

Coastal Currents

Florida Coastal Management Program E-News Summer 2008
A publication of the Florida Department of Environmental Protection

International Coastal Cleanup 2008

A picture is worth a thousand words. Visualize the Ocean Conservancy's International Coastal Cleanup (ICC) Day 2007. In Florida alone, 29,800 volunteers covered 1,907 miles of coastline along the Gulf of Mexico and the Atlantic Ocean, collecting tons of trash from beaches, rivers, lakes and wetlands. Now, envision Coastal Cleanup Day 2008 with even more volunteers.

More than an eyesore, marine litter is an environmental hazard that kills more than one million seabirds and 100,000 marine mammals and turtles each year through entanglement and ingestion.

Discarded monofilament fishing line is perhaps the single-most dangerous debris item, accounting for 65 percent of entanglements found during the 2007 ICC. Monofilament can wrap around turtle and dolphin flippers causing loss of circulation, amputation, or cuts that may become infected. Entanglement can also cause animals to smother, starve or drown and prevent them from feeding their young or make them more vulnerable to predators.

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FCMP Grants Available in 2009

The Florida Coastal Management Program (FCMP) and its activities are sustained by an annual award from the National Oceanic and Atmospheric Administration. The FCMP makes a large portion of those funds available to its state and local partners for projects and activities to protect natural and cultural resources and improve coastal communities. FCMP grants are primarily awarded through two competitive programs, one focused
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Volunteers proudly stand on mound of nets and monofilament gathered at a cleanup.



The Barrier Island Management & Education Center - Brevard County

The Brevard County Environmentally Endangered Lands Program (EEL) recently opened the Barrier Island Management and Education Center located within the county's Barrier Island Sanctuary. The sanctuary is a 34-acre property along Highway A1A near Sebastian Inlet and part of the Archie Carr National Wildlife Refuge. Maintained in its natural state, the sanctuary offers visitors the opportunity to experience the full range of 'lagoon-to-sea' habitats by walking along a ¾ mile interpretive nature trail.

The center is a modern educational facility with classrooms, an interactive exhibit room, a library, offices, an auditorium and a gift shop.

The Archie Carr National Wildlife Refuge, a 20-mile section of Florida's east coast from Melbourne Beach to Wabasso Beach, is the most significant nesting area for the Loggerhead Sea Turtle in the Western Hemisphere and for the Green Turtle in North America.

Together these promote stewardship of the area's fragile natural resources and protection and preservation of sea turtles.

One of the center's principal partners, the Caribbean Conservation Corporation (CCC), has worked for many years to promote awareness of the plight of sea turtles. The presence of a permanent, high quality educational facility in the heart of the refuge will allow the CCC to reach many more citizens and visitors.

Through the center, the CCC conducts guided sea turtle walks and an intensive education and outreach program related to sea turtle protection. The Florida Coastal Management Program provided funds through its Coastal Partnership Initiative to assist with construction of

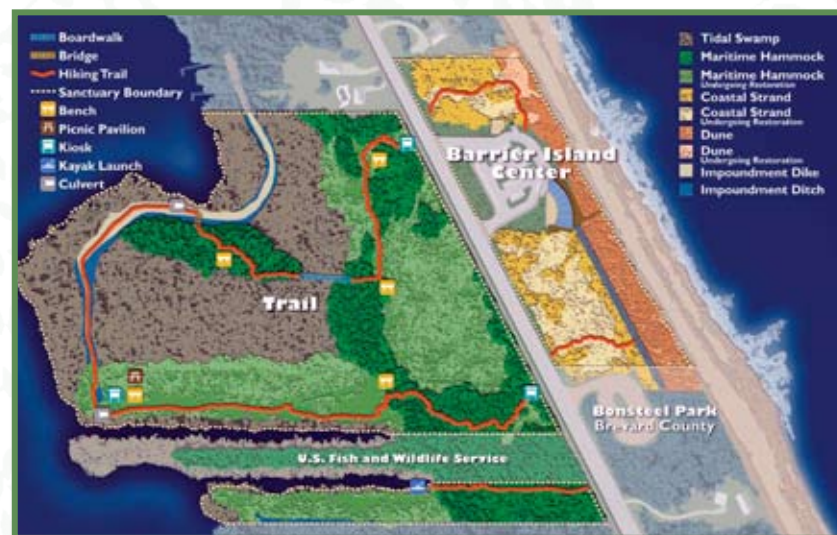


The Barrier Island Management and Education Center

an elevated interpretive beach-dune boardwalk and production of educational exhibits for the center.

The boardwalk, which is part of the larger Sanctuary trail, offers spectacular views of the Atlantic Ocean and the dune ecosystem. The walk connects to a nearby public beach and partly runs alongside the historic "Old AIA" roadbed, now reclaimed by native dune vegetation.

