



## SIERRA CLUB

FOUNDED 1892

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# Nassau Sierra News

Nassau County Sierra Group

## Nassau Sierra Group Sponsors TWO Very Special Events!

**Join us!**  
**Saturday, May 21<sup>st</sup>**  
**for Wild Amelia Nature Festival**  
**and "Hands Across the Sand"**  
**events!**

At the Fernandina Beach Atlantic Recreation Center from 10:00 am until 4 pm, the Nassau Sierra Club booth will be providing educational movie shorts, handouts, information, and a special visit from the "Bag Man". A child friendly event, the Wild Amelia Nature Festival and Sierra Club offer young minds opportunities to explore their outdoor world. With activities and information for children and adults, this nature festival makes a great family outing.

In the midst of Saturday's festival, a short walk to Main Beach at 11:30 am gives you the opportunity to participate in the "Hands Across the Sand" event. This gathering of like minds is an opportunity to raise public awareness by simply holding hands for a few photos for the news media. Our handholding chain of humanity sends the message that we say, "NO to offshore drilling and YES to clean energy". This photo opportunity is held at the same time across the country.



**Meet Bag Man! Bag the Bag!**

Standing up for our environment is an important choice. We hope you will stand with us on the beautiful sands of Amelia Island at 11:30 am at Main Beach to show your support for "NO to offshore drilling and YES to clean energy". Humanity can have a positive impact on our deteriorating environment. Nassau Sierra would love to have you join us at both events!

**We hope to see you there!**

Nassau Sierra is always looking for people to be outings leaders (training offered), volunteers to help us with establishing environmental outreach programs for young people, and volunteers who are generally willing to give even a small portion of their time to help protect our pristine environment.

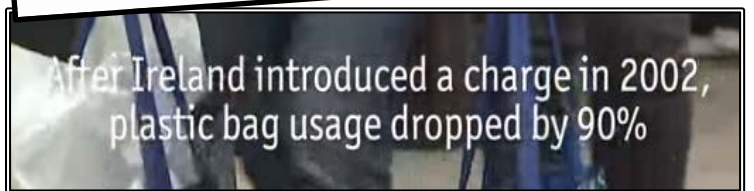
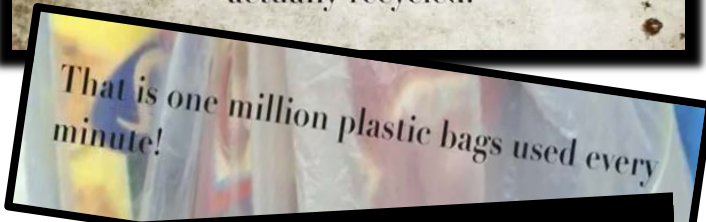
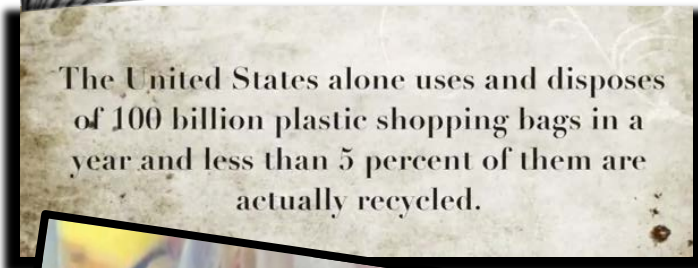
Please contact us (Facebook: Sierra-Club-Nassau-County-Group) or even better, meet us at the Atlantic Recreation Center on Saturday, May 21<sup>st</sup>, and take the first step toward creating a better world for yourself, your children and their future.

# Bag the Bag!



Our local Nassau Group Sierra Club's support of the "Bag the Bag" program continues to remind us that plastic bags can be replaced with many reusable substitutes that are far more environmentally friendly.

## Impress Your Friends with Plastic Bag Knowledge



Talk to "Bag Man" at the Wild Amelia Nature Festival on Saturday, May 21<sup>st</sup> for more information about the "Bag the Bag" program! Better yet, buy an official "BAG THE BAG" bag!





A Message  
*from*  
**Julie Ferreira**  
 Chairperson



'Hands Across the Sand' is an internationally coordinated day of action to say "Yes!" to clean energy and "No!" to offshore drilling. The movement is made of people of all walks of life and crosses political affiliations and the borders of the world. This event is not about politics — it is about the protection of our coastal economies, oceans, marine wildlife and fisheries.

