



Audubon FLORIDA

Bird Steward Manual 2012 Update



This manual was developed in 2010 with generous support from a State Wildlife Grant through the Florida Fish and Wildlife Conservation Commission.

Starting a Bird Steward Program

WHY BEACH BIRDS NEED YOUR HELP!

After suffering huge population losses due to the plume trade around the turn of the 20th century, many species of beach-dependent birds are still on the decline. While historically hunted for their feathers, nowadays these birds face loss of habitat due to coastal development, sea level rise and armoring of the barrier islands and inlets they favor as well as increased recreational pressure both on and along the shore, and increase in human-commensal predators.

In order to reverse the declines and stabilize these bird populations it is necessary to collect and analyze data through surveys and monitoring, to educate the public through interaction and outreach, and to protect nesting colonies and provide sanctuaries where birds can nest, rest and feed with minimal disturbance. There is not enough professional staff—agency staff or nonprofit employees— to implement the necessary measures and volunteer help is crucial to complement their efforts.

HOW YOU CAN MAKE A POSITIVE DIFFERENCE!

This manual provides some of the basic steps necessary to begin a volunteer based Bird Steward program. While each program may evolve differently according to the needs of the area and the resources available there are some elements that will remain the same. The Audubon Florida Bird Steward Program model was developed in the St. Petersburg area and was later exported to Northeast, Southwest and panhandle Florida. The following pages include some actions you can take and resources that will help you create a stewardship program. You can make a positive difference for Florida's vulnerable beach-dependent birds.

*Least Tern chick
being rescued.*

*Photo by Dave
Kandz*



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TAKE THE LEAD

As an effective Bird Steward Leader, you need to be willing and available to commit the necessary hours both in the field and on the computer. You will have to learn yourself and then teach others to conduct surveys, post and monitor colonies, and engage with the public during those critical times where birds and people's recreational needs overlap. Although your initial interest is to save birds, you will quickly find that a successful program is all about people, so you absolutely need to enjoy dealing with people. There will be challenges and you will need to reassess and respond creatively. Your reward will be better outcomes for the birds—a guaranteed result if you are persistent and have their well-being as your goal.

IDENTIFY YOUR PARTNERS

Before getting started!

Do your homework! Find out if there is an existing shorebird partnership near you. Shorebird partnership groups consist of land managers such as State Parks or local governments, law enforcement, agencies such as the Florida Fish and Wildlife Conservation Commission (FWC) or the US Fish and Wildlife Service (USFWS), academia (for example, the Suncoast Partnership has Dr. Beth Forys from Eckerd College in St. Petersburg), staff from conservation organizations such as Audubon, citizen volunteers, and Audubon chapter members. These regional partnerships form a loose statewide network, the Florida Shorebird Alliance (FSA) and have a statewide Shorebird Partnership Coordinator*** (See Contacts on Page 18). Go to <http://www.flshorebirdalliance.org> to begin your search. If there is already a partnership where you are, join it, we need you. If not, we need you even more!

RECRUIT, TRAIN AND COORDINATE YOUR VOLUNTEERS

You cannot do it alone so one of your primary goals is to develop a reliable and well trained volunteer corps. Get started by talking to a few friends and/or family and asking them to help you. Volunteer recruitment always starts small and seems to grow slowly and painfully, but someday, sooner that you may have expected, you will see yourself surrounded by dozens of volunteers. Training and organizing these volunteers is where your efforts will prove most valuable. Most land managers and agencies do not have the capacity to train and organize volunteers annually at the many statewide locations where they are needed.

RECRUIT VOLUNTEERS

Recruiting volunteers is an ongoing process. Here are just a few ideas on groups you might try to engage:

- Local Audubon chapters.
- Other environmental or wildlife- and nature-oriented groups such as the FL Master Naturalist Program, Sierra Club, zoos, sea turtle patrols, student associations, etc.
- Civic groups such as Rotary Clubs, Neighborhood Associations, Friends groups, etc.

Recruiting tools include:

- PowerPoint presentations work well as they can be customized for specific audiences. We recommend using local photographs of the birds as much as possible to make it more appealing to the region's public. For talks with no projection facilities, slides from the PowerPoint presentation can easily be printed and passed around as visual aides.
- Tabling at various events such as nature festivals or art fairs. Picture display, banner and/or little dioramas help attract people to your booth. Do not forget a sign-in sheet for interested volunteers.
- Electronic media such as Facebook pages.
- Press releases and articles are great to reach out to the general public.
- Engaging the birding community and local Audubon chapters: used to recruit volunteers for monitoring efforts, as surveys require more experienced bird-watchers.

TRAIN VOLUNTEERS

Training your volunteers to become effective citizen scientists is one of the key elements of a successful bird steward program. Not only are people attracted to opportunities to learn but good basic training will give volunteers the confidence to carry out their tasks and engage the public with enthusiasm and credibility.

Early in the nesting season, a classroom training session, combined with an on-site orientation session on the volunteers' first day works well. Depending on the size of the program, separate sessions can be held for surveying volunteers, bird stewards or rooftop monitors if all volunteers will not be performing all three functions. Later in the season, extra field training sessions can be held on site for newcomers.

The training session should present information about the local species of birds, the threats they face and why it is essential to better protect them. A PowerPoint presentation helps engage volunteers while they are at the training, and handouts about the birds the stewards can take home become a reference for them later. Asking some of the program partners to participate in the training will provide a broader knowledge of the program. For examples of presentations and handouts used by other groups, contact your local shorebird partnership** or the Audubon contact****.

Then discuss the various activities volunteers will be conducting. For steward training, role playing with returning volunteers coaching the new volunteers works well. Having a law enforcement person during the steward training is also very valuable. It helps define when it is justified to call law enforcement. Law officers are often worried that the stewards will become vigilantes and personal interaction usually reassures them. For the stewards' first time in the field, have a seasoned volunteer or the site coordinator conduct an orientation session at the site.

