



## Critical Wildlife Area Proposals

November 2016

Division of Habitat and Species Conservation  
Florida Fish and Wildlife Conservation Commission

This presentation will provide final proposals being considered to fulfill the direction received at the April Commission meeting.

CWAs are specific sites designated by the Florida Fish and Wildlife Conservation Commission (FWC) to protect places where wildlife congregates to breed, nest, roost, and feed. The areas are designated through an establishment order to minimize disturbance from human activities.

All aerial photos in the presentation are public domain.

All maps have been updated to more accurately reflect actual boundary distances. Proposed sign postings are for presentation purposes only. The number and location of signs around each island will be determined by Waterway Marker permits issued by Boating & Waterways.

FWC composite photo.

Report date: November 16, 2016

# What are CWAs?

- A conservation tool for FWC
  - To protect wildlife from disturbance
  - During critical times such as nesting or migration
- Established under Rule 68A-19.005
- Landowner concurrence
- Significant concentration of wildlife
- Distinct, manageable area
- Subject to disturbance
- No restrictions where signs are not posted



CWA stands for Critical Wildlife Area. CWAs are established by the FWC under the Florida Administrative Code to protect important wildlife concentrations from human disturbance during critical periods of their life cycles, such as nesting or migration. The landowner must support the CWA designation before a site can be considered for establishment.

# Why are CWAs needed?

- Bird populations have declined
- A number of species are listed as State threatened
- Some are listed as Federally threatened
- Scientific studies show that people harm birds by approaching too closely
- One way to help the long term survival of birds is to keep people a safe distance from bird colonies



In 2010, the FWC reviewed the status of all state-listed shorebirds, seabirds and wading birds. Biological review groups including FWC scientists and other experts found that the little blue heron, tricolored heron, reddish egret, roseate spoonbill, American oystercatcher, black skimmer, least tern and snowy plover all met the criteria for listing as state threatened species. This was based on data showing decline in populations for each of these species. In addition, the piping plover, red knot, roseate tern, and wood stork are Federally-listed under the Endangered Species Act. Species management plans for many of these birds call for taking steps to increase their productivity, by minimizing human disturbance at rookeries and nesting sites. While many CWAs are important for state or federally listed species, they are intended to protect all the wildlife that use these areas. In fact, CWAs are a conservation tool that predates our state imperiled species listing rule. Taking steps to protect important bird nesting and roosting sites is not only imperative to recover those species that are listed, but just as importantly, these measures can help ensure that other species will not decline to a point where they must be listed.

# Research on Disturbance

- Bird species flush at different distances
- Birds may react differently at different sites
- Birds may have different responses to people, boats or dogs
- Some birds may become more tolerant to some activities over time, but some buffer is necessary to reduce impacts



Science shows that close approach by people harms wildlife. This is well established and accepted in the scientific literature and by natural resource professionals. Our FWC avian scientists provided a summary of various studies and it includes references so that individuals can read those studies. To prevent disturbance, research supports a set-back (buffer) distance from the nearest nest to the posted boundary of 100 meters (328 feet) for mixed species wading bird colonies and 180 m (590 feet) for least tern/black skimmer colonies (Rodgers & Smith 1995).

Similarly, disturbance by people can harm bats during hibernation and in rearing young. Disturbance has caused bats to abandon roost sites. Females may abort young. Young bats can be dislodged and fall from cave walls. Being awoken during hibernation results in reduced survival.

Management plans for beach nesting birds, wading birds, and brown pelicans call for actions that will result in improved nesting success in order to help conserve and recover the species. The establishment of CWAs is consistent with this management plan objective and is intended to reduce disturbance from close approach by people, improving nesting success and long-term survival of the species.

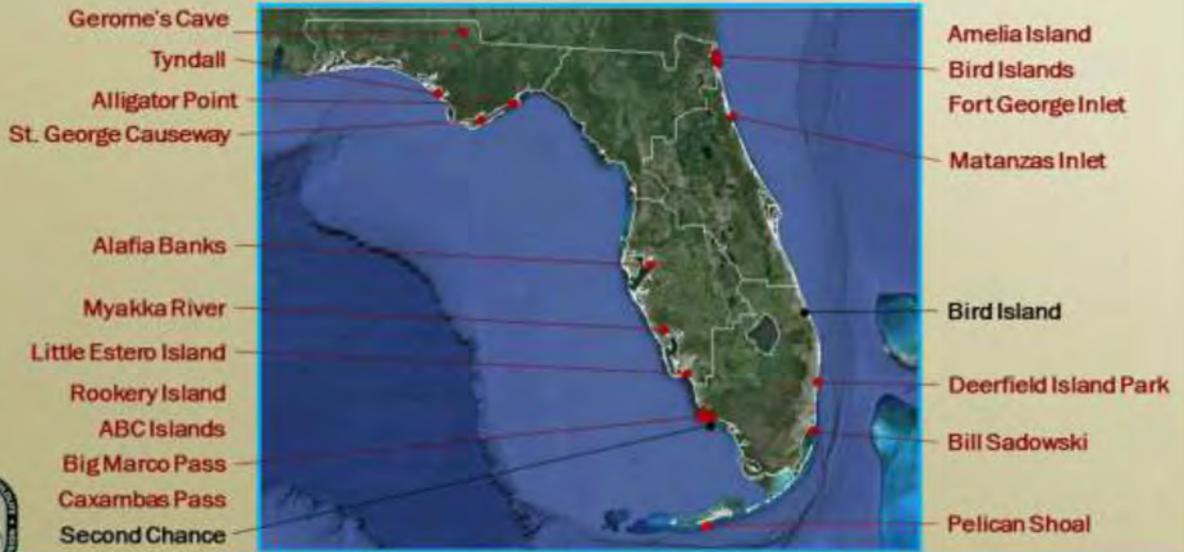
## Synopsis: CWA Conservation Initiative

- 1977–1993: 22 CWAs established throughout the state
- 2009: Staff began work to revive the CWA process
- 2010: Commission approved changes to CWA rule
- 2014–2015: Martin Co. Bird Island CWA and Second Chance CWA are established
- 2016: Staff continue work to advance CWA development



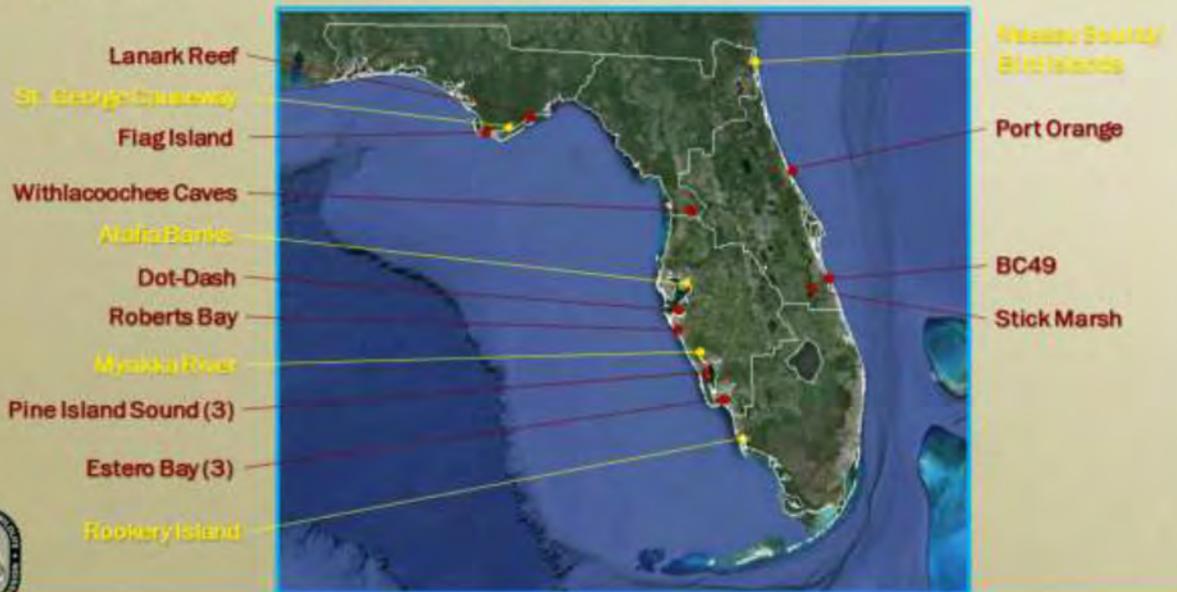
Between 1977 and 1993, FWC established 22 CWAs throughout the state, with 18 still in existence. Originally called Colonial Bird Nesting Areas, the name was changed to CWA in 1982. Staff and partners have monitored the existing CWAs and during the early 2000's, worked to revise signs and posting techniques to improve compliance. During the early 2000's several issues emerged that led staff to address revising policies and rules related to CWAs. In 2009 and 2010, staff worked to update the process for establishing CWAs. In 2010, the Commission approved changes to rules designating CWAs to allow for emergency CWA establishment, to require landowner concurrence prior to establishment, to include closures to dogs and vessels, and to allow for other CWA-specific regulations within the establishment orders. In 2012, a CWA coordinator was hired to develop and implement a strategy to improve the management, establishment, and re-establishment of CWAs. In 2014, Bird Island, in Martin County, was the first new designation in 21 years. Second Chance, in Collier County, was designated in 2015. Also in 2015, eight minor re-establishments (modernized establishment orders) and 4 dis-establishments were approved under the revised rule. Seventeen of the 20 CWAs currently provide significant habitat for nesting, roosting, or foraging seabirds, shorebirds, or wading birds. In April 2016 staff provided an update on Bird Island CWA where reduced disturbance may have contributed to increased productivity. Staff were directed to develop a list of significant sites where wildlife is concentrated and where disturbance is a problem and bring back a proposed list to the June Commission meeting. An update on the public process was provided at the September Commission meeting. Final approval for the establishment orders is currently requested.

# Current CWAs



This map shows the location of the 20 CWAs that are currently in Florida. Most of these are for birds, with the 2 exceptions being Gerome's Cave in the panhandle which is for bats, and Deerfield Beach Island Park for gopher tortoises. The two in black are the most recently established CWAs.

# Proposed New Sites and Changes



We have identified 5 existing CWAs which require re-establishment (a change in boundary or closure dates) shown in yellow and 14 new areas which would benefit from the protection of a CWA designation. Some of the new areas include multiple islands or caves. The following slides provide a summary of comments, concerns, boundaries and closure periods.

# Public Engagement Process

- Numerous press releases sent out and media contacted after the June Commission meeting
- Proposals posted on FWC web site
- Public workshops advertised around the state
- Email address established to accept comments
- Meetings and discussions with land owners and partners



There was extensive media coverage of the CWA initiative. It was picked up by all major media markets state wide and covered in at least 50 individual media outlets (newspapers and television stations).

Photo shows the winning artwork in a Mother's Day contest which highlighted nesting shorebirds and CWAs.

# Summary of Public Engagement

- 14 public workshops were held in July and August
- Several meetings in September and October with stakeholders
- Over 400 comments received
- All proposed CWAs received at least one comment
- General comments most numerous



Over 400 people attended the public workshops. Meetings and field trips have occurred with additional stakeholders to identify impacts, make adjustments and seek consensus on proposals. As of November 7, over 400 comments had been received, with the majority expressing support. Comments were received in person at the public workshops, via email, letters, comment cards, and phone. The nature of written comments was very similar to what was received in the public meetings.

Photo: FWC stakeholder meeting for Port Orange Rookery

## Topics and Themes from Public

- Support for CWAs
- Scope of proposals
- Buffer width
- Enforcement
- Timing of closures
- Navigation safety
- Multi-use needs



The majority of the feedback received has been supportive. The remaining comments have either expressed concern or opposition. Concern has been expressed in terms of the scope of the proposals – that this is only the beginning and we will continue to close more areas to public access. However, some believe there are other important areas we should consider for CWA status. Specific site proposals have received comments regarding both smaller and larger buffers. Some comments have asked for a less regulatory approach to protection, while others have stressed that the potential CWAs will need to be enforced and patrolled regularly to be effective. Whether a site has a seasonal or year-round closure has garnered discussion. There is some concern for navigational safety and the use of pilings vs. buoys. Finally, there has been opposition by specific groups who use the resource.

Slide under construction!  
Will be updated prior to Commission meeting.



This slide will demonstrate the process that occurred from receiving initial proposals from partners to the final staff recommendation.

