added recently. Learn about Florida-friendly landscaping and lifestyles.

We are located on the campus of the Sarasota County Technical Institute at the northwest corner of Proctor and Beneva roads in Sarasota. Florida House is open to the public on Tuesday, Wednesday and Thursday mornings from 9 a.m. to noon and Saturdays from 1-4 p.m. If you have suggestions for future displays that you would like to see, call us at 316-1200. We look forward to seeing you at the Florida House soon.

▼ Betty Alpaugh is program coordinator of Florida House Learning Center.



# Waterways maintenance tax enacted by split vote

BY JACK GURNEY

A new Sarasota County tax on waterfront property has been adopted that will help finance a fledgling waterways maintenance program that includes dredging.

On Tuesday, a divided county commission agreed to levy the one-twentieth of a mill tax that will raise about \$200,000 a year. It will start to be collected next fall.

Commissioner Nora Patterson, a Siesta Key resident, proposed the tiny tax as a compromise to the steeper three-tenths of a mill recommended by program officials.

"This is small enough to get the program started," she said, "and will allow me to pass the red-face test I'll have to take when explaining it to the public."

The commissioners remain divided about who should pay the most for the program, and are particularly concerned that many recreational boaters will get off cheaply. As the program is currently conceived, only 5 percent of the program's projected \$5 million annual budget will come from boat licenses.

Many of Sarasota's recreational boaters don't own waterfront property and won't be subject to

## HIGHLIGHTS

▼ The 1/20th of a mill tax will help pay start-up costs for a new county service.

▼ Permits will be sought to dredge silt from choked canals and channels.

▼ Several county commissioners feel approval of the new tax is premature.

the new tax. They launch boats from trailers or at dry storage marinas.

The commissioners unanimously agreed to pursue changes through Florida lawmakers that would direct more boat license money to waterway maintenance.

Commissioners Shannon Staub and Jon Thaxton argued that the program is still too full of unanswered questions to go forward. Both voted against it.

"I don't know what we're doing," Staub said, "and would prefer we wait until next year before adopting the program. I don't know what message we're sending the public."

Thaxton said the tiny tax would not raise enough money to get anything done. "I don't feel secure going ahead," he said. "All this does is postpone problems."

Commission Chairman David Mills said that more than \$400,000 has been spent on consultants' studies to prepare the county for a maintenance dredging program.

"I've been involved in discussions about this for eight years," he said. "The public has been waiting. I'm comfortable in moving ahead. We can make

changes."

Some community residents who appeared for a public hearing on the tax were clearly unsure whether they owned property in the taxing district.

"What we need is a more global map," Thaxton suggested, "so people can see whether they are in, or out, of this program."

Chuck Walter, the county's water resources manager, has been charged with putting the program together. "Our maps will

SEE WATERWAYS, PAGE 2A

# Mote fish farm parcel OK'd for purchase

BY JACK GURNEY

Mote Marine Laboratory took a critical step toward its fish farm project when the Hi-Hat Ranch was cleared to sell 200 acres of Fruitville Road frontage.

On Monday, the Sarasota City Commission approved a quit claim deed and release that will remove the parcel from a treated wastewater irrigation program.

Laboratory officials have long wanted to construct a profit-making aquaculture program that produces fish for sale to restaurants and markets.

The Fruitville Road land is part of about 7,000 acres the city uses as a wastewater disposal site. It is separate from a city-owned 2,500-acre sprayfield next to the ranch.

"If the Hi-Hat Ranch decides to sell off some land," Doug Taylor, the city's utility manager, said, "we have to write it out of our agreement."

In previous years, the city commission has similarly cleared the way for Hi-Hat Ranch to sell 300 acres to U.S. Homes and about 100 acres for the New Gate School.

All of the wastewater released at either the sprayfield or irrigation site receives advanced waste treatment. When the areas are saturated, it can be released into Sarasota Bay.

In the near future, city utility officials will have another convenient disposal option when a downtown aquifer storage and

recovery well is completed.

The city has a permit to install an underground storage facility just south of the Mobile Home Park auditorium on the Payne Park property east of Washington Boulevard.

"We've spent the last year putting this project together so we can have an urban reuse system for Payne Park," Taylor explained. "It is not under construction yet."

The city will pay about \$1 million to construct the well, which will hold treated wastewater until it is needed for irrigation on the park site.

"We will construct it as a test well," Taylor said. "If we demonstrate that it works properly, after

## HIGHLIGHTS

▼ Quit claim deed and release is approved by Sarasota City Commission.

▼ The 200-acre Fruitville Road parcel is owned by the Hi-Hat Ranch.

▼ Laboratory officials want to grow fish for sale to markets and restaurants.

a couple of years we'll receive a state permit to permanently operate it."

The well will be capable of storing between 180 million and 200 million gallons. About a million

SEE FISH FARM, PAGE 2A



## **WATERWAYS** FROM 1A

improve over time," he promised.

"A vast number of waterways in this county were never intended for navigation," said Glenn Compton, speaking for the environmental organization Manasota-88.

"They were only constructed to maximize profits for developers," he explained. "The question is whether taxpayers should pay for dredging."

Compton suggested that most of the silt in waterways and canals is the result of stormwater that drains from upstream development. He said the county's stormwater utility should do a better job of filtering it out.

"If stormwater is the problem," Thaxton said, "we should go upstream and fix the system. We have a [fee] mechanism in place to pay for it."

The staff's proposed three-tenths of a mill tax was supposed to raise \$1.3 million a year and pay for 17.5 percent of the county's new Navigable Waterways Maintenance Management Program.

Other revenue sources could include a 50 percent contribution from property owners who directly benefit from dredg-

ing projects and 17.5 percent from the county's stormwater utility budget.

