

**Gulf of Mexico Minute**

**PSA Announcements for WGCU – FINAL SCRIPT**

**Rookery Bay Reserve**

**April 21, 2008**

## 1. NUTRIENTS IN THE GULF

### **Narrator:**

Healthy ocean systems, like the Gulf of Mexico, need nutrients *and* oxygen rich water to sustain life. Too many nutrients entering the water depletes oxygen and can cause marine life to die or move to other locations.

Nutrients act like vitamins for the sea.

Tina Gwaltney, research coordinator at the Rookery Bay National Estuarine Research Reserve in Southwest Florida, explains the need for balance.

### **Tina Gwaltney:**

“But the tricky thing is you can’t take a whole bottle of vitamins in the morning. That’s going to be toxic to you. So everything has a proper amount for a certain balance with the system where it’s found”

### **Narrator:**

The Gulf of Mexico has a low-oxygen area, called the dead zone, found off the coasts of Louisiana and Texas. This seasonal low-oxygen area is caused by excess nutrients from local rivers. You can help minimize nutrient inputs to your local waterway by using caution when applying fertilizers which act like vitamins for your yard. Follow the label carefully and avoid over use to prevent excess nutrients from harming the Gulf of Mexico.

## **2. CITIZEN SCIENCE**

### **Narrator:**

Citizen scientists volunteer their time to help conduct important research. Along the Gulf of Mexico, these volunteers make up a critical workforce, plus they gain skills for a future career and have fun in the outdoors.

One such effort in Southwest Florida includes the excitement of working with sharks. Pat O'Donnell, a fisheries biologist with the Rookery Bay Reserve, relies on help from volunteers to study juvenile sharks in the estuaries. These citizen scientists work with O'Donnell to better understand how top predators in the ocean are affected by freshwater inputs. Sharks captured in this project are tagged and released, providing information on which water quality conditions best meet their needs. Basic shark data, together with corresponding water quality information, can serve as an evaluation tool for local restoration projects with potential for world-wide application.

### **Pat O'Donnell:**

"Without volunteers I would not have a project...So they're extremely important and not only do we get the help of them conducting some of the field work for us, they get educated on what's out there."

### **Narrator:**

Look into becoming a citizen scientist by contacting a local government or non-profit organization in your area.

### **3. WILDFIRE PREVENTION**

**Narrator:**

Accidental wildfires can have devastating effects on nearby homes and businesses. But with a few tips and some common sense, you can prevent wildfires.

**Gerry LaCavera:**

“Believe it or not, over 75% of the wild fires that we have in the southern Florida area are caused by people. About 20% are caused intentionally, and the others are caused simply by carelessness”

**Narrator:**

Gerry LaCavera, wildfire specialist with the Florida Division of Forestry, explains what people can do to prevent wildfires:

**Gerry LaCavera:**

“They need to think about the consequences of their actions. If they’re going to park along the side of the road they need to think, how hot is my catalytic converter and what am I parking on top of... how dry is the vegetation I’m going into? Are sparks going to come off the muffler?”

**Narrator:**

Use special caution to prevent wildfires during the dry winter months in Florida. Sparks from outdoor grills, cigarettes, and lawn equipment can also cause problems. Keep an eye on these heat sources and observe bans on outdoor grilling or campfires when they occur by checking your local government website.

#### 4. UNDERSTANDING SHOREBIRDS

**Narrator:**

Least terns, black skimmers and other shorebirds fly thousands of miles to Gulf of Mexico beaches to raise their chicks. As a critical part of the Gulf coast ecosystem, and the multi-million dollar bird watching industry, shorebirds need your help.

Least terns and others lay their eggs directly on the beach in depressions, or “scrapes.” Visitors often step on the eggs because of their small size and color that matches the sand. Once hatched, the tiny chicks need their parents’ protection from predators and from the blazing summer sun. Adult birds cannot protect their chicks if chased off of their nests.

Also, shorebirds need their energy for finding food. If you get too close, you will force the birds to fly off their nests, which requires lots of energy during a critical period. These birds need to bring enough food back for themselves and their chicks, and also prepare for migration.

To do your part, appreciate shorebirds from a distance. Help them conserve their energy by not forcing them to fly. This includes keeping your dogs or other pets away from resting birds. Also, avoid posted or closed areas. Please share the shore!