For surveys, it is useful to have a training session in the field, so people can practice and ask questions that arise while implementing the protocol.

DEPLOY VOLUNTEERS

Volunteers play a very large and important role in a variety of activities. Depending on skill, physical endurance and time available they can participate in surveys, assist with posting sites, spend time on the beach as bird stewards educating the public or monitor rooftop nesting sites.



Bird Stewards talking with a beach visitor.

Photo by Linda Martino

Surveys require people with the skill to identify the birds, willingness to follow a protocol and record their data as necessary. However, novices should be invited to come along for the opportunity to learn in the field. Make them feel useful carrying equipment, recording data and picking up trash. Identifying and counting birds is difficult and practice is essential.

Posting nesting sites is a more physical task that involves putting up signs and roping off either historically-used sites or newly selected nesting areas. This often involves walking long distances, carrying materials and working in a hot environment. If volunteers work under a manager, they will need to be willing to follow precise instructions. If they become responsible for posting sites, they will need to be able to exercise sound judgment to post in ways that both protect the wildlife and respect landowners' access concerns as much as possible. They will be required to report meaningfully to the concerned agencies, be willing to maintain the posting through the season, and commit to take it down at the end of the nesting season.

For **Bird Stewards**, people-skills are more important than bird identification skills. Volunteers need to learn the basics on how to identify the birds they are stewarding (normally just a handful of species), some biological information such as diet and nesting habits, the listed status of the species (a frequent mistake of beginners is to call all the birds endangered), and why the protection measures are needed. Physically, stewards also need to be able to withstand the heat. They will be requested to wear sun protection and to bring plenty of fluids to drink during their shift on the beach.

Bird stewards are posted by nesting colonies and near sites important for migrant species that stop to refuel along their travel routes. Stewards should see themselves as ambassadors for the birds. Their main purpose is to educate the public. They also address disturbance to the birds, for example, people flying kites too close to a nesting site or beachgoers walking their dogs close by and causing the adult birds to take flight or their chicks to panic and scatter. Most people will be very cooperative once they understand the consequences of what they are doing. The job of the steward is to engage the public in a positive way. Once in a while, a visitor will become antagonistic toward a bird steward. It is imperative that the stewards disengage and refer to law enforcement people or park staff. **The best long-term help the stewards can bring to the birds is to have beachgoers feel that their visit was enhanced by seeing the birds!**

Stewarding programs should only be conducted with the agreement of the local authorities. It is very important that you, as a leader, report regularly to the land managers and agencies you are assisting. Reports should be factual, relaying management concerns, sharing good or bad public interactions, and giving information on the birds' nesting status. Let the managers know both when the stewards are deployed and when the birds are left unprotected.

Volunteers need to wear a recognizable outfit. Safety vests work best. They are light, can be worn over other garments and are very visible. Label the vests "Bird Steward" across the back, with decals or permanent marker. Some vest vendors can pre-print lettering on the vests for a fee. It is also advisable for the stewards to carry cell phones in the event they need to reach law enforcement, park staff or emergency personnel.

Since most of the nesting occurs during the hot summer months it is important to provide shade for the stewards. While in some programs, stewards bring their own gear, other programs have a site coordinator or the land manager set up an umbrella or, better, a canopy. Hang an attractive banner on the canopy to attract the public. Of course, stewards need to bring water, electrolyte drinks, and protect themselves from the sun.

Having a spotting scope to allow the public to view the birds up close and personal is very

helpful. We call it the “ooh, so cute!” factor; an exclamation regularly heard the first time people see a chick through the scope. You hear that, and the birds have gained a friend!

Bird stewards should have informational material with them. Contact the FSA Shorebird Partnership Coordinator*** to find out what is available. It is imperative to include cute pictures of the birds and contact numbers for law enforcement and/or the land manager. Also include some biological facts about the birds and bird steward’ dos and don’ts.

It is helpful for law enforcement or management staff to visit the stewards on site occasionally. This reinforces the credibility and value of the stewards in the eyes of the public. This is also an opportunity to share information: stewards can give nesting news to law enforcement personnel and staff can address questions the stewards might have.

Bird steward schedules vary by site. Three hour long shifts usually work well. For example 9-12, 12-3, 3-6 provides good coverage during the busiest part of the day. Encourage stewards to report to the site coordinator and to the other volunteers (through a volunteer list-serve, for example) on how their shift went: what caused disturbances, how the public reacted, how the birds are doing. Keeping record of their comments will be helpful when preparing a summary or report for the land managers.

Rooftop nesting site volunteers are monitors and “chick-checkers”. These volunteers will monitor rooftop nesters such as Least Terns, Black Skimmers, American Oystercatchers and Gull-billed Terns. They do not need any special bird knowledge but they need to have good people skills. They are usually operating on private property and need to be considerate and positive.

For example, they might face an irate building owner whose customers’ cars are covered with droppings and who is frustrated that the birds cannot be removed. The goal is to thank these folks for putting up with these inconveniences for the birds’ sake. Volunteers also need to responsibly follow the protocol established for chick rescue, as they will be handling protected birds.

Early in the nesting season, have your rooftop monitors do an initial check of all the historical rooftop sites for presence/absence of nesting birds. Historical sites in your region can be found by using the FWC database**. It is recommended to do one or two additional complete surveys during the season as birds who have failed on one rooftop might re-nest on another. Regularly monitor the occupied roofs and estimate the number of nesting birds by counting them when they flush off the roof during a disturbance (see the FWC shorebird database for monitoring protocol**). Photographing the birds in the air can be a helpful tool in estimating the numbers of birds in the colony.