During the county's annual budget process, the commissioners will have to decide how the balance of the program will be paid for. It could include a 10 percent contribution from the West Coast Inland Navigation District and 5 percent from license fees paid into the Boaters' Trust Fund.

Environmental resources officials have been studying maps for the past three months to determine which properties are located along waterways that could be dredged.

Biological Research Associates, a county consultant, has been employed to help develop the program and provide technical assistance for a citizens' oversight advisory group.

Several years ago, the county received a voluminous document prepared by University of Florida Prof. Gustavo Antonini that supports spot dredging to clear drainage and navigation obstructions.

A debt of more than \$400,000 for the consultants' work will attach to county's new program from its inception. It will be paid when the commission approves rev-

## ▼ GLENN COMPTON

**"A vast number of waterways in this county were never intended for navigation."**

enue sources next year.

Antonini's study chronicled the county's evolution from an agricultural to an urban society, and the resultant impact on more than 180 miles of local waterways.

The final report included maps, charts and data that describe more than 15,000 water depth measurements, 11,000 boat moorings, 6,000 boats and 1,600 channel markers.

A third of the boats were restricted by shoals and accumulations of silt from development. The survey included all county waterways that connect with Sarasota Bay, Roberts Bay, Little Sarasota Bay and Lemon Bay.

In an effort to prepare for the annual waterway maintenance program, the county has obtained copies of historic permits for 700 previous dredging projects.

## **FISH FARM** FROM PAGE 1A

gallons will be pumped in each day during the rainy season.

"We'll pump out about a million each day when it's needed during the dry season," Taylor said. "There will either be about a million gallons in, or a million out, each day."

Sarasota County is also in the process of obtaining state environmental permits to store and recover treated wastewater from mid-county and south county wells.

A well at the Central County utility complex is currently on schedule, while a south county well near Venice has been indefinitely postponed.

The recent extended drought has persuaded the county to reactivate the Venice Gardens water plant, which draws up to 4 million gallons a day from deep wells.

Environmental regulations prohibit locating aquifer storage and recovery wells for treated wastewater near existing wells that produce public drinking water. The state's concern is that chemicals from treated wastewater could leak into the underground drinking water supply and contaminate it.

ring in the

In appreciation for your continued

# A new environment

*The 'enemy' should be part of the solution*

Pogo, the late cartoonist Walt Kelly's alter ego opossum, might fear the fate of his swamp in the Florida of 2002. As wells drilled to quench the thirst of increasing populations suck more and more water from the Earth and new roads and swales divert more water away from swamps, Pogo undoubtedly would join the environmentalists who cry "Wait, what are we doing here?"

All is not lost — yet — but it is time once more to apply Pogo's famous comment to society's environmental excesses: "We have met the enemy and he is us."

In that spirit, the people and leaders of Southwest Florida have an obligation to reduce their impacts on the environment during the year ahead in areas such as:

■ **Drinking water supplies.** Whether pumped from the ground or funneled from streams into reservoirs, Florida's conventional water supplies are stressed and need relief. Minimum flows must be established and vital sources protected from harm. In Manatee, Sarasota and Charlotte counties, for instance, a study of the Myakka River as a future source of drinking water will decide the fate of the Myakka River State Park — the state's largest wilderness park.

■ **Phosphate plant wastes.** Despite emergency legislative action to fund the continu-

ing maintenance of the Mulberry Phosphates gyp stacks at Piney Point and Polk County, studies of permanent solutions for such toxic waste dumps must be funded.

■ **Phosphate mining impacts.** As phosphate miners pursue dwindling ore deposits in central Southwest Florida, permanent safeguards for Horse Creek, the Peace River and other watersheds must be adopted and enforced. That effort should include an objective performance of a cumulative environmental impact study.

■ **Transportation planning.** Using the impetus of federal funds, regional transportation plans linking individual Municipal Planning Organizations should coordinate future highway, light rail, bicycle and pedestrian planning.

■ **Greenways.** Counties should establish and imple-

ment greenway plans so that environmental and human needs are met and natural uses are fulfilled — and coordinate those plans regionally.

■ **Estuarine and marine pollution.** Whether through installation of central sewer or runoff management controls, positive steps must be taken to clean up such polluted waterways as Lemon Bay that receive excess nutrients.

As Pogo said, we are the enemy. But we, the present and future residents of Southwest Florida, also are the solution. The state of our state is up to us.

**The people and leaders of Southwest Florida have an obligation to reduce their impacts on the environment during the year ahead.**

# Water district board approves funding for local programs

The Southwest Florida Water Management District's Governing Board today approved funding for the Sarasota Bay National Estuary Program (SBNEP); a project to restore native habitat at Deer Prairie Slough; for the Catfish Creek Regional Stormwater Facility Design; and for a stormwater project.

The Sarasota Bay Program was established in 1988 to assist the community in developing a comprehensive plan to restore and protect Sarasota Bay.

The district's contribution will be used to help implement the Bay Program's Fiscal Year 2002 Annual Work Plan which began Oct. 1, 2001. The funding will be used for habitat assessment, wetland restoration and protection, and building artificial reefs.

The total cost of the FY 2002 Work Plan is \$607,000. The district's share is \$133,000, of which \$79,800 will be funded by the Manasota Basin Board and \$53,200 will be funded by the state Surface Water Improvement and Management program.

The Deer Prairie Slough Restoration Project, Phase Two is a cooperatively funded effort between Sarasota County, the water district's Manasota Basin Board and the State Surface Water Improvement and Management (SWIM) program. This restoration project will improve and

increase wetland wildlife habitat. The project will also improve water supply within Deer Prairie Slough and downstream estuarine locations, including the Myakka River and Charlotte Harbor.

