Florida Fish and Wildlife Conservation Commission

# Living on the Edge: CWCI Newsletter - Fall 2016

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Welcome to the Fall 2016 edition of Living on the Edge, the newsletter of the Coastal Wildlife Conservation Initiative (CWCI)! This is a quarterly newsletter to update Florida Fish and Wildlife Conservation Commission (FWC) staff, partners and members of the public interested in Florida's coastal issues about current projects and other points of interest. Regular highlights will include featured projects related to coastal wildlife, interviews with our staff or partners, special seasonal considerations, news and events, and current funding opportunities. If you are interested in spreading the word about your project or someone who is doing a fantastic job in coastal conservation, please contact the CWCI Coordinator, Fara Ilami, at fara.ilami@myfwc.com.

The Coastal Wildlife Conservation Initiative is an FWC-led multi-agency strategy to address threats to coastal wildlife and habitats, while considering human interests and uses of Florida's coastal areas. The goal is a statewide, cooperative process to protect coastal wildlife populations, conserve and manage coastal ecosystems, and achieve balance between conservation and opportunities for recreation, commercial activities and responsible development.



### Calendar: Upcoming Meetings, Webinars, and Events

Youth Ocean Conservation Summit, December 10, 2016, Sarasota, FL

8th National Summit on Coastal and Estuarine Restoration & 25th Biennial Meeting of the Coastal Society, December 10-15, 2016, New Orleans, LA.

Sea Level Rise and Adaptations in the Estero Bay Region, December 12-

# Hot Topic: Critical Wildlife Areas Update

Some of Florida's most vulnerable wildlife are about to benefit from an unprecedented conservation effort designed to help ensure their survival. At its November meeting, the Florida Fish and Wildlife Conservation Commission (FWC) approved a proposal to designate 13 new Critical Wildlife Areas and improve five existing CWAs. Read more...

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# Summer Photo Contest: Winner!



## Coastal News Snippets

The winner of this summer's photo contest was Robbyn Spratt of Brevard County Natural Resources Management Department. She captured a surreal photo of a juvenile green sea turtle. Congratulations to Robbyn!

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# Featured Project: International Coastal Cleanup


Each year the Ocean Conservancy hosts the International Coastal Cleanup (ICC) on the third Saturday in September to collect trash from beaches and associated areas around the world. Although it is global in scope, each local community organizes its own cleanup event(s). Volunteers help collect data about the different types of trash that are picked up, and local organizers send these data to the Ocean Conservancy to compile. In addition, the ICC day marks the beginning of National Estuaries Week,

Council Releases Draft Comprehensive Plan Update, Aug 23, 2016

Climate Change Complicates Predictions of Damage from Big Surf, Aug 24, 2016

Initiative to restore one million corals launches in the Caribbean and Florida Keys, Sept 12, 2016

Learn about sea turtles, practice turtle 'Safety 101', Sept 13, 2016

U.S. Senate bill authorizes $2 billion for Everglades, Sept 15, 2016

Water Bill passes Senate; would improve U.S. Coastal Resilience, Sept 16, 2016

The Deepwater Horizon spill may have caused 'irreversible' damage to Gulf Coast marshes, Sept 27, 2016

Oil Spill Science – A Special Issue of Oceanography Devoted to the Gulf of Mexico Research Initiative, Sept 2016

Watch out for migrating

which celebrates the many ways we benefit from healthy, thriving coastal ecosystems. All throughout the country, local organizations conduct events to recognize the special role these places play in our everyday lives. Beach cleanups, hikes, canoe and kayak trips, workshops and more are led by National Estuarine Research Reserves, National Estuary Programs and member groups with Restore America's Estuaries.

This year, the CWCI decided to partner with several organizations around the state of Florida to include an educational component to the cleanups and estuary activities. Some of the local sites had a mini eco-festival associated with their cleanup, where different organizations such as the CWCI set up booths and tables for people to visit as they ate lunch. Other sites had no such festival, and the CWCI was the only outreach setup at the event. Since there was not enough staff to make it to all the events around the state, materials were sent to the coordinators at many sites to distribute themselves.