## Summary of Changes Based on Public Input:

- Buffers were increased
  - Lanark Reef, Myakka River, BC49
- Buffers were decreased
  - Roberts Bay, Dot Dash Dit, Rookery Bay, Port Orange
- Closure period was reduced
  - Broken Islands, Useppa Oyster Bar, Port Orange, Dot Dash Dit
- Establishment Areas (originally shown by yellow boxes) were reduced or eliminated
  - Lanark, Nassau Sound, Dot Dash Dit, Alafia, Roberts Bay, Broken Island, Useppa, Hemp, Matanzas, Coconut, Big Carlos
- Islands were dropped from proposal
  - M50/52, Coconut Point West



Numerous changes have been made as a result of the public process. In a few cases, proposed buffer boundaries were expanded slightly. In other instances the buffers or closed areas were reduced in size. In a number of cases the closure period was reduced. Two sites that were proposed as year round (Port Orange and Dot Dash Dit) were changed to seasonal. Originally staff had proposed large establishment areas that were depicted on the maps as yellow polygons. In all but three sites the larger establishment areas have been removed. We eliminated two islands in Lee County.

# A Few Examples of Changes

- Port Orange (Volusia County)
- Pine Island Sound and Estero Bay (Lee County)
- Dot Dash Dit (Manatee County)
- Nassau Sound (Nassau/Duval counties)



FWC Photo by Kipp Frohlich

# Port Orange – Volusia County



## Proposal at Public Hearing

- Posted buffer and boundary (red)
  - 50-150 feet
  - Year-round closure



Port Orange Rookery is in Volusia County and owned by the Florida Inland Navigation District. It is known for the large breeding colony of pelicans but snowy egrets, cormorants, great egrets, white ibis, great blue herons, American oystercatchers also breed there. The original proposal was for year round closure and a buffer that ranged from 50-150 feet.

# Port Orange – Volusia County



## Revised Proposal

- Posted buffer and boundary (red)
  - 10-150 feet
  - Matches F.I.N.D. request
- January 1 - August 31



A public meeting was held on July 26<sup>th</sup> at the Piggotte Community Center in Daytona Beach. Twenty-three people attended the meeting, representing Audubon, Coastal Conservation Association, Boat US, Defenders of Wildlife, Volusia County, Florida Inland Navigation District, the Marine Discovery Center, and the general public. Concerns about navigation and boater safety were discussed at length, with many suggesting the north buffer should be closer to the island due to use of the boat ramp directly north. Other concerns included quantity of data on disturbance and long-term monitoring of bird use. The Florida Inland Navigation District asked us to ensure there was no overlap with the channel or channel right of way and that we move the buffer on the north side to line up with an existing waterway maker. Several stakeholder groups requested that we re-look at the data and consider if a seasonal closure would be possible. FWC continues to work with FIND regarding their concurrence with CWA designation and both agencies want to ensure that the island's original use as a site for potential spoil is maintained for the future. As required, written authorization from FIND will be obtained before execution of an Establishment Order.

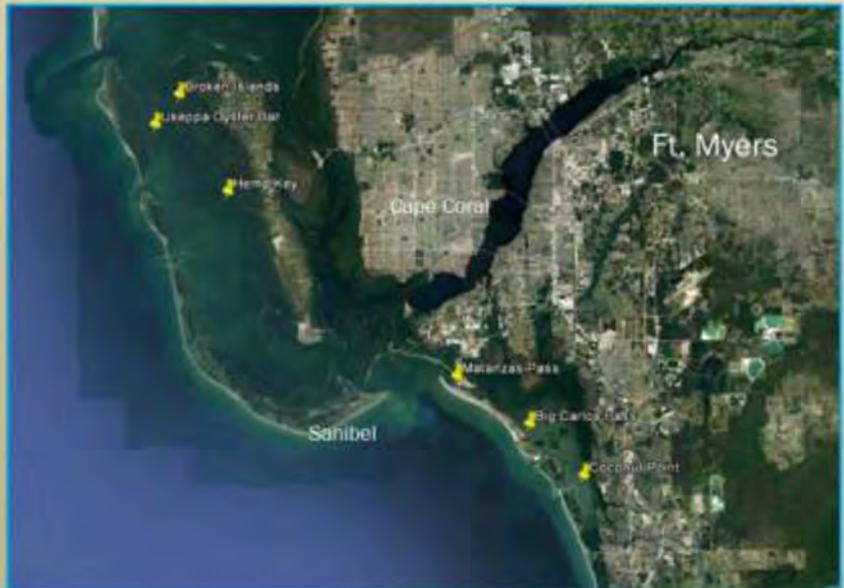
### **Changes from original proposal:**

- 1) Move north buffer to match existing signage ~25 feet off north shoreline, and proposal was also modified based on input from Florida Inland Navigation District (land owner) to avoid ICW right of way on the east side of the island.
- 2) Changed to seasonal closure after additional review of data.

# Lee County

Three areas in  
Pine Island Sound

Three areas in  
Estero Bay



There are six areas in Lee County that are being considered: three sites in Pine Island Sound, and three sites (which included 5 separate islands) in Estero Bay. At the September Commission meeting staff reported that additional stakeholder engagement and work with Lee County was needed

Pine Island Sound is approximately 54,000 acres and has about 51 mangrove islands, many of them with nesting. Thirteen islands were requested for consideration by the land managers, but FWC limited consideration to the three most important nesting and roosting areas. Ding Darling National Wildlife Refuge owns Hemp Key, while DEP Pine Island Sound Aquatic Preserve owns and manages Broken Islands and Useppa Oyster Bar. Birds that use these sites include pelicans, cormorants, reddish egret, little blue heron, tricolored heron, snowy egret, great blue heron, great egret, yellow-crowned night heron, black-crowned night heron.

Estero Bay is approximately 11,000 acres with 100 islands throughout the bay, many with birds nesting. The three most important areas for nesting and roosting are under consideration. Matanzas Pass Island is just outside of the Estero Bay Aquatic Preserve (EBAP), but it is monitored by EBAP staff. The establishment area for Big Carlos Pass originally contained 6 small islands, with two (M-52 and M-50/52 ) under consideration for posting. These islands are state lands managed by EBAP. The final area is Coconut Point, which had 2 islands in the establishment area – east and west – with the east island under consideration for posting .

# Pine Island Sound – Lee County

## Proposal at Public Hearing

- Posted buffer (red) and boundary (yellow)
- 150 feet buffers
- Closure periods seasonal for Broken and Useppa, year round for Hemp Key



The photos on this slide show the original proposals for Broken Islands (top right), Hemp Key (lower right) and Useppa Oyster Bar (center). The public meeting to discuss the proposal for the Pine Island Sound CWA was held on August 9<sup>th</sup> at the Ding Darling Education Center on Sanibel Island. Thirty eight people attended the meeting, representing the Charlotte Harbor National Estuarine Research Reserve, the Conservancy of Southwest Florida, Florida Guides Association, several bait, charter and ecotour businesses, local Audubon chapters, Sanibel Captiva Conservation Foundation, Southwest Florida Marine Industries Association, and the general public. Concerns about the water quality of Pine Island Sound were expressed with some frustration that CWAs are the focus instead of addressing larger problems. There were also questions about the data on bird use for the 3 sites, as well as disturbance; many of the local participants believed bird use is increasing in the Sound.

After the September meeting staff conducted a field inspection of Pine Island sites with Commissioner Priddy, Division of Law Enforcement, Lee County staff, and local fishermen.

# Pine Island Sound – Lee County

## Revised Proposal

- Eliminated the larger establishment areas
- Reduced closure period at Broken and Useppa
- Reduced buffer at Useppa



The photos on this slide show the final proposals for Broken Islands (top right), Hemp Key (lower right) and Useppa Oyster Bar (center). After the September meeting staff conducted a field inspection of Pine Island sites with Commissioner Priddy, Division of Law Enforcement, Lee County staff, and local fishermen.

Changes based on public input:

- 1) The larger establishment areas proposed in yellow have been dropped.
- 2) The closure period for Broken Island and Useppa Oyster Bar have been reduced by one month so that they will not be in effect during September during snook season. Closure for those islands is proposed March 1- August 31. (Hemp remains year round).
- 3) The buffer at Useppa Oyster Bar reduced on the to 25 feet or less on the northern boundary to reduce navigation concerns over signage. Other buffers are at 150 feet.

The total uplands for these sites combined is 25 acre upland, 32 acre water (.06% of available water).

# Estero Bay – Lee County

## Proposal at Public Hearing

- Posted buffer (red) and boundary (yellow)
- 100 feet buffers
- Year round closure



The photos show the original proposals for Big Carlos Pass (upper right), Coconut Point (lower right) and Matanzas Pass (center). The yellow outlines were the originally proposed establishment areas.

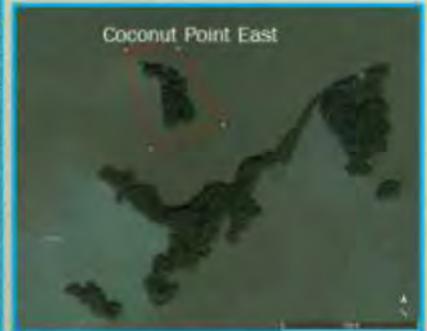
The public meeting to discuss the proposal for the Estero Bay CWA was held on August 10 at the Ft. Myers Regional Library in Fort Myers. Thirty-nine people attended the meeting, representing the Florida House of Representatives, the Town of Fort Myers Beach, Charlotte Harbor National Estuary Program, Estero Bay Aquatic Preserve, the Conservancy of Southwest Florida, Florida Guides Association, several marinas, bait, charter and ecotour businesses, local Audubon chapters, West Coast Inland Navigation District, Coastal Conservation Association and the general public. Concerns were expressed that the establishment of CWAs this year would lead to more CWAs in the future and fewer locations for fishing/photography. Posting near navigation channels was also of concern. Some people also expressed concerns about potential limitations of activities outside of the CWA boundaries.

After the September meeting staff met with Lee County staff and local business owners regarding Estero Bay.

# Estero Bay – Lee County

## Revised Proposal

- Eliminated the larger establishment areas
- Remove Island M50/52
- Remove Island Coconut West
- Buffers are 100 feet
- Year round closure



The photos show the final proposals for Big Carlos Pass (upper right), Coconut Point (lower right) and Matanzas Pass (center).

Changes made based on public input:

- 1) The larger establishment areas proposed in yellow have been dropped
- 2) Two islands were proposed for posting in Carlos Pass originally, but since then the island known as M50/52 has been dropped.
- 3) The small island known as Coconut West has been dropped.

# Dot-Dash-Dit – Manatee County



## Proposal at Public Hearing

- Large establishment area
- Posted buffer (red) with in-water posting
  - 75 to 100 feet
- Year-round closure



These three islands are owned by the Division of state lands and a local condo. Wood storks, roseate spoonbills, tricolored herons, great egrets, snowy egrets, black-crowned night herons, great blue herons, and anhingas nest there.

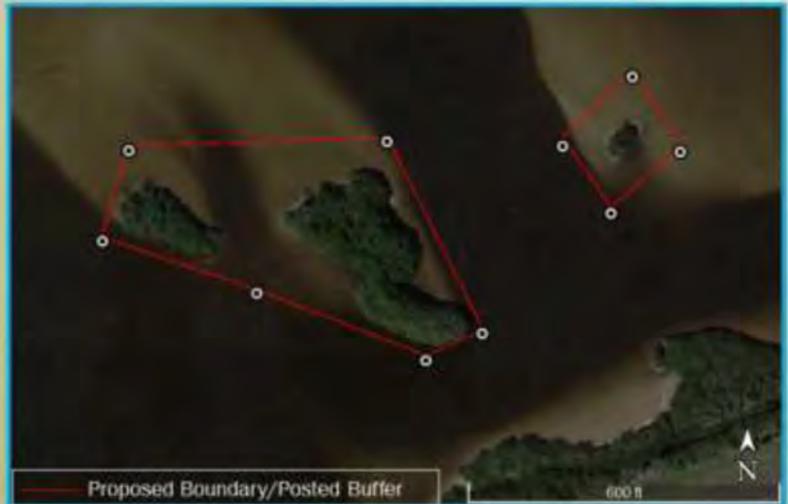
The original proposal was for year round closure and included a larger establishment area shown in yellow.

# Dot-Dash-Dit – Manatee County



## Revised Proposal

- Posted buffer (red) with in-water posting
  - 25 to 100 feet
  - Remain outside of navigation channel
- January 1 – August 31



The public meeting was held on August 11<sup>th</sup> at the Rocky Bluff Branch Library in Ellenton. Thirty-seven people attended the meeting, representing West Coast Inland Navigation District, Florida Guides Association, Sierra Club, several charter and ecotour businesses, Florida Native Plants Society, Coastal Conservation Association, Venice Camera Club, Two Rivers Mobile Home Park, Wildlife Inc, Friends of Wildlife, Earth First, local Audubon chapters, and the general public. Concerns discussed at the meeting included impacts to photography and tour operators with the proposed 100 foot buffer, and concerns about boating safety if signs are near the channels. West Coast Inland Navigation District requested the boundary change to 25 feet on the west and southwest sides of Dot and Dash to match their channel use. Additional concerns were raised regarding the data supporting year round proposal.