The center exhibits explain the various habitats occurring in the barrier island ecosystem and display different species from the Indian River Lagoon and the Atlantic Ocean in live animal aquaria. The FCMP has



The Barrier Island Sanctuary 1-mile hiking trail begins at the Center and winds through several habitat types. (Click map for brochure)



Visitors explore the interactive exhibits

The Barrier Island Management & Education Center (from page 2)

also provided funds to the CCC to design and deliver educational programs at the center and to sustain a community initiative that recruits and trains a network of volunteers.

The Brevard County Environmentally Endangered Lands Program is a model for responsible local government stewardship of environmental resources. By combining land acquisition, land management, recreation, education and volunteerism, the EEL Program is creating an awareness and understanding of the environment that should benefit the citizens of this area for decades to come.



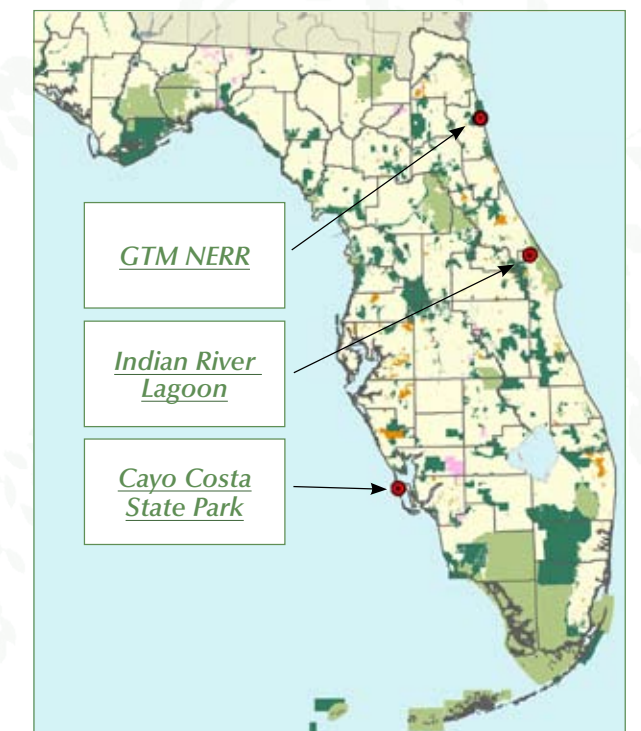
Center's Aquarium

CELCP Update

The Coastal and Estuarine Land Conservation Program (CELCP) was created by NOAA in 2002 to help coastal states acquire and protect threatened coastal and estuarine lands with significant ecological value. In July, the FCMP nominated three properties for acquisition in 2009. The properties are located in or near:

- Guana-Tolomato-Matanzas National Estuarine Research Reserve— St. Johns County
- Indian River Lagoon – North Brevard County
- Cayo Costa State Park— Lee County

NOAA's review of states' acquisition proposals will begin in August and a ranked list of projects will be released in October. Continue to visit the FCMP's CELCP Web site for information.



The Coastal Dune Lakes of Walton County

Walton County on the “Emerald Coast” is well known for its world class beaches and great fishing. Lesser known, but extremely important, are the coastal dune lakes found in the area’s beach-dune system. This rare geological feature only occurs in the Florida Panhandle, Madagascar, Australia, New Zealand and the northern Pacific coast of the United States. For this reason, the 15 named coastal dune lakes in Walton County have been designated as globally imperiled by the Florida Natural Areas Inventory.

Three of the lakes are protected and managed by the Topsail Hill Preserve State Park. In addition, the Walton County Coastal Dune Lakes Advisory Committee spearheads efforts to preserve the lakes and educate residents and visitors about these unique natural areas.

Coastal dune lakes develop from various coastal processes, most commonly when sand deposition fills an inlet to a tidal basin or lagoon. Once isolated from the direct effects of tides, the water may become hypersaline because of salt water intrusion through sandy substrates and rapid evaporation of surface water. Lake water may also gradually become less saline if there is a decline in subsurface saltwater intrusion and greater freshwater inputs from rain and watershed drainage.

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Gary Knight, Florida Natural Areas Inventory

Campbell Lake at Topsail Hill State Preserve



Morris Lake at Topsail Hill State Preserve

The Coastal Dune Lakes of Walton County (from page 4)

The coastal dune lakes of Walton County are fed by streams, groundwater seepage, rain and storm surge and experience intermittent connection with the Gulf of Mexico. The periodic connection, called an outfall, empties lake water into the Gulf and, depending on tides and weather, salt water and organisms from the Gulf flow back into the lakes.

Among the Walton County lakes, each is different and each outfall is unique. Salinity in the 15 lakes ranges from totally fresh to highly saline, resulting in biologically diverse ecosystems. Coastal dune lakes are important feeding and watering areas for birds and mammals.

