

# TURNING THE TIDE

Volume 1 Number 8 October 2008

Indian River County Pollution Reporting Hotline # 226-1888

View past issues on the IRC stormwater website at [www.ircgov.com/stormwater](http://www.ircgov.com/stormwater)

IRC citizens are learning and implementing proper outdoor chemical applications, revised disposal methods, and erosion control techniques to avoid contaminating all water that runs off their properties. Property water runoff from urban areas and construction activities are the most significant pollution contributors. Through self-awareness, implementing new behaviors, motivating others, and reporting waste disposed into storm drains and water bodies, IRC citizens will "Turn the Tide" of polluted property water runoff from reaching our oceans.

## What is the item most often littered in the world?

- Worldwide, smokers toss at least 4.5 trillion cigarette butts each year. Cigarette butts are the most littered item in the world. Cigarette butts are a danger to wildlife and have been found in the stomachs of fish and birds and other marine animals. Cigarette butts contain concentrated toxic chemicals and (acetate) plastic that is NOT biodegradable. ([www.cigarettelitter.org](http://www.cigarettelitter.org) or [www.litterbutt.com](http://www.litterbutt.com) for more info)
- Used oil is the single largest source (over 40%) of oil pollution in the U.S. harbor and water ways, at 385 million gallons per year, Americans carelessly dispose of 35 times more oil than was spilled in the entire Valdez oil spill. At least half of the amount is disposed of by do-it-yourselfers who change their own oil and disposed of it improperly.

Join your neighbor in Keeping Indian River beautiful,  
Diane Wilson, IRC Stormwater Educator

## Deadlines:

Oct. 3 to exhibit at the 2<sup>nd</sup> Annual Green Expo at the Indian River Mall on Oct 18  
Nov. 3 for the FREE Environmental Workshop @ Sea World in Orlando Nov. 5

*In Indian River County*

**REPORT POLLUTION**

**226-1888**

**[IRCGov.com-STORMWATER](http://IRCGov.com-STORMWATER)**

**For Hazardous Waste call 911**

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## Did you know.....

97% of the earth's water is salty or polluted,

2% is too far underground to reach.

That leaves only 1% for clean drinking water

.....and 50% of that is spent watering grass!

With so little water available  
we each need to  
use it conservatively  
and keep it clean.

## NEWS FOR EVERYONE....

### You Need To Know...

IRC's Environmental Health Services Division addresses the prevention and control of environmental contaminants and disease. If you have questions about environmental health issues call 794-7440. Following are a few of the services they provide:

**Drinking Water Quality:** Certain private and public water supplies are routinely tested for disease causing bacteria, viruses, chemicals, pesticides, and other harmful contaminants. Arrangements can be made for household water testing when requested. New well construction is monitored and permits are issued.

#### **Emergency Response:**

part of the community emergency response team that addresses environmental spills and accidents  
special drug, food or drink recalls, consumer product safety alert.

**Environmental Hazards:** All environmental complaints, including those related to solid and liquid wastes, drinking water, public housing, vermin control, air pollution, and other related concerns.

**Environmental Safe Drinking Water Laboratory:** Biological and chemical analysis of drinking water and surface water pollutants is conducted on-site.

**Hazardous and Toxic Waste:** Businesses that handle hazardous and toxic waste are surveyed. Complaints about disposal of waste are investigated. Storage pollution tanks, such as those at gas stations, industrial, and agricultural facilities, are regulated and monitored.

**Public Swimming Pools and Bathing Facilities:** These facilities are licensed and inspected on a routine basis to assure freedom from harmful contaminants. (BOB: He could talk about proper disposal of pool water.....)

**Sewage Disposal:** Sewage systems are monitored to assure proper disposal of human waste. Individual onsite sewage disposal systems are regulated with permits for new construction and repair. Certain public waste disposal facilities are routinely inspected. Complaints of improper sewage disposal are investigated and abatement procedures undertaken. Connections to sanitary sewer systems are promoted

**Surface Water Pollution:** The water quality of the Indian River Lagoon and the Sebastian River is monitored at several sites for levels of contaminants and nutrients. BOB: This is a great way to remind people their individual pollution behaviors affect the waters..... (Source: <http://www.myirchd.org/ClinicsandServices/EnvironmentalHealth.htm> )



## LOOKING FOR THE PERFECT GIFT?

**Give a turtle adoption.....**With a gift donation of \$25 or more to the Caribbean Conservation Corporation Sea Turtle Survival League, your gift recipient will receive a personalized adoption certificate, colorful logo decal, colorful magnet, *Sea Turtle Conservation Guide*, and a free one-year newsletter subscription newsletter, the *Velador*. Learn more about the currently active Satellite Tagged Turtles. To order a gift certificate call visit <https://www.cccturtle.org/Secure/gift-membership.php> for more than one turtle per gift call 1-800-678-7853, or by email at [membership@cccturtle.org](mailto:membership@cccturtle.org)



## An Eco-Friendly Life Style

**October 3 is the deadline** to register as a vendor or education & outreach non-profit/agency for the **Green Team's Green Expo to be held 10 – 3pm on Saturday, October 18 at the Indian River Mall**. This is a great opportunity to reach residents and visitors with information on ways to integrate eco-friendly behaviors into their lifestyles. For more information contact Ursula Gunter, Director of Mall Marketing 772-770-9404 [ugunter@simon.com](mailto:ugunter@simon.com)

## Second Annual Treasure Coast Green Conference October 23<sup>rd</sup>, 8:30 am – 4 pm

The program will consist of creative real-world solutions to current economic and development challenges, innovative projects, and progressive public policies that make sustainable development possible and profitable. Location: the Havert L. Fenn Center, the new \$14 million, 62,575 square foot special needs shelter, on Virginia Avenue ½ mile east of US #1 at the Lawnwood Sports Complex, east of the SLC Chamber of Commerce building. The conference fee is \$65. For more information email [info@treasurecoastgreen.com](mailto:info@treasurecoastgreen.com) or call (321) 971-1960.

**October 4, 2008 from 10 A.M. to 3 P.M. Free entrance to Jonathan Dickinson State Park for the FL Division of Forestry Fire & Forest Fest.** This event will be held at the park's new education center in Hobe Sound off US1 & South of Bridge Rd/Rte 708.

Fire & Forest Fest is the kick off for Fire Prevention Week starting October 5, 2007. Also, October is Forest Awareness Month. This is a free, family event designed to raise awareness in the community about the dangers of fire, the importance of prescribed fire and importance of preserving our forests. Your family can have fun and learn through games, fun and hands on activities.

*Activities Include:*

GUIDED BURN ZONE WALK – (10am to 11am and 2pm to 3pm) Come explore a Florida eco-system after a prescribed fire. An experienced guide will take you through a previously burned area to experience a mosaic healthy forest. You might see wildlife foraging off new vegetation emerging through the ash.