**How It Got Started**

In Florida on Saturday, February 13, 2010, a statewide gathering against near and offshore oil drilling occurred. 10,000 Floridians representing 60 towns and cities at over 90 beaches joined hands to protest the efforts by the Florida Legislature and the US Congress to lift the ban on oil drilling in the near and off shores of Florida. Florida's "Hands Across the Sand" event was the largest gathering in the history of Florida united against expanding oil drilling into Florida's waters. On June 26, 2010, in response to the Deepwater Horizon Oil Spill Disaster in the Gulf of Mexico, 'Hands Across the Sand' went national and global. The event was announced and the website went live allowing event organizers sign up only four weeks prior to June 26th. It became the largest gathering of people in the history of the world united against expanding offshore oil drilling and championing clean energy and renewables.

Over 1000 events were held worldwide. Events took place in all 50 United States, the District of Columbia and Puerto Rico. Events were held in 42 countries outside the U.S. including Australia, Bangladesh, Brazil, Belize, Canada, China, Colombia, Costa Rica, Germany, Denmark, Dominican Republic, Ecuador, Spain, France, United Kingdom, Greenland, Greece, Croatia, Ireland, India, Italy, Japan, South Korea, Lebanon, Mexico, Malaysia, Nicaragua, Netherlands, Norway, New Zealand, Panama, Peru, Poland, Romania, Sweden, Turkey, Tanzania, and South Africa.

**Nassau County/Fernandina Beach Involvement**

Fernandina Beach participated in the first 'Hands Across the Sand' event in June of 2010. This was

during the Deepwater Horizon oil spill when oil gushed for 87 days unchecked in the Gulf of Mexico, creating the largest single marine oil disaster in US history. The issue was near and dear to our local Sierra Group's heart as several members of Nassau Sierra had gone to Louisiana as oil spill cleanup volunteers so it was a natural for the Nassau County Sierra Group to sponsor the rally at Main Beach. We were both surprised and happy when we had over 100 people attend. That year we also organized a group of about 20 to 25 individuals in a protest at Janet Adkin's office on 8th Street to ask her to join our efforts in opposing oil exploration off the coast of Florida.

**The Future of 'Hands Across the Sand'**

The Nassau County Sierra Group will continue its involvement in this international movement by sponsoring its annual local protest here at Main Beach. We are asking Fernandina-ites and Nassau County residents to help us draw a line in the sand, literally and figuratively, to demonstrate our opposition to any seismic testing or offshore drilling and support for clean energy alternatives. The future of our ocean, beaches, and marine life depend on it. And we can meet most of our energy needs with renewable energy sources such as solar, wind, and biomass which will allow us to power the future with minimal pollution and little dependence on fossil fuels. Renewable energy can provide us with the energy we as a nation need cleanly, cheaply, and indefinitely.

Part of this year's event will be dedicated to oppose seismic testing because the Obama administration has paved the way for seismic oil and gas exploration up and down the Atlantic coast, which includes our waters. Their environmental review concluded that the air-gun blasts will have "moderate" impacts on marine mammals and sea turtles. However their EIS review estimates that about 138,000 marine animals could be injured in some way, and perhaps 13.6 million could have their migration, feeding, or other behavioral patterns disrupted by the seismic surveys. We find these numbers unacceptable.

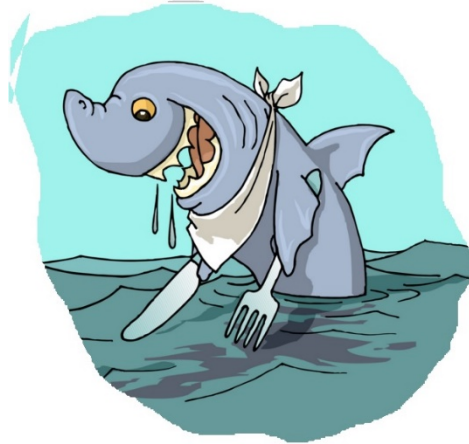
**Join Us May 21<sup>st</sup>**

**Please join us this year for Fernandina's 5th annual 'Hands Across the Sand'! We will start registration at 11:30 am and at exactly 12:00 noon we will all join hands along the shoreline at Main Beach.**

**See you on the beach on May 21st!**



# Bite Me?



## Which Sharks Will EAT Me?

Often the media portrays all sharks as giant, evil carnivores of human flesh. Overwhelmed with dramatic, background music during a media shark attack, we become filled with suspense and dread. In marketing fear, television has found a welcome partner in the shark with its menacing, razor sharp teeth. The occasional harm inflicted upon the human population by sharks only adds to the plausibility of humans for lunch.

