

# Florida

# LAKEWATCH



Dedicated to Sharing Information About Water Management and the Florida LAKEWATCH Program Volume 41 (2008)

## Special Taxing Districts:

*A Possible Solution For Helping Lakefront Property Owners Fund Lake Management Expenses*

We see it all the time. Some aspect of lake management is needed, but it never happens in a timely manner because there is no plan in place and no funds available to implement the plan. Before you know it, a minor problem becomes a major problem with associated major costs to fix it.

For example, invasive aquatic plants may be introduced into a lake and they should be managed before they get out of control. If the plants are not controlled, they can limit use of the lake and negatively affect property values

if someone decides to sell their waterfront property. Aquatic plant management can be costly and it is often difficult to quickly collect enough money from lakefront property owners to deal with the plants before they become a big problem. Before you know it what might have cost hundreds of dollars to fix now costs thousands or even tens of thousands of dollars!

A possible solution for funding such lake management expenses may be the establishment of a special taxing district. The reason for establishing this type of special

taxing district is to collect the necessary funds required for maintaining, improving, managing, and administering common properties in and around a lake or group of lakes. Usually, these are lakes where the land surrounding them is privately owned and with no public access. Because these lakes are often considered to be "private lakes," there are generally no public funds available for managing them. Establishing a special taxing district to insure that money is available for lake management activities has proven to be successful strategy for some lakes in Florida. A special taxing district's Board of Trustees is responsible for setting the priorities for the special taxing district's activities.

When considering a special taxing district as a solution, there are some factors to consider. First, is whether or not your local city or county government has the power to establish such a taxing district? This can be determined by reading

**Continued on page 2.**

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Hydrilla Infestation  
on Rodman Reservoir  
Photo by W.T. Haller  
2008 Center for Aquatic and Invasive Plants

the city or county charter or state law. Second, is whether or not your city or county wants to establish a special taxing district. Besides obvious political reasons, there are staffing and financial implications for local government, especially when other critically needed services may be reduced or eliminated. Although the special taxing district bears most of the burden for operating the district, local government does share some of the costs. This could mean creating a new skilled position or shifting responsibilities at some point.

For example, Hillsborough County has managed to have one-half of a full-time position dedicated to its 46 special taxing districts for the past 20 years because the ordinances are standardized, the districts are limited in scope, and the trustees do all the day-to-day work. Under the state-mandated fiscal constraints, counties and cities would most likely give a special taxing district administration a lower funding priority. Another factor to consider is the will of the group to administer their special taxing district. This is something that requires a long-term commitment and a capacity to administer because a district is designed to provide for ongoing maintenance, not just the most immediate crisis. It also requires trustees who are willing to attend monthly meetings. Trustees must be skilled in taking minutes, running meetings in a business-like fashion, dealing with budgets, and accounting for funds and expenditures. In an era where time is precious and people have multiple commitments to family and work, for many, community service is not a high priority.

Following are several points about the formation, structure, and operation of a special taxing district as defined by the Hillsborough County Board of County Commissioner's neighborhood district program. There are 46 of these districts in unincorporated Hillsborough County.

### **Steps to Establishing A District:**

To informally start the process of creating a special taxing district, county staff meets with a neighborhood leadership group to explain what a special taxing district is and how it operates. If the group then decides to proceed further, it will work with county staff to define the boundaries of the proposed taxing district, the methodology for charging the assessment, and the maximum assessment rate. The formal part of the process begins with a public meeting for the community in which the group supporting the establishment of the district and a county representative explain the reason for the district and how a district operates. The group can then start circulating a county-prepared petition.

To proceed to the next step, some board policies require that a minimum of 51% of the property owners in the proposed district must sign a county-approved petition form. This petition must state the maximum amount of the proposed assessment. After a title abstractor or attorney verifies that the names on the petition truly represent a minimum of 51% of the property owners, the Board of County Commissioners can direct their staff to develop an ordinance. The Board will also schedule a public hearing where

the public may comment on the proposed ordinance. Then the Board votes at this hearing. The county pays for advertising the public hearing but the community pays for the petition verification. The county uses a standard ordinance for establishing the special taxing district.