INVASIVE PLANTS PRESENTATION – (11am- 12pm) Have you ever wondered about the plant life here in Florida? What is invasive and what is natural to Florida's eco-systems? Well, come on in to the new Jonathan Dickinson State Park education center and learn all about Florida's plant life.

FIREFIGHTER OBSTACLE COURSE – (12pm) Come cheer on your local firefighter from various agencies competing for the golden shovel award. This is an obstacle course designed to challenge firefighter's mental and physical ability. Come see the FL Division of Forestry defend its title against Martin County Fire District & Jonathan Dickinson State Park.

FIRE DEMONSTRATION – (1pm) A small prescribed fire demonstration will be conducted near the Jonathan Dickinson State Park education center. Here experienced firefighters will show how we plan, prepare and conduct a prescribed fire. There is a lot of preparation and planning before fire is placed on the ground. This is a great event for the entire family. Your family can learn why fire is neither good nor bad but a necessity for our eco-system.

MULTI-AGENCY FIREFIGHTING EQUIPMENT (10-3)

KIDS ZONE WITH GAMES & PRIZES (10-3)

Jonathan Dickinson State Park abounds with wildlife and the Loxahatchee River runs through the park. Visitors can enjoy paved and off-road biking, and equestrian and hiking trails. Boating, canoeing and kayaking along the river are also great ways to see the park. Anglers can fish along the riverbank or from a boat. The park offers two full-facility campgrounds and a youth/group primitive campground. Visitors can arrange boat tours of the river and rent canoes, kayaks, and motorboats.

Come out to see the park and stay for the family event. You will be amazed when you see what this park has to offer. **You can come and see why the Loxahatchee River was Florida's first federally designated Wild and Scenic River.** For more information please call Libby Reinert, Education Specialist, Jonathan Dickinson State Park at (561) 745-5551.

**Florida Ranch Recognized by National Stewardship Award**  
(allow a moment for the graphic to appear below...)



The Longino Ranch is the first ranch in Florida to receive the Association of Fish and Wildlife Agencies' Private Lands Fish and Wildlife Stewardship Award. This highly coveted annual award recognizes the contributions of private farm, ranch and forest lands to conserving the nation's fish and wildlife resources by selecting a private land manager who exemplifies outstanding stewardship of fish and wildlife resources. The Longino Ranch, now as a national role model for other private landowners, will be featured in the Florida Fish and Wildlife Commission's magazine, "Florida Wildlife."

Nominations for this national award are made by the state fish and wildlife agencies. The Florida Fish and Wildlife Conservation Commission nominated Longino Ranch for its outstanding commitment and stewardship in preserving the environmentally sensitive land while still managing a successful cattle, citrus and timber operation. The innovative, cost-effective and environmentally sound best management techniques are demonstrated on a video produced in 1998 by the Florida Dept. of Agriculture for an Environmental Leadership Award.,

[http://www.florida-agriculture.com/videos/flash/Ag\\_Environ\\_Award\\_1998\\_Longino\\_Ranch.htm](http://www.florida-agriculture.com/videos/flash/Ag_Environ_Award_1998_Longino_Ranch.htm) .

Of particular interest from the stormwater perspective is the grove's irrigation and drainage system. Miles of pipes were laid underground to deliver water directly to the root system of citrus trees using microjet sprinklers. This method reduces water loss to evaporation and improves efficiency of water use by citrus trees. Previously groves were irrigated through flooding the furrows with water pumped from canals or wells.

Buster Longino's commitment to soil and water conservation is also exhibited through his grove's drainage set up. During the late 1950s, wetlands within the ranch were drained to increase the amount of usable farmland per recommendations from the Soil and Water Conservation Service. When the family decided to add a citrus grove in the early 1990s, the Longino Ranch was required to dig an adjacent retention pond. Faced with an extensive excavation project, Buster turned to a solution more in harmony with nature: he reestablished the nearby wetlands that had been drained forty years earlier. An overflow was put in the main outlet of one of the previously drained ponds allowing the run-off from the grove to go into the reestablished wetland where it is treated with the pond's plants. By the time the water reaches

the far end of the retention area, the water becomes cleaner than when it entered the pond. Florida is fortunate to have such a conscientious agricultural entity recognized as a national model for its environmentally sound BMPs!

**PRIVATE LAND OWNERS:**  
**Wildlife Conservation Planning Tool is Now Available**

Landowners seeking assistance with habitat management will likely find it offered within the Florida Fish and Wildlife Conservation Commission's (FWC) Landowner Assistance Program (LAP). There are many forms of assistance that include technical, financial, educational, and various forms of recognition that seek to award landowners who manage their habitat properly for wildlife. The goal of this website is to provide a "one-stop-shop" for landowner's needing habitat management assistance. Landowners will quickly find the resources they need from this website while others may learn how to receive additional assistance. One resource is FWC's Habitat Conservation Scientific Services section, a group of approximately 30 biologists who are available to provide wildlife-related assistance with land-use planning and habitat management. <http://myfwc.com/LAP/>

Over half of Florida is privately owned. The land-use planning efforts and habitat management decisions made by private landowners today will determine the future for fish and wildlife tomorrow. With over 700 animals on land and more than 1,250 freshwater and marine fish, Florida is literally teeming with wildlife. All are dependent on the highly productive, but delicate, natural systems of Florida, ranging from the tropical coral reefs of the Keys and the magnificent Everglades to the awe-inspiring array of springs and quiet beauty of the rolling sand-hills. Florida is also home to more than 17 million people, 1,250 golf courses, 370,000 hotel rooms and a gross state product of more than \$490 billion dollars.

"At first glance, it would seem these two worlds would be incompatible, but the impressive thing about Florida is there is room for both humans and wildlife," says Ken Haddad, executive director of the Florida Fish and Wildlife Conservation Commission (FWC). Conserving habitats is the key to survival for people and a diverse array of living things.

**SLC Extension Office PLANT SALE October 11 & 12**

The St. Lucie County Cooperative Extension Office and Master Gardeners will hold the 25<sup>th</sup> Annual Plant Sale on Saturday, Oct. 11 from 8 a.m. - 2 p.m. and Sunday, Oct. 12 from 10 a.m. - 2 p.m. Located at the Extension Office, 8400 Picos Road, the Annual Plant Sale features free soil testing and garden demonstrations by trained volunteers from the University of Florida's Institute of Food and Agricultural Sciences (IFAS). Additionally, an **\*\*\*Edible Landscape Workshop will be held on Saturday, Oct. 11 from 9:30 - 11:30 a.m.** For more information contact the St. Lucie County Extension Office at (772) 462-1660 or visit: <http://stlucie.ifas.ufl.edu>.

**TAKE THE TIME TO EXPLAIN THE HAZARDS OF PLAYING IN SWALES**

**Parents,**

Please talk with your children about the hazards of playing in flooded swales. Versus just telling them not to play in the water, take the time to educate them as to why they don't want to play in it.