But should all sharks be treated as the “usual suspects” in shark bites or fatalities? Which sharks generally find us unappetizing? And are there sharks that actually find human encounters frightful experiences? So what are the facts?

Most sharks are not dangerous to humans at all. There are more than 500 known species of sharks, and *the overwhelming majority have never been known to bite a human*. So which species are known to inhabit our area?

## Benign Sharks of Northeast Florida



Bonnethead or Shovelhead

One of the smallest sharks plying the coast of Northeast Florida is the Bonnethead shark or the “Shovel

Head”. Generally measuring 2 to 3 ½ feet in length, it scours the bottom for crustaceans and small fish. They are abundant in the warm, shoreline waters of Florida and prefer shallow sand and mud flats. Though thought to be harmless to people, its “hammerhead” like appearance often frightens the public. It can easily be distinguished from its more dangerous cousin, the Great Hammerhead shark, by its shovel shaped head.



**Bonnethead, Shovelhead**  
Harmless



**Scalloped Hammerhead**  
Accidental Bites

Both the Bonnethead and the Scalloped Hammerhead (another one of our native sharks) use their heads like metal detectors looking for minute electro-magnetic disturbances produced by marine life. Not to be confused with the Great Hammerhead shark (more aggressive), Florida’s Scalloped Hammerhead may often be seen in low visibility estuaries where fresh water impairs their electrical sensors. This is when accidents occur with humans. The Scalloped Hammerhead is likely to respond with a defensive reaction when disturbed or surprised by humans. Though they may bite if disturbed, there are no fatalities to humans caused by these 6 to 12 feet long sharks. They eat fish, squid and stingrays, not you.

## Blacknose Sharks



Often found in Florida bays and lagoons, the Blacknose shark has a very noticeable dark “moustache” on

the tip of its snout. Fortunately, this shark is more worried about being eaten by another shark than eating us. At a maximum length of 5 feet with a pointy snout, this species simply seems to be happy with its diet of small fish.

## Sandbar Shark



Luckily for us, the most abundant species of large shark in the Western Atlantic is considered to be one of the safest sharks to swim with. Due to the Sandbar shark’s preference for smaller prey, and its tendency to avoid beaches and the surface, it poses little threat to humans. Generally found in depths of 60 to 200 feet, this 6 foot long, 150 lb. shark is commonly targeted by commercial and sports fishers.

## Who are the Experts?



The University of Miami in conjunction with the National Geographic Society conducts an internationally renowned Shark Research and Conservation Program. They continually tag and track the sharks of our Florida coastline. In cooperation with Google Earth several species of our largest sharks can be watched by the public as they traverse our waters.

If you would like to **watch our more aggressive sharks** move along our coast line, you may visit this website: <http://sharkresearch.rsmas.miami.edu/education/virtual-learning/tracking-sharks> . And for a price, you can also name and adopt your own shark!

## Bull Shark (aggressive)





# To Breathe or NOT to Breathe?

## Is That REALLY a Question?

The Sierra Club has always supported clean air, not only for our wildlife, but also for the general human population. And for the most part, the United States Environmental Protection Agency has remained our legal, stalwart, enforcement agency for air quality control. The EPA has fought for our air quality through the permitting processes of industries, our vehicles, and our businesses.

For the EPA, and its air monitoring system, it has been a harrowing task to balance all sources of air pollution into an equation that meets the set limits for healthy air quality for all of our earth's inhabitants. Air pollution does not stop at the borders of countries.

If you are a community that has been designated as an area of "nonattainment", such as Nassau County, then the hazards of poor air quality become very personal. A nebulous federal agency called the EPA located somewhere in Washington, D.C. suddenly becomes your best friend.

To be unaware of community air quality is not an uncommon experience in the United States. Really, who actually sits and thinks about the air they are taking in and out at any point of their day? No individual wants to know that the place where they live has become more hazardous to their health.



Our largest sources of air pollution are industry, vehicles, air travel, and shipping. ALL of these major sources of pollution are concentrated on Amelia Island. Even our diesel fueled log trucks and train have been added to the mix.