In addition to the important goal of cleaning up trash threatening marine and coastal wildlife, the CWCI had four main goals for the event: 1) Make people aware of the benefits of biotic beach wrack and encourage them to leave the biotic material in place for the benefit of wildlife, 2) Encourage the reduction of mechanical beach cleaning (beach raking) to allow native vegetation to stabilize the beach and provide habitat for wildlife, 3) Alert people to the potential presence of wildlife on the beaches that they may be cleaning up and best practices to avoid disturbance of wildlife while they are cleaning, and 4) Make people aware of the existence of the CWCI and how we may be of service in the future. To accomplish these goals, materials were distributed such as a Beach Wrack ID Guide, a brochure and magnet entitled "Grow a Better Beach," and other brochures about preventing wildlife disturbance.

Attendance at the ICC events throughout Florida was strong:

- Lee County had over 2,000 volunteers and collected over 8,000 pounds of trash.
- A group in Key Largo (Pirates on the Water) had a smaller number of volunteers but was still able to collect over 700 pounds of trash.
- Friends of Palm Beach collected 750 pounds of trash with just 62 volunteers.
- Franklin County volunteers collected 10.93 tons of trash and found some rather interesting items — a Darth Vader case, Tonka toy truck, skull of a wild hog, bathroom sink full of oyster shells, fire hydrant, car headlight, refrigerator, bear trap, nine baseball caps, men's underwear, and a (half) bottle of rum.
- Lake Powell Community Alliance had 88 volunteers and hosted an educational display.

In addition to the ICC, some of the sites have multiple cleanups throughout the year, such as the Treasure Coast Naturists who clean every weekend.

The Beach Wrack ID Guides were very popular with both adults and children at many of the sites, and some of the coordinators requested additional copies for other events or for next year's ICC. The CWCI had requested that coordinators put out a sign-up sheet for people who were interested in receiving this quarterly newsletter or otherwise being involved with the CWCI, and many people at various sites signed up, including high school students and teachers.

manatees! Nov 1, 2016

FWC to assist with sea turtle-friendly lighting retrofits on beachfront properties, Nov 3, 2016

FWC to receive funding for shorebird, sea turtle and Gulf fisheries conservation due to oil spill, Nov 15, 2016

Florida Tech Works to Restore Lagoon with Living Shoreline, Dock Projects, Nov 16, 2016

FWC approves historic plan to conserve imperiled species, Nov 17, 2016

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Last year, Florida collected a total of 745,164 pieces of trash from coastal areas. These included items such as cigarette butts, bottles and caps, straws, lids, cans, plastic bags, fishing gear, packaging materials, appliances, balloons, construction materials, and personal hygiene items, among other things. By far, the most abundant item was cigarette butts (240,225), accounting for 31.54% of the total amount of trash collected. The second most abundant was plastic bottle caps (72,119), which made up 9.53% of the total. The data for this year's cleanup is not yet available, but once it is compiled, it may be accessed at the Ocean Conservancy's Marine Debris Database.

The organizations that partnered with the CWCI on the 2016 International Coastal Cleanup and/or National Estuaries Week included the following: Volusia County Environmental Management, Citrus County Department of Water Resources, Friends of Jupiter Beach, Reef Medics, Friends of Palm Beach, Adventure Outpost, UF/IFAS Extension, Pensacola State College, Topsail Hill Preserve State Park, American Tower Corporation, Keep Collier Beautiful, Manatee County Parks and Natural Resources, Sea Angels, NOVA Southeastern University, City of Riviera Beach, City of Greenacres, Franklin County, Bald Point State Park, Delray Beach Parks and Recreation, Keep Lee County Beautiful, U.S. Fish and Wildlife Service, Lake Powell Community Alliance, Pirates on the Water, Friends of South Walton Sea Turtles, Treasure Coast Naturists, American Association for Nude Recreation, Keepers of the Coast, and Guana Tolomato Matanzas National Estuarine Research Reserve.

Additionally, CWCI staff have been working with other FWC staff as well as numerous state and local agencies, organizations, and NGOs throughout the state to draft the first statewide guidance plan to address marine debris reduction in Florida. Team edits are currently being incorporated into the draft document, and the Florida Marine Debris Reduction Guidance Plan will be going out for stakeholder review over the next several months. This is the first step in collaboratively and comprehensively addressing the issues surrounding the impacts of marine debris at a statewide scale.