In 2006, the FCMP provided funds to the Choctawhatchee Basin Alliance (CBA) to establish a volunteer monitoring program to obtain baseline water quality data for the lakes. Three monitoring stations were established in each of the 15 lakes to gather data on a variety of parameters. The data can be used to characterize current conditions of the coastal dune lakes.

The CBA continues to use volunteers to monitor water quality in the dune lakes as well as Choctawhatchee Bay and throughout the Basin watershed. To volunteer, contact Joni Barreda at barredaj@owc.edu.

In addition to their unique form and significant ecological value, the coastal dune lakes are among the most picturesque places in Florida. It is hard to imagine a more beautiful vista than the high dunes at Topsail Hill Preserve State Park with the blue water of a dune lake on one side and the emerald gulf waters on the other. 🌊

View of Gulf of Mexico from Campbell Lake
Topsail Hill Preserve State Park



International Coastal Cleanup 2008 (from page 1)



Plastic sandwich bags, often ingested by sea turtles, can block their digestive tracts and create a false sense of fullness that leads to starvation, or can lodge in their windpipes and cause suffocation. Ingested sharp objects, like metal and broken glass, often perforate animals' stomachs and cause internal bleeding. These animals suffer slow, painful deaths -- the tragic result of improper trash disposal and inadequate prevention of debris.

In the 2007 cleanup more than 50 percent of all debris collected came from shoreline and recreational activities while 33 percent came from smoking-related activities. Almost two million cigarettes/filters were picked up from coastlines worldwide.

Always the third Saturday in September, this year's event takes place on September 20th. Site captains provide volunteers trash bags, gloves, data cards, pencils, bug spray and sunscreen.

Volunteers from community organizations, schools, government agencies, and many others walk along the shore, wade in the water, canoe, kayak, and scuba dive to collect and record litter and debris.

As the world's largest volunteer cleanup event, the ICC provides a direct, tangible way for individuals to make a difference in one of the world's largest environmental problems. The Ocean Conservancy compiles the data from each event to offer a global picture in its *annual report* of trash in the ocean and its effects on wildlife.

The results of Florida's 2007 Coastal Cleanup are impressive. Here are just a few examples of successes that would not be possible without the participation of dozens of local volunteer groups.

- The Jupiter Middle School 'Treehuggers' and EarthRehab joined over 4,700 Palm Beach County volunteers to pick up over 62,000 pounds of trash from beaches and lakes.
- More than 200 Rollins College students, faculty, and staff, along with Keep Brevard Beautiful, collected marine debris at the Canaveral National Seashore.
- Almost 200 Coast Guardsmen walked and cleaned South Beach with Miami-Dade Coastal Cleanup.
- 200 community volunteers gathered nearly 2,000 pounds of debris near Tampa's South Sunshine Skyway Fishing Pier. 🌿

*Each year the FCMP coordinates with the Ocean Conservancy to promote the ICC event in Florida. The FCMP distributes posters with a **list of cleanup captains** to schools throughout Florida encouraging students and teachers to join the coastal cleanup in their counties.*

FCMP staff are responsible for the annual cleanup at Mashes Sands Park in Wakulla County and nearby Ochlockonee River Bridge.

Join us on September 20th!
"Start a Sea Change!"



NOAA divers remove underwater debris

Greenways & Trails Month

October Florida Greenways & Trails Month

DEP's Office of Greenways & Trails continues its efforts to establish a statewide system of greenways and trails for recreational and conservation purposes.



Marjorie Harris Carr Cross Florida Greenway
Boundless Playground

Florida's vision for the greenways and trails system is to help conserve wildlife and protect native biological diversity by offering multi-use trails the length and breadth of the state to:

- promote appreciation of the state's natural and working landscapes
- provide routes for alternative transportation
- protect cultural and historic sites

During Florida Greenways & Trails Month, each October, the natural beauty of Florida's greenways and trails is highlighted with equestrian rides, educational hikes, birding festivals, paddling excursions, as well as running and mountain biking events.

For a list of upcoming events in your area, visit FloridaGreenwaysandTrails.com 🌿



Grassy equestrian trail to the Apalachicola National Forest

Lake Okeechobee
Scenic Trail

FCMP Grant Funds Available in 2009 (from page 1)

on local activities and projects, and the other focused on the strategic priorities of state agencies and water management districts. Those interested in obtaining funds that will be available in July 2009 need to consider the grant application procedures described below and the deadlines for submitting applications.

The Coastal Partnership Initiative (CPI), provides funds in amounts ranging from \$15,000 - \$50,000 for innovative local coastal management projects in four areas:

- Public Access
- Working Waterfronts
- Community Stewardship
- Remarkable Coastal Places

Typical projects include habitat restoration, park facilities improvements, public access projects, and working waterfront revitalization.