The water in these areas is referred to as stormwater runoff resulting from rain that runs off surfaces such as rooftops, paved streets, highways and parking lots. Along its path the water picks up and transports hazardous waste: motor oils, gasoline, antifreeze, fertilizers, pesticides, animal waste, industrial wastewaters with chemicals and septic tank leakage. That is only a partial list of contaminants aside from the flooded canal waters potentially containing fire ants, snakes, unwanted pets released by citizens, and other hazards.

Residents and children should not try to walk through or play in any form of standing water. If you have to walk through flooded areas, be sure to wear rubber boots/shoes. Remember, the largest organ in your body is your skin which absorbs toxins and carries them to your blood system.



## Animated Fishing Graphics

Available at <http://www.angelfire.com/home/lake/cgif7.html>



**REGISTER BY NOV. 3 FOR:**

**FREE 1-DAY ENVIRONMENTAL WORKSHOP  
IN ORLANDO**

The Metropolitan Environmental Training Alliance of Orlando (METRA) is hosting their 4<sup>th</sup> Annual Environmental Excellence Day Workshop for environmental professionals and small-business employees.

Environmental vendors will be on hand with booths to display their products and answer questions. Door prize drawings will be presented throughout the day!

**WHEN:** Wednesday, November 5, 2008; 8:30 am – 4:00 pm *Lunch will be provided*  
Register by 12:00 p.m. Nov. 3, 2008 at [www.metra.org](http://www.metra.org)

**WHERE:** SeaWorld Adventure Park's Ports of Call

## PROGRAM AGENDA:

*An Environmental Case Study* will be presented to the audience, followed by these subjects:

**General Waste Management:** Waste Identification, Industrial Wastewater, Used Oil/Oily Waste, Universal Waste, Generator Status, Container Management, Recordkeeping, and Training

**National Pollutant Discharge Elimination System:** Stormwater discharges, Recordkeeping, and Best Management Practices

**Regulatory Inspections:** Case Study Facility Regulatory Inspection

**Enforcement Resolutions:** What happens after the inspection?

**Pollution Prevention:** Strategies for reducing pollution, waste generation, and regulatory burden

### **Guest Speaker**

While working 38 years with the Florida Department of Environmental Protection, Jim Stevenson served as the Chief Biologist for the Florida State Park System and as the Director of the Governor's Florida Springs Protection Initiative. In recognition of his dedication to environmental stewardship, the state has named a spring on the Suwannee River and dedicated an annual award in his name for the most deserving state lands manager.

**Registration information, directions & parking information** are available at the bottom of the home page on [www.metra.org](http://www.metra.org)

*Note: Copies of the presentations will NOT be provided onsite. However, you may print a copy from our website about a week in advance.*

## Want to Reduce Your Expenses?

**Use Native Plants in your yard....**

**Save Time, Money, and Energy.** When used intelligently, native plants require less maintenance, are less expensive, and save energy. Did you know that lawnmowers are a significant source of air pollution? They also use up an appreciable amount of fossil fuel.

**Conserve Natural Resources.** Used properly, native plants require little to no extra water or fertilizer compared to most exotics. Watering non-native plants that aren't adapted to Florida's climate wastes energy as well as water, costs you money, and contributes to the pollution of surface water. Fertilizers, pesticides, and herbicides used in landscape and lawn maintenance run off into streams and creeks, polluting these water bodies.

**No Pesticides Needed.** Native plants have been exposed to Florida's pests as long as they have existed in Florida, and continue to display their resistance to insects and disease in our own yards. Forty years ago Rachel

Carson pointed out that pesticides are *biocides* - their toxic effects are not confined to pests, but spill over to cause health problems for wildlife and people. Now, *Our Stolen Future* reminds us that we have again underestimated the danger of pesticides.

Source: <http://www.fnps.org/pages/plants/natives.php>

# Pond Hazards

## What is a "Retention Pond"?

A retention pond is a body of water that is used to collect storm water runoff for the purpose of controlling the release of this runoff. Retention ponds have no outlets or streams, creek ditches, etc. Water collects and then is released through atmospheric phenomenon such as evaporation or infiltration.



## What is the difference between a Retention pond and a Detention pond?

The biggest difference between a detention pond and a retention pond is that a detention pond has an outlet such as a pipe that discharges water to a stream. A detention pond is a body of water that is used to collect storm water runoff for the purpose of controlling the release of this runoff. The pipe that a detention pond contains is sized to control the release rate of the storm water runoff.

Both retention ponds and detention ponds can be located in your neighborhood, so be sure to apply the safety rules to both types of ponds. Both can be dangerous.

So always remember what Diver Dan says, When in Doubt, Just Stay Out!

**W.A.R.N. HOW DEEP IS IT?**



**Pond Construction**

Neighborhood ponds serve several purposes, but none of those purposes include swimming or wading.

The ponds must be of sufficient depth (at least 8-10 feet) to prevent stagnation and algae growth, and to handle the amount of stormwater runoff that will enter from your neighborhood.

Many people, and most children, don't realize that these ponds typically have a "safety ledge" at the edge to keep those who UNINTENTIONALLY enter the pond from getting into deep water immediately.

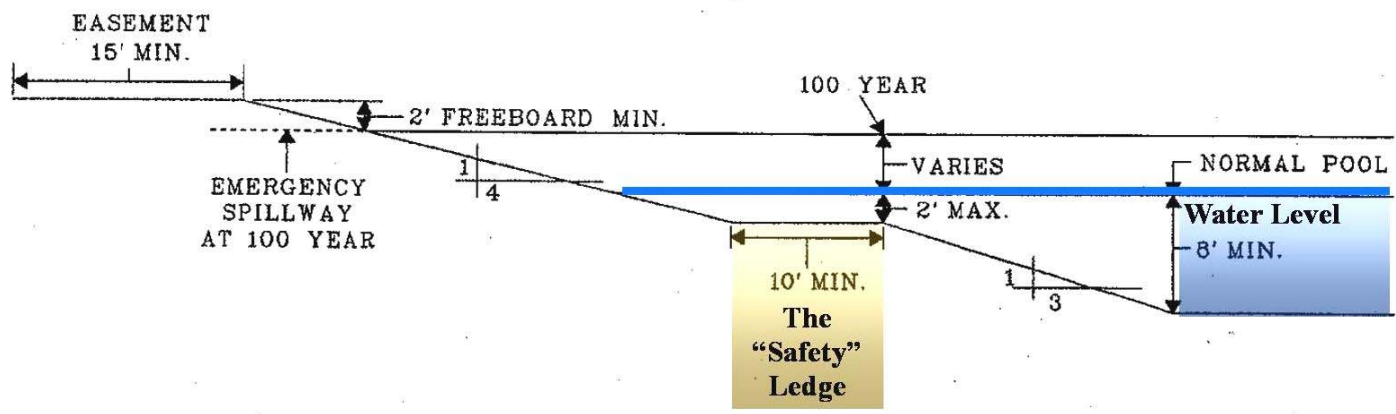
**W.A.R.N. What's in the Water?**



This safety ledge is generally no wider than 10 feet, and leads directly to much deeper water. The slope off the safety ledge varies greatly, as does the depth of water it leads to.