Flightless chicks will often fall from the gravel rooftops if the roof has no lip. These chicks cannot get back onto the rooftops by themselves. Once a chick is on the ground, it has no chance for survival and it needs to be returned



Least Terns flushing off the roof they are nesting on. Photo by Dave Kandz

to the roof to be tended by its parents. It is imperative to organize chick-checking patrols every three hours to minimize the loss of chicks. To return chicks to the roof, do not go onto the roof, but use a tool developed for this, known as the “chick-a-boom.” Use your volunteers and try to engage the building occupants as well. This will allow for more frequent checks during the day. As “chick-checking” involves handling protected birds, contact the FWC Shorebird Partnership Coordinator*** to make sure you are following the right protocol and to get the design of the chick-a-boom.

Rooftop colonies can allow you to reach out to a wider public and make them aware of the plight of the birds. Provide the building owner with information to be shared with his patrons. And of course, rescuing chicks is a very rewarding experience for volunteers and a good recruitment tool.

COORDINATE VOLUNTEERS

As projects grow and the number of volunteers increases, share the workload by creating a network of regional and/or **site coordinators**. A site coordinator should be assigned to each of the most important nesting sites. The site coordinator takes responsibility for scheduling the volunteers, pairing new volunteers with more seasoned ones if possible, helping with on-site volunteer training and providing feedback and reports to the volunteers to keep them engaged.

Site coordinators need to be able to dedicate several hours a week to the project and require good people and communication skills. They should be comfortable with emails and list-serve management and be able to share their enthusiasm about the birds and the importance of protecting them. In addition, reporting to land managers and partner agencies keeps everyone informed and builds trust.

MAINTAIN THE PROGRAM

Building personal relationships with your volunteers is essential to keeping them engaged. Do it through personal visits, and by emailing updates, reports and photos. Report regularly to the volunteers the progress of the nesting season (first chick, species nesting, and success stories) and share anecdotes such as interesting interactions with the public, an unexpected predation event, etc. At the end of the nesting season, organize a volunteer recognition event with distribution of certificates, awards and feedback on volunteers' achievements. Awards are less important than the opportunity to spend some social time all together. It is crucial to summarize to the volunteers how the nesting season went. They need to hear how their efforts are protecting the birds. Equally important you need to hear from them how they enjoyed their time volunteering and how their experience could be enhanced. Share the results of the surveys; it is essential for the volunteers to see how the data they collect is being used!

A good tool to use for communication between yourself and the volunteers, as well as among the volunteers, is an email list-serve. Such a medium facilitates deployment and allows for

uploading of useful files and photographs to be viewed by all. This builds a sense of community and collaboration.

SURVEY THE BIRDS

Adopting a rooftop or a beach nesting site is only one element of a successful program. For more effective conservation, assessing the abundance and distribution of the shore-dependent bird species in your region will be needed. This will provide a broader perspective, help prioritize sites and/or fill gaps in monitoring or protection efforts.

ASSESS EXISTING DATA

Suggested steps:

Study the existing databases and resources to determine which shore-dependent species are in your region and where they are.

- FWC: <https://public.myfwc.com/crossdoi/shorebirds/index.html>
- eBird: <http://ebird.org/content/ebird>;
- Important Bird Area (IBA): <http://web4.audubon.org/bird/iba>
- Florida Breeding Bird Atlas: <http://myfwc.com/bba>
- Birding list-serves, local rehabilitation facilities, etc.

ASSESS EXISTING MONITORING EFFORTS

Assess existing monitoring efforts by meeting with the land managers, the regional agency biologists and/or volunteer surveyors. Determine if all sites are regularly monitored and where the data is reported. It is not only important to have regular surveys but it is key that the data collected is shared and easily accessible to conservation professionals. Monitoring of nesting sites should aim at assessing nesting success/productivity as much as possible: a weekly survey recording the number of nests, downy chicks, feathered chicks and flight capable young is recommended.

FILL IN THE GAPS

Organize surveys to complement existing monitoring efforts. Once you have determined where surveys are needed, refer to the FWC shorebird database** for protocol.

ESTABLISH A SHOREBIRD PARTNERSHIP

Begin to organize volunteers, scientists, landowners, agencies and concerned individuals into a working group that will meet on a regular basis, at least twice a year, before and after nesting season. Conservation efforts need to be coordinated at the regional level. This will:

- Help track the birds if they move from one site to another;
- Help focus protection and monitoring efforts where most needed;
- Allow land managers to share problems faced and solutions found;
- Facilitate communication between the regional agency biologist and the various land managers; and
- Help organize effective volunteer involvement.



Audubon volunteers, land managers and FWC staff pre-posting a Least Tern nesting site.

Photo by Monique Borboen

To establish a regional forum for managers - now referred to as a “shorebird partnership group,” we suggest:

- Coordinating efforts with the FSA Shorebird Partnership Coordinator ***.
- Meeting with the region’s managers and agencies to promote the benefits of a regional approach to shore-dependent birds’ management.
- Enlisting a local land manager or agency biologist to be a co-chair and to help start the group.
- Identifying potential partners, inviting them in person and encouraging them to invite others.
- Organizing meetings. At the initial meeting, spend some time discussing needs, expectations, meeting venue, group organization and means to communicate. Hold the meetings in a professional way with agenda and minutes. Always plan some social time so partners get to know each other better.
- Setting up a calendar. Plan a pre-nesting season meeting, with discussion of pre-posting, volunteer needs and surveys. Wrap up with a post-nesting season meeting, with discussion of the season’s successes and failures. An extra winter meeting is useful to discuss wintering bird surveys and other concerns, such as developing signs or informational material.
- Establishing convenient ways for the partners to communicate such as a list-serve. The list-serve for the partners needs to be separate from the one for the volunteers. With the tightening of budgets, some agencies might have travel restrictions: offering conference call capabilities at meeting locations will allow partners to call in if they cannot attend in person.
- Keeping the group structure flexible to accommodate new needs.