Eligible applicants include local governments within the 35 coastal counties that are required to include a coastal element in the local comprehensive plan; national estuarine research reserves (NERR); and national estuary programs (NEP). Eligible applicants also include public and private colleges, universities, regional planning councils and nonprofit groups, as long as an eligible local government, NERR, or NEP agrees to participate as a partner in the application and the project.

In August, the FCMP distributed an informational CPI brochure and published a funding notice in the *Florida Administrative Weekly* (FAW) to solicit grant proposals for funds that will be available in July 2009. Applications for Coastal Partnership Initiative grants will be accepted until October 21. Complete and timely applications will be evaluated and ranked by an interagency review committee. Selected applications must be approved by NOAA.

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Volunteer prepares to plant native vegetation at Historic Virginia Key Native Plant Restoration project

CZMA Priorities

- Natural Resource Protection and Management
- Hazard Mitigation
- Water Quality Protection
- Siting of Major Developments
- Public Access
- Redevelopment of Urban, Cultural and Historic Features
- Expedited Governmental Decision-Making
- Effective Coordination with Federal Agencies
- Effective Public and Local Government Participation
- Comprehensive Planning and Management of Living Marine Resources
- Shoreline Erosion and Land Subsidence
- Ocean Resource Management

Anyone interested in the FCMP's grant programs is encouraged to view the information at <http://www.dep.state.fl.us/cmp/grants/index.htm> and review examples of projects funded in the past at <http://www.dep.state.fl.us/cmp/grants/fcmpabs.htm>.

Grants to state agencies and water management districts in amounts ranging from \$15,000 - \$150,000 are available for priority projects that contribute to the protection, management and enhancement of Florida's ocean and coastal resources and achieve the goals identified in the Coastal Zone Management Act (See box page 8). The range of goals in the Act addresses not only the natural environment, but also the cultural, historical, human and built environment, and the importance of healthy coastal economies and communities. In addition to meeting these goals,



St. Lucie County received CPI funds for this park improvement project.

FCMP Grant Funds Available in 2009 (from page 8)

the FCMP gives priority consideration to proposals that complement other state and federal ocean and coastal resource management programs, and meet or reduce unmet needs.

A notice in the September 12 *Florida Administrative Weekly* solicits proposals from state agencies and water management districts for grants to be awarded in July 2009. The deadline for submitting state agency/water management district proposals is November 12. Applications will be ranked by an interagency review committee. Selected projects must be approved by NOAA.



DEP's Northwest District received FCMP funds for the Project Greenshores restoration project in Pensacola.

	Coastal Partnership Initiative	State Agency Grants
Eligible Applicants	<ul style="list-style-type: none"> • Local Governments • National Estuarine Research Reserves • National Estuary Programs • University/College • Regional Planning Councils • Non Profit Groups 	<ul style="list-style-type: none"> • State Agencies • Water Management Districts
Grant amounts	\$15,000 To \$50,000	\$15,000 To \$150,000
Availability	July 2009	July 2009
Grant term	12 months	12 months
Submission Deadline (electronic and fax submissions not accepted)	4:00 PM October 21, 2008	4:00 PM November 12, 2008
For More Information	<ul style="list-style-type: none"> • FAW Notice • FCMP grants website • Susan.Goggin@dep.state.fl.us • 850-245-2163 	<ul style="list-style-type: none"> • FAW Notice • FCMP grants website • Rule 62S-4, FAC • Lynn.Griffin@dep.state.fl.us • 850-245-2163

Marshes and seagrass meadows are flourishing after restoration at PROJECT GREENSHORES.

NOAA's Coastal Zone Management Act Performance Measurement System (CZMAPMS) is designed to track the effectiveness of coastal management programs and estuarine research reserves at the national level and monitor state program activity related to the objectives of the Coastal Zone Management Act. The Florida Coastal Management Program (FCMP) conducted a survey in March and April 2008 to collect data for two of the *performance measures*:

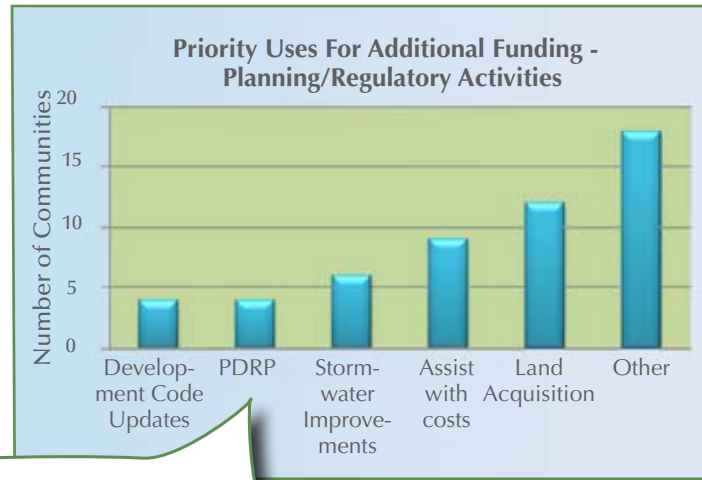
1. Coastal Hazards
2. Coastal Dependent Uses and Community Development.