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# Featured Project: Capture of Sea Turtle Egg Poacher

Our second featured project highlights quite a different aspect of coastal conservation — law enforcement. A sea turtle egg poacher was caught red-handed and arrested by FWC law enforcement officers in July. Glenn Robert Shaw was charged with the taking and possession of 107 loggerhead sea turtle

eggs, a third degree felony, punishable by up to 5 years in prison and a fine up to $5,000. This was the first capture of a sea turtle egg poacher in Florida in two years. The last poacher arrested, James Odel McGriff, was caught with 299 eggs in August 2014.

Five days prior to the arrest of Shaw, FWC Division of Law Enforcement received information from FWC biologists regarding a possible suspect poaching sea turtle eggs from a beach behind a residence on Jupiter Island, which had a large number of marked turtle nests. When FWC Marine Turtle Permit Holders come across nests that have been tampered with by humans, they contact the FWC Division of Law Enforcement to investigate further. Their observations on the beach often provide valuable assistance to catching the poachers.

After receiving the tip, officers increased patrols in the area to monitor for illegal activity. At approximately 10:30 p.m. on July 1, FWC officers observed Shaw in the process of taking eggs from a female loggerhead sea turtle as she was laying them. Shaw was found to be in possession of 107 eggs. He was booked into the Palm Beach County Jail and charged with a third degree felony for the taking and possession of the threatened loggerhead sea turtle eggs. The US Fish and Wildlife Service assisted FWC officers in this arrest. The arrest occurred away from the nest, and the female loggerhead returned to the water with no unusual behavior observed.

As for the eggs, 15 of them were kept as evidence and for DNA testing. FWC has a wildlife forensic lab at the West Palm Beach regional office. FWC biologist, Hector Cruz-Lopez, runs the lab and coordinates the testing. Some testing is done in-house and some is done in other labs throughout the US. The remaining 92 eggs were re-buried by FWC biologists so that they may hatch later this year. They were re-buried in the original nest cavity within 4 hours of deposition and in accordance with relocation protocols included in the FWC Marine Turtle Conservation Guidelines. The protocol requires that eggs be moved no later than 12 hours following deposition, because after this time the potential for movement-induced mortality in sea turtle eggs increases rapidly. The hatching status of the eggs will be announced after the case is over.

The poacher’s motive is still being determined at this time, and the investigation into this case is still ongoing. However, it is known that the black market for marine turtle eggs still exists, and one of the prime locations for the U.S. market is in Riviera Beach, which is near Jupiter Island where the poacher was caught. Thanks to diligent efforts by FWC law enforcement, poachers are at greater risk and have been less successful in obtaining eggs in recent years.

Florida outlawed the poaching of sea turtle eggs in 1953, but poaching arrests didn't become common until the 1980s. Even though enforcement has increased over the years, conviction is rare. Many poachers are actually repeat offenders. Although state law allows judges to send poachers to jail for a year if caught molesting a nest, it's rare for officers to actually catch them with their hands in the sand. There are several challenges to reducing sea turtle egg poaching: lack of enough state and federal wildlife agents to patrol the beaches effectively; lack of enough minority officers to be able to infiltrate the predominantly minority markets for undercover operations; the current law which typically allows for only short sentences even for repeat offenders; and lack of an organized effort to track poaching. Poachers have told police they intend to keep working despite the possibility of tougher penalties. They know their profits will increase if the eggs become harder to obtain. And they

know conservation efforts, which have increased the number of turtle nests in Florida will, ironically, add to their supply.

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# Fall Wildlife: Watch for Washbacks

Washbacks are defined as post-hatchling sea turtles, with a carapace length between 5cm-10cm, which have washed back to shore. They are generally a few weeks old. Typically found July 1st through November 30th, these washbacks are generally the product of large storm events or high onshore winds. Large amounts of wrack are also washed back onshore during such events, and washbacks are often found mixed in with the marine plant detritus. Due to the risk to these small protected animals, FWC biologists recommend that beachfront communities use manual cleaning methods to pick up manmade beach debris rather than large beach cleaning machines. Operators of beach cleaning equipment are unlikely to detect the washbacks that are uniquely adapted to blend in with the seaweed and algae to avoid depredation in the open ocean. Washbacks are most often post-hatchling sea turtles that were too weak or otherwise debilitated to fight the strong currents. Washbacks typically only need a little rest, nutrition and rehydration before they can be released to continue on their journey. Only FWC staff and Marine Turtle Permit Holders or their authorized personnel are allowed to handle sea turtles, including washbacks. If you come across washback sea turtles or any other sea turtle hatchlings, report it to the FWC's Wildlife Alert Hotline: 888-404-FWCC (3922), #FWC or *FWC on a cell phone, or by texting Tip@MyFWC.com.