## 5. EXOTIC SPECIES

### **Narrator:**

Some newcomers to the Sunshine state are more welcome than others. Over time, invasive species arrive – swimming, hitch hiking, or floating on the breeze. Invasive exotics are plants or animals that are not native and flourish without the natural population checks and balances of their home land. They thrive in our warm, mild climate and frequently crowd out local native species. This upsets the natural ecosystem and can also impact farming, fishing and recreation.

Florida has one of the most severe exotic pest plant problems in the country. Invasive plants now common in Florida include Brazilian pepper, Melaleuca and Australian pine. About 45% of Florida's invading plants arrived originally as imports for ornamental landscaping. Most of these attractive, but unruly, plants still dominate landscapes today.

Local, state and federal governments invest significant amounts of time and money to control invasive exotic species. Identify any existing exotic plants on your property and invest the time and the money to remove these plants. Your local wildlife will thank you!

## 6. LEAVE NO TRACE

### **Narrator:**

Thousands of pounds of trash wash into the Gulf of Mexico each year from litter dropped from boats or left on beaches. Marine debris negatively impacts wildlife such as turtles and birds that think it is food, eat it, and die as a result. Broken glass causes injuries, and dirty beaches can cause financial losses to tourism-based businesses.

Tina Gwaltney, Research Coordinator at the Rookery Bay Reserve in Southwest Florida, educates citizens about the importance of developing an environmental ethic,

### **Tina Gwaltney:**

“there needs to be a sense of stewardship when you go or it’s not going to be a nice beach next year when you come back.”

### **Narrator:**

Healthy coastal economies rely on clean beaches and waterways. Recycling monofilament fishing line, picking up broken beach chairs, and encouraging others to do the same is also critical to coastal wildlife.

### **Tina Gwaltney:**

“But I think at this point everyone needs to step up. It doesn’t matter who put the trash there, it would be nice if you picked it up. Take a bag every time you go somewhere, pick up what you see and be a role model in that regard.”

## 7. ROVER'S RUNOFF

### **Narrator:**

Did you know that nearly 15 tons of pet waste ends up in the ocean every day? In many communities, storm drains transport excess rain water - and any pollutants it picks up along the way - directly to local rivers, streams, and eventually the ocean, untreated.

Tina Gwaltney at the Rookery Bay National Estuarine Research Reserve explains how pet waste adds excess fertilizers to your yard, and eventually to our waterways.

### **Tina Gwaltney:**

"If you have a dog, who goes out in the yard, you'll have little round patches of really nice green grass in your yard."

"So, all of the waste that we flush into the system...then those nutrients come out full blast, full concentration, full load and that's when we see the major impacts."

### **Narrator:**

According to the environmental information service Earth Gauge, the average dog produces three-quarters of a pound of waste per day! You can help prevent water pollution by picking up after your pet and disposing of waste in the trash can. This will prevent waste from washing into storm drains and local waters during the next rain, where it can make humans and wildlife sick.

## **9. ECO-TOURISM**

### **Narrator:**

The tourism industry employs nearly one million Florida residents. Over 82 million visitors made Florida their travel destination last year alone, largely to partake in natural resource based recreation.

Keith Lakkonnen, Resource Management coordinator at the Rookery Bay Reserve in southwest Florida explains the value of protecting our waterways.

### **Keith Lakkonnen:**

“The value of having protected areas for eco-tourism, for commercial fishing, for recreational fishing is huge for the economy.”

### **Narrator:**

People visit Florida to enjoy the sandy beaches and fresh seafood that largely define the Sunshine state. Clean and healthy natural ecosystems equal a healthy bottom line for Florida’s economy. Residents and tourists alike must learn to maintain shared resources while enjoying the outdoors.

You can do your part: properly dispose of all trash, recycle fishing line and protect wildlife. Observe slow boating speed zones and avoid dragging your boat propeller through sensitive seagrass beds. Obey signs indicating closed beach areas for nesting shorebirds and please share the shore with wildlife.

## **10. MANGROVE FORESTS**

### **Narrator:**

Mangrove forests in the Gulf of Mexico protect communities from storms by minimizing winds, waves, and storm surge. Because of their architecture and prop root system, healthy mangroves absorb storm energy and can actually protect coastal homes from damage.

In addition to providing a first line of defense, mangroves provide food and shelter for many other plants and animals. Keith Lakkonnen, Resource Manager at the Rookery Bay Reserve in Naples, Florida, explains that the leaf matter, or detritus, from a mangrove forest, drives the entire ecosystem.

### **Keith Lakkonnen:**

“It’s a detritory driven system, and the plant life and other animals and birds and everything, invertebrates actually depend on those plants dropping those leaves and actually functioning as a natural ecosystem.”