### **Governing the District:**

A seven-member board of trustees governs the special taxing district. Trustees are voters who are registered in the district. The Board of County Commissioners appoints the first set of trustees, called "interim trustees", from a list of nominees submitted by the group supporting the establishment of the district. Subsequent trustees are either elected through a process run by the Supervisor of Elections Office or, if there are not enough candidates to fill vacant positions, the Board of Trustees may appoint replacements. The term of a trustee is four years. Annually, trustees are required to file financial disclosure forms with the state showing their major sources of income but are not asked to disclose amounts. There are five officers, elected by the Board of Trustees, who serve for two years.

The Board of Trustees supervises and administers all real and personal property owned or leased to or from the special taxing district. It negotiates the purchase of real and personal property on behalf of the district and also determines and fixes the amount to be collected as an annual special assessment within the district. The Board of Trustees prepares the tax roll for transmittal to the tax collector so the assessments may be put on the annual tax bill.

The Board of Trustees can enter into contracts and can incur obligations on behalf of the district. It may borrow funds secured by assessment revenues and may employ and pay necessary costs associated with security officers. The Board of Trustees does not have police powers and cannot enforce or assist in the enforcement of deed restrictions. As well as complying with its establishing ordinance, the Board of Trustees must comply with Florida's Government in the Sunshine Laws, open record laws, and all other state laws pertaining to units of local government.

### **Budgets and Financial Activities:**

Each special taxing district controls its own budget and governs its own financial affairs as long as it conforms to state laws, county ordinances, and generally accepted principals of governmental budgeting and accounting. The Management and Budget Department provides technical assistance to insure that each district prepares its budget properly. The Board of County Commissioners approves each district's budget after staff reviews it for consistency with various standards.

Each special taxing district has its own bank account from which disbursements are made and to which district monies are deposited. The Tax Collector's Office deposits assessment revenues into the district's account electronically after deducting 4% in fees for itself and the Property Appraiser and applying the appropriate discounts for early payments. None of the

special taxing district funds flow through the Hillsborough County budget or financial system. Each district is required to submit an audited financial statement to the County annually. Taxpayers are protected with public official bonds for those trustees with check signing authority.

### **Imposing the Assessment:**

Each special taxing district has the ability to levy a non-ad valorem or special assessment on properties located within the district's boundaries. This assessment is a government imposed fee and is not based on the value of the property. The ordinance establishing a district defines the categories of properties on which the assessment will be levied and defines the maximum amount of the assessment.

The annual tax bill is the preferred collection method because this method assures a 100% collection rate. This method also utilizes the services of the Tax Collector's Office to enforce the assessment. Chapter 197.3632 of the Florida Statutes defines the process the special taxing district must follow in order to put the special assessment on the tax bill. The district's Board of Trustees is responsible for the process of putting the assessment on the annual tax bill and the district bears the cost of this process. This process requires two public hearings. One hearing takes place before January 1<sup>st</sup> of the year during which the assessment will be levied for the first time and the second hearing takes place in the subsequent

summer. The first hearing requires four weekly advertisements and the second one requires the district to send first class notices to property owners and also advertise a public hearing.

### **Protecting the Taxpayer:**

Two significant protections to taxpayers are the annual audited financial statement and the public official bond. The annual audited financial statement insures a review of all financial transactions and an accurate representation of the special taxing district's financial position. The public official bond protects the district for up to \$5,000 against the financial implications of the actions of the three parties with check signing powers: the president, vice-president, and the treasurer.