Usually sharing management measures that worked is sufficient to inspire managers to implement better protection. Some managers are wary of outside help and it will take them some time to realize the value of skilled and committed volunteers. Be patient: it’s a matter of time.

PRIORITIZE YOUR SITES AND IMPLEMENT BEST MANAGEMENT PRACTICES

PRIORITIZE THE SITES

Prioritize sites by identifying the most critical habitat along with the need for management actions. Factors used to determine importance include:

- The site provides habitat for the most species;
- The site provides habitat for imperiled (listed) species;
- The area has not been monitored, it has suitable habitat, and nesting is likely at some time during the season so advance protection is warranted;
- The site manager needs help with implementing best management practices;
- The site is not being managed; or
- The site offers potential habitat that could be used by the birds if certain management measures were taken.

SUPPORT BEST MANAGEMENT PRACTICES

Best beach-dependent bird management practices you and your volunteers can support or implement include:

- **Pre-posting of historical nesting sites.** The sites that have had nesting in previous



years should be posted a few weeks before the birds normally begin nesting. The posted sites should be in the exact historical location, or if the habitat has changed, on a close-by suitable upper-beach area. Pre-posting protects a sitesfrom intrusions, allows the habitat to regenerate, and provides a protected area for the birds as soon as they arrive, allowing them to nest as early as possible. Early nesting may help protect them from summer tropical storms as their young will be old enough to fly,

walk onto the dunes or swim in case of a storm surge.

- **Conducting** county-wide **surveys** at least 6 times during the nesting season—see dates of statewide window surveys in the shorebird database (FSD) protocol. In addition, regular surveys of active nesting sites should be conducted at least once a week to assess nesting success. Counts should include: number of nests, number of chicks – differentiated into downy, feathered and flight-capable — and number of adults. Monitoring should also capture information about disturbance and potential predators. It is crucial that data collection follows the FWC protocol and that data is entered as promptly as possible into the FWC shorebird database (FSD)**.
- **Posting and maintenance of new and old sites.** It is important to maintain twine to prevent sagging and entanglement risks as well as removing it at the end of nesting, when the last chick is flight-capable. Encourage the placement of educational signs a few feet outside the posted boundary so people don't have to walk too close to the nests to read the signs.
- **Deploying Bird Stewards** needed at all key sites. See page 7.
- **Discouraging the presence of dogs.** Banning dogs from beach-dependent bird sites is best. However, at sites where dogs are allowed, leash laws should be mandatory and strictly enforced. An education campaign complemented by regular law enforcement visits might help as many dog owners are repeat visitors, especially early and late in the day when more people walk their dogs. On isolated islands, which are important both to nesting and wintering/migrating birds, dogs should not be allowed year-round.
- **Controlling predation.** Land managers should be encouraged to assess the presence of potential nuisance predators and contract for removal with USDA specialists. Avian predators can be discouraged from perching on signs and poles by cutting the top of the poles at an angle or by using flimsy laminate on signs. Proper disposal of garbage will discourage scavengers which may also predate chicks.
- **Providing for site specific management.** Examples include: stewarding late at night on July 4th to protect the birds during fireworks, or stewarding migrating birds.

- **Discouraging vehicles on the beach.** No beach driving is best.
 - ◇ At nesting sites where public beach driving is allowed, driving should be stopped on the upper part of the beach by pre-posting at least a month before nesting season starts to restore the habitat. Then public driving should be stopped between the nesting birds and the water. The car-free area should be very extensive in areas where plovers nest as the chicks roam far to feed.
 - ◇ A vast majority of beaches in Florida do not allow public beach driving but vehicle use by authorized personnel (law enforcement, life guards, maintenance staff, turtle patrol) can still be heavy. Encourage patrols to be done on foot as much as possible or using vehicles such as ATVs. Managers should share with law enforcement and lifeguard personnel the precise location of the posted areas and should point out the less damaging areas to drive when emergency access is required.



Wilson's Plover Chick by RJ Wiley

- **Discouraging beach raking.** Beach raking removes wrack (seaweed and other material deposited by the tide) which offers good feeding and roosting habitat for shorebirds. Wrack also helps build the upper beach nesting habitat and should be protected from any damage.
- **Creating Bird Sanctuaries** (areas with no human access/disturbance). Birds react very well to areas set aside for them, even if they are small. Both nesting and migrating birds will congregate in them. Sanctuaries on public beaches can become quite an attraction for wildlife-viewing by the public.

SPEAK UP FOR BEACH BIRDS

Education and outreach are a critical piece in your long term protection program. It is important to raise awareness about beach birds at three levels:

- **Reach out to the general public** through lectures, articles, press releases, electronic newsletters, and personal outreach during bird steward shifts and surveys at the beach. You can use a simple message: the birds are an extra attraction for beach visitors.
- **Share your knowledge and concerns with our environmental partners.** Many are not aware that the beach is critical and threatened bird habitat.
- **Become a trusted and valuable resource for the agencies** that manage these important sites. They are in charge of multiple species and non-game departments are often very understaffed. You will become their eyes in the field as you and your volunteers will surely be spending more time observing the birds than they are able to. Similarly, land managers have to oversee a whole park or region, taking care of public issues as well as natural resources protection. Being there for them will help them prioritize beach bird conservation.

USEFUL CONTACTS

* Florida Shorebird Alliance: <http://www.flshorebirdalliance.org/>

** FWC Shorebird Database (FSD) <https://public.myfwc.com/crossdoi/shorebirds/index.html>

***Florida Shorebird Partnership Coordinator: http://www.flshorebirdalliance.org/contact_us.html

**** Audubon Florida: Jacqui Sulek: jsulek@audubon.org

Appendix I – Sample of material distributed to the Huguenot Park Bird Stewards:

The Huguenot bird steward instructions sheet contains general and site-specific instructions.