This is a common place to find young drowning victims who were unaware of this hazard.

The graphic below is an example of a construction guideline for building a new pond. Note the minimum pond depth of at least 8 feet. This guideline calls for a 10 foot minimum safety ledge with a maximum water depth of 2 feet.





### Got Birds in Your Pond?

One common problem with ponds is the buildup of bacteria like E-coli.

Because of the limited water flow and the tendency of wildlife like birds to gather around ponds, they can become breeding grounds for dangerous bacteria.

If you have a large bird population at your pond, have you noted the amount of droppings in and around the water? Where do you suppose all of that nasty stuff goes?

One more reason to stay out of the water.

## Resources and Incentives Available For New Home Construction

**6.7 gallons every hour...**

**160 gallons of water in typical daily activities...**

**4,800 gallons each month...**

**58,400 gallons a year**

This is the **“average per person use”** of publicly supplied water in the St. Johns River Water Management District’s service area on typical daily activities. It doesn’t take long for the gallons to add up. Inefficient fixtures use an average **five gallons per minute in the shower and four gallons every time an older model toilet flushes**. In fact, a leaking toilet can waste more than 200 gallons in a single day.

This is why the District and its partners are promoting Florida Water Star<sup>SM</sup>. The program encourages water efficiency in household appliances, plumbing fixtures, irrigation systems and landscapes. These promote the economic and environmental benefits of efficiency in new home construction.

To do this, the program currently offers resources and incentives to builders and home buyers who value water efficiency in new home construction. The program may later be expanded to include ways to update or retrofit older homes. Visit <http://sjrwmd.org/floridawaterstar/index.html>

## Friends of Savannas Preserve State Park, Inc. Fall Wildflower Lecture and Workshop

**Saturday, October 11, 6 PM:** Join botanist Steve Woodmansee for an evening lecture on fall wildflowers native to South Florida. Refreshments provided!

**Sunday, October 12, 9:30 AM-12:00 PM:** Steve Woodmansee leads a field workshop on Savannas' fall wildflowers. Refreshments provided. Bring sunscreen, water, hiking shoes and a bag lunch if you'd like to picnic afterwards.

Cost: \$10 per program, or \$15 for both. *Call the Education Center to sign up, as spaces are limited:* 772.398.2779 This event will take place at: Savannas Preserve State Park Education Center 2541 Walton Road, Port Saint Lucie, Florida, 34952

**October 15, 2008 9:00 am – 1:30 pm**

**Native Butterfly Gardening Workshop & Native Plant Sale**

At Florida Atlantic University's Center for Environmental Studies (CES) at the Riverwoods Field Lab in Lorida, FL is conducting a native Butterfly Gardening Workshop. The workshop fee is \$10.00 (bring to workshop) and reservations are required. The workshop will introduce you to our local native plants and the native butterflies that they will attract to your garden. You will have the opportunity to purchase native butterfly plants. **If you have questions please contact Casey Trent, Field Coordinator at 863/462-0026 or [ctrent@strato.net](mailto:ctrent@strato.net)**

**Alternatives to Toxic Cleaners**

To get a home that is truly clean, rather than covered in toxic chemicals, try making your own non-toxic cleaners at home. It's easy! Basic ingredients found in your kitchen can be used to make non-toxic cleaners for your different cleaning needs. Visit <http://www.ecocycle.org/hazwaste/recipes.cfm>

*Always be conscious to avoid directing any wash or rinse water into the street.*

Indian River County Extension  
**2008 – '09 Master Gardener Lecture Series**  
*Pre-registration is required*

**For more information call (772) 770-5030**

<b>DATE</b>	<b>TIME</b>	<b>PROGRAM</b>	<b>PRESENTER</b>	<b>LOCATION</b>
Thursday September 25, 2008	7pm - 9 pm	Backyard Econo-Gardening	Christine Kelly-Begazo County Extension Agent	IRC Administration Building B 1800 27 St., Room B1-501 Vero Beach
Tuesday October 14, 2008	10am -12 pm	Backyard Econo-Gardening	Christine Kelly-Begazo County Extension Agent	IRC Administration Building B 1800 27 St., Room B1-501 Vero Beach
Thursday November 6, 2008	10am - 12 pm	Winter in Your Florida Landscape	Violet Krochmalny Master Gardener	Indian River County Extension 1028 20 <sup>th</sup> Place, Room B Vero Beach
Thursday December 4, 2008	7pm - 9 pm	Winter Blooms That Won't Bust Your Budget	Ed Skvarch County Extension Agent	Indian River County Extension 1028 20 <sup>th</sup> Place, Room B Vero Beach
Thursday January 8, 2009	10am -12 pm	New Year's Resolutions for Your Landscapes	Kathy Wegel and Martha Willoughby Master Gardeners	Indian River County Extension 1028 20 <sup>th</sup> Place, Room B Vero Beach
Thursday February 5, 2009	7pm - 9pm	Greening Your Grass Without Spending Your Green	John Beukers Master Gardener	Indian River County Extension 1029 20 <sup>th</sup> Place, Room B Vero Beach
Saturday March 28, 2009	10am - 4 pm	Green Spring Fling	University of Florida and Extension Agents	IRC Administration Building 1800 27 Street Vero Beach

## **NEWS FOR HOMEOWNERS (and HOA Leaders)**

Earth 911 video library has a series of **13 one-minute Envirotip videos** teaching you how to green specific areas of your life <http://earth911.org/videos/>

### **A liter out of 58 gallons: Breaking Down the Water Supply**

Water is a common chemical substance, essential to all known forms of life. About 1,460,000,000,000,000 (1,460 trillion) tons of water covers 71 percent of the Earth's surface, but relatively little is suitable for consumption. In many parts of the world, suitable water is in very short supply.

Let's scale the world's water supply to a size easier to comprehend like 58 gallons, about the same as a really full bathtub.

- a full 55 gallon drum of that water is saltwater ocean.
- About 10 pounds of ice is locked in polar ice caps and glaciers.
- About one drop is in the atmosphere as vapor, clouds, and precipitation.
- Another drop is in our soil, and part of life itself (our bodies are made up mostly of water, for instance).
- Our drinking water sources:
  - Almost one gallon of that water is below ground in aquifers.
  - Three-fourths of this is polluted or otherwise unavailable to us.

- We are left with less than a liter of this water to live on.
- About four tablespoons of that is in surface water such as rivers and lakes.

Proper disposal is key to water conservation because water is easily contaminated.