### **Changes from original proposal:**

- 1) Remove the Establishment Area, shown in yellow on the original proposal;
- 2) Reduce buffer on Southwest and South sides of Dot and Dash islands to approximately 25 feet to keep clear of navigation channel.
- 3) Changed to seasonal closure after additional review of data.

# Nassau Sound

- CWA established in 1977
- Designates only 2 islands, seasonally
- Very dynamic area
- Need flexibility for future



The Bird Islands of Nassau Sound were first protected in 1977. This is a very dynamic area and currents and storms have resulted in islands being created, disappearing and moving over the years. The establishment order designates Big Bird and Little Bird Island but does not provide locations. It only allows posting from May 1 through August 31. Until recently what was once known as Big Bird island was attached to Little Talbot Island State Park. This area has been used by least, royal, and gull-billed terns, black skimmer, Wilson's plover, American oystercatcher, piping plover, the federally threatened red knot. Bird Islands is a very important site for wintering and migrating shorebirds. Protecting these areas during the winter provides a disturbance-free area for foraging and resting; red knots and piping plovers (federally listed) fail to complete migration or breed successfully if unable to adequately forage during migration. Based on history, the current shoals are expected to accrete, and become important areas for nesting and migratory birds in the future.

# Hurricanes Hermine & Matthew

- Big Bird: Island again separated from Little Talbot
- Little Bird: Now a sandbar that is submerged at high tide



This is a recent aerial which shows that Big Bird Island has detached from the state park. In addition, Little Bird Island is now a sand bar that is exposed during low tide, but submerged at high tide.

# Bird Islands CWA Re-establishment

## Duval/Nassau County

- Create an establishment area encompassing dynamic shoals
- Post within establishment area for the protection of nesting and migratory birds
- No posting until islands are emergent during high tide
- Work in consultation with DEP to determine posting locations
- Rename as Nassau Sound Islands CWA



### Changes from original proposal:

- 1) Worked with DEP to reconfigure the establishment area to include only the dynamic areas that have island creation. This establishment area is reduced from original.
- 2) Include the area known as Big Bird Island within the establishment area.
- 3) Initial proposal was to post at mean low water. That proposal may be problematic in some areas because of extreme tide fluctuations and frequently changing shorelines. FWC will work with DEP Division of Parks and Recreation as well as Division of State Lands to post at appropriate locations that will provide protection for nesting and migratory birds.
- 4) Little Bird Island will not be posted until it becomes emergent at high tide.

New cut that separates Big Bird Island from Little Talbot Islands is shown by red arrow.

# Enforcement and Posting of CWAs

- Uniform Waterway Markers
- State and Federal Permits
- Clear Message
- Educational Approach to Enforcement



All signs posted in the water will conform to the uniform waterways marking requirements for visibility and safety and be authorized by the FWC, Coast Guard, and U. S. Army Corps of Engineers. All signs will have a clear message following rule requirements to designate as a Critical Wildlife Area. Some areas may be marked with buoys instead of signs. As with any new regulation FWC Division of Law Enforcement will take an educational approach to ensure the public is aware and understands the requirements and rationale of the newly established closed areas.

Slide under construction!  
Will be updated prior to Commission meeting.



This slide will list past CWAs that have been dis-established, will explain the process of dis-establishing a CWA, and propose a framework for monitoring all CWAs moving forward.

# Summary

- Staff propose new CWAs in 14 areas and changes to 5 existing CWAs
- More than 25 species conserved
- Proposed Closures
  - 213.4 acres of upland
  - 181.3 acres of water



The total acreage of the proposed CWAs adds up to 394 acres. Approximately  $\frac{3}{4}$  of this area belongs to the state (146.5 acres upland and 143.8 acres water) – Division of State Lands, Florida Forest Service, St. Johns Water Management District and Florida Inland Navigation District. The remainder is in private or federal ownership.

For reference, there are more than 37 million acres of land within the state of Florida. On average, the proposed water closures represent less than one percent of the available waters in the surrounding area.

FWC photos by Carol Rizkalla.

## Staff Recommendation

- Approval to establish the following Critical Wildlife Areas
  - Lanark Reef, Flag Island, Withlacoochee Caves, Dot Dash Dit, Roberts Bay, Broken Islands, Useppa Oyster Bar, Hemp Key, Matanzas Pass Island, M52, Coconut Point East, Stick Marsh, BC49, Port Orange
- Approval to re-establish the following Critical Wildlife Areas
  - St. George Causeway, Alafia Banks, Myakka River, Rookery Islands, Nassau Sound Islands
- Authorize the Executive Director to issue Establishment Orders setting the boundaries and closures pursuant to 68A-19.005, Florida Administrative Code



Staff recommends the Commission approve the establishment of the proposed Critical Wildlife Areas and authorize the Executive Director to issue the appropriate establishment orders.

The following slides were included in the Commissioner briefing packages and posted for public review. They will be available as backup information as needed at the Commission Meeting.

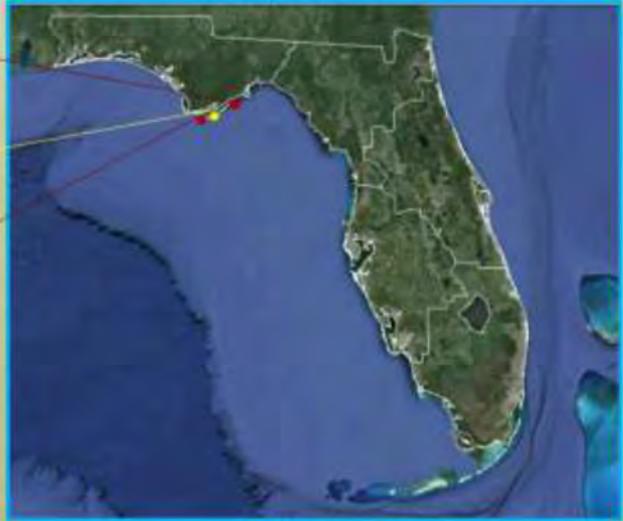


# Northwest Region

Lanark Reef

St. George Causeway

Flag Island



Three sites are under consideration in the Northwest region.

# Flag Island Franklin County



Average Number of Birds Observed



Bird use at Flag Island has been monitored for nesting by FWC and/or Audubon since 2008 and year-round since 2014. State-listed species among the nesting birds include American oystercatcher, black skimmer, and least tern. In the graph above, March and April are critical months for the American oystercatcher, which begins courtship and nest building during this time. On average, 2 pairs of oystercatchers are using the islands during March and April. Other nesting species include gull-billed tern, Caspian tern, royal tern, sandwich tern, brown pelican, and laughing gull. More than 50 species use the islands over the winter, including state listed species and federally listed species, such as piping plover and red knot. Wintering species are still present on the island in March and April, but are not counted as the focus shifts to nesting oystercatchers. Up to 5 pairs of oystercatchers have been observed in March and April and this species is highly susceptible to disturbance.

# Flag Island – Public Comments

## Franklin County



- 16 people attended the public meeting
- Summary of Public Input:
  - Support designation with buffers and year round closure as proposed
  - Spelling of 'Flagg' inconsistent with older nautical maps



The public meeting for Flag Island was held on July 12<sup>th</sup> at the Apalachicola National Estuarine Research Reserve in Eastpoint. The meeting was combined with the proposed changes to St. George Causeway. Attendees at the meeting included staff from Apalachicola National Estuarine Research Reserve, members of local Audubon chapters, and the public at large. Discussion of the Flag Island proposal included confirmation of the extent of the sandflats around the areas; no alterations in the proposal were suggested at the meeting or in emails. The spelling of 'Flagg' was noted as a newer spelling inconsistent with older nautical charts. Staff are recommending using 'Flag' instead.

FWC photo by Carol Rizkalla.

# Flag Island – Proposal

## Franklin County



- Establishment area in yellow
- Only area in red would be posted
- Red buffer ranges from 50-300 feet
- Year-round closure



### NEW establishment

**Ownership:** Division of State Lands, unmanaged

**Birds:** black skimmer, brown pelican, American oystercatcher, and Caspian, royal, sandwich, gull-billed, and least terns

**Acreage:** currently 26.5 upland, 53.5 water

As the sandbars shift over time (moving, accreting, eroding) having an establishment area (shown in yellow), would allow for FWC to change the position of the boundary markers as the islands shift.

**Changes from original proposal:** Change spelling of Flag.

**Justification:** The American oystercatcher, a state listed species, begins nesting activities as early as February (documented on Flag Island in March) and is one of the species most susceptible to disturbance. The recommended buffer distance is 300 feet to protect this species. The buffer would be 50 feet near St. Vincent Island to avoid navigation issues. The proposed buffer distance and year round closure will protect this highly vulnerable species, while also protecting other state listed species that use Flag Island for nesting, wintering, and as a migratory stopover.

# St. George Causeway CWA Franklin County



Number of Nesting Birds Observed



Nest counts at St. George Causeway have been conducted by DEP since it was established as a CWA in 1990 with April 1 – August 31 closure. Year-round monitoring has been conducted by DEP and Audubon since 2014 and has indicated the nesting of 4-5 pairs of state-listed American oystercatcher beginning in March. It has also indicated that flightless pelican chicks are still present in September. Other nesting species include least tern, gull-billed tern, Caspian tern, royal tern, sandwich tern, sooty tern, and laughing gull.

# St. George Causeway – Public Comments

## Franklin County



- 16 people attended the meeting
- Summary of Public Input:
  - Supportive of proposal
  - Some recommended creating in-water buffer
  - Increase law enforcement presence



The public meeting for St. George Causeway was held on July 12<sup>th</sup> at the Apalachicola National Estuarine Research Reserve in Eastpoint. The meeting was combined with the proposed establishment for Flag Island. Comments regarding St. George Causeway re-establishment were generally supportive. No changes were proposed in the boundary, and no one expressed concerns about adding an additional month at the beginning and ending of the nesting season. Several people did mention concerns about increased law enforcement presence; the island is already closed seasonally, and people have been documented on the island or tied up to the seawall along the edge of the island during the closed period. There were also several recommendations to create a posted buffer around the island to protect least terns using the top of the seawall. Due to the popularity of the area for fishing, staff feels the best compromise is to maintain a seasonal closure with extended dates, and to maintain the current posting.

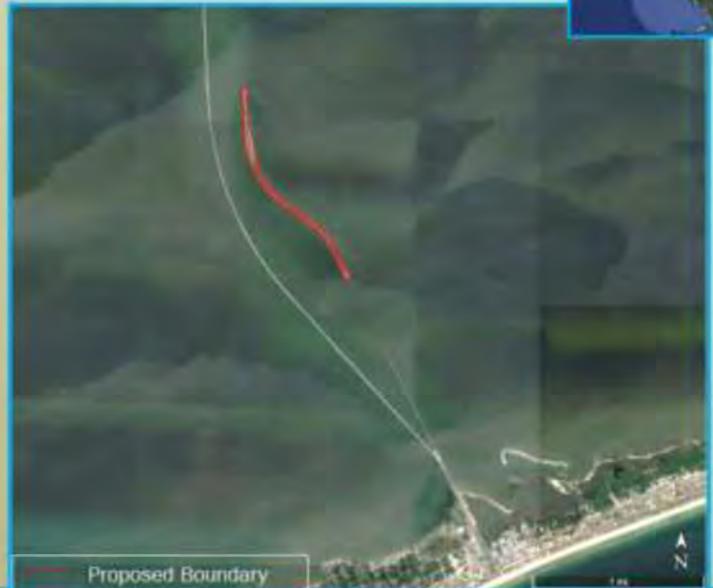
Photo by Megan Lamb.

# St. George Causeway CWA Re-establishment

## Franklin County



- No change proposed for boundary or posted areas
- Extend closure season by 2 months (March 1 through September 30)



### Re-establishment:

**Ownership:** FDEP ( Apalachicola National Estuarine Research Reserve)

**Birds:** least, royal, Caspian, gull-billed, and sandwich terns, laughing gulls, American oystercatchers, brown pelicans

**Acreeage:** 32 acres uplands, no water posting

**Changes from original proposal:** No changes

**Justification:** Expanding the closure period to begin in March will protect state-listed species such as the state-listed American oystercatcher, which begins courtship and nest building as early as February, and is documented on St. George Causeway in March. Expanding the closure to include September will improve protection for brown pelicans and other species that nest later in the year, providing a disturbance-free area for hatchlings until they are flight capable.