Though the designation of a "nonattainment" area has officially been given to Nassau County, the actual location of the offending area is located

### *So how did Nassau County become an area of "nonattainment" for SO<sub>2</sub> air quality from the EPA?*

U.S. Environmental Protection Agency <https://www3.epa.gov/airquality/greenbk/ancl.html>

on Amelia Island into Yulee. According to more detailed maps of the area, much blame could be placed upon our industry, but a more important question needs to be asked:

### *Who fixes this problem?*

The EPA has tasked the Florida Department of the Environment (FDEP) with a State Improvement Plan (SIP). This plan is developed to specifically find a solution to our air quality difficulties. In April of 2015, the FDEP presented the EPA with an SIP that will hopefully provide the desired results. However, at the time of this publication, the plan has NOT been approved by the EPA. [https://www3.epa.gov/airquality/urbanair/sipstatus/reports/fl\\_areabypoll.html](https://www3.epa.gov/airquality/urbanair/sipstatus/reports/fl_areabypoll.html)

As the EPA reviews the State Improvement Plan and our air quality future, it is important to note that presently the Port of Fernandina is initiating expansion plans for its shipping

operations. Larger ships and more truck traffic will likely have further negative impacts on our future air quality.

In 2010 the Port of Los Angeles, emitted 3.5 SO<sub>2</sub> tons per day. In 2014 Fernandina's mills emitted 10.5 SO<sub>2</sub> tons per day (FDEP actual numbers). With the guidance of the EPA and the State of California, the City of Los Angeles demanded that the port create a Clean Air plan that employed ship to shore power when ships were in port. Air quality at the Port of Los Angeles has improved, but compliance is a continual battle. Fernandina's Port has no ship to shore power. And no Clean Air mandates have been discussed for its future.

For Nassau County, with a new barge port to be placed across the river in St. Mary's, Georgia, additional new concerns arise for large SO<sub>2</sub> emissions from tugs. The EPA has targeted tug boats for millions of dollars in grant monies to retrofit their engines to cut their emissions as major air polluters of ports.

What is SO<sub>2</sub>, can I smell it, and why should I worry about it? According to the National Institute of Health, sulfur dioxide can be detected by the human nose when it reaches a level of 330 parts per billion. The EPA Clean Air Act one hour limit is 75 parts per billion. So you will likely not smell a harmful level of SO<sub>2</sub> in our ambient air unless it is extremely high. As a gas that contains 1 part sulfur and 2 parts of oxygen, it is an irritant to our airways. When in contact with our lungs, or moisture in general, it gains acidic properties (sulfurous acid).

According to the EPA and the National Institute of Health, the young, the elderly, and lung impaired are most affected. Worldwide studies have concluded that children residing (8 years) in moderate SO<sub>2</sub> exposure developed higher numbers of lifelong asthma, lifelong allergic rhinitis, and eczema cases. Adults can have irritation of the nose, throat, lungs, coughing, watery eyes and shortness of breath. Prolonged exposure can decrease fertility in men and create more emergency room visits for migraine headaches and heart disease.

Compliance with the EPA one hour SO<sub>2</sub> standard is mandated in 2018.

# Air Pollution

People with heart problems were 43% more likely to suffer from a second heart attack or congestive heart failure and 46% more prone to stroke if they live in areas with high air pollution compared with their counterparts in the least-polluted areas . . .  
[http://www.upi.com/Health\\_News/2012/06/05/Bad-air-linked-to-repeat-heart-attack/UPI-81611338946347/](http://www.upi.com/Health_News/2012/06/05/Bad-air-linked-to-repeat-heart-attack/UPI-81611338946347/)

For sulfur dioxide, the stillbirth risk increased 13 percent with every 3-ppb increase in the first trimester, and 26 percent for every 3-ppb increase in the third trimester. - See more at: <http://www.livescience.com/22204-air-pollution-stillbirth-risk.html#sthash.stE65Xpt.dpuf>

Current scientific evidence links short-term exposures to SO<sub>2</sub>, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects including bronchoconstriction and increased asthma symptoms. These effects are particularly important for asthmatics at elevated ventilation rates (e.g., while exercising or playing.) <https://www3.epa.gov/airquality/sulfurdioxide/health.html>

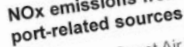
## Ports and air pollution

Port-related emissions account for about 10% of the smog-forming emissions in the South Coast air basin. Some of the top pollution sources in the region:

Total daily nitrogen oxide (NOx) emissions



NOx emissions from port-related sources



Major sources of nitrogen oxide pollution in 2014 (tons per day)

Diesel trucks	129.37
Off-road equipment	64.03
Large industrial facilities	54.00
Ocean vessels	35.13
Passenger vehicles	34.77
Trains	21.73
Diesel buses	20.07
Home appliances	19.79
Aircraft	13.94

@latimesgraphics

Source: South Coast Air Quality Management District

## Newsweek

...the roughly 16,000 babies born too early every year in the U.S. due to air pollution exposure in utero translate to \$4.33 billion in costs to the U.S. economy.

<http://www.newsweek.com/preterm-births-caused-air-pollution-cost-americans-43-billion-every-year-441938>

## FOX NEWS Health

"Women who lived near monitors that recorded high levels of four pollutants, including nitrogen dioxide and fine particle pollution, throughout pregnancy had 12 percent to 24 percent higher odds of getting hypertension than women with less exposure." "Women develop high blood pressure during about one in ten pregnancies. Having so-called gestational hypertension makes it more likely that a woman will need a cesarean section, that she will give birth early and that her baby will be born small."

<http://www.foxnews.com/health/2013/10/11/air-pollution-tied-to-high-blood-pressure-in-pregnancy.html>

**CONCLUSIONS:**  
 "Our findings provide additional support for a consistent correlation between migraine headache and air pollution (SO<sub>2</sub>)."

Brook's research has found a very rapid increase in blood pressure within 15 minutes of inhaling air pollutants.

[http://www.upi.com/Health\\_News/2009/03/23/Inhaling-a-heart-attack/UPI-89831237861827/?st\\_rec=25231071604862](http://www.upi.com/Health_News/2009/03/23/Inhaling-a-heart-attack/UPI-89831237861827/?st_rec=25231071604862)

## Total Fernandina Mill Industry Air Emissions FDEP Year 2014

Amounts in Tons per Year				
PM10	PM2.5	NOx	SO2	CO
568	245.58	5,221	3,831.81	1,946.6

Photo: Diesel Truck Exhaust Pipe





### **Saturday May 21st @ 11:30 at Main**

**Beach-** Join Nassau Sierra for HANDS ACROSS THE SAND, a worldwide movement to say “yes” to clean energy and “no” to dirty energy. This is the 5th annual event Sierra has organized, so mark your calendar! We will start registration at 11:30 am and at exactly 12:00 noon we will all join hands along the shoreline at Main Beach. Protect our beaches, waters, and marine life from seismic blasting and future offshore drilling. Hope to see you at the beach!

### **Also on Saturday May 21st @ the Rec**

**Center-** From 10:00 to 4 pm Nassau County Sierra Club will have a booth at Wild Amelia's Eco Expo. Come join us and the many exciting activities available during the Nature Festival.

### **Friday June 10th @ 7pm at the Fernandina**

**Public Library-** Nassau Sierra will present the film “*Sharkwater*”. This documentary stars the passionate marine activist, Rob Stewart. Stewart’s goal is clear – he wants to rid the world of the common myth that the shark is a barbaric predator that should be eliminated. Instead, he wants to spread the message that sharks are fundamental to the world’s ecosystem and should be revered and protected. Be prepared for your eyes to cloud with tears of compassion and frustration while your soul is fed by the breathtakingly beautiful underwater scenes. (Rated PG. Content likely to disturb children under the ages of 10-12)

### **Saturday June 25th at 11:00am-**

Have a kayak or canoe? Join the Nassau Sierra Group as we paddle the North Fork of the Black Creek in Jennings State Forest. This will be an all-day outing and is limited to 10 canoes or kayaks. Email: [nassau.sierra.outings@gmail.com](mailto:nassau.sierra.outings@gmail.com) or call [770-668-6161](tel:770-668-6161) before June 18th to make your reservation and get directions.

### **Monday July 4th @ 6:45pm at the**

**Fernandina Public Library-** Before the July 4th fireworks downtown, Nassau Sierra will screen the family friendly documentary ‘*The Whale*’. This is the true story of a young killer whale, an orca nicknamed Luna, who makes friends with people after he gets separated from his family on the rugged west coast of Vancouver Island, British Columbia. As rambunctious and surprising as a visitor from another planet, Luna endears himself to humans with his determination to make contact, which leads to laughter, conflict and unexpected consequences.