The *survey* was distributed to all 203 coastal communities; a total of 80 communities responded, resulting in a 40% response rate. Although the survey focused on gathering information for the CZMAPMS, the FCMP also collected data on the outreach and training needs of coastal communities and their familiarity with the Coastal Partnership Initiative grant program (see related article, page 1). Selected conclusions based on survey responses are reported below. The FCMP will use the *results* of the survey to develop public information strategies and products and to determine funding and outreach priorities.

Coastal Hazards Findings

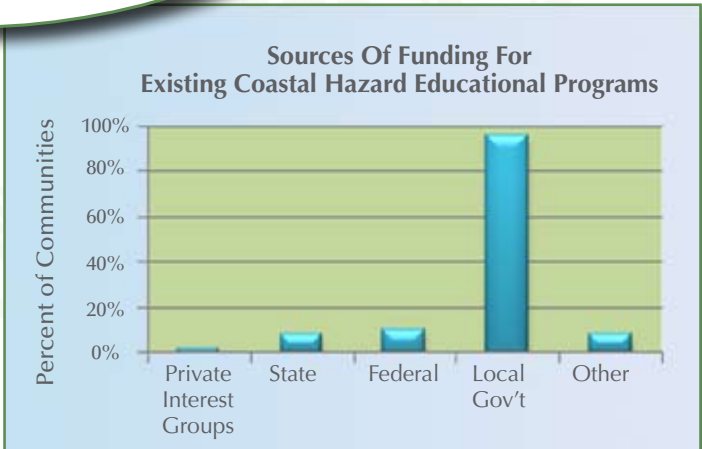
- Some communities do not have adequate map resources of areas vulnerable to common coastal hazards.
- Most communities recognize sea level rise as a potential coastal hazard.
- Although coastal communities are using policies to direct development away from hazardous areas, only 30% are using policies stricter than state requirements.

- Of the 25 communities reporting stricter standards, 14 indicated that density changes and setbacks and buffers are the most common practices.
- Few communities are prioritizing post-disaster redevelopment planning to aid in recovery from coastal hazard damage.



Post disaster redevelopment planning prepares communities for long-term recovery and orderly restoration of infrastructure, businesses, neighborhoods and services.

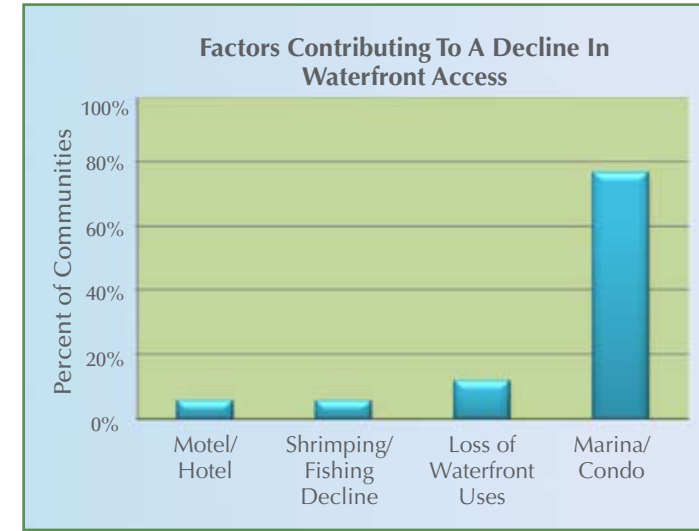
- Local governments bear more than 80% of the cost of coastal hazard educational programs.



Coastal Dependent Uses And Community Development Findings

- Most coastal communities have inventories of beach access sites, but many lack inventories of public marinas, piers/docks and boat ramps.
- 16 of the 80 respondent communities indicate that there is a loss of traditional waterfront areas. Of those 16 communities, 13 estimated a loss between 0 – 20%.

- Loss of traditional waterfront uses is primarily attributed to private residential and commercial development i.e., private marinas and docks, condos.



- Coastal communities prefer to receive training materials via a workshop or publication and are primarily interested in information on flooding, climate change and coastal hazards.
- The priority needs of coastal communities are in line with the FCMP's priorities, including: **public access; coastal hazards; coastal dependent uses and community development; water quality; and coastal habitats.**
- More than half of the coastal communities that participated in the survey had no prior knowledge of the Coastal Partnership Initiative (CPI).
- Most communities that have applied for CPI grants received funds for community projects.