The current establishment order allows for posting the causeway between April 1 – August 31.

# Lanark Reef

## Franklin County



Average Number of Birds Observed



Bird use at Lanark Reef has been monitored for nesting by FWC and/or Audubon since 2005 and year-round since 2014. State-listed species among the nesting birds include American oystercatcher and black skimmer. Other nesting species include gull-billed tern, Caspian tern, royal tern, sandwich tern, brown pelican, willet, and laughing gull. More than 50 species use the islands over the winter, including state listed species and federally listed species, such as piping plover and red knot. Wintering species are still present on the island in March and April, but are not counted as the focus shifts to nesting oystercatchers, a state listed species highly susceptible to disturbance, and several pairs are documented nesting on the island in March.

# Lanark Reef – Public Comments

## Franklin County



- 38 people attended the meeting
- Summary of Public Input:
  - Extend buffer, close cut (inaccessible at low tide)
  - Tarpon fishing guide at meeting felt that fishing on flats wouldn't be impacted
  - Increase law enforcement presence



The public meeting for Lanark Reef was held on July 11 at the Lanark Boat Club in Lanark. Thirty-eight people attended the meeting, and provided input to staff. Meeting attendees included members of local Audubon chapters, Coastal Conservation Association (CCA), Defenders of Wildlife, fishing guides, and the public at large. Input included requests that the cut be closed. The proposal had left this area open to allow boating access, but local fisherman and residents expressed that the area is only accessible at high tide, and even then it is very shallow. Fishing guides felt that the tarpon fishery would not be impacted by the closure – the areas commonly used by the fisherman were outside of the proposed buffer. Participants at the meeting, as well as subsequent emails, also requested the buffer be extended up to 100 feet to better protect the solitary nesting birds along the reef.

It was proposed that we drop the yellow box representing a proposed establishment area that would not be posted. The larger area was proposed to allow FWC to alter sign posting locations in the future. These larger establishment areas caused confusion for the public about what would be posted and generally were not supported. In all but a few sites the larger establishment areas originally proposed and depicted by yellow boxes have been dropped.

FWC photo by Carol Rizkalla.

# Lanark Reef – Revised Proposal

## Franklin County



- Red buffer ranges from 75-300 feet from MHW
- Generally 75 feet along sides, and up to 300 feet at ends
- 300 feet around east island
- Year-round closure

### NEW establishment

**Ownership:** Audubon and the Division of State Lands, unmanaged

**Birds:** brown pelicans, black skimmers, American oystercatchers, and willets

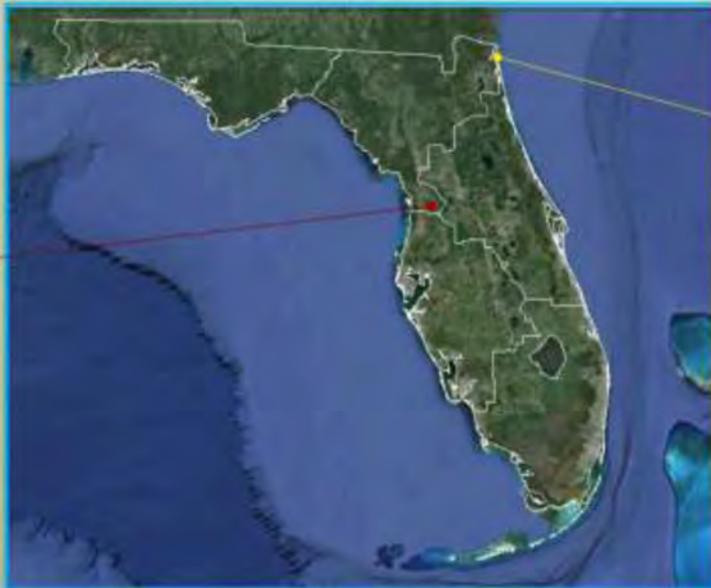
**Acreeage:** Currently 34 upland, 31 water

**Changes from original proposal:** The establishment area, shown in yellow on the original proposal, was removed. The buffer, originally proposed at 50 feet was expanded to 75 feet along the sides. The proposal presented at the public meeting left an unregulated cut through the reef. No one supported this, indicating the cut is not suitable for navigation and should be included in the closed area.

**Justification:** Lanark Reef is used year round. American oystercatchers, a state listed species with documented declines, use the less vegetated portions of the islands for nesting. The 300 foot buffer at either end of the large reef, and around the smaller island, are designed to protect this species that is highly susceptible to disturbance. More than 45 species use the site throughout migration and winter, including state listed snowy plovers, brown pelicans, American oystercatchers and tricolored herons. Many other Species of Greatest Conservation Need use Lanark Reef in high numbers, with more than 1000 individual birds documented from September through January each year.

# North Central Region Sites

**Withlacoochee  
Caves**



**Nassau  
Sound/  
Bird  
Islands**



Two sites are under consideration in the Northwest region.

# Withlacoochee Caves

## Citrus County



- These are some of the most important roosting sites for tricolored bats and Southeastern myotis bats on public lands in peninsular Florida



Tricolored bat



Southeastern myotis

At least 40 caves occur within the Withlacoochee State Forest. Six of the caves are considered critical for bats: Big Mouth, Werner, Trail 10, Morris, Jackpot and Blowing Hole. Southeastern myotis use the caves during the breeding season. Historically, thousands of bats were counted by FWC, but numbers have dwindled in recent years. Tricolored bats use the caves during hibernation. This species was recently petitioned to be listed under the Endangered Species Act.

FWC Photos.

# Withlacoochee Caves – Public Comments

## Citrus County



- 15 people attended the meeting
- Summary of Public Input:
  - Increase law enforcement presence
  - Important to conserve bats and ecosystems within caves
  - Other caves are available, could potentially close these year round



The public meeting was held on August 4<sup>th</sup> at the Withlacoochee Training Center in Brooksville. Fifteen people attended, including representatives of local Audubon chapters, the Tampa Bay Grotto (a caving group), the Florida Bat Conservancy, and the public at large. Attendees were supportive of the designation of the caves as a Critical Wildlife Area, but also stressed that enforcement would be important to the success of the designation.

FWC photo by Jeff Gore.

# Withlacoochee Caves - Proposal

## Citrus County



- Seasonal closure
  - April 15 - August 15 and December 15 - March 15
- Posted boundary 10-50 feet from caves



Big Mouth Cave



Jackpot and Blowing Hole Caves



Morris Cave



### NEW establishment

**Ownership:** Florida Forest Service

**Bats:** Southeastern myotis, tricolored bat

**Acreage:** 2.93 acres

**Changes from original proposal:** No changes

**Justification:** Tricolored bats have declined by 75% as a result of white nose syndrome, and Florida represents the southernmost un-infected population. Closure during the winter will protect this species during hibernation; repeated disturbances during hibernation are known to cause bats to abandon sites or die as result of insufficient fat stores. Southeastern myotis form large maternity colonies in a small number of Florida caves; only a few cave sites are known outside of Florida. Disturbance during maternity season can cause bats to abandon roosts, young bats may fall from cave walls, and pregnant bats may abort unborn pups due to stress. Closure of caves during these critical times offers protection to both species.

### CWA Proposal Summary:

10 foot buffer around existing fenced caves - Big Mouth, Werner, Trail 10

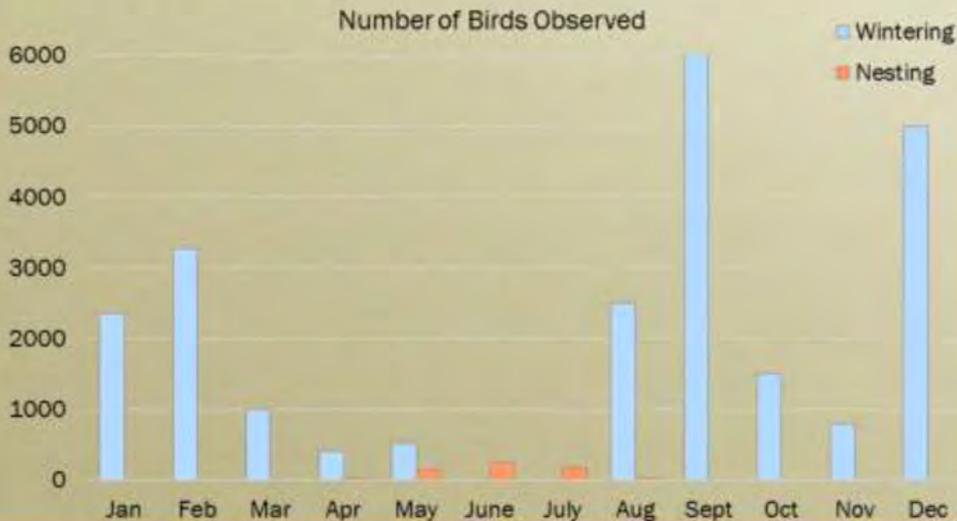
50 foot buffer around existing unfenced cave - Morris

25 foot buffer around gated caves - Jackpot, Blowing Hole

Seasonal closure to protect maternity colonies and hibernating bats

# Bird Islands

## Duval/Nassau County



Use of the Bird Islands has been monitored by UNF, DEP, FWC, and volunteers since the 1970s and when it was established as a colonial bird nesting site 1977 with May 1 – August 31 closure. The area is dynamic. At the time of establishment, two islands known as Little Bird and Big Bird hosted thousands of nests. Lower nesting levels have occurred on Little Bird since 2005 likely due to the combined effects of erosion and disturbance. Counts of non-nesting birds have occurred at irregular intervals throughout this period by volunteers. Big Bird Island eventually migrated and attached to the mainland. Another island formed for a few years but then disappeared. Little Bird existed until Hurricane Mathew in 2016. A recent site inspection showed that Little Bird is now a large shoal that is exposed and used for feeding and resting by birds during low tide, but is submerged during high tides. Based on past history it is expected that sand will accrete and the shoal will become an island suitable for nesting in the future.

The graph depicts representative winter observations since 1999. Note the September observation is off the graph and up to 20,000 birds have been seen. Species documented during the winter observations include federally protected red knots and piping plovers, and state listed American oystercatchers. Nesting begins in April and the graph represents average number of nesting birds over the last 5 years. State-listed species among the nesting birds include American oystercatcher, least tern and black skimmer. Other nesting species include gull-billed tern, royal tern, sandwich tern, Wilson's plover, and laughing gull. Wintering birds include state listed species and federally listed species, such as piping plover and red knot.

# Bird Islands – Public Comments

## Duval/Nassau County



- 35 people attended the meeting
- Summary of Public Input:
  - Increase law enforcement presence
  - Important site for wintering birds
  - Year round protection of mudflats seen as critical



The public meeting was held on July 14<sup>th</sup> at the Peck Center Auditorium in Fernandina Beach. Thirty-five people attended, representing the City of Fernandina Beach, North Aquatic Preserve, Bethune Cookman University, National Park Service/Timucuan Preserve, Kayak American, Defenders of Wildlife, Audubon, North Florida Land Trust, and the general public. Comments included details on historical and current bird use of Nassau Sound and concerns about disturbance of wintering birds. Suggestions included posting at mean low water to protect birds foraging in the mud flats. Discussion also included posting at Big Bird Island, with plans to continue posting as FPS does now, with access to the cove by kayakers.

Photo by Patrick Leary.

# Bird Islands CWA Re-establishment

## Duval/Nassau County

- Create an establishment area encompassing dynamic shoals
- Post existing or emergent islands within establishment area for the protection of nesting and migratory birds
- No posting until islands are emergent during high tide
- Work in consultation with DEP to determine posting locations
- Rename as Nassau Sound Islands CWA



### Re-establishment

**Ownership:** FDEP (Nassau River-St. Johns River Marshes Aquatic Preserve), State Lands

**Birds:** least, royal, and gull-billed terns, black skimmer, Wilson's plover, American oystercatcher, piping plover, red knot

**Acreeage:** Varies: previously 25 uplands, presently 7 on Big Bird Island and none on Little Bird Island

**Existing CWA:** Little Bird Island and Big Bird Island can be posted at mean high water from May 1 through August 31.

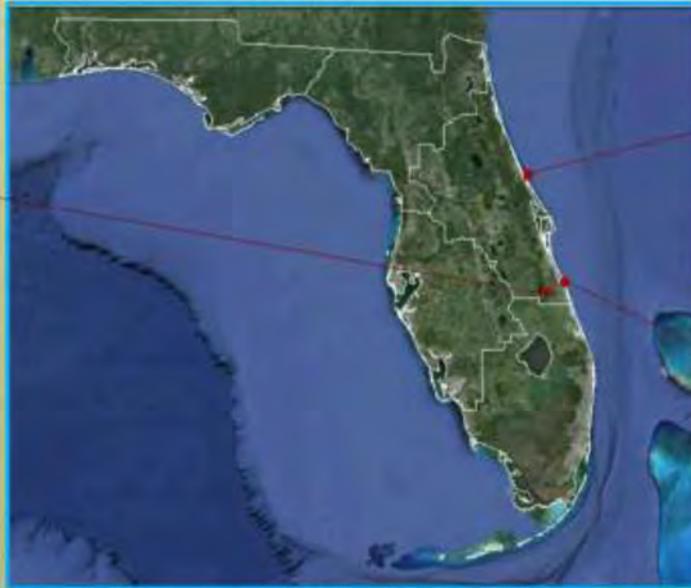
**Original Proposal:** Large Establishment area but did not include Big Bird Island that was attached to Little Talbot Island State Park, post little bird at mean low water, year round.