The Bird Steward Project–Basic Information for Volunteers

MISSION

The mission of Bird Stewards is to educate people in a friendly and inviting manner. Education is achieved by engaging others in issues facing beach-nesting birds and by identifying birds on the beach.

PROCESS–WHAT YOU WILL BE DOING AS A BIRD STEWARD

- Educating people about birds that are present at the location where you are working.
- Providing information about what the birds are doing and why.
- Explaining issues facing beach-nesting birds.
- Teaching people how to identify the birds that are present on the beach.
- Educating people in a friendly and inviting manner.

FREQUENTLY ASKED QUESTIONS

What problems are caused if people disturb the birds?

Disturbing the birds threatens the survival of eggs and chicks on the beach by exposing them to the sun and predators like crows, herons, and raccoons. If adults are disturbed repeatedly, they may even abandon their nests.

Chicks need to be able to move safely from the dunes where they find shelter to the water's edge where they find food or relief from the heat.

Disturbance also affects migrating birds, as it prevents them from foraging and resting adequately. Migrating birds need to replenish and stock up on fat reserves before continuing their long-distance journey.

Birds are on the beach nesting for two to three months. For them, the beach you play on is vital breeding ground. By sharing the beach with them, you are helping their survival and offering future generations of beachgoers the pleasure of observing our local birds.

Why are some areas closed to people/pets?

Suitable habitat is declining for these birds. Both eggs and chicks are well camouflaged and can be very hard to see. By closing areas, we are providing a safe habitat for the birds to nest.

Why are pets not allowed or why do pets have to be leashed?

An unleashed pet can destroy a whole colony in minutes. Birds perceive dogs as predators and will be disturbed even if the dog is not chasing them.

What should I do if I see someone disturbing the birds or causing other wildlife violations?

- If the educational approach fails and an individual or group refuses to follow a request to avoid disturbing the birds or is argumentative or combative, back-off, observe their actions from a distance, and contact 1 or 2.
- If people or dogs continue to be present inside posted areas or other actions are occurring which you believe present an imminent harm to adult birds or chicks, you should:
 1. Contact the intern if she/he is present.
 2. If there is no intern, contact the Park's office: 904-251-3335
 3. File a complaint with the appropriate state law enforcement:

Florida Fish and Wildlife Conservation Commission Wildlife (FWC) Alert:

1-888-404-3922

- When filing a complaint try to have:
 - **WHO** - Who are you? How can you be reached if the responding officer needs additional information?
 - Who is the violator? Provide an accurate description of the violator and the number of people involved. Was a vehicle involved? Provide a description of the vehicle and/or tag number. Are there dogs present?
 - **WHAT**--What are they doing that violates the law?
 - **WHEN**--When did the violation occur? Is it in the progress?
 - **WHERE**--Be as exact as possible. What direction are they heading?

APPENDIX 2 - Huguenot reference sheet:

This document serves as a reference and allows interested volunteers to read more information about the birds of the site they will steward.

Beach-nesting Bird Species at Huguenot Memorial Park:

Colonial:

- **Royal Tern.** *Nested successfully in 2009. High juvenile/chick number: 1647 on July 23*
- **Sandwich Tern.** *We are certain that a few nested successfully in 2009 as some unfledged chicks were seen on the beach.*
- **Laughing Gull.** *Nested successfully in 2009. High juvenile/chick number: 3601 on July 23*
- **Black Skimmer.** *A group of about 30-35 birds settled inside the dunes for over a month. 5-6 birds were seen returning to the same spot after a disturbance. We consider this an unsuccessful nesting attempt. Lack of success has been attributed to flooding.*
- **Gull-billed Tern.** *Nested sporadically in small numbers in the recent past.*
- **Least Tern.** *Nested in the more distant past; no nesting in recent years.*
- **Caspian Tern.** *Never reported nesting at the park, but a few individuals of this species nest among Royal Terns at other sites in Florida and may nest here in the future.*

Solitary:

- **Wilson's Plover.** *No nesting confirmed but adults seen pairing in the cove and at least two reports of adults going into the dunes. Reported as nesting in the past.*
- **Willet.** *Not surveyed. Prefers nesting in the marshy area of the park.*
- **American Oystercatcher.** *No sighting of this species in 2009. Reported nesting in the past.*

For information:**FWC:**

- Shorebirds website: <https://public.myfwc.com/crossdoi/shorebirds/index.html>
- “Share the Beach with Beach-nesting Birds” brochure: <http://www.myfwc.com/media/1393838/beachnestingbirdsbrochure.pdf>
- Breeding bird atlas: <http://legacy.myfwc.com/bba/default.asp>
- FWC imperiled species listing: http://myfwc.com/WILDLIFEHABITATS/imperiledSpp_index.htm
- Florida Shorebirds Alliance (FSA) Website: <http://www.flshorebirdalliance.org>
- Red Knots: “A tale of two species”: <http://www.pbs.org/wnet/nature/episodes/crash-a-tale-of-two-species/introduction/592/>
- 2010 State of the Birds/Climate change report: <http://www.stateofthebirds.org/2010>

APPENDIX 3 - Lee County Bird Steward 101 Handout

Beach Stewardship 101

- Information you need to be a GREAT bird steward -

Disturbances of nesting birds – especially disturbances making the parents take flight – threaten the survival of the young. When the birds are disturbed - whether by people coming close or dogs walking nearby - their eggs and chicks are exposed to the hot killing sun and the ever-present predators like crows, gulls, and raccoons.