If you are in the Brevard, Volusia or St. Johns County area and are an avid beach walker, you may want to consider volunteering with Sea Turtle Preservation Society's Sea Turtle ER Program (in Brevard County), Volusia County's Washback Watcher program or St. Johns County Beach Steward program. Volunteers must undergo training to find and rescue these post-hatchling sea turtles, and are specifically authorized by FWC to conduct this important work.

**Fall Beach Tips:**

- Use of mechanical beach cleaning equipment is discouraged on beaches with imperiled species and should be limited or eliminated whenever possible.
- When possible, conduct mechanical cleaning only during times when nesting and hatching are not occurring.
- Leave as much fresh wrack as possible in place — at least one-third — to provide foraging habitat and cover for coastal species. Beach wrack is not "dirty". It is part of a natural healthy beach and dune system and is integral in promoting natural shorelines that are essential for effective shoreline stabilization and storm protection.
- Remove human-generated debris (plastics, balloons, monofilament line) in or near the wrack line by hand.

- Promote “pack-in/pack-out” practices for garbage and the ecological value of leaving the beach wrack intact.
- If mechanical cleaning must occur during the sea turtle nesting season, special precautions should be taken.
- Sea turtle nesting surveys and associated conservation measures shall be completed after sunrise and prior to the commencement of any mechanical beach cleaning each day beach cleaning takes place. No beach cleaning or other permitted activity can occur on the beach until the daily morning nesting surveys have been completed. If hatchlings are found on the beach, contact the FWC-authorized Marine Turtle Permit Holder (MTPH). Do not resume beach cleaning activities until the MTPH gives the all clear.

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# Staff/Partner Spotlight: Dr. Jennifer McGee

**1. What is your title?** Florida Beaches Habitat Conservation Plan (FBHCP) Statewide Coordinator

**2. What organization do you work for?** Florida Fish and Wildlife Conservation Commission, Division of Habitat and Species Conservation

**3. What type of work do you do?** I currently oversee the development of the nation's first statewide beaches habitat conservation plan which covers ~825 miles of sandy beaches in Florida. The FBHCP integrates coastal development and land use activities with conservation by providing a framework for the preservation and management of threatened and endangered species of plants and animals including sea turtles, shorebirds and beach mice. I provide subject matter expertise on conservation issues both regionally and statewide as well as act as a liaison between FWC and its partners including federal, state and local government agencies and organizations, as well as a wide variety of stakeholders. My job involves a lot of travel and meetings as well as some field work, all focused around the beaches of Florida. In addition to this position, I am also part of the Coastal Wildlife Conservation Initiative (CWCI) team, hold the position of Courtesy Faculty at the University of Florida’s College of Veterinary Medicine (aquatic animal health research), serve as a Steering Committee Member on the Gulf of Mexico Alliance’s Marine Debris Cross Team Initiative (GOMA-Marine Debris CTI), and Co-Lead the Wildlife and Habitat Impacts Group (WHIG) as part of the Florida Marine Debris Reduction Guidance Plan development team.

**4. What project(s) have you recently been working on?** The FBHCP is currently in its ninth year of development and we are rapidly approaching finalization of the draft Plan and submission to the US Fish and Wildlife Service (to be completed

spring 2018). We are heavily focused on completing the draft chapters on minimization and mitigation measures. The measures outlined provide the framework for avoiding, minimizing and mitigating any potential impacts or threats to the listed species on Florida's sandy beaches as a result of permitted coastal activities, events, and/or development. I have also been spending considerable time working with our legislative staff and agency partners as we work towards finalizing the Plan's implementation strategy. As we finalize the remaining draft chapters of the FBHCP, and given that this is a statewide Plan that impacts a significant portion of the coastal activities occurring in the state, much of my time in 2017 will be focused on outreach with stakeholders throughout Florida.