**Changes from original proposal:** Revise establishment area to be smaller than originally proposal but to include Big Bird Island. Post islands to protect nesting and migrating birds.

**Justification:** Bird Islands is a very important site for wintering and migrating shorebirds. Protecting these areas during the winter provides a disturbance-free area for foraging and resting; red knots and piping plovers (federally listed) fail to complete migration or breed successfully if unable to adequately forage during migration. Based on history, the current shoals are expected to accrete, and become important areas for nesting and migratory birds in the future. In recent years the area formerly know as Big Bird Island became part of Little Talbot Island State Park. Due to storms, the area shown as a peninsula above is separated from Little Talbot Island State Park except at extreme low tide (shown by red arrow). This island is included in the CWA and will be posted in coordination with the State Park.

# Northeast Region Sites

Stick  
Marsh



Port  
Orange

BC49



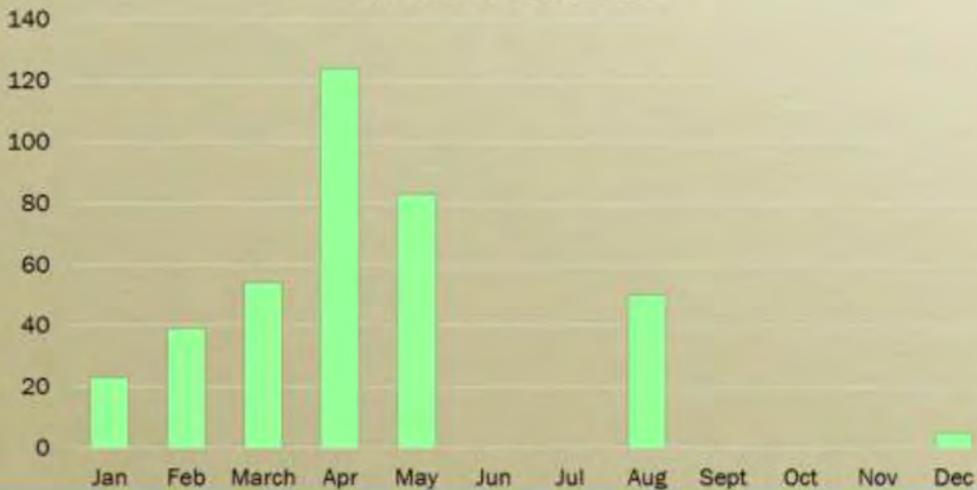
Three sites are under consideration in the Northeast region.

# Stick Marsh

## Brevard County



Number of Birds Observed



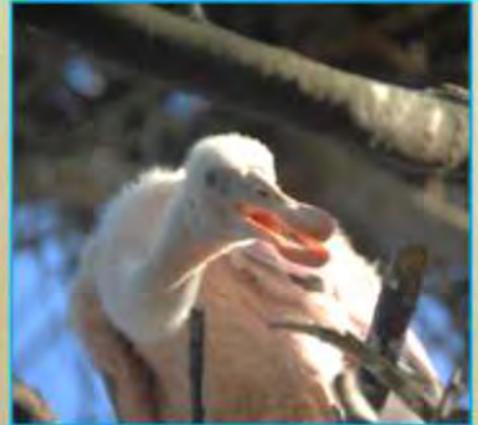
Stick Marsh has not been regularly monitored and has only recently become an important nest site, especially for roseate spoonbills. It attracts many bird watchers and photographers. The graph depicts eBird data for 3 species: roseate spoonbill, tricolored heron, and little blue heron only. No eBird data was recorded for any species in June, July, September, October, or November indicating a lack of reporting in those months. Anecdotal observations indicate that the birds are present and nesting through the end of July. The peak nest count this year, conducted by Audubon, was 577 nests which translates to more than 1100 birds present. This suggests that eBird data represents minimum observations. State-listed species among the nesting birds include roseate spoonbill and tricolored heron. Other nesting species include snowy egret, great egret, cattle egret, and anhinga.

# Stick Marsh – Public Comments

## Brevard County



- 32 people attended the public meeting
- Summary of Public Input:
  - Support designation as proposed
  - Concerned size of signs might obstruct view
  - Photography/tour operators indicated proposed buffer will not hinder photography



The public meeting for Stick Marsh was held on July 25<sup>th</sup> at the City of Fellsmere Council Chambers in Fellsmere. Thirty-two people attended the public meeting, representing St. Johns Water Management District, Sierra Club, Audubon, Florida Outdoor Center, Boat US, Fellsmere elected officials, local businesses, Friends of Sebastian River, and the public. Discussion included concerns about the impacts of photographers, seasonal versus year-round closure, and that large signs would hinder viewing the islands from the levy.

FWC photo by Carol Rizkalla.

# Stick Marsh - Proposal

## Brevard County



- Posted seasonal buffer (red line) with in-water posting
  - Closed January 1–July 31
  - Include area between Islands
- Year-round closure of islands



### NEW Establishment

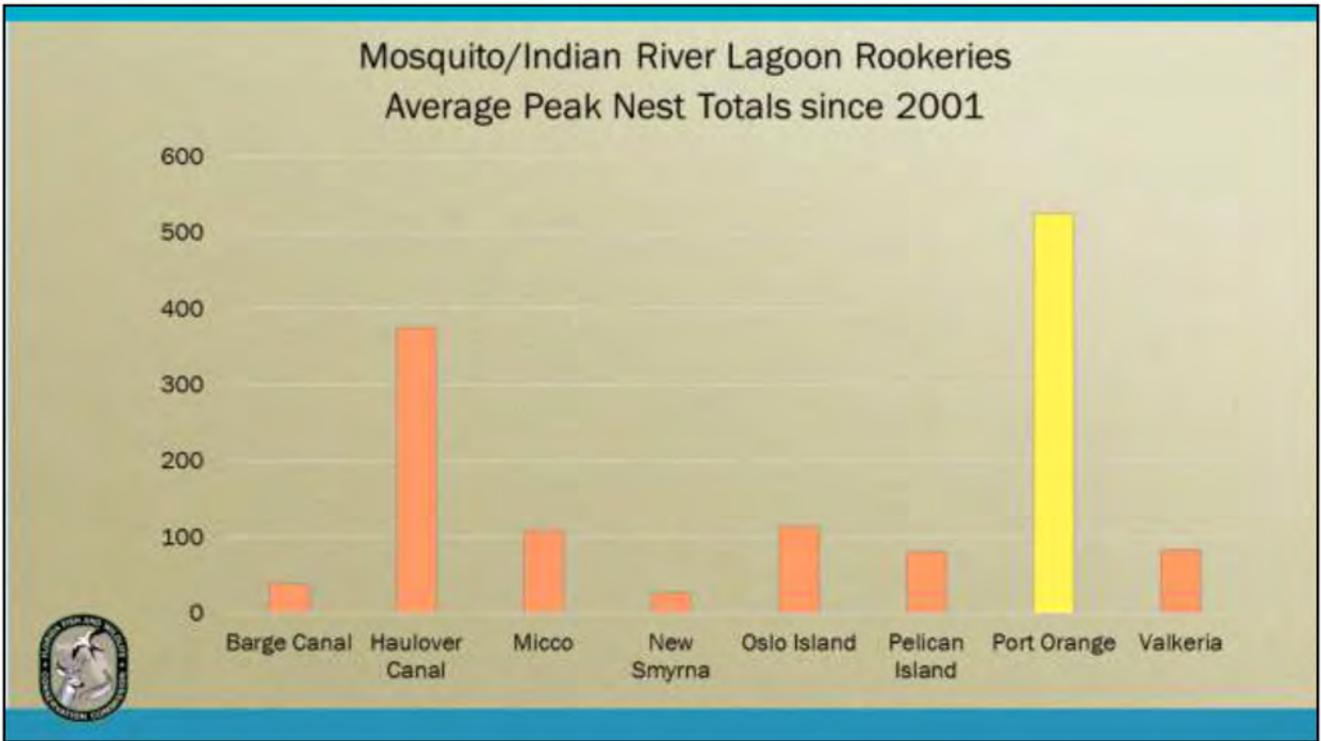
**Ownership:** St. Johns River Water Management District

**Birds:** roseate spoonbill, great egret, snowy egret, tri-colored herons, anhinga

**Acreage:** .92 acres uplands, 1.55 acres of water

**Changes from original proposal:** None proposed.

**Justification:** Roseate spoonbills are a state-listed species that meet the criteria for listing because of their small population size and the limited number of sites where they nest. Little blue herons, another species found at the Stick Marsh site are also state-listed due to a 30% decline in their estimated population size. Creating a seasonal buffer around these islands will help meet the conservation actions within the species management plan to protect nesting areas for both of these species. Closing the islands to access year round will also help to protect roosting birds from disturbance.



Peak nesting averaged over 9 years for 8 pelican colonies in Volusia, Brevard, and Indian River Counties - showing the concentration of nesting on the Port Orange island proposed for CWA designation.

# Port Orange Volusia County



Bird Observation Data



Nest counts for brown pelicans and American oystercatchers have been conducted since 2010 by Volusia County, Audubon, and volunteers and have been averaged in the above graph. Other nesting species not regularly monitored include the state listed little blue heron and tri-colored heron, snowy egret, great egret, and white ibis. The graph also depicts eBird observations of brown pelicans throughout the year – the high counts per month were graphed for this species. In addition to the data graphed above, data from the North American Migration Count, which was conducted in May and September each year between 1997-2007, indicate up to 3200 birds use the island during those periods .

# Port Orange – Public Comments

## Volusia County



- 23 people attended the public meeting
- Summary of Public Input:
  - Navigational concerns near boat ramp and channel
  - Additional data on disturbance and bird use is needed



A public meeting was held on July 26<sup>th</sup> at the Piggotte Community Center in Daytona Beach. Twenty-three people attended the meeting, representing Audubon, Coastal Conservation Association, Boat US, Defenders of Wildlife, Volusia County, Florida Inland Navigation District, the Marine Discovery Center, and the general public. Concerns about navigation and boater safety were discussed at length, with many suggesting the north buffer should be closer to the island due to use of the boat ramp directly north. Other concerns included quantity of data on disturbance and long-term monitoring of bird use. The Florida Inland Navigation District asked us to ensure there was no overlap with the channel or channel right of way and that we move the buffer on the north side to line up with an existing waterway maker.

FWC photo by Carol Rizkalla.

# Port Orange –Volusia County



## Proposal at Public Hearing

- Posted buffer and boundary (red)
  - 50-150 feet
  - Year-round closure

## Revised Proposal

- Posted buffer and boundary (red)
  - 10-150 feet
  - Matches F.I.N.D. request
- January 1 – August 31



## NEW Establishment

**Ownership:** Florida Inland Navigation District

**Birds:** pelicans, snowy egret, cormorants, great egret, white ibis, great blue heron, American oystercatcher

**Acreage:** 1.86 acres uplands, 1.88 acres of water

### **Changes from original proposal:**

- 1) Move north buffer to match existing signage ~25 feet off north shoreline, and proposal was also modified based on input from Florida Inland Navigation District (land owner) to avoid ICW right of way on the east side of the island.
- 2) Changed to seasonal closure after additional review of data.

**Justification:** The brown pelican is a Species of Special Concern, however during the 2010 status review it did not meet the criteria for listing as a Threatened species. It was noted that the species has declined outside of Florida, and threats still exist. The Species Action Plan for the brown pelican includes protection of nesting sites to maintain stable populations and prevent re-listing the species in the future. American oystercatchers, a state listed species with documented declines, use the less vegetated portions of the islands for nesting. Although the recommended buffer distance for this species is 300 feet, the location of the island next to the ICW makes this buffer too large for safe navigation and it has been modified for protection and navigation. Although not state listed, snowy egrets, great egrets, and great blue herons are all identified as Species of Greatest Conservation Need, and actions to protect the brown pelican and the American oystercatcher will also protect these species.