What to bring: Cell phone, lunch/snacks, Gatorade or similar electrolyte drink, plenty of water, sun block, hat, sunglasses, towel or chair, and binoculars and scope. Your site coordinator may have an umbrella available for use.

Your job is to educate people and to ask people not to disturb the birds if they are doing so. Beach stewards are not law enforcement officers.

Come prepared to engage with a wide variety of people with varying degrees of knowledge about beach-nesting birds. People interested in nesting birds and turtles will approach the posted nesting area. Other people will be indifferent to the need for protecting nesting shorebirds and seabirds. You will encounter both residents and tourists vacationing from elsewhere in the U.S. and abroad.

If you have access to a spotting scope, set it up at a distance from the posted area that doesn't alarm any of the nesting birds. Train the scope on a bird that is incubating eggs or brooding chicks so visitors can see what's being protected inside the posted area. If there are chicks in the viewing area, those are especially engaging for beach visitors – you'll win over some of the most reluctant people once they see the little chicks being tended by their parents. Binoculars can also be used to show visitors what's inside the posted area if you don't have use of a spotting scope on your shift. Keep bird reference material or handouts nearby if people express interest in more information but beware that paper handouts can become loose trash on the beach.

If you encounter indifference, provide as much information as the person will receive. If you encounter hostility, disengage and move away. Do not allow their attitude to influence the outcome of your encounter. If a hostile person enters a posted area where birds are nesting or they allow their dog or family member to enter the posted area, follow the instructions provided by your beach site coordinator for addressing violations of this type. Procedures may include calling the land manager or calling law enforcement directly. If the land manager or law enforcement officer arrives on the scene move well away from the area and let them handle the situation – as they are trained and paid to do.

Occasionally bird stewards encounter inebriated beach visitors that become hostile toward stewards or toward the nesting birds. They may enter, or threaten to enter, the posted areas. If this happens, contact your site coordinator immediately or follow instructions previously provided by your site coordinator.

KEY TALKING POINTS

Why is this area posted and off-limits for people?

Suitable habitat is declining for shorebirds and seabirds. The area is closed to allow space for federally-protected beach-nesting birds to nest and raise their young. The feathers of these birds are the color of sand, seaweed, shells, and wood bits so they are hard for predators to see. However, their camouflaged coloration makes it difficult for people to see them too so we provide posts and signs that will help beach-goers be aware they are sharing the beach with nesting birds.

Disturbance of the birds threatens the survival of eggs and chicks on the beach by exposing them to the sun and predators like crows, gulls, and raccoons. If adults are disturbed repeatedly, they may even abandon their nests. By sharing the beach with them, you are helping them survive so future generations of beachgoers have the pleasure of observing our local birds.

How long is the nesting season?

Birds are on the beach nesting in Florida between mid-February and early September. Starting dates are different for each species. Snowy Plovers are usually first to nest and will lay eggs between mid-February and mid-March. Black Skimmers are the last to lay eggs – often in late May or early June. Their chicks are not fledged until August or early September each year.

Why are dogs not allowed or required to be leashed?

An unleashed pet can destroy a bird colony in minutes by crushing eggs or chicks. Birds perceive dogs as predators and will fly off their nests or away from their chicks even if the dog is not chasing them. The hot sun can kill a bird's eggs in 10-15 minutes!

Some other important points:

- Shorebirds and seabirds have nested on Florida beaches for thousands of years.
- They prefer to nest on barrier islands or peninsulas where they are protected from mammalian predators such as raccoons, bobcats, and feral cats.
- Optimal nesting habitats are where there is a combination of undisturbed, suitable nesting habitat close to productive feeding grounds. Optimal habitat for Snowy and Wilson's Plovers, Least Terns, and Black Skimmers is white sand with very low dunes and minimal vegetation so the adults can see in all directions.
- Because of intensive coastal development, boats and human recreational activity, there are very few undisturbed places left for nesting.
- Some birds like Plovers and American Oystercatchers are solitary nesters: one pair every 100 feet or so of beach. Others group together and are colonial nesters like terns and skimmers.

About nesting birds and their behavior:**Mating behavior:**

- Birds choose a mate for the entire nesting season.
- During mating you will see a number of behaviors like noisy display, and males offering small fish to females.
- In the same colony, you might see birds mating at the same time that others already have young chicks. If a pair is unsuccessful and the eggs are destroyed or their young do not reach maturity (fledging), they may mate again. They might make one or two more attempts at raising young.

Egg incubation period:

- Birds lay their small, very well camouflaged eggs right on the beach in a shallow “scrape” in the sand. They do not use nesting materials like twigs but may add a few small shell pieces.
- If you watch you can see adults flying out and back into the colonies. One adult “sits” on, or stands over, the eggs to keep them at the temperature needed for the embryo to develop and to protect the eggs from predators, while the other adult finds food.

Raising and protecting young:

- Birds are very protective parents and are sensitive to predators. Like most parents, they are stressed and watchful when they have eggs or chicks.
- When they think there is danger, the adults fly up into the sky and call noisily, and sometimes they will fly at or around the predator (attempting to distract or discourage them). This is called “mobbing”. Birds may even defecate on predators to drive them away.
- This “protection” is very tiring to the adult parents and costs them energy needed to feed and care for their young after hatching.
- There are many predators including other birds (laughing gulls, crows, night-herons), cats, dogs, bobcats, coyotes, and raccoons.
- If adults leave the eggs or young chicks alone on the beach – even for minutes – their young may be killed by heat or predators.
- Young chicks must be protected from the sun and followed to keep them safe – similar to human children. This is also energy-intensive work for the parents and even more so if there are numerous human disturbances around the chicks.