### **Narrator:**

Mangroves are protected by law in Florida. Removing mangroves from your property requires a permit from the state. Trimming is best done by a certified arborist.

You can help by following legal guidelines for mangrove management in residential areas and by planting mangrove seedlings. Protecting mangroves means protecting your home, your community, and your environment.

## 12. WILDFIRE AT HOME

### **Narrator:**

Gulf coast residents need to be prepared for wildfire. Gerry LaCavera, Wildfire Specialist with the Florida Division of Forestry, explains how development trends are pushing people into wild areas, where fire is a natural part of the ecosystem.

### **Gerry LaCavera:**

“Currently we have over 700 people a day moving into Florida. And a great number of those people are putting their homes near wildland areas. Its an area we call a ‘wildland urban interface’- the area where the ‘eves meet the leaves.”

### **Narrator:**

LaCavera offers these suggestions for protecting homes from wildfire. Keep combustible materials off of your roof. Make sure any burnable debris, such as leaves, twigs, palm fronds, and pine needles, is cleared from your roof on a regular basis.

In addition to keeping the roof clean, LaCavera says residents must have clean gutters, roofs and soffets made of non-flammable materials, and a green and well-hydrated landscape. Lawns should be free of debris, including dead grass, vines, and branches.

Living in coastal scrub habitat comes with extra responsibility. Plan ahead to protect your home from fire and other natural events.

### 13. WATERSAVING TIPS

**Narrator:**

Judy Haner of the South Florida Water Management District describes the need for water conservation in our landscaped areas. Balancing the water needs of people and the needs of natural systems is an important part of her job. Haner describes water in the Gulf region as a hot commodity.

**Judy Haner:**

“...It’s not that we will never have water, it’s how much are we willing to pay for it.”

**Narrator:**

Currently, more than half of the highest-quality water used in Florida goes directly onto the ground for irrigation. Most of Florida’s drinking water comes from underground aquifers, which are supplied *only* with rainwater. Conserving this potable, or highest-quality drinking water, is extremely important. Restrictions now force Gulf residents to hold back on watering lawns, especially during the hottest times of the day.

Haner emphasizes the importance of several water conserving tips for your landscape, such as planting drought-resistant, native plants, using a rain gauge, and collecting rainwater onsite.

**Judy Haner:**

“Really what we need to do is have a conservation ethic so that whether it’s raining right now or in our back yard, we’re really doing these measures year round.”

## 14. RECYCLING IN FLORIDA

### **Narrator:**

Oil and natural gas prices are at record highs. Abnormally dry or drought conditions are affecting nearly half the country, meaning that many people have energy and water conservation in mind. While often overlooked, recycling common household materials can have a big impact on energy and water use. Recycling also means that less land is needed in the Gulf region to store our garbage.

Toss your household items into your recycling bin for big environmental benefits: According to Earth Gauge, an environmental information service,:

- Recycling one ton of paper saves 7,000 gallons of water, 17 trees, 3 cubic yards of landfill space, and enough energy to power an average home for five months.
- Recycling just one aluminum saves the amount of energy needed to power a computer for three hours, or run a 100-watt lightbulb for 20 hours.
- 95 percent less energy is used to make a plastic item from recycled materials than new materials.

Recycle today! Lower your communities' energy and water use.

## **15. DON'T GET CARRIED AWAY**

### **Narrator:**

The strong, gusty winds and heavy rains that accompany a tropical storm can easily carry away trash and other large items. These items can cause injury, damage property, and injure wildlife. Trash can become a harmful pollutant in our waters.

Be prepared for tropical storm season this year. Earth Gauge, an environmental information service, advises residents to take specific steps when a tropical storm approaches. Bring lightweight items inside, such as trash cans, toys, garden tools, and lawn furniture. Boats should be securely tied or moved to a safe area. Dispose of hazardous materials properly before a storm arrives. Make sure your roof and your yard are free of any debris, including dead vines and branches. Have a plan for your family and for your pets.

Although smaller than hurricanes, tropical storm winds can reach 74 miles per hour and are often associated with widespread damage and flooding. Be advised of watches and warnings, which alert coastal residents of an approaching storm.

Plan ahead, and keep items from blowing or washing away!

## 16. AC PREP

### **Narrator:**

Hot weather means that many people are cranking up the air conditioning to stay cool! Home energy use is often on the rise during summer months, but there are simple steps you can take at home to reduce your energy bill!