Conclusions

The survey results provide some insight into the current priorities and needs of coastal communities related to hazards and coastal development. Not surprisingly, the survey confirmed that local and state concerns are closely aligned. The FCMP in particular has existing programs attuned to the issues identified in the survey responses, and the survey results will help guide future FCMP efforts to assist communities with planning, public education, and basic data and information needs. For example, the survey highlighted a potential need of some communities for more complete map resources, including GIS-

based records, and assistance with educational programs.

Improving the preparedness and resiliency of coastal communities is a current FCMP priority. Programs such as *Waterfronts Florida* and the _____ provide support for community action related to these challenges. The lack of awareness of the CPI program evidenced in the survey results, however, is limiting its potential benefits. Increased outreach and planned changes to the funding categories and application procedures are expected to improve the CPI program's value to coastal communities.

The survey indicated a low level of community involvement in post disaster redevelopment planning, a component of disaster planning historically overlooked. Recent events have highlighted the need for long-term recovery planning to carry a community beyond the emergency response and management phase of disaster events. The FCMP is currently working with the Florida Department of Community Affairs on a multi-year project to assist communities with planning for post-disaster redevelopment and business continuity.

The survey also provided useful feedback related to other FCMP activities, such as climate change and boating facilities and management. All in all, the survey has been a very informative exercise that will improve coastal management services and partnerships in Florida. The participation of the 80 coastal communities is greatly appreciated.



Harmful Algal Bloom Response Plans

In Florida, residents and visitors should be aware of the risks associated with harmful algal blooms (HAB). Microscopic algae occur naturally in abundance in fresh and marine waters. When conditions stimulate rapid growth (blooms), dense masses of microalgae form in the water. Most species are harmless, but some produce toxins that can become concentrated during bloom conditions and potentially affect humans and wildlife in the area.

All major toxin-producing microalgae occur in Florida, in both fresh and salt water, and can cause a variety of health problems. The public can be exposed to aquatic toxins from a HAB event anywhere in Florida because of its long coastline, warm climate, dense coastal population, and the human interface through water activities and seafood consumption. Depending on the health of an affected person, exposure to certain HAB toxins can even be deadly.

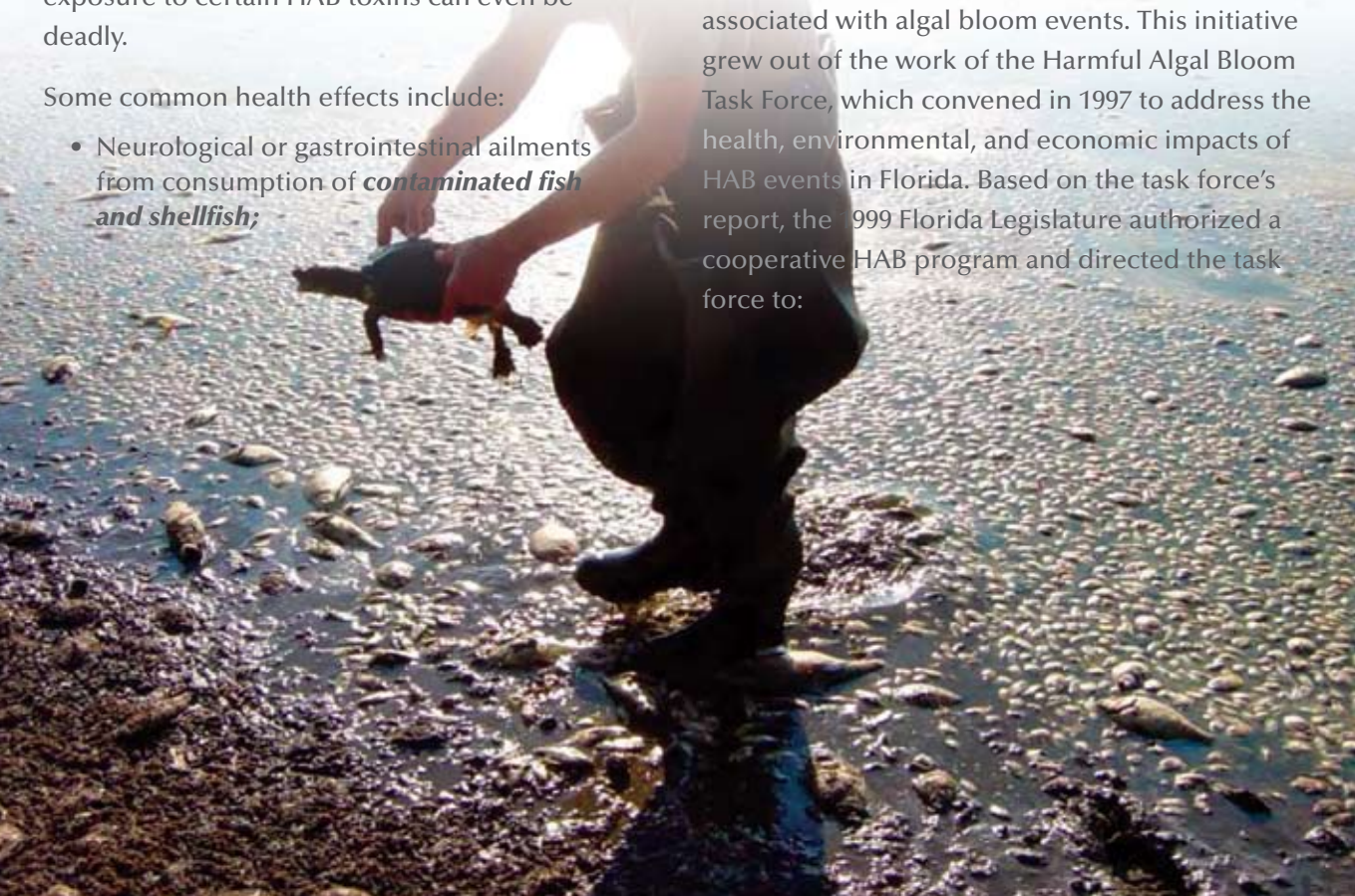
Some common health effects include:

- Neurological or gastrointestinal ailments from consumption of **contaminated fish and shellfish**;

All major toxin-producing microalgae occur in Florida, in both fresh and salt water, and can cause a variety of health problems.

- Respiratory and eye irritation from exposure to **air-borne toxins**, and potentially serious effects in persons with asthma or other pulmonary diseases
- Skin irritation from exposure to **blue-green algae (cyanobacteria)**
- Gastrointestinal illness and damage to the liver and nervous system from ingesting water contaminated with **elevated concentrations of cyanotoxins**
- Neurotoxic Shellfish Poisoning resulting from **Red Tide blooms**. Red Tide has also been implicated in the deaths of marine mammals, birds and fish

The Florida Department of Health (FDOH) is developing county-specific HAB response plans to minimize human exposure to aquatic toxins associated with algal bloom events. This initiative grew out of the work of the Harmful Algal Bloom Task Force, which convened in 1997 to address the health, environmental, and economic impacts of HAB events in Florida. Based on the task force's report, the 1999 Florida Legislature authorized a cooperative HAB program and directed the task force to:



One of 43 turtles killed in Lake Lafayette November 2005. Aquatic vegetation in the lake was replaced with algae/cyanobacteria.

Harmful Algal Bloom Response Plans (from page 12)

will quickly follow suit and develop their own county-specific plans.

The response plan development process will be facilitated by posting finalized plans on a HAB-specific Web site, currently under development. The Web site and first response plans will initially be focused on blue-green algae, but will be improved over time to include other HAB types. The Web site will provide a place for agencies to share data, post notices about HAB events and significant findings, and ultimately provide user-friendly public access to important HAB information.

Adoption of response plans in all 67 counties will result in:

- A consistent statewide public health strategy;
- Improved public notification of algal bloom events by county health departments;
- A greater level of outreach and education about HAB issues and scientific research;
- A reduction in public health effects from HAB outbreaks.



P. Schmidt, Charlotte (FL) Sun.

The infamous "red tide" occurs almost annually along portions of Florida's Gulf Coast, causing beach closures.

1. Determine the status and adequacy of existing information and research;
2. Develop research, monitoring, and management priorities for detection, prediction, mitigation, and control; and
3. Develop recommendations for the creation of response and contingency plans.