Phase One consisted of back-filling 6.7 miles of ditches within the county's T. Mabry Carlton Jr. Memorial Reserve, removing exotic weeds and replacing them with native plants.

Phase Two is similar in nature. This phase of the project consists of back filling 1.7 miles of ditches in two separate areas of the slough, which is also within the Carlton Reserve. Exotic vegetation will be removed and replaced with native plants. This will result in the restoration of a natural wetland hydrology to approximately 80 acres of herbaceous marsh and 400 acres of hydric and mesic hammock.

This project also includes extensive monitoring to determine the changes in the wetland hydrology, vegetation and water flow.

The project is expected to cost \$223,249. As part of the agreement, Sarasota County will receive up to \$111,500 in financial assistance from the water district, which will be funded by the Manasota Basin Board and SWIM funds. The Manasota Basin Board's share is up to \$44,600, and the SWIM fund's portion is up to \$66,900.

The Catfish Creek flood control project is a cooperatively funded effort between Sarasota County and the water district's Manasota Basin Board.

The project will be completed in phases and includes the design, permitting and development of construction plans and bid documents for stormwater infrastructure improvements. The improvements include a conveyance system and storage enhancements along Clark Road. The improvements will minimize flood damage to 16 businesses, as well as reduce roadway flooding.

Project design is expected to cost \$400,000. As part of the agreement, Sarasota will receive up to \$200,000 from the district's Manasota Basin Board.

The final construction documents are to be completed by July 2004.

A stormwater improvement project will help control flooding in Sarasota County. The Northern Branch Stormwater Improvements project is a cooperatively funded effort between Sarasota County and the Manasota Basin Board.

The project consists of replacing existing culverts under Heron, Kent and Pompano roads along the northern branch of the Woodmere Creek Basin with larger culverts. The project also includes reconnecting an abandoned channel which pro-

vides opportunities for future projects that will benefit Lemon Bay's water quality.

The total cost of construction is expected to be \$700,000. Sarasota County will receive up to \$350,000 from the Manasota Basin Board.

## NEW WATER CONSERVATION MEASURES DISCUSSED

The Southwest Florida Water Management District's governing board also has begun discussions on the rules governing year-round conservation measures and a water shortage plan.

Due to limited water resources, the board is considering strengthening its year-round conservation measures to ensure that water conservation is a part of everyday water use and not practiced only during a severe drought. The existing year-round conservation measures have been in place since 1984 and primarily ban watering between the hours of 10 a.m. and 4 p.m. Two-day restrictions have been in effect district-wide as part of water shortage orders since 1992 with the exception of recent one-day restrictions to address the drought. The water shortage plan is designed to provide extraordinary steps during drought conditions.

The year-round measures will serve as a baseline for conservation.

# Old deed restrictions stall rail corridor purchase

BY JACK GURNEY

Historic deed restrictions that date back more than 90 years have brought Sarasota County's efforts to purchase a 13-mile railroad corridor to a virtual standstill.

"If the county could have secured a sign-off on these reverter clauses," Commission Chairman David Mills said, "this project would have been full-speed ahead."

For more than a decade, the county has pursued a little-used stretch of old railroad tracks that extends from State Road 72 south to Center Road near Venice.

The 100-foot-wide strip would become the centerpiece of a linear park project for hikers, bikers and joggers. Projects to convert old rail corridors into recreational trails are popular throughout the country.

On Nov. 27, Mills discussed the bogged down project with the county commission. "We're foundering on this," he said. "It's so important for the future of the county."

County Administrator Jim Ley conceded that he'd forgotten the unresolved issue was still on the commission's list of outstanding board assignments.

"This is complex," he said. "There is an owner, a licensee and underlying reverter clauses that make this difficult. It's no good unless we get them all."

What the county has run into are old legal documents from a bygone era that revert ownership back to the land's previous owners, if it isn't used for a railroad.

In 1910, the deeds that initially conveyed ownership were signed by Adrian C. Honore, the brother of Bertha Honore Palmer, to protect the family's extensive

## HIGHLIGHTS

▼ Sarasota County wants to buy 13 miles of right-of-way for a linear park project.

▼ CSX Transportation owns the strip of land and leases it to Seminole Gulf Railway.

▼ Historic deed restrictions that date back to 1910 could block future public ownership.

financial interests in the mid-county area. The deed language conveyed ownership of the property to the Seaboard Air Line Railway, which constructed the original north-south corridor.

Included in the fine print is a stipulation that states a portion of the strip reverts to the Palmer family if it ceases to be used for

railroad operations.

The reverter clause language addresses right-of-way that extends from State Road 72 south to Laurel Road, which represents about half of the corridor.

Lawyers for the county have attempted to deal with Palmer family heirs and their lawyers to pave the way for public ownership, but without apparent success.

"From what I'm told, the Palmer representatives were ready to sign," Mills said, "then determined they couldn't. There's some question whether these deeds are still valid."

The county has \$8.5 million of local option sales tax revenue budgeted for the purchase. A trail system could land-bank the corridor and other old rights-of-way for other future uses, such as a passenger trolley system.

In 1997, county voters approved money for the railroad corridor purchase when

they extended the 1 percent local option sales tax through the year 2009.

If the legal hurdle involving the reverter clauses can be cleared, the county will submit offers to CSX Transportation in Jacksonville and Seminole-Gulf Railway in Fort Myers. CSX owns the 100-foot-wide corridor, while Seminole-Gulf has three long-term leases and owns the tracks, trestles, signals and other above-ground equipment.