# BC49

## Brevard County



Average Number of Birds Observed



Infrequent nest counts were conducted at BC49 by DEP from 2006-2010. Almost monthly counts have been conducted since 2011 during the nesting season (January – August). No visits have occurred in September and October, so the absence of data in the graph does not reflect an absence of birds. Birds counted in November and December were generally loafing on the sand spit. The federally listed wood stork nests at this site. State-listed species among the nesting birds include roseate spoonbill, little blue heron and tricolored heron. Other nesting species include snowy egret, black-crowned night heron, white ibis, great blue heron, great egret, double-crested cormorant and anhinga.

## BC49 – Public Comments Brevard County



- 16 people attended the public meeting
- Summary of Public Input:
  - Requested year round closure and extension of buffer to include spit
  - Photography/tour operators present indicated proposed buffer will not hinder photography



The public meeting for BC49 was held on July 25<sup>th</sup> at the Barrier Island Sanctuary in Melbourne Beach. Sixteen people attended the public meeting, representing local Audubon chapters, Boat US, Space Coast League of Women Voters, Florida Conservancy, photography/ecotour business, Florida Ornithological Society and the public. Discussion included concerns over seasonal versus year-round closure and use of the sand spit by shorebirds.

FWC photo by Carol Rizkalla.

# BC49 – Revised Proposal

## Brevard County



- Posted buffer (red) to prevent boat landings
- 50 feet around island and sand spit
- Seasonal closure  
January 1 – August 31



### NEW Establishment

**Ownership:** FDEP (Indian River Lagoon Aquatic Preserve), Army Corps of Engineers spoil easement

**Birds:** wood stork, roseate spoonbill, cormorants, great egret, white ibis, great blue heron, tricolored heron, anhinga

**Acreeage:** 3.86 acres uplands, 2.51 acres of water (including 0.5 acre exposed at low tide)

**Changes from original proposal:** The proposal originally did not include the sand spit. It was added based on public input.

**Justification:** Wood storks are federally listed as Threatened, and the Federal recovery plan identifies reduction of disturbance at nesting sites as a needed action to assist in recovery of the species. Roseate spoonbills are a state-listed species that met the criteria for listing because of their small population size and the limited number of sites where they nest. Tricolored herons are also state listed due to a 30% decline and projected continuing decline. The state management plan for both species identifies protection of nesting sites as an important conservation action. Wood storks have been documented on BC-49 in December, and begin nesting by February, and young are flight capable 10 to 12 weeks after hatching. Tricolored herons also breed and raise young from February through August. Closure from January through August will allow protection of these species throughout the breeding season, from courtship to flight capable young.

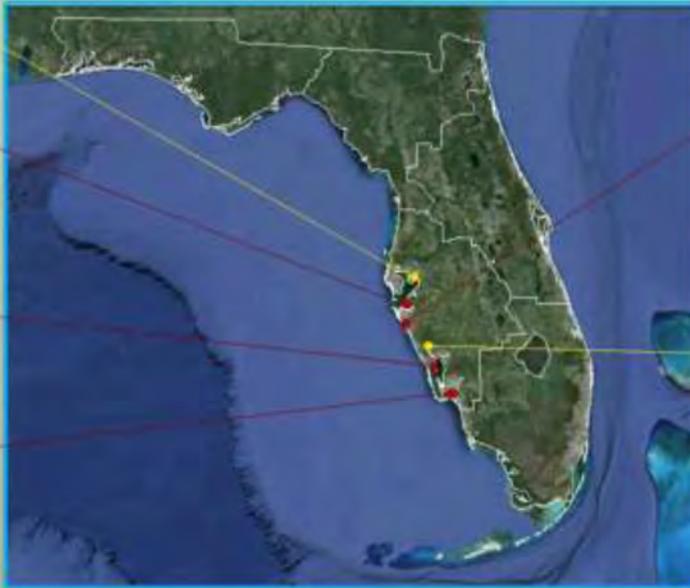
# Southwest Region Sites

Alafia Banks

Dot-Dash-Dit

Pine Island  
Sound (3)

Estero Bay (3)



Roberts  
Bay

Myakka  
River



Ten sites are under consideration in the Southwest region.

# Alafia Banks Hillsborough County



Number of Birds Observed



Bird and Sunken Islands have been monitored since the 1930s and have been managed as a bird sanctuary by Audubon under agreement with the owners. Monthly counts have occurred since the 1990s. Bird Island was established as a CWA in 1977 with a seasonal closure. There are now more birds nesting on Sunken Island and at least 2000 birds can be observed in any given month. State listed species include little blue heron, tri-colored heron, reddish egret, roseate spoonbill, and American oystercatcher. Other species which nest here include brown pelican, double-crested cormorant, great blue heron, great egret, snowy egret, cattle egret, green heron, black-crowned night heron, yellow-crowned night heron, white ibis, glossy ibis, willet, and laughing gull.

# Alafia Banks – Public Comments

## Hillsborough County



- 21 people attended the public meeting
- Summary of Public Input:
  - Support adding Sunken Island and expanding buffer to 100 feet
  - Concern with distance in cove



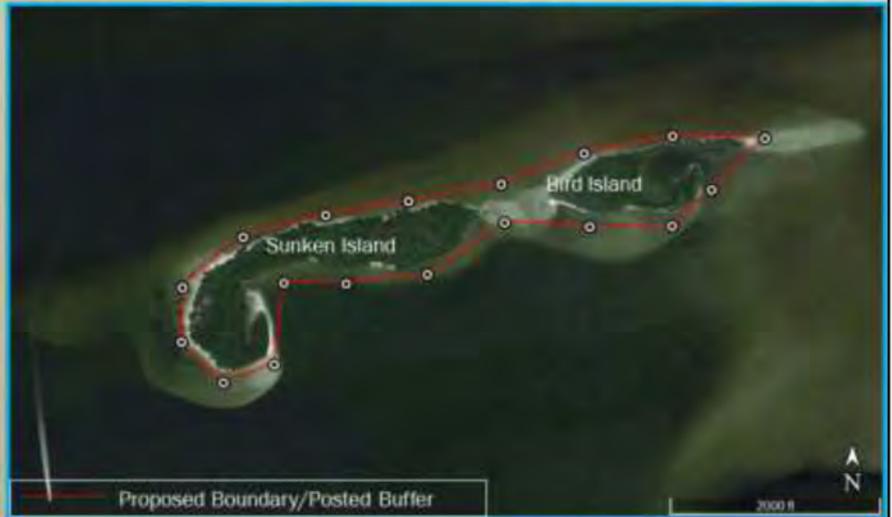
The public meeting was held on July 18<sup>th</sup> at the Gardenville Recreation Center in Gibsonton. Twenty-one people attended the meeting, representing local Audubon chapters, the Sierra Club, Defenders of Wildlife, Coastal Conservation Association, Mosaic, and the Tampa Port Authority. Comments and discussion were supportive of the addition of Sunken Island to the CWA boundary, although there was some concern expressed about closure of the 'cove' area – a popular spot for nature photography. The cove is also the site of most shorebird nesting as well as waterbird foraging, and is therefore most vulnerable to disturbance.

Photo by C. Cassels.

# Alafia Banks CWA Re-establishment Hillsborough County



- Addition of Sunken Island
- Posted in-water buffer (red)
  - 100 feet from island
- Year-round closure



## Re-establishment

**Ownership:** Mosaic Fertilizer, LLC and Port Tampa Bay

**Birds:** pelicans, cormorants, great egrets, great blue herons, snowy egrets, little blue herons, tricolored herons, reddish egrets, black crowned night heron, green heron, roseate spoonbill, American oystercatcher

**Acres:** 33.5 water, 60 upland

**Changes from original proposal:** The Establishment Area, shown in yellow on the original proposal, was removed.

**Justification:** Five species that meet the criteria for state-Threatened nest or roost on the Alafia Banks, with thousands of individual birds found on the islands throughout the year. Little blue herons and tricolored herons have an estimated population size reduction of at least 30% over the last 36 years, and a similar decline is projected into the future. Roseate spoonbills have very small or restricted populations, with very few nesting locations; reddish egrets also have a very small population size, and have declined 10% within Florida Bay, a trend that is expected to continue. The Species Action Plan for these species includes development of CWAs to support successful breeding and improve population size, and identification and protection of important foraging and roosting sites during the non-nesting season. Other state listed species such as the American oystercatcher, and Species of Greatest Conservation Need will also benefit from these protections.

The current establishment order allows for posting of Bird Island at mean high water from December 1<sup>st</sup> through September 1<sup>st</sup>.

# Dot-Dash-Dit

## Manatee County



Number of Nesting Birds Observed



Peak nest counts have been conducted annually by Audubon since 2002. Nest building to fledging generally occurs from January to September with double-crested cormorant and great blue herons nesting in November-December. Federally threatened wood storks also begin courting in the winter. This site is a winter roost but nighttime counts have not been conducted. State threatened species which nest here include tricolored heron, little blue heron, and roseate spoonbill. Other species include great egret, snowy egret, cattle egret, black-crowned night heron, anhinga and white ibis.

# Dot-Dash-Dit – Public Comments

## Manatee County



- 37 people attended the public meeting
- Summary of Public Input:
  - Concerns about buffer distances impacting photography/ecotour businesses
  - Navigational concerns about posting near channels
  - Fishing line on island and bird deaths



The public meeting was held on August 11<sup>th</sup> at the Rocky Bluff Branch Library in Ellenton. Thirty-seven people attended the meeting, representing West Coast Inland Navigation District, Florida Guides Association, Sierra Club, several charter and ecotour businesses, Florida Native Plants Society, Coastal Conservation Association, Venice Camera Club, Two Rivers Mobile Home Park, Wildlife Inc, Friends of Wildlife, Earth First, local Audubon chapters, and the general public. Concerns discussed at the meeting included impacts to photography and tour operators with the proposed 100 foot buffer, and concerns about boating safety if signs are near the channels. West Coast Inland Navigation District requested the boundary change to 25 feet on the west and southwest sides of Dot and Dash to match their channel use.

FWC photo by Carol Rizkalla.

# Dot-Dash-Dit – Revised Proposal

## Manatee County

- Posted buffer (red) with in-water posting
  - 25 to 100 feet
  - Remain outside of navigation channel
- January 1 - August 31



### NEW establishment

**Ownership:** Division of State Lands (unmanaged), Carlton Arms of Bradenton

**Birds:** wood stork, roseate spoonbill, tricolored heron, great egret, snowy egret, black-crowned night heron, great blue heron, anhinga

**Acreeage:** 3.4 water, 1.6 upland

**Changes from original proposal:** Remove the Establishment Area, shown in yellow on the original proposal; reduce buffer on Southwest and South sides of Dot and Dash islands to approximately 25 feet to keep clear of navigation channel. Changed to seasonal closure after additional review of data.

**Justification:** Wood storks are federally listed as Threatened, and the Federal recovery plan identifies reduction of disturbance at nesting sites as a needed action to assist in recovery of the species. Roseate spoonbills are a state-listed species that meet the criteria for listing because of their small population size and the limited number of sites where they nest. Tricolored herons are also state listed due to a 30% decline and projected continuing decline. The Species Action Plan for both species identifies protection of nesting sites as an important conservation action. Wood stork nesting begins in February, but they may gather earlier to begin courtship activities. Eggs may be laid as late as June, with a 1 month incubation period followed by 10 to 12 weeks when the young birds cannot fly and are dependent on parents at the nest. Closure from January through August will provide protection for the most critical periods of nesting and rearing young.

# Roberts Bay Sarasota County



Number of Nesting Birds Observed



Peak nest counts have been conducted annually by Audubon since 1997. Almost daily surveys were conducted while a breakwater was constructed in 2007-08 indicating nesting occurs year-round. State listed species include little blue heron, tricolored heron, reddish egret, roseate spoonbill, and American oystercatcher. Other species include brown pelican, double-crested cormorant, anhinga, great blue heron, great egret, snowy egret, cattle egret, green heron, black-crowned night heron, and yellow-crowned night heron.