***The annual tax bill is the preferred collection method because this method assures a 100% collection rate. This method also utilizes the services of the Tax Collector's Office to enforce the assessment.***

# Thank You For Your

*We thank the following people for donating to Florida LAKEWATCH, the LAKEWATCH building fund and Fishing For Success.*

## **\$1000 or more**

<i>Anonymous</i>	<i>Edward O. Bernard</i>	<i>Lake Mystic Neighborhood Association</i>
<i>Aquarius Systems (D&amp;D Products Inc.)</i>	<i>Eric and Kelly Schulz</i>	<i>Okaloosa-Walton College</i>
<i>Aquatic Ecosystems Restoration</i>	<i>Free Family Foundation Corp</i>	<i>Rosegger Aquatic Services, LLC</i>
<i>Bear Lake Preservation Association, Inc</i>	<i>John Gardner Aquatic Systems, Inc</i>	<i>SePRO</i>
<i>Corner Drugstore of Gainesville, Inc</i>	<i>Johns' Lake Improvement Assoc.</i>	<i>Tallavana Homeowners' Assoc.</i>

## **\$500-\$999**

<i>Allstate Resource Management, Inc</i>	<i>Irvin B. Green and Associates, Inc</i>	<i>Too Far Inc</i>
<i>Central Florida Extension and Research Advisory Committee</i>	<i>Little Lake Harris Shores Civic Association</i>	

## **\$100-\$499**

<i>Advanced Auto Repair &amp; A/C, Inc</i>	<i>Gainesville Harley-Davidson and Buell, Inc</i>	<i>Louis and Cynthia Mantini</i>
<i>Alfred C. Warrington, V</i>	<i>George and Leslie Jennings, Jr.</i>	<i>Lynn and Samuel J. Dowe, r III</i>
<i>All Steel Structures of North Florida</i>	<i>Harry Oldford</i>	<i>Mark and Dorothy Armstrong</i>
<i>Applied Technology &amp; Management, Inc</i>	<i>James and Nancy Dunn</i>	<i>Marshall Bloom</i>
<i>BCI Engineers and Scientists</i>	<i>James and Rebecca Cato</i>	<i>Melissa and Stuart Fox</i>
<i>Brentwood School</i>	<i>Jeff Boston, President State Plastering Co. Inc</i>	<i>Miller &amp; Brasington, P.L.</i>
<i>Brian and Danielle Sevier</i>	<i>Jim and Barbara Powell</i>	<i>Oak Hall School</i>
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<i>Christopher and Eleanor Conner</i>	<i>Joseph and Betty Miller</i>	<i>Robert and Terry Ern</i>
<i>D. B. Petty, DVM</i>	<i>Joseph and Marilyn Heyck</i>	<i>Robin and Michael Creamer</i>
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<i>David Hermelbracht</i>	<i>Lake Broward Assoc., Inc</i>	<i>Wanda C. Garfield</i>
<i>David O' Brien/ Surv Tech Solutions</i>	<i>Lake Gertrude Property Owners' Assoc., Inc</i>	<i>Water and Air Research, Inc.</i>
<i>Don Davis/ Teresa Vickers (Capital City Bank)</i>	<i>Lake Gertrude Property Owners' Assoc., Inc</i>	<i>William and Cheryl Stephens</i>
<i>Elyse Gile</i>	<i>Law office of Laurie D. Mitchell, P.A</i>	<i>William and Lisa Anne Seaman, Jr</i>
<i>Faith Presbyterian Church</i>		

# Generous Donation!

Your gift will help secure the legacy by giving LAKEWATCH and its youth education program **Fishing For Success** a permanent building of its own!

## Less than \$100

*A. W. and Dorothy Morley*

*Alan Bachvott*

*Albert Dan Duerr*

*Amanda Cole*

*Amy and Joe Richard*

*Anna Maria Melton*

*Audrey S. Reed*

*Barney and Marsha Sapp*

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*Charles and Mary Cichra*

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*Thomas and Kristy Harwood*

*Thomas Luche*

*Thomas Potts*

*Todd and Christine Toriscelli*

*William and Lois Rosenthal*

This list contains donors through January 28<sup>th</sup>, 2008. The LAKEWATCH building fund continues to accept donations. Your help today will serve generations to come. If you would like to make a tax-deductible donation, make your check payable to:

University of Florida Foundation, Inc. –SHARE

Memo or For: Florida LAKEWATCH Building

Mail to : Florida LAKEWATCH

Attn: Christy Horsburgh

7922 NW 71<sup>st</sup> Street

Gainesville, FL 32611-0170

# Volunteer Bulletin Board

## No longer able to sample?

If you are unable to collect samples on your lake and would like to resign, please give us a call and let us know. We appreciate all of the hard work that you have done and understand that time does not always allow us to get everything done that we would like. We also ask that you return the sampling equipment to your water collection center or mail to our office as soon as possible. Be sure to label the equipment kit with your name, lake name and county so we can credit you with its return. The equipment used to sample your lake is essential for our program and costs about \$400 dollars per kit. It is important that we re-use this equipment to keep our expenses down. If you have already returned your equipment, thank you very much, but give us a call and let us know so we can update our records.

## Water levels low?

If you are unable to sample due to low water levels and have not contacted us to let us know please consider giving us a call. We have a toll free number (1-800-525-3928) and it will just take one minute of your time. This will update our records and help us separate which volunteers can no longer sample due to low water from those who can no longer sample due to other reasons such as health, time, or etc.

## Regional Meeting Schedule for 2008

Here is a list of the 2008 Regional Meetings planned so far. In case of unforeseen circumstances the dates are subject to change. Look for more details in your invitation a few weeks in advance.

Polk County	March 13	Marion County	August 29
Leon County	March 26	Volusia County	September 10
Osceola County	April 24	Hillsborough County	October 6
Lake County	May 3	Alachua County	October 20
Okaloosa/Walton County	May 17	Highlands County	November 2
Orange County	June 26	Clay County	November 6
Seminole County	July 10	Brevard/Miami-Dade County	December 6
Pasco County	July 16	Duval County	December 12
Bay County	July 26	Citrus County	TBA
Putnam County	August 22	Flagler County	TBA

## Collection Center Changes

### Citrus County

*There is a change in the collection center for Inverness:*

The collection center at TOOFAR has been moved to the East Citrus Community Center.

The new contact information is:

**East Citrus Community Center**  
**9907 East Gulf to Lake Hwy.**  
**Inverness, FL 34450**  
**Contact: Mary or Sal**  
**352-344-9666**  
**Hours: M-F 9:00 AM-4:00 PM.**

## NOTICE TO ALL FLORIDA LAKEWATCH SAMPLERS

Keep those samples flowing!

Please be sure to **deliver any 2007** frozen water and chlorophyll samples to your collection center as soon as possible. This will enable us to prepare the annual data reports on schedule.

We also take this opportunity to thank you for your hard work and dedication!

Sincerely,

The Florida LAKEWATCH Crew

# LAKEWATCH NEEDS YOU!

*These lakes have been inactive for over one year. If you know of anyone who might want to sample any of these lakes please have them call us at 1-800-525-3928 or e-mail us at [fl-lakewatch@ufl.edu](mailto:fl-lakewatch@ufl.edu).*

## Lake County

Akron  
Arlene  
Arthur  
Black  
Cook  
CR Big  
CR Small  
Crescent 2  
David  
Desire  
Dixie East  
Dixie West  
Dolls  
Eagle  
Eldorado  
Evert  
Glon  
Grassy  
Haines  
Heron  
Idlewild  
Jack's  
Lady  
Linda  
Little Mary  
Little Nellie  
Loch Leven  
Lucy  
Middle Bear  
Mill Stream Swamp  
Mirror  
Nellie  
Nettie  
Norris  
North Twin  
Owen  
Pearl  
Pine Island  
Placida  
Saunders  
Shady Nook  
Silver  
Silver Paisley  
South Twin  
Spencer  
Sunset  
Sunshine  
Swatara  
Tavares  
Umatilla  
Unity  
Woodward  
Zephyr