The offers would be contingent on signed contracts with both CSX and Seminole-Gulf, and wouldn't be legally binding if one of the companies does not agree to terms.

McCarthy, Sweeney and Harkaway, a Washington, D.C. law firm, has been hired by the county to deal with federal and state

SEE RAILS, PAGE 6A

# Well scrapped to keep peace with Venice

## HIGHLIGHTS

▼ County sacrifices a \$1.5 million state grant in response to city's opposition.

▼ Environmental concerns about nearby drinking water wells prompt decision.

▼ Opponents believe such wells could contaminate future drinking water supplies.

BY JACK GURNEY

A \$1.5 million state grant to help Sarasota County pay for a chemically treated sewage wastewater storage project will be sacrificed to keep peace with the City of Venice.

On Dec. 11, the county commission reluctantly agreed to scrap one of two planned aquifer storage and recovery wells that would have been used for irrigation purposes.

The difficult decision was prompted by

recent drought conditions and environmental concerns about emergency plans to reactivate a Venice area water treatment plant.

"If reverse osmosis wells were constructed on the Venice Gardens site," Warren Wagner, the county's utility manager, explained, "it could violate the setback distances required."

Florida Department of Environmental

SEE WASTEWATER, PAGE 6A

**WASTEWATER** FROM PAGE 3A

Protection rules prohibit wastewater storage and recovery wells from being constructed near wellfields that provide drinking water.

The science of storing untreated stormwater and treated wastewater in underground wells is relatively new. It is not universally embraced by environmentalists or politicians.

Skeptics believe that untreated stormwater runoff from pastures, yards, roads and industrial sites, or treated wastewater, could threaten underground water supplies with chemical contamination.

In fact, Sarasota County's legislative delegation split 2-1 on a new law that permits untreated stormwater to be pumped into underground storage wells for later use.

The county commission reflected a philosophical division when it voted 3-2 to go forward with mid-county and

south county wastewater storage well projects.

Florida lawmakers recently approved stormwater storage wells as a way of addressing future droughts and the availability of irrigation water for crops, citrus groves and lawns. They recognized stormwater as a viable water resource and set out to establish both underground storage facilities and safeguards to protect drinking water.

County utility officials want to inject chemically treated sewage wastewater into the ground during rainy periods and store it for irrigation during dry spells.

The county sells treated wastewater for irrigation for ranches, citrus groves, farms, cemeteries, golf courses, public parks, road medians and residential lawns.

In 1994, the county commission gave utility officials clearance to pursue underground storage of treated sewage, despite concerns from the environmen-

tal community.

In 1999, the county shared its plans with the state. Environmental specialists submitted a list of questions for the county to answer and suggested changes.

Both the City of Venice and an environmental organization known as the Legal Environmental Assistance Foundation asked for a state administrative hearing on the county's storage well plans.

In addition to the Venice Gardens area storage well, the county also plans to pursue a second well near the former

Central County Utilities wastewater treatment plant. The county bought Central County Utilities several years ago and continues to operate it with employees who formerly worked for the franchise operation.

Plans still call for the county to seek state permits for a well at the Central County site that could store from 200 to 300 million gallons of treated wastewater.

The Southwest Florida Water Management District has committed to pay for about \$1.5 million of the costs associated with the project.

**RAILS** FROM PAGE 3A

laws during negotiations.

Seminole-Gulf owns a series of three 20-year leases on the right-of-way that still have more than 45 years to run. The leases have significant long-term value.

Coastal Naples Services, a Naples appraisal firm that specializes in evaluating railroad corridors, has worked with the county to help prepare purchase offers.

The firm appraised the corridor's value at \$10.2 million, which is about double what the county would offer to CSX and Seminole-Gulf.

A handful of Seminole-Gulf freight trains still operate south of Clark Road, but due to poor track conditions federal regulations limit them to 10 miles per hour.

Freight trains deliver food and other goods to regional warehouses on the south side of Clark Road that are owned by Publix and Winn-Dixie.

# Water negotiations begin to extend Ma

## HIGHLIGHTS

- ▼ Sarasota County buys up to 14 million gallons per day from Manatee County.
- ▼ Two long-term water agreements are scheduled to expire in 2011 and 2013.
- ▼ Negotiations will focus on agreements to provide a reduced supply through 2020.

BY JACK GURNEY

Negotiations are under way between Sarasota County and Manatee County utility officials to extend long-term water supply agreements through the year 2020.

Sarasota County water customers consume about 17.5 million gallons every day. The county buys up to 14 million of those gallons from Manatee County.

On Dec. 20, the talks focused on Sarasota County's projected water needs beyond the year 2011 and 2013, when two contracts with Manatee County expire.

"This could be difficult," Manatee County Utility Director John Zimmerman said, "because it's politically tough on our commissioners when there are water shortages."

Sarasota County pays Manatee County a fixed rate of \$104,654 each month, plus \$1 for every 1,000 gallons it receives up to 10 million gallons per day.

The rate jumps to \$1.96 per 1,000 gallons for daily purchases of between 10 million and 12 million gallons, and to \$2.35 per 1,000 gallons for purchases of between 12 million and 14 million gallons.

"This is the perfect time to sit down and talk," Deputy Sarasota County Administrator David Bullock said, "when the existing

## Singers from another age



Riverview High School's madrigal singers are especially popular during the Christmas holidays. Special costumes carry through the theme of the a capella singers in this performance at Siesta Key Chapel. Madrigal singing was developed in Italy in the late 13th century, but reached its peak of popularity in England in the late 16th and early 17th centuries.

contract deadlines are still 10 to 12 years out. We expect to have some very open discussions."