(Source: <http://earth911.org/water/breaking-down-the-water-supply/> )

## The Construction Industry

### BMP REMINDER

#### **CONSTRUCTION SITES ARE REQUIRED TO MAINTAIN INSPECTION RECORDS**

**TO VALIDATE INSPECTIONS ARE DONE WITHIN**

**24 HOURS OF EVERY STORM WATER EVENT**

**AND A MINIMUM OF EVERY 7 DAYS.**

\* Construction sites that will result in a disturbance of one acre or more, and sites that include the disturbance of less than one acre of total land area that is part of a larger common plan of development or sale that will ultimately disturb equal to or greater than one acre and less than five acres are required to seek coverage under the Generic Permit for Stormwater Discharge from Large and Small Construction Activities (Source: <http://www.dep.state.fl.us/water/stormwater/npdes/docs/cgp.pdf> )

# Indian River County Dewatering Compliance Workshop

Sponsored by Indian River County Stormwater Division,  
the Florida Department of Environmental Protection,  
and Geotechnical and Environmental Consultants, Inc.

**Wednesday, November 19, 2008**

**Municipal Employees: 9:30-11:30 a.m.**

**Private Sector: 1:30 – 3:30 p.m.**

**Indian River County Fairgrounds**

**PRE-REGISTRATION IS REQUIRED - DEADLINE: November 7, 2008**  
Register by sending your agency/organization's full contact  
information and total headcount to [dwilson@ircgov.com](mailto:dwilson@ircgov.com)

**Directions:** From I-95: Take exit 147 (old exit 68) Vero Beach. Go East on SR 60.  
Turn left on 58th Ave, 6 miles north. Fair ground is on the left.  
From Turnpike: Take exit 193 Vero Beach/Yeehaw Junction, East SR 60  
to Vero Beach. Turn left on 58th Ave, 6 miles north. Fair ground is on the left.

**Questions?** Email Diane Wilson, IRC Stormwater Education Coordinator, [dwilson@ircgov.com](mailto:dwilson@ircgov.com)

**The FDEP is now beginning to step up enforcement**  
**of the "Generic Permit for the discharge of**  
**produced ground water from any non-contaminated site activity."**

One of the major issues with this permit is that there is a particular panel of water quality testing that must be completed before water can be discharged. Testing must be done before the beginning of dewatering, after 30 days and then every 6 months with results submitted to FDEP. One of the challenges is that the level of mercury required to be tested is very low and only a very small number of labs in the state (2) have the equipment to do so. Be sure to allow enough time for the lab you are working with to send the mercury related test out to one of the two labs (which take at least 2 – 3 weeks for turn-around of results). Laboratories certified under NELAP by the Florida Department of Health are listed at: <http://www.dep.state.fl.us/labs/cgi-bin/aams/index.asp> . There are different values for discharge to fresh water and to coastal water. If any of the results exceed the screening values, except TOC (total organic carbon), then discharge is not permitted. TOC may be impacted by naturally occurring properties in the soil and, if proven to be so, an exemption can be allowed for TOC only.

A permit can be avoided by keeping water on site, discharging to uplands where it can return to the ground or allowing it to sheetflow over undisturbed upland areas (just so it doesn't get into a surface water body and isn't creating erosion). If it is contaminated and there is no choice but to discharge, an individual permit is required and that can take as long as 6 months to obtain. The enforcement of this state level permit is mandated to the DEP by the EPA. The FDEP permit, [www.dep.state.fl.us/legal/rules/shared/62-621\(2\).doc](http://www.dep.state.fl.us/legal/rules/shared/62-621(2).doc) went into effect 2-14-2000.



**Top 10 Ways to Avoid NPDES Phase II Fines!**

- 1 Submit a Notice of Intent before starting work.
- 2 Obtain an NPDES permit before starting work.
- 3 Prepare a Storm Water Pollution Prevention Plan (SWPPP) before starting work.
- 4 Keep a signed copy of your SWPPP on site and update it regularly.
- 5 Implement all parts of your SWPPP throughout the project.
- 6 Properly train all involved contractors.
- 7 Correctly install and maintain Best Management Practices.
- 8 Perform timely inspections and correct problems within 48 hours.
- 9 Maintain complete records of all SWPPP activities.
- 10 Never discharge muddy water or other pollutants from the site.

**Get your free Bilingual—English and Spanish poster (with the above message) today!**

IECA is GIVING AWAY this great educational poster for a limited time only.....go to

<http://www.ieca.org/contactus/poster.asp>

**REGISTER NOW .....FOR THE TUES/WED, DEC 9 & 10 \* 2- DAY DEP FLORIDA STORMWATER EROSION AND SEDIMENTATION CONTROL INSPECTOR'S COURSE** hosted by Indian River County Stormwater Division. ---Don't wait until November to register as this class fills quickly. Participants will learn the proper methods of installing, maintaining, and inspecting Best Management Practices (BMPs) for use during and after construction to minimize erosion and sedimentation and to properly manage runoff for both stormwater quantity and quality. In order to obtain the FDEP certification, participants must attend the entire two-day class, and earn a minimum passing grade of 70% on the proctored examination. Registration is required as seats are limited. Register by sending your contact information to [dwilson@ircgov.com](mailto:dwilson@ircgov.com)

**\*Additional 2-Day DEP classes held year-round across the state are listed on the FDEP website at <http://www.dep.state.fl.us/water/nonpoint/erosion.htm>) Stormwater Inspector Certification classes, held for free all year around the state of Florida, are listed at <http://www.dep.state.fl.us/water/nonpoint/erosion.htm>. Address questions to the DEP Stormwater Certification Coordinator 850-245-8294**

## **Florida Water Star<sup>SM</sup> Workshops are Certifying Professionals to do Inspections**

Workshops on building and certifying Florida Water Star<sup>SM</sup> homes will be offered within the St. Johns River Water Management District's 18-county service area. Workshops will offer:

- Comprehensive guidance in irrigation principles, including basic hydrology, pipe sizing, head spacing, and microirrigation

- Exposure to the latest irrigation, leak detection and water-conserving technologies
- Guidelines on installation inspection and documentation
- Familiarity with Florida Water Star<sup>SM</sup> program objectives and processes
- Practical experience working within multiple water-conserving disciplines

Florida Water Star<sup>SM</sup> workshops are currently certifying professionals to inspect new residential buildings for Florida Water Star<sup>SM</sup> home designation. Builders are welcome to attend workshops to learn more about the program. Visit <http://sjrwmd.org/floridawaterstar/certifiers/workshops.html>

## **Can Concrete Pavement Purify the Air?**

"In an effort to combat air pollution, a Dutch town has paved some of its streets with [air-purifying concrete](#). It contains a titanium dioxide-based additive that utilizes sunlight to turn car exhaust into harmless nitrates. It was shown to do this in a lab and now the scientists are interested in just how much this will affect the air quality around the road. They will sample the air quality by a normal road and by this newly paved one." (Source: <http://tech.slashdot.org/article.pl?sid=08/08/06/1520221> )