Recently, in a collaboration among FWC, FDEP, NOAA, and numerous agencies and organizations from around the state, I have also been assisting in the development and agency review of the state's first Plan to address marine debris in Florida. The Florida Marine Debris Reduction Guidance Plan (FMDRGP) will be going out for stakeholder review in fall 2016. Both the FBHCP and the CWCI address marine debris issues in Florida at various levels, with the underlying goal of restoring and/or preserving quality sea turtle and shorebird nesting habitat.

**5. How does your work relate to the CWCI?** Since my work covers all sandy beaches in Florida, there is a high degree of overlap with the work of the CWCI. Much of my work with the CWCI has focused on addressing the impacts of mechanical beach cleaning and marine debris on coastal species and habitats. Most recently, we have also been working on several projects related to promoting the importance and increased use of living shorelines as a means of natural and effective shoreline stabilization vs. coastal hardening which can have negative impacts on both coastal wildlife as well as the integrity of the beach itself.

**6. How long have you been working in the coastal environment, and what are some lessons you have learned?** I have been working in the environmental field for a little over 17 years, 15 years of which has been largely coastal, marine, and/or riverine focused. I grew up in NY, but was a frequent annual visitor of Florida. I have been fortunate to work, study and live in some of the most beautiful places including Brazil (Amazon), the UK, Australia, Belize, Cuba, New York, Texas (coastal), and now Florida. I moved to Florida in 2006, having just returned from Australia where I was conducting humpback whale research and living on a 13 meter catamaran. My Florida career began working for Volusia County, after which I moved a bit more inland and north to Gainesville for graduate school. After finishing my Ph.D. and staying on with the University of Florida for a year teaching and conducting research, I headed a bit more north again, this time to Tallahassee, where I have been based since 2013.

I have learned so many lessons along the way, but here are a few that stuck with me the most: 1) If you don't ask or don't take a chance, the answer will always be 'no', 2) Try new things and embrace the unexpected, 3) Aim Big, 4) Collaborations are essential, 5) It all comes down to passion and perseverance, and 6) If you've got mud on your feet, salt in your hair, or sand in places you didn't think it could go … chances are, it's been a pretty awesome day.

**7. What do you think is the greatest threat to coastal ecosystems, and what action(s) should be undertaken to address it?** There are many threats to our coastal ecosystems, but I think one of the biggest threats is the viewing of our coastal systems as a resource for us to use rather than an integral part of a healthy,

thriving, natural environment in Florida. Finding the balance between human activities along the coast while preserving the biological needs of the coastal systems by not only maintaining and/or increasing the quantity of habitat but also maintaining and/or improving habitat quality, is an ever increasing challenge. The FBHCP addresses such challenges by integrating coastal development and land use activities with conservation, thus providing a framework for the preservation and management of threatened and endangered species on Florida's beaches.

**8. What is your favorite coastal animal, and why?** It's impossible for me to pick just one … but I think my top 5 would be 1) sea turtles — Kemp's ridley and green, both of which nest on Florida beaches, 2) cownose stingrays (always loved them, more pelagic but also found in inshore waters), 3) manatees (yes they do travel along the coast, mainly in the warmer months), 4) humpback whales, which migrate, sometimes quite close to shore, along Florida's east coast in the winter months, and 5) the blue sea slug, also known as the 'blue dragon,' 'sea swallow' or 'blue angel,' a mostly pelagic species that is sometimes brought close to or onshore by winds and ocean currents. This oceanic nudibranch floats upside down in the water, feeds on the Portuguese man o' war and blue buttons — sequestering the most venomous nematocysts from its prey for its own use, and is just one of the most unique and beautiful animals I've ever seen!

**9. Do you have a message you would like to share with readers of this newsletter?**

We must lessen our footprint in nature.

Take Action! Those little steps, little actions … they add up to make a BIG difference. "The greatest threat to our planet is the belief that someone else will save it." ~ Robert Swan

Find what you're passionate about, and go for it.

Get Outside and Play!! It's a beautiful world!