To prepare for future years when Manatee County may no longer be willing to sell cheap water, Sarasota County is involved in a project to draw about 5 million gallons of water a day from the Peace River.

"We still expect to serve Sarasota County with about 10 million gallons a day, or possibly less, through the year 2020," Zimmerman said. "That's not a

fixed position, but we don't expect to exceed 10 million gallons."

There are projections that Sarasota County's drinking water needs could almost double to about 32 million gallons of water a day by the year 2020, so the Manatee County connection is critical.

"We are now looking at three resources, Manatee County, the Peace River and our Carlton

SEE WATER, PAGE 2A



## Ringling Bridge light plan could threaten sea turtles

BY JACK GURNEY

Sea turtle protection officials at Sarasota County have warned the City of Sarasota about potential "skyglow" from intense lights that will be installed on the new John Ringling Causeway Bridge. They have requested a parallel

environmental specialist, addressed a letter to City Manager Michael McNeas that describes the "degrading effect" of cumulative illumination from high-pressure lights.

"Please take this opportunity to incorporate preventative mea-

## HIGHLIGHTS

- ▼ County environmental officials have discussed the matter with bridge contractors.
- ▼ High-pressure sodium



data and video telecommunications network called the INET, which will support a broad range of future government applications.

The implementation will be conducted building by building across the county. Already, Health and Human Services, located at 2200 Ringling Blvd., the new operations center where Public Works and part of Environmental Services are located, at 1001 Sarasota Center Blvd., have undergone the change.

Most employees at the operations center will be getting a completely new seven-digit telephone number, but for most others, 861 will be a new prefix to the old telephone number. At Health and Human Services for example, callers simply replace the old prefix with 861.

Once the transfer takes effect all of the old numbers will continue to work for six months, but all of the main numbers — such as those to the switchboard and business centers — will work for a year. When the latest telephone directory is distributed in fall 2002, 861 should be printed as the new county prefix.

ing turtles, which insouciously crawl from their shoreline area nests toward the night skyline.

Sarasota County has the highest density of sea turtle nests on the Gulf Coast of the United States between May 1 and Oct. 1,

ing South Jenny Holm, Venice, Fla., and the city's Lido Beach Pavilion. They are also used at Patrick Air Force Base in Brevard County to minimize the disorientation impact on nearby turtle nesting beaches.

## WATER FROM PAGE 1A

Preserve," Bullock said. "We are closely aligned with Manatee County."

The Peace River passes through Polk, Hardee and DeSoto counties without touching Sarasota County. It empties more than a billion gallons into Charlotte Harbor on an average day.

When a 21-mile Peace River pipeline project is completed early next year, Sarasota County will receive up to 5 million gallons a day.

The daily draw is expected to exceed 12 million gallons per day in future years if normal rainfall projections resume and environmental experts approve.

Manatee County has been selling water to Sarasota County since the mid-1960s, when Sarasota County elected not to participate in a joint-venture partnership and develop a two-county supply.

The decision has worked to Manatee County's long-term advantage because of regional population growth and the

demand for more drinking water.

"There is a lot of interest in these contracts," Zimmerman said, "because people up here want lush landscapes without paying for water. They blame the Sarasota County contracts for driving up their costs."

The Peace River pipeline will be finished early next year at a cost of \$21 million. The Peace River Treatment Plant is being expanded from 12 million gallons to 18 million gallons per day at a cost of \$18 million.

To store water in rainy seasons when the river runs high, 12 underground aquifer storage and recovery wells have been drilled near the plant at a cost of \$2 million.

"We're taking a close look at Sarasota County's water supply plans," Zimmerman said. "They may be thinking in terms of only buying about 6 million gallons a day from us. We'll do what we can to provide."

Sarasota County has made a significant financial commitment to draw water from the river and is legally obligated to pay off \$34 million of a \$50 million bond issue.

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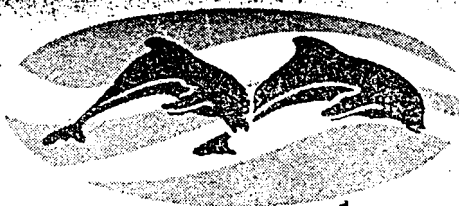
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# Everglades plan all wet, critics say

The restoration does not include any performance goals to measure the progress of the project.

By MICHAEL GRUNWALD  
THE WASHINGTON POST

Federal officials on Friday proposed long-awaited rules to govern the \$7.8 billion effort to replumb the Florida Everglades, but environmentalists immediately denounced them as a recipe for failure for the largest ecological restoration initiative in history.

The 58-page draft "programmatic regulations" released Friday by the Army Corps of Engineers, the federal agency overseeing the Everglades initiative, included few of the specific requirements and assurances that conservation groups have insisted are necessary to make sure the project actually restores the parched South Florida ecosystem.

And the Corps declined to propose any performance goals that would help the public measure the project's progress in resurrecting the so-called River of Grass over the next three decades.

Instead, the Corps largely limited the regulations to generalities, postponing the details to less formal "protocols" to be drafted later. That was the strong desire of sugar farmers, water

## their steps

**F**ront to back,  
Jessica Watson,  
Chelsea Gaspar,  
Courtney Wyatt,

# Critics say Everglades plan all wet

RESTORATION FROM 1B

utilities and other thirsty Florida interest groups, as well as the president's brother, Gov. Jeb Bush.

The governor's aides had argued that more detailed legal rules attempting to reserve water for the Everglades would trample on the state's right to allocate water as it sees fit, an argument the Corps cited in its documents Friday.

"I'm sure plenty of groups are going to zero in on something they don't like," said Stuart Applebaum, the Corps official overseeing the Everglades project. "When you have something this extraordinarily complicated with this many stakeholders, that's what you'd expect."