Egg incubation and chick fledging data for species nesting on Lee County beaches:

Bird species	Snowy Plover	Wilson's Plover	Least Tern	Black Skimmer
# eggs in clutch	usually 3	usually 3	2-3	3-4
time to clutch completion	4-6 days	4-6 days	2-3 days	4-6 days
time between clutch loss and replacement	about 7 days	about 7 days	unknown; will renest up to 3 times/season	unknown; will renest up to 3 times/season
incubation period	25-27 days	23-27 days	19-25 days	23-25 days
time to leave nest	few hours	few hours	about 2 days	about 2 days
time to first flight	28-33 days	30-35 days	about 20 days	28-30 days

Federal Laws and Florida Statutes regulating protection of migratory and nesting birds:**68A-4.001** General Prohibitions

1) No wildlife ...or their nests, eggs, young, homes or dens shall be taken, transported, stored, served, bought, sold, or possessed in any manner or quantity at any time except as specifically permitted by these rules nor shall anyone take, poison, store, buy, sell, possess or wantonly or willfully waste the same except as specifically permitted by these rules.

Chapter 372. State Wildlife Statutes**Sec. 372.001.** Definitions.--

(17) "Take" means taking, attempting to take, **pursuing**, hunting, **molesting**, capturing, or killing any wildlife ..., or their nests or eggs, by any means, whether or not such actions result in obtaining possession of such wildlife...or their nests or eggs.

68A-4.004 Possession of Wildlife or Fresh-water Fish or the Carcasses

1) Whenever the taking or possession of wildlife...is prohibited, the possession of any carcass or portion of the carcass of such wildlife...is prohibited....

68A-13.002 Migratory Birds; Adoption of Federal Statutes and Regulations.

The following United States statutes are hereby adopted as rules of the Commission and are incorporated herein by reference.

(a) The Migratory Bird Treaty Act, 16 U.S.C. Sections 703-711 and 16 U.S.C. Section 712

Migratory Bird Treaty Act

Pertains to all native bird species.

Includes the birds, their eggs, nests, young, or any part thereof and any products made from

any of these.

Prohibited activities include:

Pursue, hunt, take, capture, kill, possess, offer for sale, sell, offer to barter, barter, offer to purchase, purchase, deliver for shipment, ship, export, import, cause to be shipped, exported, or imported, deliver for transportation, transport or cause to be transported, carry or cause to be carried, or receive for shipment, transportation, carriage, or export.

68A-27.0011 Killing Endangered Species

No person shall kill, attempt to kill or wound any endangered species....

Florida State Statute 372.0725 Killing or wounding of any species designated as endangered, threatened, or of special concern; criminal penalties.

It is unlawful for a person to intentionally kill or wound any fish or wildlife of a species designated by the FWC as endangered, threatened, or of special concern, or to intentionally destroy the eggs or nest of any such fish or wildlife, except as provided for in the rules of the commission. Any person who violates this provision...is guilty of a felony of the third degree...

68A-27.003 Designation of Endangered Species; Prohibitions; Permits.

(a) No person shall pursue, molest, harm, harass, capture, possess, or sell any of the endangered species in this subsection, or parts thereof or their nests or eggs except as authorized by specific permit, permits being issued only when the permitted activity will clearly enhance the survival potential of the species.

68A-27.004 Designation of Threatened Species; Prohibitions; Permits.

(a) No person shall take, possess, transport, molest, harass or sell any threatened species ...or parts thereof or their nests or eggs except as authorized by specific permit... permits being issued only for scientific or conservation purposes and only upon showing...the permitted activity will not have a negative impact on the survival potential of the species.

68A-27.005 Designation of Species of Special Concern; Prohibitions; Permits

(a) No person shall take, possess, transport, or sell, any species of special concern ...or parts thereof or their nests or eggs except as authorized by Commission regulations or by permit...or by statute or regulation of any other state agency, permits being issued upon reasonable conclusion that the permitted activity will not be detrimental to the survival potential of the species.

68A-19.005 Establishment and Protection of Critical Wildlife Areas.

CWA's may be established by the Commission with landowner concurrence for the purpose of protecting significant concentrations of wildlife from human-related disturbance.

Establishment orders detail the physical location and closure dates (seasonal vs. year-round).

Take and disturbance of any wildlife, and entry into the area by people, vehicles, and dogs are prohibited during the designated closure period.

68A 19.002 Establishment of Restricted Hunting Areas, and Bird Sanctuaries, Procedure.

The Commission may establish bird sanctuaries...within any developed area upon the written request of the local governmental body...

...the Commission shall, through its staff, investigate to ensure that the tract under consideration is sufficiently developed as to preclude recreational hunting.

68A 19.004 Regulations in Bird Sanctuaries

No person shall take any wildlife in any bird sanctuary using a gun unless such taking is authorized by specific rule relating to such sanctuary.

Florida Fish and Wildlife Alert Hotline: 1-888-404-3922

Appendix 4. Examples of report to land managers

Add pictures to illustrate your points

Porpoise Point, June 20, 2009

Katie and I were out from 9 until 11:15 this morning. The heat was bad so we quit a little early. Fewer than usual people were out, probably due to all the heat advisories on TV.

Least Terns: total 30 nests

- 23 nests inside west area,
- 2 definite nests about 10 meters outside the protected area, (Do we need to move the posts out?)
- 5 estimated nests behind dune.
- 43 foraging and resting birds

Wilson's Plovers: total 14 individuals, 0 young chicks

- 6 birds in or behind east area
- 8 birds in or around west area
- All birds were moving freely to the water and back.

Killdeer: 1 bird seen twice, or 2 birds, coming from behind dune to water and back.

Willetts: 1 actively foraging along tidal pool, 0 seen coming from behind dunes today

Disturbances:

Tire tracks between east and west posted nesting areas and inside the no vehicle area, appear to be after most recent rain.

Dog poop and human tracks inside east posted area, but not far in.

Crows above and on ground in east area, one eating something. (I hope the Wilson's chicks are just hiding in the dunes today.)