What at first sight looks like science fiction, becomes reality through nano-technology. Nano-particle titanium dioxide dispersed in the top layer of concrete blocks turns the pavement into a photocatalytically active surface. Pollutants as e.g. nitrogen oxide or organic gases in contact with the surface are decomposed or oxidized and in this way rendered harmless. Hence concrete paving blocks with TioCem® can effectively contribute to air purification. (Source: <http://cat.inist.fr/?aModele=afficheN&cpsidt=20059470> \_

## **Using Smart Growth Techniques as Stormwater Best Management Practices**

**Communities across the country are adopting smart growth strategies to reach environmental, community, and economic goals. The goal of this document is to help communities that have adopted smart growth policies and plans recognize the water benefits of those smart growth techniques and suggest ways to integrate those policies into stormwater planning and compliance. Taking credit for the work a community is already doing can be a low-cost and practical approach to meeting water quality goals and regulatory commitments. EPA has issued a comprehensive guide called “Using Smart Growth Techniques as Stormwater Best Management Practices” which is available for free at <http://snipurl.com/bmp358>**

**METRA Meetings are held at 3:00 p.m., on the second Wednesday of every month** typically at the Florida Department of Environmental Protection's Central District office in Orlando however it is advisable to check [www.metra.org](http://www.metra.org) <[www.metra.org](http://www.metra.org)> for meeting locations. There are no fees or dues to join METRA. Everyone is encouraged to come and participate. Remember, everybody shares and everybody benefits. See the Calendar of Events at (<http://metra.org/> ). The mission of METRA (Metropolitan Environmental Training Alliance) is to promote environmental excellence through training and partnerships. METRA was established in 1998 by the leaders of Orange and Seminole Counties, the City of Orlando, the Greater Orlando Aviation Authority , Reedy Creek Improvement District and the DEP Central District . Contact METRA to be added to their email distribution list.

**REGISTER NOW FOR the November 5, 2008 METRA's FREE Environmental Excellence Day, to be held at the Sea World Ports O' Call facility in Orlando.** Attended by environmental stakeholders from across the state, this workshop has become METRA's flagship event, combining a full day of expert environmental training, hot-topic presentations, a complimentary luncheon, exhibits, and prize drawings. The featured theme this year will be water conservation and feature a prominent guest speaker. Register at [www.metra.org](http://www.metra.org) – scroll down to the bottom of the home page.

**PlanetReuse.com** is the world's first Web site that connects buyers and sellers of reused and reclaimed construction materials and equipment and allows them to purchase products with integrated shipping online, per <http://www.eponline.com/articles/60262>

**Concrete washout issues ...** EPA is targeting construction sites to insure that there is no violation of the NPDES requirements. Those who are in violation are being hauled away in handcuffs. Please make an extra effort to ensure your staff is informed and you are making specific plans to handle concrete washout. Contractors and concrete producers must wash out the chutes in order to prevent any concrete from spilling onto the streets. Simple solution for small amounts of washout is a designated pit (sign) lined with plastic – remove and haul off when dried. Make sure this activity is located AWAY from streams and water bodies. There are 2 potential pollutants in washout. 1 = pH issues. 2 = Selenium 6 (toxic). Any questions...look at the EPA and DEP websites.

## **Get Your Staff Trained in Stormwater BMPs for FREE.....**

Visit <http://www.dep.state.fl.us/water/nonpoint/erosion.htm>

At that website, move your cursor down about ¾ of the web page where you will see a list of classes offered all around the state throughout the year.

Learn new practices and implement them project by project: <http://www.wwn-online.com/articles/50888/>

## **Students & Teachers**

**We all have something in common.....**we like to eat food. Check out [www.slowfood.org](http://www.slowfood.org) A fun web page to see: <http://www.slowfoodgtc.com/petrini.html>

When children participate in growing a garden they can learn about stormwater and erosion!!!

## **Marine debris education begins with the future decision makers - our children**

Did you know that the same ocean, river or bay that you swim, fish, surf and dive in can also be a fabulous classroom?

The oceans provide students of all ages with unlimited opportunities to learn about the world around us. Sadly, one of the lessons the oceans and waterways are teaching us today is how hazardous marine debris is to ocean health.

Marine debris is more than an eyesore - it's a serious pollution problem that affects the wildlife, habitat and water quality of all the world's oceans and waterways. It is also an issue that will require continued attention for years to come.

That's why it's essential that marine debris education begin with the decision makers of the future - our children. Unlike many environmental issues, students and educators can play a direct and significant role in reducing the marine debris problem. Visit [http://marinedebris.noaa.gov/marinedebris101//WYCD\\_student.html](http://marinedebris.noaa.gov/marinedebris101//WYCD_student.html)

### ***Nature is Good for Your Health***



**Emerging research shows that children who feel connected to nature have better physical, mental, and emotional health. Nature also improves student learning. And sharing the outdoors together can build strong family bonds and create life-long memories.**

**What Can You Do? Go outside and connect a child to the wild! Spending time outside is fun for the whole family. And it doesn't have to be somewhere far from home. It can be simple and safe:**

- **Take a walk in the woods**
- **Lie on your back in your backyard and watch the clouds roll by**
- **Turn over rocks in a stream and look for critters**
- **Catch lightning bugs**
- **Climb a tree**
- **Fish at a local pond**
- **Draw a picture of a tree and all the animals that live in it**
- **Picnic at a local park**

Whether it is your own backyard, a local community park or a [national wildlife refuge](#), there are lots of outdoor places you can visit <http://www.fws.gov/letsgooutside/>

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## Educational Activities Related to Sea Turtle Migration-Tracking

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Below are activities, materials and data that cover topics in Biology, Conservation, Geography, Earth Science & Mathematics that can be used as part of the Sea Turtle Migration-Tracking Education Program. By becoming aware of turtle migration, students realize that turtles are becoming extinct and the cause of this is the consequence of stormwater runoff.

▶ [Activities Related to the Satellite Tracking of Sea Turtles](#) 📄

▶ **NEW:** [Google Earth Tracking KMZ files](#)

Use Google Earth to track CCC's turtles! Click on the turtle's name below to save the file to your computer and open with Google Earth. Don't have Google Earth? You can download a free version of [Google Earth](#).

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### PROGRAM IDEA.....



***Climate Change is Elementary™*** is intended to help schools and families to begin to take meaningful action toward understanding and solving the Climate Crisis. *Climate Change is Elementary™* and *Juggling for Success™* are projects of Congressional District Programs, a non profit 501c3 foundation. <http://www.climatechangeiselementary.com/index.html>

Dave Finnigan, who designed both of these programs, has a BA from Cornell in Anthropology and a Masters in Health Education (MPH) from Berkeley. He worked from 1967-1976 in Population and

Development Planning Programs in East Asia. **From 1976 through 2005 Dave took the self-esteem and school-esteem program, *Juggling for Success*™, to over 2,000 elementary and middle schools in North America.**

Dave's educational preparation, his 10 years of experience working in attitude change regarding population and family planning in Asia and his 30 years of working in schools has given him a unique set of insights and tools to help design, test, refine, and implement the *Climate Change is Elementary*™ Program for schools.