Those stakeholders put aside their differences last year to support a bipartisan plan to restore "America's Everglades," and managed to secure a federal commitment to split funding and control of the massive project with the state of Florida.

In the heat of the 2000 campaign season, no one wanted to say no to a national treasure in trouble. Half the Everglades had been swallowed by development; the other half was running dry. Ninety percent of its storied wading birds had disappeared.

So Congress approved the 4,000-page plan with hardly any dissenting votes, and hardly any debate.

But the project — really 68 separate projects, ranging from storage reservoirs to pumping stations to diversion canals — is more than a restoration project. It is a replumbing project, and the additional

water it should capture is designed to accommodate South Florida's exploding population and politically connected sugar farmers as well as its dying shallow-water ecosystem.

Otherwise, it wouldn't have passed the Florida Legislature.

Friday's preliminary effort to fill in the blanks of the congressional blueprint exposed deep tensions within the coalition that lobbied the measure into law.

On one side, green activists and some federal environmental officials argue that a plan pitched to the nation as restoration should focus primarily on restoration. But there are powerful Florida economic interests and state officials who note that the Everglades law is supposed to help solve their water problems as well, and they oppose federal efforts to put the environment first.

There are no specific assurances for the Everglades in the law, so conservation groups have been counting on the programmatic regulations to help make sure the natural system is first in line when the time comes to reallocate South Florida's water.

Now they believe the Corps proposal — which includes no assurances, and pointedly rejects congressional language suggesting that 80 percent of the plan's water should go to the natural system — would just maintain the status quo. And they do not trust the discretion of the Corps, which drained the Everglades at the behest of Congress in the 1950s, and has never been considered a particularly eco-conscious agency.

"This just screams business

as usual," said Shannon Estenoz, the World Wildlife Fund's Everglades director. "They talk about state's rights. What about the rights of taxpayers to get what they're paying for: Everglades restoration?"

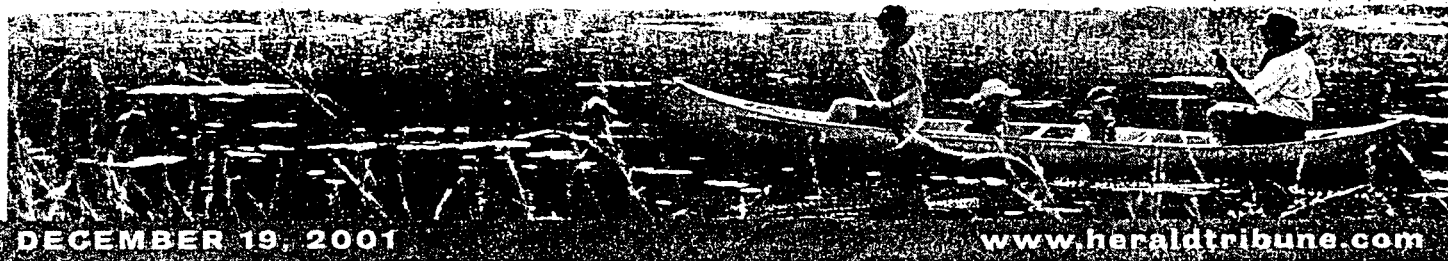
But this is not the last word on the regulations. There will be a public comment period, and the Corps does not expect to issue final rules until March. And it will not be able to do so without approval from the Interior Department, which runs Everglades National Park and has historically advocated for the environmental aspects of the Everglades plan.

On Friday, Interior Secretary Gale Norton issued a statement describing the regulations as merely "a starting point" and noting that her department "will have ample opportunity to participate fully in the rulemaking process."

An Interior official who spoke on condition of anonymity said the department is still concerned about aspects of the Corps proposal, but is encouraged by the willingness of the Corps to work with the department to improve it.

"There's still a lot of work to be done," the official said. "We understand our role, and we're not going to back away from that role."

State officials did not return calls Friday. But Applebaum emphasized that the Corps is committed to Everglades restoration, and noted that the regulations could still change. He said that the Corps and its partners in Florida's government need to maintain flexibility to adapt to the unforeseen, but pledged that key decisions will be made "out in the open."



## County OKs new dredging program

Waterfront homeowners would help pay for the cleaning up of creeks, canals and bays.

By CHAD BINETTE

chad.binette@heraldtribune.com

**SARASOTA COUNTY** — Boaters could have a clearer path to the Gulf of Mexico starting in a few years because of a new program the County Commission approved Tuesday.

The county plans to dredge creeks, canals and bays, add signs and remove fallen trees and derelict boats from waterways. The dredging could start in a few years.

The commissioners still have to decide how to pay for much of the program, especially the planning and permitting costs associated with dredging.

Under the proposal, most waterfront homeowners who don't live in a municipality would pay a new tax to help clean up waterways. The commissioners voted to cap the tax at \$5 for every \$100,000 of a home's value. That's one-sixth of what had been discussed.

The commission will set the

amount of the tax during budget hearings in September.

Dredging projects would be paid for through separate assessments paid by residents who live on waterways that are dredged. Those assessments, which would require the commission's approval, could be \$500 to \$700 a home for each of five to seven years.

Existing money from storm-water fees, boat registrations and West Coast Inland Navigation District taxes will help pay for the effort. Boaters could pay more if the county can convince the state to allow higher registration fees.

### Other action

Commissioners agreed to let the construction company building the jail annex continue work without charging a \$6,000-a-day late fee until Feb. 28.

Page 2B

The county must decide which waterways it will dredge, and hearings could be held this summer to gather residents' opinions.

A handful of boaters told the commissioners Tuesday that

they want creeks and bays near their homes to be dredged.