# Roberts Bay – Public Comments

## Sarasota County



- 47 people attended the public meeting
- Summary of Public Input:
  - Support designation with buffers and year round closure as proposed
  - 100 foot buffer is difficult for nature photographers
  - North buffer blocks access



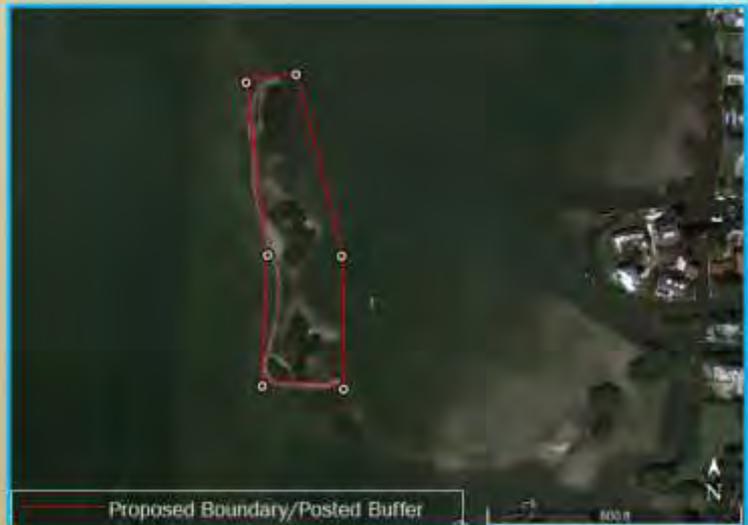
The public meeting for Robert Bay was held at the Celery Fields Nature Center in Sarasota on July 20<sup>th</sup>. Forty seven people attended the meeting, representing nature tour operators, nature photographers, local Audubon members, and Sarasota County staff. The proposed buffers were discussed at length. Many local nature tour operators and photographers expressed support for the concept of the CWA, but were concerned the proposed 100 feet would be too far for their customers to see and photograph the birds on the island. Others felt the 100 foot buffer was necessary to maintain protections for the birds, based on literature and observed disturbance of the birds. Several of the nature tour operators suggested a compromise distance of 50 feet for the buffer. Local boaters also shared concerns the northern posted buffer cut into the deepest water for accessing the area behind the island.

Photo by Jean Hall.

# Roberts Bay – Revised Proposal

## Sarasota County

- Posted buffer on breakwater on west, north, and south
- 50 feet on north island
- 100 feet for remainder of site
- Year-round closure



### NEW establishment

**Ownership:** Division of State Lands (unmanaged)

**Birds:** pelicans, cormorants, great egrets, great blue herons, snowy egrets, little blue herons, tricolored herons, reddish egrets, black crowned night heron, green heron, roseate spoonbill, American oystercatcher

**Acreage:** 2 water, 2.9 upland

**Changes from original proposal:** Remove the Establishment Area, shown in yellow on the original proposal; update boundaries based on input from West Coast Inland Navigation District, move boundary on west, north, and south to breakwater, buffer reduced to 50 feet on east side of north island.

**Justification:** Five species that meet the criteria for state-Threatened nest or roost on Roberts Bay. Little blue herons and tricolored herons have an estimated population size reduction of at least 30% over the last 36 years, and a similar decline is projected into the future. Roseate spoonbills have very small or restricted populations, with very few nesting locations; reddish egrets also have a very small population size, and have declined 10% within Florida Bay, a trend that is expected to continue. The Species Action Plan for these species includes development of CWAs to support successful breeding and improve population size. Roseate spoonbills and brown pelicans have been documented breeding from March through September. The great blue heron begins breeding as early as November, and other Species of Greatest Conservation Need, such as the green heron, have been documented to breed in October.

# Myakka River CWA

## Sarasota County



Average Number of Nesting Birds Observed



Myakka River CWA was established in 1987 with seasonal closure (March 1 – November 31). Monthly surveys have been conducted by DEP since 1993 indicating birds use the island year-round and nest building begins in January. Federally listed species include wood storks. Other nesting species include great egret, great blue heron and anhinga. Eight other species have been observed roosting on the island.

# Myakka River – Public Comments

## Sarasota County



- 42 people attended the public meeting
- Summary of Public Input:
  - Increase data collection on bird use and disturbance
  - Increase buffer where feasible and provide some protection to sandbar



The public meeting for the Myakka River CWA re-establishment was held on July 19<sup>th</sup> at the North Port Public Library in North Port. Forty-two people attended the meeting, representing local Audubon chapters, Friends of North Port Wildlife, Sarasota County, Charlotte Harbor National Estuary Program, City of North Port, Southwest Florida Water Management District, People for Trees, and the Environmental Confederation of Southwest Florida. Many participants requested expansion of the buffers to include more of the sandbar, and wider buffers where it wouldn't impede boating.

FWC photo by Carol Rizkalla.

# Myakka River CWA Re-establishment

## Sarasota County



- Buffer of 50 feet on east side
- Buffer of 75 feet on west, north and south sides of island
- January 1 – August 31



### Re-establishment

**Ownership:** FDEP (Wild and Scenic River program)

**Birds:** wood stork, great egret, great blue heron, anhinga, snowy egret

**Acreage:** 1.1 water, .42 upland

**Changes from original proposal:** Increased buffer to 75 feet on west, north and south sides. Shifted seasonal closure, changed from year-round after additional data review.

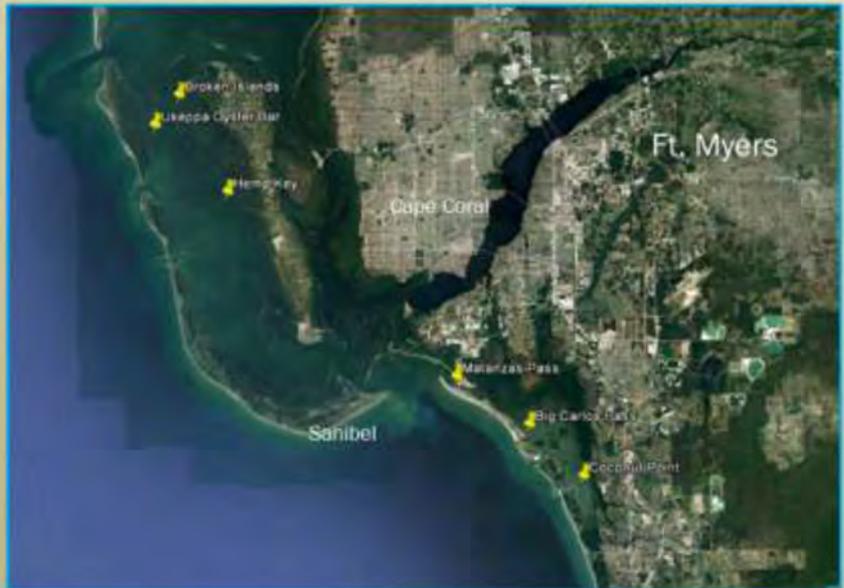
**Justification:** Wood storks are federally listed as Threatened, and the Federal recovery plan identifies reduction of disturbance at nesting sites as a needed action to assist in recovery of the species. Wood storks have been documented on the island in December, and begin nesting by February, and young are flight capable 10 to 12 weeks after hatching (can be as late as October in central Florida). Seasonal closure will protect wood storks throughout the breeding season, from courtship to flight capable young. Although 300 feet is the recommended buffer distance, the configuration of the island within Myakka river limits the size of buffers; the proposed buffers will offer increased protection and still allow for safe navigation. Other Species of Greatest Conservation Need, such as great blue herons and snowy egrets, will also benefit from these protections.

The current establishment order allows for posting above mean high water between March 1 – November 31.

# Lee County

Three areas in  
Pine Island Sound

Three areas in  
Estero Bay



There are six areas in Lee County that are being considered: three sites in Pine Island Sound, and three sites (which include 5 separate islands) in Estero Bay.

Pine Island Sound is approximately 54,000 acres and has about 51 mangrove islands, many of them with nesting. Thirteen islands were requested for consideration by the land managers, but FWC limited consideration to the three most important nesting and roosting areas. Ding Darling National Wildlife Refuge owns Hemp Key, while DEP Pine Island Sound Aquatic Preserve owns and manages Broken Islands and Useppa Oyster Bar. Birds that use these sites include pelicans, cormorants, reddish egret, little blue heron, tricolored heron, snowy egret, great blue heron, great egret, yellow-crowned night heron, black-crowned night heron.

Estero Bay is approximately 11,000 acres with 100 islands throughout the bay, many with birds nesting. The three most important areas for nesting and roosting are under consideration. Matanzas Pass Island is just outside of the Estero Bay Aquatic Preserve (EBAP), but it is monitored by EBAP staff. The establishment area for Big Carlos Pass originally contained 6 small islands, with two (M-52 and M-50/52 ) under consideration for posting. These islands are state lands managed by EBAP. The final area is Coconut Point, which had 2 islands in the establishment area – east and west – with the east island under consideration for posting .

## Pine Island Sound: 3 Sites



Broken Islands

Useppa Oyster Bar

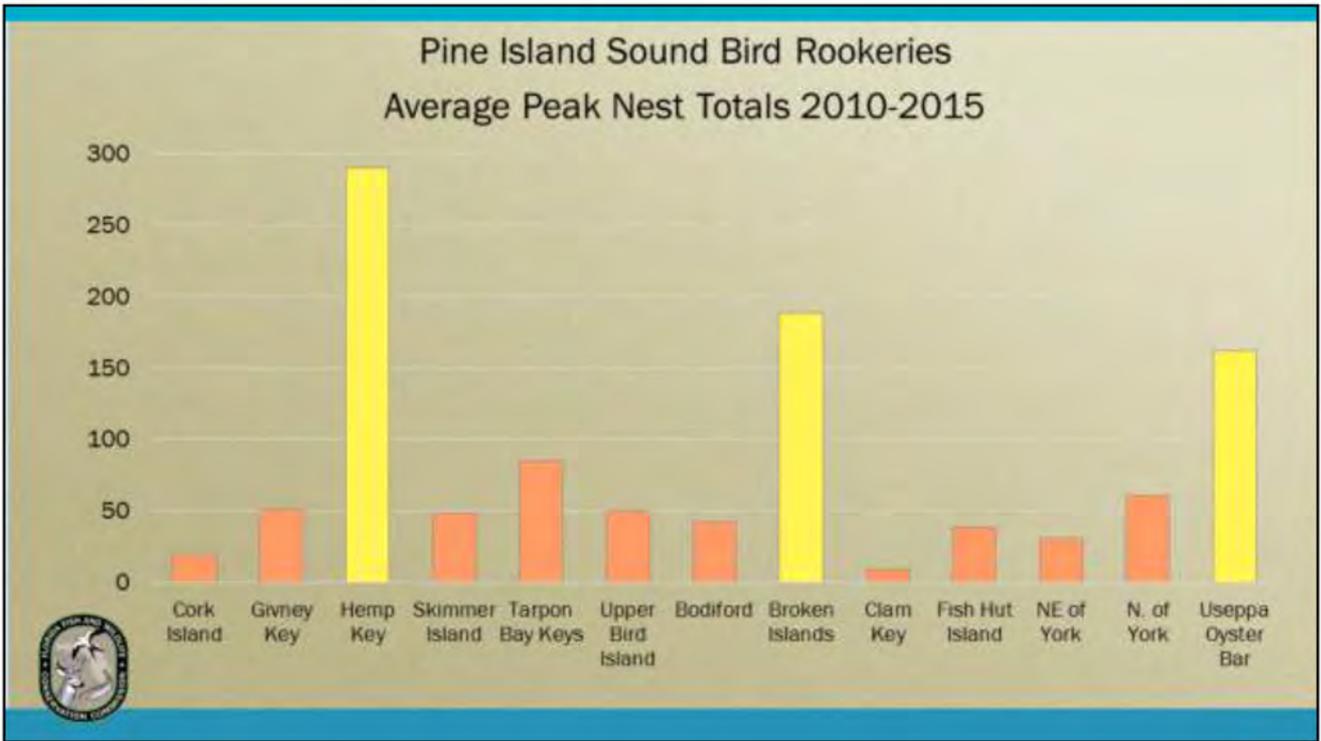
Hemp Key



NEW establishment

**Acreage - total for all sites:** 25 acre upland, 32 acre water (.06% of available water)

All 3 sites were considered together at one public meeting.



Peak nesting of all species averaged over 5 years for 13 islands in Pine Island Sound showing the concentration of nesting on the 3 islands proposed for CWA designation.

# Broken Islands

## Lee County



Average Number of Nesting Birds Observed



Monthly surveys have been conducted by DEP since 2008 during the nesting season (February – September). State listed species include tricolored heron, little blue heron, and reddish egret. Other nesting species documented include brown pelican, great blue heron, snowy egret, green heron, yellow-crowned night heron, black-crowned night heron, white ibis and double-crested cormorant.