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# Critter of the Quarter: Striped Mullet

This fall's Critter of the Quarter is the striped mullet (*Mugil cephalus*), which is most notable during the early fall when it forms into large schools and migrates offshore to spawn. This behavior is commonly called the "mullet run." The striped mullet ranges in color from a grayish to olive-brown, and gets its name from the spots found on each scale that resemble stripes when viewed at a distance. They can reach sizes up to 120 cm and weights of over 6.8 kg. This species occurs worldwide in warm temperate to sub-tropical waters. In Florida, this fish can be found

in all coastal waters and can tolerate a wide range of salinities (0 – 77 parts per thousand). This allows it to occur inland in freshwater rivers, to hyper saline lagoons and offshore, where this catadromous species spawns. Catadromy refers to the fact that even though this fish is primarily found in freshwater and estuarine regions, it migrates offshore in saltwater to spawn.

Mullet are an essential link in the energy flow within estuarine systems. As schooling fish, large groups of juveniles are common in very shallow water, feeding on zooplankton. Adults also form large schools, commonly feeding on detritus found on the surface of sediments over mud or sand flats. In areas with large amounts of seagrass, they eat the epiphytes (non-parasitic plants that grow on the seagrass) or epifauna (animals that live on seagrass). Striped mullet are a food source for many popular sport fish, such as speckled trout, redfish, snook, tarpon, billfish and sharks, to name a few.

Since they are a preferred prey item for so many recreationally important species, the mullet run, or spawning migration, is eagerly anticipated by fishermen. During this time, it is easy to catch both mullet and predatory sport fish in large numbers. As temperatures drop in the fall, schools of adult mullet begin to exit freshwater and brackish environments and move along the coast, joining up with other schools to form huge masses of thousands of fish, and migrate along the coastline before eventually moving offshore. Anglers and predators alike gather to intercept the schools and take advantage of the favorable fishing opportunity presented by having so many fish concentrated in such a tight group. With the increase in the use of drones, there is some truly spectacular footage of the mullet run now available to give a bird's eye view of the many dynamics of the mullet run.

Striped mullet are harvested both commercially and recreationally for human consumption and bait, often with baitfish selling at higher prices. The roe, or eggs, are also considered a delicacy in many cultures. During the 1980s and early 1990s, striped mullet were rapidly declining due to overfishing by commercial fishermen, who were able exploit the schooling nature and annual migration to an extreme extent. Since Florida enacted the net ban in 1995, which prohibits use of any entanglement net designed to ensnare an animal in the meshes, this species has rapidly recovered while still remaining available for harvest by other means. This had the added benefit of protecting many non-targeted species (sea birds, marine mammals, sea turtles, non-target fish), known as by-catch, which were often inadvertently captured in entanglement nets and often died as a result of prolonged entanglement.

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# Funding Opportunities

**Center for Dark Energy Biosphere Investigations Education Small Grants Program** — C-DEBI Education & Outreach Grants Program will fund the development of educational opportunities and materials that are pertinent to deep biosphere research in the subseafloor environment. The deadline is **December 1, 2016.**

**NRDA Florida Trustee Implementation Group (TIG)** **Project ideas Requested for Restoration in Florida** **—** New project ideas or revisions of previously submitted projects are being accepted. The deadline is **December 5, 2016.**

**Gulf of Mexico Alliance** **Coastal Community Small Grants** **—** Proposals are now being accepted from coastal communities who wish to proactively address their vulnerabilities to coastal hazards identified during a community self-assessment. The deadline is **December 9, 2016.**

**Temper of the Times Foundation** **—** Provides funds to nonprofit organizations for environmental advertising projects that will lead to measurable outcomes for wildland ecosystem conservation and restoration. The deadline is **December 15, 2015.**

**NOAA Marine Debris Program** **Marine Debris Research FFO** **—** This opportunity provides funding for original, hypothesis-driven research projects focused on the persistence and chemical impacts of marine debris. The deadline is **December 19, 2016.**

**NOAA FY17 Coral Reef Conservation Program** **Domestic Coral Reef Conservation Grants** **—** Applications accepted for projects will fall within at least one of the following four categories: (a) Fishing Impacts; (b) Land-Based Sources of Pollution; (c) Climate Change; and (d) Local and Emerging Management Needs. The deadline is **January 11, 2017.**

**EPA Environmental Justice Small Grants Program** –Applications should reflect activities that empower and educate affected communities to understand environmental and public health issues and to identify ways to address these issues at the local level. The deadline is **January 31, 2017**.

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