## **Growing Plants Without Dirt**

Living on Mars is still science fiction, but growing plants without soil is science fact. The technique is called hydroponics. It's simply growing plants in water, something you can do today. Researchers say hydroponics will someday be used not only for feeding space dwellers but also us earthlings. Raising plants without soil allows farmers to grow more food in less space. That's especially important in poorer countries, where many people go hungry. The term hydroponics was coined in 1936 by a scientist in California who planted a tomato in a tub of water. The plant grew more than 25 feet tall! Once word got around, people were growing plants in baskets, on patios and on rooftops using only water and a little plant food.

**Disney Does Science**.....People who have eaten at EPCOT Center in Walt Disney World have experienced hydroponics. Researchers there produce fresh tomatoes, lettuce and cucumbers from hydroponic gardens.

The National Aeronautics and Space Administration (NASA) is using hydroponics to provide fresh food for astronauts. On the frozen continent of Antarctica, scientists are testing hydroponic techniques that may be used on missions to Mars.

Many commercial growers around the world are turning to hydroponics as an alternative to traditional farming. More food can be produced, and weed problems are eliminated.

Strawberries are a popular hydroponics crop in Australia. Tomatoes, lettuce and a variety of herbs lead the way in Ontario, Canada. In the United States, cucumbers and tomatoes are grown in water.

**A Year-Round Garden**.....Hydroponics is not only useful. It can be fun. Clear a place on your window sill, and you too can grow vegetables, flowers and fruits. Visit *Boys' Life* magazine <http://www.boyslife.org/hobbies-projects/projects/4406/growing-plants-without-dirt/> )

## **Growing Plants WITH Dirt! First test your soil.....and this is how....**

**The Indian River Extension Service (IRES), 1028 20th Place, Suite D  
Vero Beach, suggests homeowners start with the free pH testing which can take 3 days to one week for results. Homeowners can call IRES to get instructions on how to collect the soil samples to get an accurate**

test result, 770-5030. For a more extensive tests is desired for a nutritional analysis citizens can pick up bags, boxes and forms at the IRES office. Prices vary with the different tests offered.

The direct link to the UF Soil and Water Testing lab (yes, they test water too! Mostly for metals and sediments that may affect irrigation lines): <http://soilslab.ifas.ufl.edu/>

Go to the link "Analysis Page" and scroll down to find the info for Landscape and Vegetable Garden Producer Test. This is the one Homeowners will use. There is a different section on that page for farmers and pasture producers.

Health tests for bacteria in water should be handled by the Environmental Health Department in the IRC Health Department - phone number is 794-7440. They have very specific instructions on how & when to collect samples so have the residents call directly there: 794-7440

### **Have you submitted your volunteer project ?**

Now through November 5th – vie for the \$25,000 award offered by the [www.wfchallenge.com](http://www.wfchallenge.com) competition by conceiving and implementing a totally unique volunteer project improving any waterfront

**Kids Taking Action to preserve aquatic habitats.....**visit the website: <http://www.aquakids.tv/> – a half-hour program on the FOX television network (airs locally on WFLX 12:30 PM Saturdays) features young people taking action across the U.S. to preserve aquatic environments and wildlife.

## **News for Marine Industry and Boaters**

Learn more about  
the Sport Fish  
Restoration  
Program and  
its impact  
nationwide.



### **Do Your Part for Sport Fish Restoration**

By posting the Sport Fish Restoration logo – a shared symbol of cooperative conservation – in your communications materials, you can help educate the public about what boaters and anglers have done to fund conservation in this country.

The Sport Fish Restoration Act, commonly referred to as the Dingell-Johnson Act passed on August 9, 1950, creates a program for management, conservation and restoration of fishery resources. When you buy a fishing rod, reel, lures, flies and artificial baits, your tax dollars go towards fish research, the re-introduction of declining sport fish species, restoration of aquatic habitats, aquatic education and construction of boat ramps and fishing piers. The Sport Fish Restoration Program (SFR) provides grant funds to the states, the District of Columbia and insular areas fish and wildlife agencies for fishery projects, boating access and aquatic education. The Program is authorized by the Sport Fish Restoration Act (Dingell-Johnson DJ) of 1950. The SFR Program was created to restore and better manage America's declining fishery resources and was modeled after the successful Wildlife Restoration Program. Through the purchases of fishing equipment, motorboat and small engine fuels and import duties the SFR Program is one of the most successful user pay, user benefit programs. The SFR Program symbol may be downloaded and displayed by authorized users. For more information visit <http://www.rbff.org/page.cfm?pageID=321>

## Recreational Anglers are Partners in Fishery Conservation

Anglers and boaters are some of our nation's most avid conservationists, and the principles of The Ethical Angler creed are values that they live by everyday.

"The Ethical Angler" public information campaign was recently initiated as a tool to reach anglers, fishing clubs and the general public with this a simple code of responsible fishing practices:

**Avoid** spilling and never dump gasoline, oil or other pollutants - on land or in the water.

**Never** leave trash behind, including worn line, old hooks and bait, and practice recycling.

**Gain** knowledge about aquatic nuisance species and how to help prevent their spread.

**Learn** and abide by all fishing regulations and boating laws.

**Educate** fellow anglers and especially new participants about fishing ethics.

**Respect** private property and the rights of other anglers and outdoor recreationists.

**Save** fish for tomorrow by practicing conservation and learning proper catch-and-release techniques.

Source: <http://www.boatus.com/news/releases/2008/september/EthicalAngler.asp>

**Adopt-A-Fishing Bin Project** - Volunteers are needed to inventory monofilament recycling bins along our waterfronts, and place collection boxes in marine-oriented businesses. For details contact KIRB at 388-5472

**Clean Boater Program** – If you would like to assist in the efforts to promote this valuable program at events please call KIRB at 388-5472. We can educate our citizens to utilize Florida's Clean Marinas, Boatyards & Retailers, safeguard the state's waterways, and adopt environmentally-friendly practices such as using bilge socks, fueling collars, and good recycling habits. For more information see [www.dep.state.fl.us/cleanmarina/boater/default.htm](http://www.dep.state.fl.us/cleanmarina/boater/default.htm)

### **Green Business Tips**

(Source: [www.dep.state.fl.us/pollutionprevention](http://www.dep.state.fl.us/pollutionprevention) )

When you start to green your business operations, you're helping to reduce carbon emissions, preserve forests and biodiversity, and keep our air and water clean. And you also can help protect your bottom line because environmentally responsible businesses are efficient businesses. The simple tips listed below can help any business start “going green”.