"I think it's a long time coming," said Rick Tritschler, who supported the dredging of Philippi Creek near his Dinah Lane home. "I think a lot of people are living in this area for one reason — to enjoy boating."

Pam Wnorowski said she and her neighbors want the county to dredge part of the creek near Webber Street and Tuttle Avenue. Nokomis residents Harold Baar and Robert Calder discussed the need to re-

PLEASE SEE TAX ON 2B

## Graduation day

# Florida House plans energy efficient display

The Florida House is Sarasota's model eco-home and landscape showplace. It is an environmentally friendly model home and landscape that teaches resource conservation, recycled products, healthy house concepts. Since the Florida House project opened on Earth Day in 1994, it has welcomed more than 85,000 visitors from all over the world.

The house is a sustainability project, teaching the integration of environmental preservation, economic success, and social responsibility. It focuses on energy efficient products, water-conserving devices, building materials of recycled content, native and drought-tolerant plants, micro-irrigation, edible landscaping, composting, and ways to reduce fertilizers, pesticides and run-off into Florida's bays and estuaries.

The house has just opened a new energy efficient lighting display room that was added onto the house. Now through Jan. 10, visitors can enjoy free tours and classes.

The addition was built to showcase the latest environmental products and procedures. Although the design principles for the house and landscape have not changed over time, there have been many new methods and materials developed over the past seven years, and we felt we needed to have a dedicated space where we could demonstrate some of the latest technologies. The house will have three or four new displays each year to educate our citizens about state-of-the-art green building and landscaping ideas.

The first exhibit on Energy

Efficient Lighting will be on display through Thursday, Jan. 10. Lighting was selected because it is an easy and effective way for consumers to save energy, no matter where they live or what their lifestyle.

A recent national initiative called "Change a Light, Change the World" that encouraged every household to make their next bulb an Energy Star brand compact fluorescent bulb.

These bulbs provide the same amount of light (lumens) as traditional incandescent bulbs but they use less than a quarter of the energy and last up to 10,000 hours. That's seven years of normal household use!

In addition to the direct energy savings, compact fluorescent bulbs also save energy and money by reducing the need for air conditioning. The new compact fluorescents do not produce heat or burn hot like conventional incandescences, so for every dollar you save in electrical costs, you save an additional 30 cents in air conditioning costs as well.

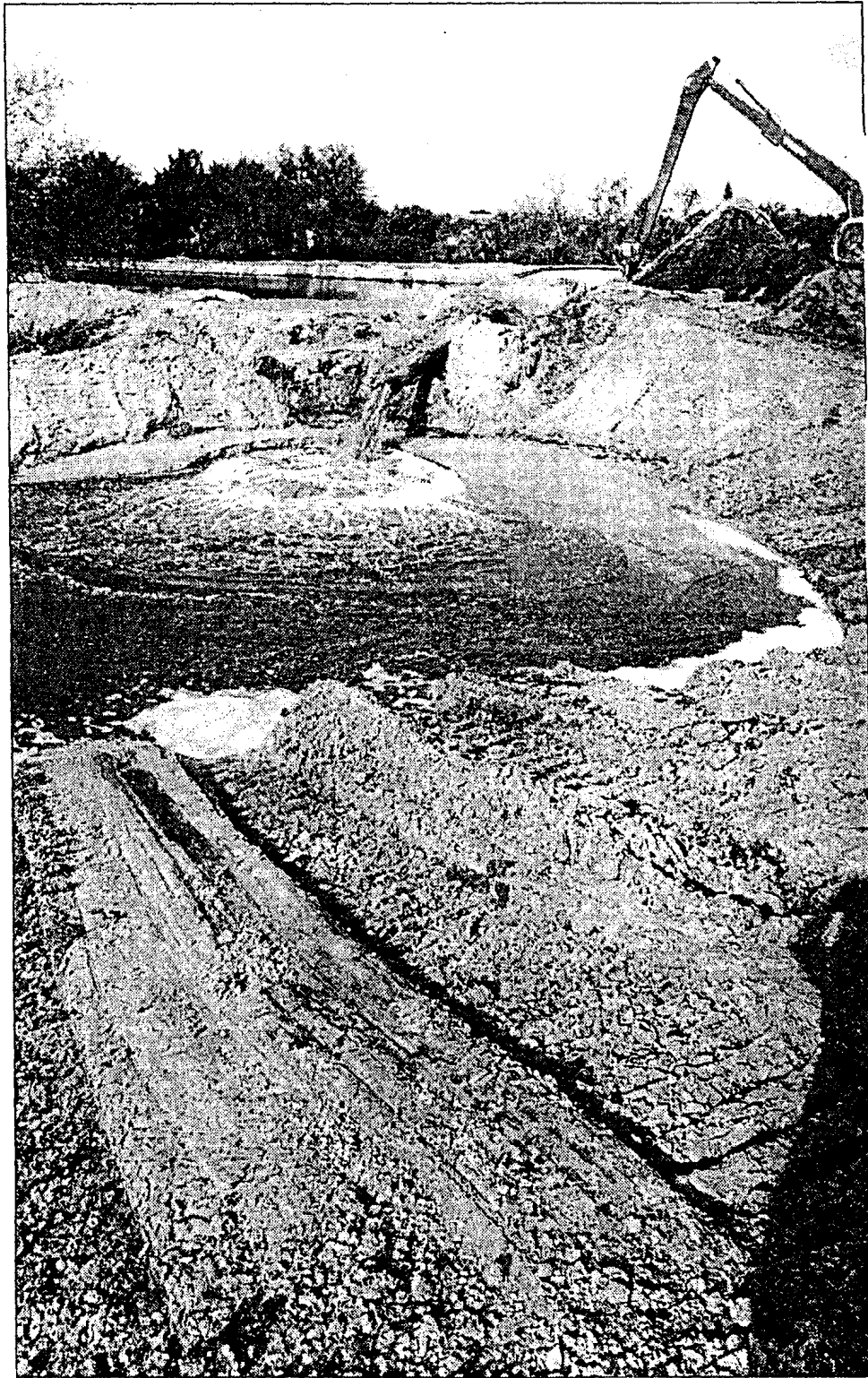
The next Florida House display will be about Solar Energy and will open to the public on January 24th. It will cover solar water heating, solar pool heating, and photovoltaic systems.