### **Coming in July to the Fernandina Public**

**Library--** Nassau Sierra will sponsor a Children's Energy Detective Program led by the Jacksonville Green team. This DIY Science program will teach children how to become energy detectives in their own homes; finding out how much energy that Wii, X-Box, or Playstation uses. And what about the cell phone charger? They'll learn how to measure these and discover what parts of their homes might be the most likely suspects for energy or water waste. Recommended for ages 8 and up. Dates to be confirmed.

### **Friday August 5th @ 7pm at the Fernandina**

**Public Library-** Nassau Sierra will show the documentary “*Oil & Water*” which immerses the viewer in the captivating and complex experiences of society and oil in one of the world's most biodiverse places on the planet, the Ecuadorian Amazon. The film gives an intimate portrait of two young people finding their voices and trying to beat incredible odds. Their journeys lead them to explore what could be a more just future, not just for the people of the Amazon, but for all people around the world born with oil beneath their feet. Eight years in the making, this film is a shocking and inspiring David and Goliath story. Best for viewers 12 and above.

### **Saturday August 6th @ 5:00pm-**

Amateur photographers and nature enthusiasts will want to join Nassau Sierra on Big Talbot Island for a cookout social and sunset photo opportunity. This outing is designed to offer opportunities for amateur photographer's to capture the 'golden hour' when the long shadows created by the sun just before sunset help to add texture, depth, and a golden glow to Talbot's infamous driftwood boneyard. Cost \$5 to cover food, and there is an entry charge for Big Talbot. Limited to 25 participants. Email: [nassau.sierra.outings@gmail.com](mailto:nassau.sierra.outings@gmail.com) or call [770-668-6161](tel:770-668-6161) before July 30th to make your reservation and get directions.



## Calico Scallop

(Argopecten Gibbus)

Commonly washed ashore all along the east and west coasts of Florida, these mottled, pink-hued scallops provide beachgoers with colorful treasures. Although they are closely related to Bay scallops, Calico scallops live in deeper offshore waters. These red and pink patchwork colored scallops are almost identical to Bay scallops except for their surprising "baby blue" eyes which line the edges of their shells. Up to 100 of these simple eyes are strung around the edges of their mantles like strings of light blue beads. These baby blue, reflector eyes contain two retina types. One retina responds to light and the other responds to abrupt darkness (a predator).

Calico scallops almost mirror Bay scallops anatomically. They pump water across their gills to filter out their simple diet of food particles and filter our sea water. And when quickly closing and opening their large adductor muscle to open and close their shells, they are rapidly propelled up off the sea bottom to a new location on the seafloor.

The typical life span of a Calico scallop, 18 months, is longer than that of the Bay scallop. Some can live as long as 24 months. During its lifetime, a Calico scallop will generally reproduce 3 to 4 times. It can become reproductively active as young as 4 months. Like Bay scallops, fertilization occurs outside the animal in the water column.

**JOIN US! - MAY 21<sup>st</sup>!**  
**Wild Amelia Nature Festival**  
Atlantic Recreation Center  
**10 AM - 4 PM, Saturday, May 21<sup>st</sup>**  
AND  
**Hands Across the Sand**  
Main Beach  
**11:30 AM, Saturday, May 21<sup>st</sup>**  
Help us make the human chain,  
**"NO" to Offshore Drilling and**  
**"YES" to Clean Energy"**

**\*CALENDAR\***  
**May 21<sup>st</sup> - Saturday ALL DAY!**  
See "Join Us!" insert on this page.  
**June 10<sup>th</sup> - Friday, 7 pm**  
Fernandina Library  
**Free Film: "Sharkwater"**  
**June 25<sup>th</sup> - Saturday, 11 am**  
**Paddle Black Creek, Jennings State Forest**  
See contact information.  
**July 4<sup>th</sup> - Friday, 6:45 pm**  
Fernandina Library  
**Free Film "The Whale"**  
**August 5<sup>th</sup> - Friday, 7 pm**  
Fernandina Library  
**Free Film "Oil & Water"**  
**August 6<sup>th</sup> - Saturday, 5 pm**  
**Big Talbot Island & Driftwood Boneyard**  
Cook Out Social and  
Sunset Photo Opportunity

For ALL event details see  
the Nassau Sierra Club's  
**Calendar Page Inside!**



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