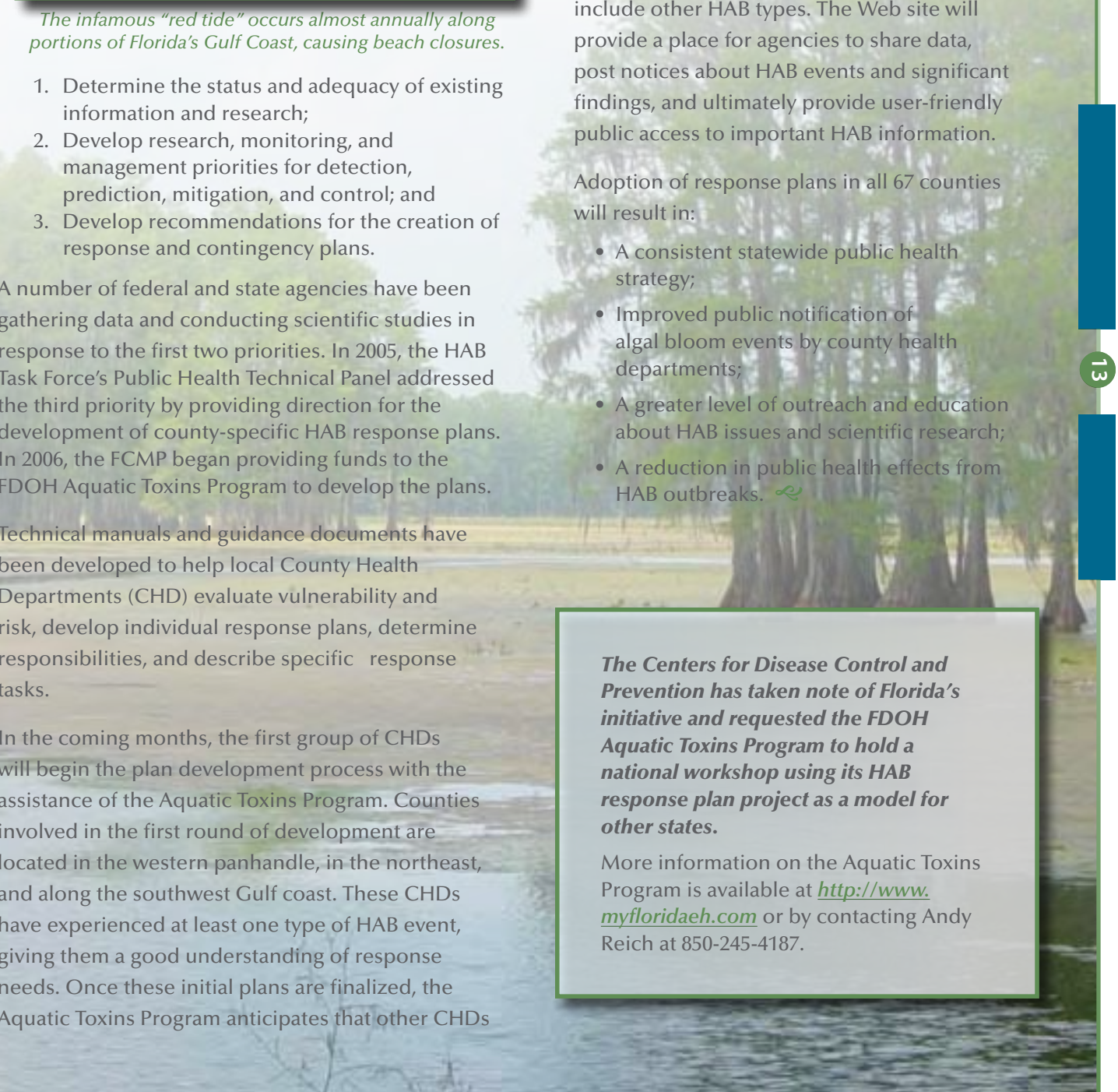
A number of federal and state agencies have been gathering data and conducting scientific studies in response to the first two priorities. In 2005, the HAB Task Force's Public Health Technical Panel addressed the third priority by providing direction for the development of county-specific HAB response plans. In 2006, the FCMP began providing funds to the FDOH Aquatic Toxins Program to develop the plans.

Technical manuals and guidance documents have been developed to help local County Health Departments (CHD) evaluate vulnerability and risk, develop individual response plans, determine responsibilities, and describe specific response tasks.

In the coming months, the first group of CHDs will begin the plan development process with the assistance of the Aquatic Toxins Program. Counties involved in the first round of development are located in the western panhandle, in the northeast, and along the southwest Gulf coast. These CHDs have experienced at least one type of HAB event, giving them a good understanding of response needs. Once these initial plans are finalized, the Aquatic Toxins Program anticipates that other CHDs

The Centers for Disease Control and Prevention has taken note of Florida's initiative and requested the FDOH Aquatic Toxins Program to hold a national workshop using its HAB response plan project as a model for other states.

More information on the Aquatic Toxins Program is available at <http://www.myfloridaeh.com> or by contacting Andy Reich at 850-245-4187.



Mats of Hydrilla coat much of the surface of Lake Munson.

Coastal Currents is a publication of the Florida Department of Environmental Protection Florida Coastal Management Program to update our partners on issues and projects of interest to the coastal community.

Please send us your questions and suggestions for future editions to:

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Upcoming Events

September 20 – International Coastal Cleanup Day

September 27 – National Estuaries Day

October – Greenways & Trails Month

October 21 – Closing date for submission of Applications for the Coastal Partnership Initiative funding.

October 27-30 – Regional Coastal Program Manager's Meeting, Austin, Texas

November 12 - Closing date for submission of applications for funds for state agencies/water management districts

November 17-20 – Coastal Cities Summit, St. Petersburg, Florida