**TIPS FOR RECYCLING AND REDUCING WASTE** -The average U.S. office worker goes through 10,000 sheets of copy paper a year.

- Implement paper-reducing strategies, such as double-sided printing, re-using paper, and using email instead of sending memos or faxing.
- Using a mug saves 500 disposable cups per person from being thrown away each year.

**TIPS FOR CONSERVING ENERGY IN EXISTING BUILDINGS** - Installing compact fluorescent light (CFL) bulbs in place of standard incandescent bulbs can save you as much as \$40 a year in energy costs by changing out just one 60-watt incandescent with a 14-watt fluorescent lamp. CFL bulbs last up to 13 times longer.

- Use programmable thermostats to ensure reductions during off hours and keep thermostats at 78 degrees or higher.
- Lower the thermostat on hot water heaters; 115 degrees is comfortable for most uses.

**TIPS FOR GREEN CLEANING/PURCHASING** - Americans generate 1.6 million tons of waste each year from common cleaning products with potentially hazardous ingredients.

- Refer to the Environmentally Preferred Purchasing list created by the Florida Department of Management Services:  
[http://www.myfloridaclimate.com/env/home/environmentally\\_preferred\\_purchasing](http://www.myfloridaclimate.com/env/home/environmentally_preferred_purchasing)
- Use “green “cleaning products and “eco-clean” your office: [www.responsiblepurchasing.org](http://www.responsiblepurchasing.org) and [www.epa.gov/oppt/epp/pubs/vendors](http://www.epa.gov/oppt/epp/pubs/vendors).

**TIPS FOR CONSERVING WATER** - One drop of water wasted per second wastes nearly 3,000 gallons per year.

- Wash company-owned vehicles less often, and use a commercial car wash that recycles water.
- Use native plants in your landscape that require less water than ornamental varieties and follow other “Xeriscape” principles: [www.floridayards.org](http://www.floridayards.org).

**TIPS FOR TRANSPORTATION AND TRAVEL** - Present full-time home business owners & telecommuters save approximately 4,439 million gallons of gas per year.

- For company-owned vehicles, maintain maintenance records and meet standards to reduce fuel consumption, i.e. regularly scheduled tune-ups, maintaining proper tire pressure and changing oil and filters.
- Encourage and reward carpooling to the office or biking and walking if office is located near by.

**For more information visit [www.dep.state.fl.us/green](http://www.dep.state.fl.us/green)**

## Volunteer Opportunities To Preserve & Protect our Waters

**Sebastian Fishin' Chics** - For information call: Michelle Michelle Barkley – President or

Karen 772-633-2043 Email: [SebFishinChics@aol.com](mailto:SebFishinChics@aol.com) Website: <http://fishinchicssebastian.com/>

**Coastal Conservation Association** – For more information call Pete - 772-464-1972 or Cindy - 772-388-3183

Annual CCA Treasure Coast BBQ Date: October 17th (Friday) Time: 6:00 - 10:00PM

Location: The Riverhouse - 305 Acacia Road, Vero Beach

Festivities include a silent auction, raffle, BBQ dinner, FREE BEER and wine and Live Music. Tickets are only \$40. person or \$60. per couple and this includes a one year CCA Florida membership. Already a member? Bring your current CCA Membership Card and be entered to win a special raffle item. The CCA Florida is a grassroots organization that is committed to conserving and protecting Florida's marine resources.

## JOB NETWORK

NPDES Education & Certification Coordinator, DEP - Nonpoint Source Management Section, Tallahassee, FL  
850/245-8294

## IRC Environmental Event Calendar

To enhance community awareness and organizational planning, non-profit and governmental groups (no commercial groups) are welcome to list their environmental events, meetings and activities occurring inside and outside the county. **Go to <http://www.calendar.yahoo.com>. The yahoo Id is IRCwaterqualityed and the password is calendar.** Once you are in the calendar, events are easily added by selecting the desired date and clicking on "add". Please include your name, title, organization name and phone number in the comments section.

## Environmental Websites

<http://fn.cfs.purdue.edu/fish4health/Walletcard/walletcard.htm> - a wallet-size reference chart listing fish according to high, low and moderate mercury levels.

[www.CNN.com/solutions](http://www.CNN.com/solutions), profiles innovative solutions to tough environmental problems

Carbon Footprint Calculator – <http://www.nature.org/initiatives/climatechange/calculator/>

[www.Earth911.org](http://www.Earth911.org)

[www.BuildingSoil.org](http://www.BuildingSoil.org)

[www.recyclefloridatoday.org](http://www.recyclefloridatoday.org)

<http://www.palmbeachpost.com/green/content/shared/green/index.html>

<http://fn.cfs.purdue.edu/fish4health/Walletcard/walletcard.htm> - a wallet-size reference chart listing fish according to high, low and moderate mercury levels.

<http://www.learningtogive.org/>.

Free Software to create educational and outreach tools:

<http://www.etc.cmu.edu/Global/resources/software.html>

[www.slowfood.org](http://www.slowfood.org)

**13 one-minute Envirotip videos** - how to “green” your life <http://earth911.org/videos/>

## Grant Deadlines

### **Deadline: October 31, 2008 -The NOAA Restoration Center has two funding opportunities to restore fisheries habitat:**

**NOAA Marine Debris Prevention and Removal Project Grants**- Funds individual grass-roots marine debris prevention and removal projects that benefit coastal habitat like wetlands and coral reefs, as well as fisheries, marine mammals, sea turtles and waterways .

Typical funding range: \$15,000-\$250,000

**NOAA Open Rivers Initiative** - Funds the removal of obsolete dams and other stream barriers to improve fisheries, enhance public safety and boost local economies through benefits resulting from removal.

Typical Funding Range: \$30,000 to \$1,000,000

The full Federal Funding Opportunity (FFO) and application materials are posted on [www.Grants.gov](http://www.Grants.gov).

The FFO numbers and deadlines are as follows: Open Rivers Initiative: **NMFS-HCPO-2009-2001496**.

Community-based Marine Debris Prevention and Removal Project Grants: **NMFS-HCPO-2009-2001501**.

More information can also be found at our website:

[http://www.nmfs.noaa.gov/habitat/restoration/funding\\_opportunities/funding.html](http://www.nmfs.noaa.gov/habitat/restoration/funding_opportunities/funding.html)

Contact: Daphne Macfarlan, NOAA Restoration Center Community-based Program

v 727.824.5384

### **Dec 30, 08 (ROLLING DEADLINE) - TMDL Water Quality Restoration Program**

**stormwater construction grants**, Requires a 50/50 match. Average grant award is \$500K-\$1M. Approximately \$18M is available statewide. Construction of stormwater BMPs, wet detention, exfiltration, baffle boxes, etc. Contact [aadams@gate.net](mailto:aadams@gate.net)