Air conditioning accounts for more than half of a typical Florida home's energy. With warmer weather on the horizon, now is the time to make sure your air conditioning system is in good condition. A properly functioning system uses less energy and runs more efficiently, adding up to less air pollution from energy production, and more savings on your energy bill!

The environmental information service Earth Gauge advises to check your air conditioner filters regularly, and clean or replace them if needed. Also, make sure that indoor and outdoor coils are clean - dirty indoor coils are the most common cause of a poorly functioning air conditioner. If you're not sure how to check your system, ask a professional.

Keep unwanted heat out of your home by keeping it closed up during the day. Put off any heat-producing activities (such as running the dishwasher or dryer) until the evening.

## 17. URBAN ISLANDS

### **Narrator:**

In many Gulf Coast cities, summertime temperatures can be up to 10 degrees warmer than surrounding natural areas, creating “urban heat islands.” The structure of cities plays a major role in the development of heat islands - dark pavement and buildings absorb and trap heat, narrow streets with tall buildings can trap heat and reduce wind flow, and reduced tree cover results in less shading and natural cooling. As a matter of fact, increasing temperatures in cities over the past several decades means that between three- to eight-percent of energy is used to compensate for the heat island effect.

Earth Gauge, an environmental information service, advises to stay cool and save energy by keeping your home closed up during the day and putting off any heat-producing activities (such as running the dishwasher or dryer) until the cooler evening hours. If you don't have a fan or air conditioner, try to get to a mall, library, or other community building to cool off. And, lend a hand — if you have an older or disabled relative, friend, or neighbor, check-in with them to make sure they are safely coping with the heat.

## 18. AVIAN DECLINE

### **Narrator:**

The National Audubon Society recently looked at 40 years of data about bird populations, finding that many of the United States' common bird populations are in decline. For instance, the northern bobwhite population, robin-sized birds with striped faces, has declined by 82 percent - from 31 million to 5.5 million. The northern bobwhite is common in the Gulf region, relying on grasslands mixed with shrubs to survive.

Many of the declining bird populations are threatened by loss of habitat as cities and suburbs replace grasslands or old-growth forests.

Researchers estimate that each year, more than two million acres of land are used for residential areas. By making some simple landscape choices, you can create a backyard habitat that will welcome feathered-friends. Consider adding native shrubs and trees to your yard, which are plants that grow naturally in your area and are well-adapted to local weather conditions. Earth Gauge, an environmental information service, reminds residents that more native plants in your yard means more habitat for local birds and wildlife!

## 19. SEA GRASS SMARTS

### **Narrator:**

Sea grasses are vital to the health of the Gulf of Mexico. Did you know that approximately 50 percent of inland and coastal wetlands and up to 80 percent of sea grasses in some areas of the Gulf? Wetlands and sea grasses are home to a diverse array of marine species, and the loss of these important areas can lead to a decrease in overall biodiversity.

Although sea grasses can be damaged by natural disturbances such as hurricanes, one of the biggest threats to seagrass survival is human disturbance.

Avoid running your boat motor in areas where sea grass beds are present. According to Earth Gauge, an environmental information service, when seagrasses are damaged by boat propellers, they can take years to recover! Keep an eye out for sea grasses by looking for areas of water that appear brown. Wearing polarized sunglasses will help you to see these areas. Using an accurate chart and referring to tide tables will help you stay in deeper channels. Avoid sensitive areas to protect sea grass beds and your boat equipment. By protecting seagrasses, you are doing your part to protect the Gulf of Mexico.

## **20. CITIZEN ACTION**

### **Narrator:**

Do you have a favorite natural place to walk, bike or fish? Unless protected by law, your special place may be at risk.

Renee Wilson, science translator for Rookery Bay National Estuarine Research Reserve describes how citizens helped to establish this special sanctuary in Southwest Florida.

### **Renee Wilson:**

“Many of the local residents around the 1950s and 60s had grown up here...this place was very special to them. And when they heard of the possibility that Naples area may become like Miami, which had already experienced a tremendous amount of growth at that point, people got a little worried and decided that they wanted to take a stand to protect this special place.”

### **Narrator:**

Concerned citizens in southwest Florida organized meetings, raised money to purchase land, and worked with the state to form a Reserve. The Rookery Bay Reserve now encompasses 110,000 acres on the western edge of the Everglades.

Protect natural places in the Gulf region by donating property to be preserved, informing yourself as a voter, and joining community organizations.