## Orange County



Adair  
Angelina  
Apopka  
Arnold  
Baldwin  
Bell  
Big Sand  
Big Sand Bay  
C  
Cay Dee  
Cay Dee North  
Cay Dee South  
Chase  
Cherokee  
Christie  
Clear  
Como  
Concord  
Copeland  
Crystal  
Cypress  
Daniel  
Davis  
Dot  
Dream  
Druid  
Estelle  
Lawne  
Lawson  
Little Down  
Little Pheasant  
Little Wauseon Bay  
Lorna Doone  
Love  
Lucerne East  
Lucerne West  
Lucien  
Maitland  
Mann  
Margaret  
Marshall  
Martha  
Mary Jess  
Metro West  
Mira  
Nan  
Olive  
Olivia  
Orlando  
Park  
Pearl  
Pocket  
Price  
Rabama

## Orange County

Estelle East  
Eulalia  
Eve  
Fairview  
Fischer  
Floy  
Gear  
Gem  
George  
Greenwood  
Hart  
Hiawassee  
Highland  
Hope  
Horseshoe  
Hourglass  
Hubbert  
Huckleberry  
Irma  
Isleworth  
Jackson  
Jessamine  
Killarney  
La Grange  
Lancaster  
Richmond  
Rock  
Rose  
Rose Hill  
Rouse  
San Susan  
Santiago  
Sawyer  
Silver  
Smith  
Spring  
Sue  
Sybelia  
Tennessee  
Terrace  
Theresa  
Underhill  
Wade  
Walker  
Waunatta  
West  
Whippoorwill  
William Davis  
Willisaria  
Winyah  
Wise

# Florida LAKEWATCH Long-term Fish Monitoring Program

Since the beginning of Florida LAKEWATCH in 1986 over 1000 lakes from more than 50 counties have been sampled as part of this successful program. Currently over 800 citizen volunteers sample approximately 600 lakes from Pensacola to Key West. This large effort focuses mainly on water chemistry sampling; however, LAKEWATCH is interested in understanding and monitoring all aspects of the lake ecosystem.

One major interest of the public, LAKEWATCH volunteers, and biologists alike is the condition of fish populations in lakes around Florida. Since 1999, Florida LAKEWATCH has monitored fish populations in many lakes around the state. To help get more information on fish communities and long-term trends in fish populations, Florida LAKEWATCH began a cooperative study with the Florida Fish and Wildlife Conservation Commission (FFWCC), collecting fish data on 32 water bodies throughout Florida. In 2006 this cooperative sampling effort was expanded to cover 52 lakes statewide. These lakes were selected to include a wide range of lake trophic states and aquatic plant abundances, as these are two major factors influencing fish populations in lakes. The goals of this project



Florida LAKEWATCH

*Florida LAKEWATCH personnel Daniel Willis places stunned fish into a holding tank from Lake Ivanhoe in Orlando.*



*Florida LAKEWATCH personnel conducting a plant survey.*

are threefold: 1) to identify and examine long-term changes in fish communities from a range of lakes in relation to water chemistry, lake trophic status, aquatic plant abundances, and lake morphology (the shape and structure of a lake basin), 2) educate the public in the trends and dynamics of fish populations in Florida, and 3) facilitate the interaction and cooperation among Florida citizens, the Department of Fisheries and Aquatic Sciences (Florida LAKEWATCH), and the Florida Fish and Wildlife Conservation Commission.

Water chemistry samples are collected monthly or quarterly on the lakes in this long-term monitoring project by volunteers, LAKEWATCH, and FFWCC personnel. These samples are analyzed at the LAKEWATCH Water Laboratory at the University of Florida.

Plant surveys are conducted by LAKEWATCH personnel and are done on all 52 lakes every other year (26 lakes per year) during the summer months (May – August). These surveys consist of 5 to 30 sample sites depending on lake size, spaced evenly around





Florida LAKEWATCH

*Florida LAKEWATCH personnel Jason Bennett conducting a plant survey on a lake in Orange County.*

the lake. Plant species composition, percent area coverage, and biomass (weight) measurements are taken from each site. A Lowrance high definition sonar system is used to map the bottom and measure amounts of submerged vegetation throughout the open water portions of the lake.