The Florida House is on the campus of the Sarasota County Technical Institute at the northwest corner of Proctor and Beneva road in Sarasota. It is open to the public on Tuesday, Wednesday and Thursday from 9 a.m. to noon; and Saturday from 1 to 4 p.m. If you have suggestions for future displays that you would like to see, or for more information call 316-1200.

- Yvette Kimm



## Project killing oaks at park



REBECCA WILD BAXTER

Drainage ponds with special liners were created on the Phillippi Estate Park grounds to keep saltwater from silt dredged out of Phillippi Creek out of the soil. The pond liners have leaked and threatened a nearby stand of oak trees. Several small trees within the pond area are dying, and signs of damage have been detected in about a half-dozen larger trees along the shoreline. Subaqueous Inc., a Fort Lauderdale dredging firm, is under contract to the West Coast Inland Navigation District to dredge 40,000 cubic yards of silt from the creek.



FILE PHOTO

Two boys ride on part of the Pinellas Trail, a model for the trail system envisioned for Sarasota County.

# Getting trails on track

While other areas of the country have developed and maintained recreational urban/suburban trail systems for years, Sarasota County has lagged behind the trend, much to the frustration of area athletes. County Commissioner David Mills has long been a visible supporter of the effort to create a comprehensive trail system. With James K. Harriott Jr., transportation planning manager, and Billie Havey of the county's public communication and graphic arts department, Mills spoke recently with *Herald-Tribune* correspondent Barbara Peters Smith about the pitfalls and prospects of the 20-year Master Trail Plan. Here is an edited transcript of that conversation:

*Q: Commissioner Mills, tell me a*

## COMMUNITY FORUM

*Part of the Herald-Tribune's Celebrate Community project*

*little about how you got involved with this.*

**Mills:** It's probably one of the most important projects that I'm working on at the present time, and maybe will be during my tenure as a county commissioner.

I do a lot of running, around various parts of the country. My younger son was living in Phoenix, and we went out running on one of their trails one day, and after we had run a while I asked, "How far does this trail go?" And

he said, "About 200 miles." That kind of got my attention a little bit, and I started to notice the trail systems that have been put in.

The public really, I believe, is ready for a comprehensive, integrated trail system in Sarasota County. And since I've been working on this project, it's expanded. Manatee County now is pretty aggressive in their approach; Charlotte County is starting to do some really active planning for trails. And of course, the king of all the trail systems in Southwest Florida is Pinellas County, and they have a 43-mile trail now. I was up there one day, on a weekday afternoon, and it was crowded. A hundred thousand people a month use the Pinellas County

PLEASE SEE TRAILS ON 5F

# District tackles growing needs

**KEVIN HORAN**  
Herald Staff Writer

**SARASOTA** — Looking to bolster water supplies, water district leaders cleared a list of projects they would like governments to tackle in the next five years.

That effort to beef up the water base includes a Bradenton plan to store underground nearly a billion gallons of drinking water.

"The city has to do something to make sure city residents have water in the dry season," said Ed Chance, a member of the Southwest Florida Water Management District.

Just as the water district must do something to meet the growing demands of a growing area. That thrust turned Wednesday to tackling the thirst in the Manatee-Sarasota county region, as the district's Manasota Basin Board

## DISTRICT FROM 1C

gathered.

With residents, visitors, businesses, farms, ranches and more using 170 million gallons of water each day in the two-county area, and demand climbing, that panel looked at options for finding or freeing more water.

The group took a big step by updating its five-year plan for managing the area's water resources. That plan identifies key projects that would help protect or preserve existing water supplies while developing others.

The wish list includes nearly 80 projects, from extending Manatee County's reclaimed water system to flood control in Palmetto. It also includes a revised plan to store water for Bradenton's dry season needs.

Initially, the city's \$1.6 million aquifer storage and recovery plan called for building two wells. One, near the U.S. 41 and State Road 64 intersection, would store 400

More research also will come before basin board members agree to parcel out any money for any of the five-year plan's projects. In total, the plan comes with a \$53 million price tag attached.

million gallons of fully treated drinking water, district leaders said.

Work on that well, with testing underway, will move forward. The district will pull back, though, from a second well slated to store 500 million gallons of partially treated water near the city's Evers Reservoir.

Concerns about the water's quality and its impact on surrounding aquifers — the underground "rivers" of water — forced the district to slow that effort.

"The desire of the public is to see more research," said Donald Ellison, a district geologist.

More research also will come before basin board members agree to parcel out

any money for any of the five-year plan's projects. The plan comes with a \$53 million price tag attached — albeit loosely.

"There is no commitment to these projects just by approving the five-year plan," Richard Owen, the water district's planning director, told basin board members. "You don't have to fund any of them."

"The whole intent of the plan is simply to try to articulate the priorities of this board."

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**Kevin Horan**, *environmental and higher education reporter*, can be reached at 745-7037, or at [khoran@bradentonherald.com](mailto:khoran@bradentonherald.com).