Some kind of two-wheeled buggy or other conveyance had been dragged all the way through the entire west posted area colony! It appears they missed several nests by inches, but who knows how many were destroyed.

Boats on beach, one just dropping off wife and kids and leaving. The other boat had 2 young men and an **unleashed dog**. I spoke to them briefly about the nesting birds but disengaged when they just laughed....beer and hot sun, I guess. They weren't hostile, just silly. The dog was still running around when I left. I informed the deputy as I was leaving. (Thanks to Deputy D. W. who will be at the beach until 8 PM tonight.)

Huguenot, July 29 2010.

I participated in the weekly survey this morning and walked the cove with Chris the new city intern.

Had a Piping Plover, no bands, still in breeding plumage (black line across forehead) in zone 13 and 2 Whimbrels in zone 13.

Of management concern:

- 7 Wilson's Plovers (WIPL) all in zone 13. Four of them were first seen on the flats, then were resting in tire ruts where zone 13 juts out. There were 3 more WIPL there, which walked from the bollards line into the posted area when we approached. 2 were juveniles and one was a male. The juveniles were identified by their white fuzz behind the neck. The 3 moved as a family, with the dad keeping a watchful eye, placing himself between us and the young ones.
- As it looks like the City is considering reopening driving in that zone (poles posted by the jet ski launching area), I went back after we finished the survey and saw again the 3 WIPL. They again avoided me by walking away, so I cannot say the young can fly. I reviewed some photos Pat sent last year to help distinguish pre-fledged and fledged chicks. I would say they looked like the "WIPLnearfledged..." picture attached, feathered but with a very short tail.
- To be prudent, as they were in an area where we have suspected nesting (bird flying into the dunes, chick observed there in a distant past), I would advice to confirm them as flight capable before reopening driving. It would also be valuable to observe how much this area is used by plovers to rest at incoming tide as the 7 plovers were seen resting above the bollard lane.
- 2 sets of mammalian tracks. One that looks like a small raccoon, one like a cat (actually, looking at the picture attached I see some claw marks); they were along the cove, going back and forth into and out of the posted area, all of 13 and part of 12). Chris the intern is aware and will report to the manager.
- If Chris the intern is also supposed to do education, I would advise that he use a scope. It makes it so much easier for the public in general to see the birds and a close look at the chicks is the best educational tool we have. I have tried to get people to look through binoculars but it is very difficult for them to find the birds. With the scope, we can point it on the chicks and people can easily look through.

As of last year, the large Royal tern chicks have spread out around the Point (none south of the jet ski launch).

Other returning migrant: 2 short-billed dowitchers, sandwich terns (including some young).

Attached are pictures (rather blurry, sorry) I took of the plovers: white fuzz visible in chick on right and dad in watchful posture while his chicks were resting. Other picture (taken when I went back) shows the 3 running away (the young then went to feed at the water's edge). Also attached is a picture by Pat "WIPLnearfledge..."

APPENDIX 5: Examples of messages to keep bird stewards engaged, sent during and after nesting season

Example 1:

Hello, everyone!

I counted 59 nests today at Summer Haven. What a nice start! The beach was relatively quiet. There were several families, many with umbrellas and unleashed dogs, but everyone complied when asked to steer the dogs away from the nesting area. Should you venture down there, I am concerned about whether the nesting area needs to be extended out in the direction of the beach. There were three courting pairs outside the boundary, and the females seemed to stay in place though they were not "sitting". We did see two gopher tortoises plowing through the sand, and that was really neat. What a gorgeous place! We are still in need of stewards for Summer Haven, so if you can, talk it up to everyone you know!

Example 2:

Hello, everyone,

We were at Summer Haven Sunday morning, about 8:30-11:15 (had to leave when we ran out of water after giving it to a dog that looked very heat exhausted). It was extremely quiet, only a few fishermen and couples out walking the never ending dogs. At least this morning they were all on leash or under control. The heat exhausted dog I mentioned was alone, or seemed alone, walking on arthritic legs at an alarmingly slow pace. He gobbled up nearly all of our water until his owner showed up. She explained he was 14 years old and insisted on walking every morning. She had gone by earlier with her other dog on a leash. A loggerhead was on the beach, dead, with the orange marks indicating it had been noted by a biologist. Sad, sad, sad. The most exciting thing we saw was a great egret fly over the colony, chased by at least five Least Terns. The poor egret zigged and zagged trying to make it across.

Example 3:

Hello, everyone,

They're "the folks with mud on their boots and sand between their toes. I give a huge salute to these folks." The FWC Commissioner could have added "mud in the car and sandspurs in the rug." He was talking about US!

I hope you haven't recycled your Audubon Florida "Naturalist" magazine yet. Be sure to read what Chairman John Elting wrote inside the front cover. He was talking about "accelerated involvement of citizen scientists". Again, that's us!

He quotes FWC Commissioner Brian Yablonski who made the mud and sand remarks before a large crowd at a public hearing in World Golf Village recently. The majority of those who spoke were either for or against the delisting of Florida black bears. We were the "bird people" who advocated for continued or increased protections for our shorebirds and seabirds.

I'm especially proud that I was one who spoke up for citizen science. I think I said something like they shouldn't assume that data collected by our Audubon volunteers was squishy! (Maybe not a real scientific word choice.) Anyway, more and more our Shorebird Partnership county, state, and federal agency partners have begun to rely on us for year-round surveys, data-collecting, and stewarding to supplement their over-stretched staffs. A reminder, our St. Johns Audubon chapter's Mission Statement refers to "science-based advocacy and education".

Hopefully, our chapter will hold a class or do some training soon for those of you who'd like to get mud on your boots..... Well, you know!

What our volunteers do is fun and rewarding. We never have enough people. We could use YOU.