Fish community sampling is done on all 52 lakes each year. LAKEWATCH personnel sample

twenty-two of these lakes with the rest sampled by FFWCC. Fish communities are sampled using electrofishing. This method uses a specially equipped boat, which delivers a strong electrical current into the water. This stuns the fish causing them to rise to the surface where they are collected and held in a tank on board the boat. All fish are identified, measured, and returned to the

lake. The effects of the electrical current only last a few minutes and nearly 100% of the fish swim away with little or no problems. Data collected are analyzed to identify changes in fish populations/communities over the years sampled. The 2006-2007 LAKEWATCH long term fish report is on the Florida LAKEWATCH website at

<http://lakewatch.ifas.ufl.edu/>

### ***A list of lakes in the LAKEWATCH-FWC long-term fish project.***

<b>County</b>	<b>Lake</b>	<b>County</b>	<b>Lake</b>	<b>County</b>	<b>Lake</b>
Alachua	Lochloosa	Lake	Cherry	Osceola	Alligator
Alachua	Newnan	Lake	Dorr	Osceola	Kissimmee
Alachua	Orange	Lake	Grasshopper	Osceola	Tohopekaliga
Alachua	Santa Fe	Lake	Griffin	Osceola	Tohopekaliga East
Alachua	Wauberg	Lake	Harris	Palm Beach	Okeechobee
Bay	Deerpoint	Lake	Minneola	Pinellas	Tarpon
Bradford	Sampson	Lake	Sellers	Polk	Dexter
Brevard	Poinsett	Lake	Wildcat	Polk	Eloise
Broward	Conservation Area 3	Leon	Jackson	Polk	Weohyakapka
Collier	Trafford	Marion	Mill Dam	Putnam	Crescent
Gadsden	Talquin	Marion	Weir	Putnam	George
Gulf	Dead Lakes	Miami-Dade	E	Putnam	Rodman
Highlands	Istokpoga	Orange	Butler	Seminole	Jesup
Highlands	Josephine	Orange	Conway	Seminole	Monroe
Highlands	June	Orange	Ivanhoe	Sumter	Panasoffkee
Hillborough	Wilson	Orange	John's	Walton	Juniper
Indian River Lake	Stick Marsh Apopka	Orange	Starke	Walton	Spring

## Outstanding LAKEWATCH Volunteer

Samuel J. Dower, II grew up in Minnesota and attended the University of Minnesota before joining the Army Air corps during World War II. In 1944 Sam married Jean Laugen and together they began a family of three daughters and a son. The family moved to Miami, Florida in 1954 where Sam worked in construction for 30 years. After retiring, the family purchased a home on Lake Lizzie in Osceola County in 1984.

Lake Lizzie is located in St. Cloud on the Alligator chain of lakes in Osceola County. The lake is a 923-acre mesotrophic lake. Mesotrophic lakes have moderate amounts of biological productivity. Lake Lizzie is in the Osceola Slope region. This region is composed of lagoonal deposits with a top layer of medium to fine sands and silts. Lakes in the region are generally acidic, low nutrient, colored lakes.

According to Sam's family, he fell in love with Lake Lizzie and the Alligator Chain of Lakes. His passion led him to action, volunteering his time and energy to help protect the waterways of Osceola County. Sam joined the Alligator Chain of

Lakes Homeowners Association which is now the Alligator Lakes Chain Heritage Association (ALCHA). In 1990, Sam was instrumental in getting the ALCHA actively involved in the Florida LAKEWATCH Program by serving as a volunteer sampler on Lake Lizzie over the next several years. After passing the sampling responsibilities to new volunteers, Sam participated in a pilot bacterial sampling project conducted by the University of Florida/LAKEWATCH

program on the chain of lakes during the mid 1990's.

Sam's passion for conservation extended well beyond lake sampling. He routinely attended county commission meetings where rules and regulations were being set regarding developments near wetlands and lakes. He voiced community opposition to rules that favored increased development in these areas. Sam also wrote many letters to the Orlando Sentinel as a way to get other residents involved in this decision-making

processes. He strongly believed in public input to help manage and protect Osceola County's environmental resources.

Sam passed away in 2007 at the age of 86 and his wife Jean passed away this February. They will be greatly missed by their family and all who knew them. We are proud to acknowledge Sam's dedication to conservation and his considerable efforts on behalf of Florida LAKEWATCH, Lake Lizzie and ALCHA.



Lynn Dower

*Sam Dower speaking at one of his many environmental events.*

## Featured Fish: Redbreast Sunfish (*Lepomis auritus*)

The redbreast sunfish is found throughout central and north Florida and is the dominant sunfish in some streams and rivers including the Ocklawaha, Ochlockonee, Suwannee, and Santa Fe Rivers. It has been introduced into the Blackwater and Yellow Rivers in the panhandle and can be found in some lakes including the Harris Chain, Starke, and Ivanhoe in central Florida. The native range of the redbreast sunfish is from the Atlantic and Gulf slopes from New Brunswick Canada to central Florida and west to the Apalachicola and Choctawhatchee river drainages. The species has also been widely introduced in the western and central United States.

Redbreast sunfish can grow to 11 inches in length and attain a weight of up to two pounds. As the name suggests, redbreasts are some of the most colorful fish in the sunfish family. Males are dark olive to dusky on the upper sides and yellow, orange or red on the belly. The females are less colorful with their bellies yellow to pale red. In both sexes the opercular flap or "ear" is very long, no wider than the eye, black without a light border, and can reach a length of one inch or more. Redbreast sunfish typically inhabit sand-bottomed areas of coastal plain streams and rivers and are occasionally found in lakes. They frequently are found near boulders, limestone outcroppings, woody debris, submersed aquatic

vegetation, or the root systems of shoreline trees and shrubs. Redbreast sunfish have one of the most diverse diets of any of the sunfishes. They will feed on bottom dwelling organisms including insect larvae, snails, clams, shrimp, and crayfish. Small fish and even terrestrial insects that fall into the water are also prey items.

Redbreast sunfish spawn from May through August when water temperatures range from 68° to 82° Fahrenheit. The males construct circular depressions or "beds" in the sand in waters from one to three feet deep and usually adjacent to woody debris such as snags or stumps. They frequently occupy "beds" abandoned by other sunfishes. The males guard the eggs after spawning and protect the larvae for a short period after hatching. Females can lay 1,000 to 10,000 eggs during a season

depending on their age, size and health.

In a study of 60 Florida lakes sampled between June 1986 and June 1990, redbreast sunfish were found in only 8% of the lakes. This is not surprising because redbreasts are typically stream and river fish. In lakes where they were collected, the surface areas ranged from 24 to 5580 acres while the average depths ranged from 6 to 15 feet. The percentage of the lake covered in submersed aquatic plants ranged from 1% to 27%. The water in these lakes ranged from slightly clear (Secchi disc visibility = 5.2 ft, chlorophyll = 18 µg/L) to very low visibility (Secchi disc visibility = 1.3 ft, chlorophyll = 173 µg/L).

Despite their small size, red breast are a prized game fish and are caught on both

*(Continued on page 12)*



A redbreast sunfish (*Lepomis auritus*) showing brightly colored breast and long opercular flap.

Florida   
**LAKEWATCH**

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**Featured Fish: Redbreast Sunfish (Continued from page 11)**



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*A redbreast sunfish swimming in the water.*

natural bait and artificial lures. Unlike most sunfish, redbreast will bite well at night on flies, small spinners, worms, crickets, grasshoppers and small minnows. The flesh is a

sweet, flakey white meat that is commonly fried after dipping in seasoned cornmeal or pancake batter and is excellent eating.