# Useppa Oyster Bar

## Lee County



Average Number of Nesting Birds Observed



Monthly surveys have been conducted by DEP since 2008 during the nesting season (February – September). Nesting species documented include brown pelican, great egret, great blue heron, and double-crested cormorant.

# Hemp Key Lee County



Average Number of Nesting Birds Observed



Biennial aerial surveys have occurred since 1957. In the 1990s, nest surveys were conducted by USFWS 3-4 times per year. Monthly surveys have been conducted by DEP since 2008 (February - September). Occasional surveys October - January indicate nesting occurs year-round. State listed species include tricolored heron, little blue heron, and reddish egret. Other nesting species include brown pelican, great blue heron, snowy egret, great egret, cattle egret, yellow-crowned night heron, black-crowned night heron, green heron, double-crested cormorant and white ibis.

# Pine Island Sound – Public Comments

## Lee County



- 38 people attended the public meeting
- Summary of Public Input:
  - Concern about future proposals and potential loss of fishing areas
  - Navigational channels and boater safety
  - Other issues – water quality in particular – seem more important at this time
  - More or better data needed to support closures



The public meeting to discuss the proposal for the Pine Island Sound CWA was held on August 9<sup>th</sup> at the Ding Darling Education Center on Sanibel Island. Thirty eight people attended the meeting, representing the Charlotte Harbor National Estuarine Research Reserve, the Conservancy of Southwest Florida, Florida Guides Association, several bait, charter and ecotour businesses, local Audubon chapters, Sanibel Captiva Conservation Foundation, Southwest Florida Marine Industries Association, and the general public. Concerns about the water quality of Pine Island Sound were expressed with some frustration that CWAs are the focus instead of addressing larger problems. There were also questions about the data on bird use for the 3 sites, as well as disturbance; many of the local participants believed bird use is increasing in the Sound.

FWC Photo by Alex Kropp.

# Broken Islands – Revised Proposal

Lee County



- 150 foot buffer around island
- Seasonal closure  
– March 1 - August 31



## NEW establishment

**Ownership:** FDEP (Pine Island Sound Aquatic Preserve)

**Birds:** pelicans, cormorants, reddish egret, little blue heron, tricolored heron, snowy egret, great blue heron, great egret, yellow-crowned night heron, black-crowned night heron

**Changes from original proposal:** Remove the Establishment Area, shown in yellow on the original proposal; shorten closure by one month.

**Acreeage:** 12.94 uplands, 18.09 water

**Justification:** Three species that meet the criteria for state-Threatened nest on Broken Islands. Little blue herons and tricolored herons have an estimated population size reduction of at least 30% over the last 36 years, and a similar decline is projected into the future. Reddish egrets meet the criteria for listing because of small population size and an estimated continuing decline of 10%. The Species Action Plan for these species includes development of CWAs to support successful breeding and improve population size. Brown pelicans are a Species of Special Concern and do not meet the criteria for state listing as Threatened, but the Species Action Plan identifies the need to post and manage breeding colonies to maintain stable populations and prevent the need for listing in the future. Ending the seasonal closure in August will protect most breeding and still allow for fishing near the island during snook season. The buffer distance of 150 feet is smaller than the recommended 300 feet, but should provide improved protection and still allow for safe navigation and access to nearby flats for fishing.

# Useppa Oyster Bar– Revised Proposal

## Lee County



- 150 foot buffer around island
- < 50 foot buffer on north side
- Seasonal closure  
- March 1 - August 31



### NEW establishment

**Ownership:** FDEP (Pine Island Sound Aquatic Preserve)

**Birds:** pelicans, cormorants, great blue heron, great egret

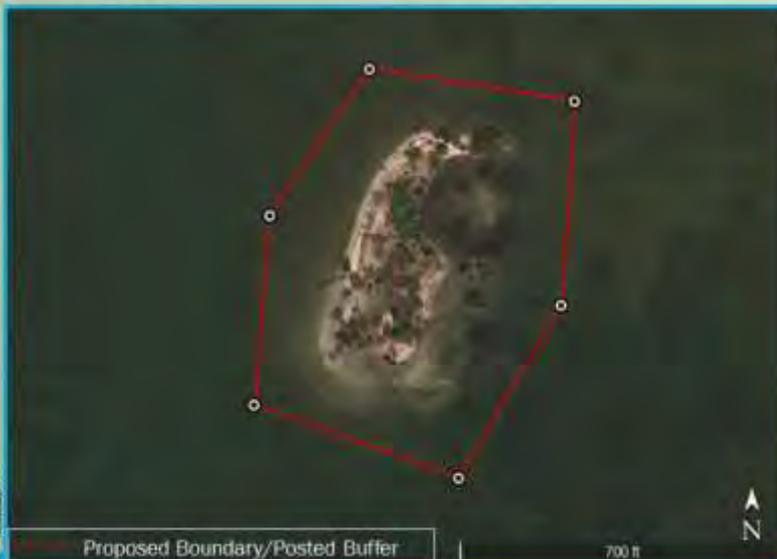
**Changes from original proposal:** Remove the Establishment Area, shown in yellow on the original proposal; shorten closure by one month. North side will be less than 50 feet to minimize navigation concerns.

**Acreage:** 7.24 uplands; 8.26 water

**Justification:** Brown pelicans are a Species of Special Concern and do not meet the criteria for state listing as Threatened, but the Species Action Plan identifies the need to post and manage breeding colonies to maintain stable populations and prevent the need for listing in the future. Brown pelicans have been documented breeding from March through September, although most breeding is completed in August. Ending the seasonal closure in August will protect most breeding and still allow for fishing near the island during snook season. The buffer distance of 50 to 150 feet is smaller than the recommended 300 feet, but should provide improved protection and still allow for safe navigation and access to nearby flats for fishing. Other Species of Greatest Conservation Need, such as great blue herons and great egrets, will also benefit from these protections.

# Hemp Key– Revised Proposal

## Lee County



- 150 foot buffer around island
- Year-round closure

### NEW establishment

**Ownership:** Ding Darling NWR

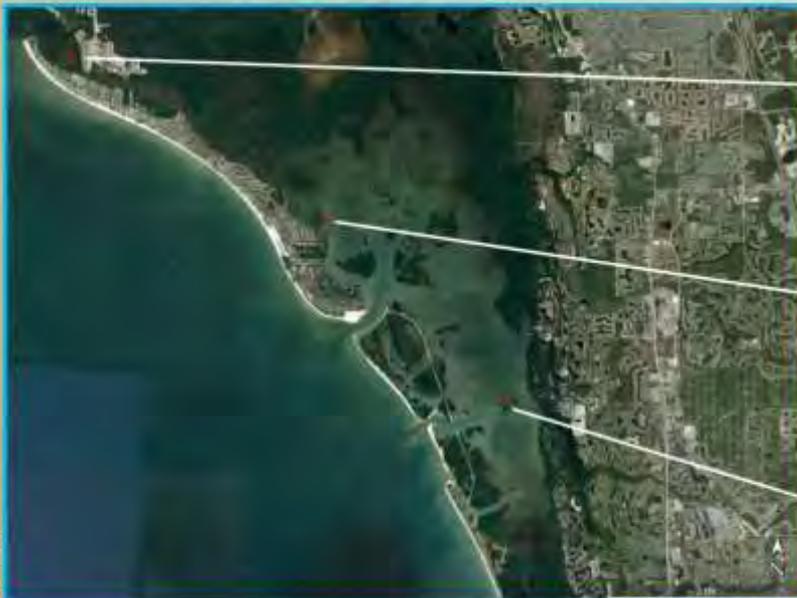
**Birds:** pelicans, cormorants, reddish egret, little blue heron, tricolored heron, snowy egret, great blue heron, great egret, yellow-crowned night heron, black-crowned night heron

**Changes from original proposal:** Remove the Establishment Area, shown in yellow on the original proposal.

**Acreage:** 4.87 uplands; 5.43 water

**Justification:** Three species that meet the criteria for state-Threatened nest or roost on Hemp Key. Little blue herons and tricolored herons have an estimated population size reduction of at least 30% over the last 36 years, and similar decline is projected into the future. Reddish egrets meet the criteria for listing because of small population size and an estimated continuing decline of 10%. The Species Action Plan for these species includes development of Critical Wildlife Areas to support successful breeding and improve population size, and identification and protection of important foraging and roosting sites during the non-nesting season. Nesting has been documented on the island year round. Brown pelicans have been documented breeding from March through September. The great blue heron, a Species of Greatest Conservation Need, begins breeding as early as November. Other SGCN will also benefit from the proposed buffer zones and year round closure.

## Estero Bay: 3 Sites



Matanzas Pass

Big Carlos Pass:  
M52

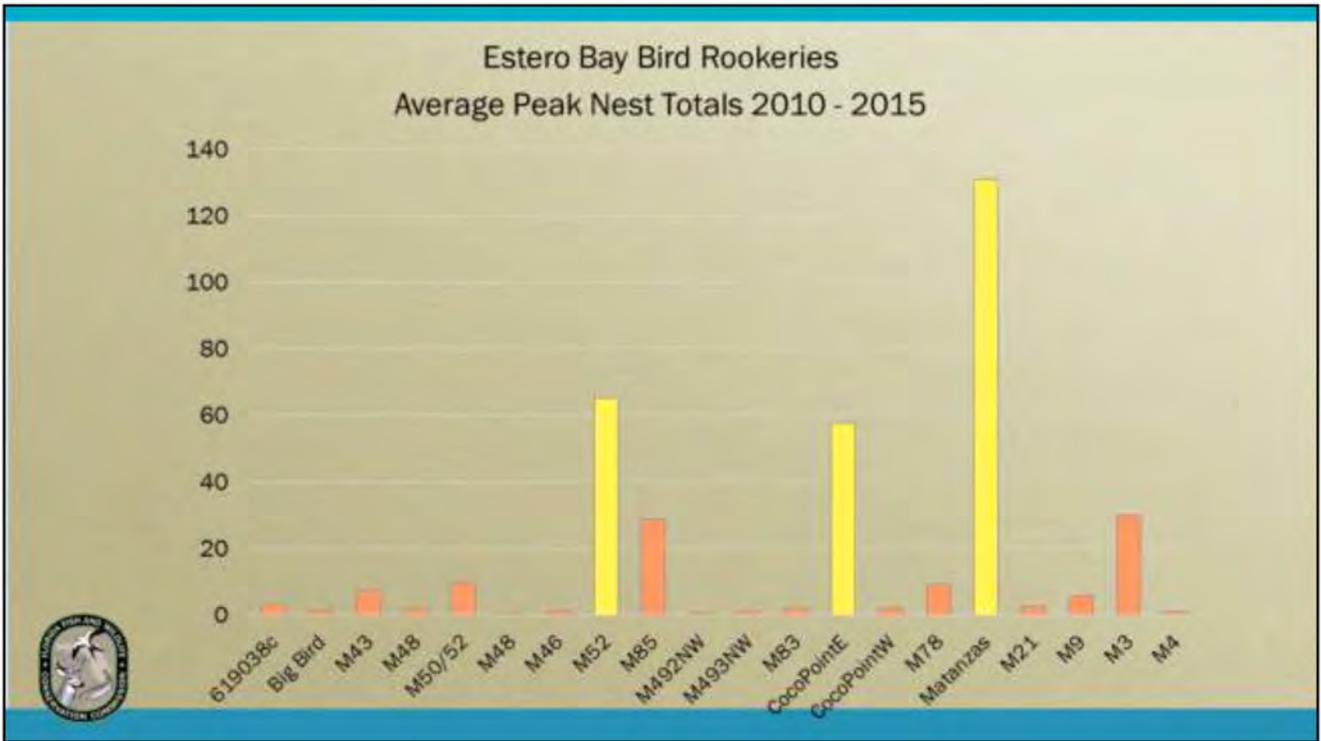
Coconut Point  
East



NEW establishment

**Acreage - total for all sites:** 3.17 acre upland, 7 acre water(.06% of available water)

All 3 sites were considered together at one public meeting.



Peak nesting of all species averaged over 5 years for 19 islands in Estero Bay showing the concentration of nesting on the 3 islands proposed for CWA designation.

# Estero Bay – Matanzas Pass Island

Lee County



Average Number of Nesting Birds Observed  
2008-2015



Monthly surveys have been conducted by DEP since 2008 indicating nesting occurs year-round. State-listed species include little blue heron, tricolored heron, and reddish egret. Other nesting species include brown pelican, double-crested cormorant, great blue heron, great egret, snowy egret, black-crowned night heron, yellow-crowned night heron, green heron, and cattle egret.

# Estero Bay – Big Carlos Pass M52

Lee County



Average Number of Nesting Birds Observed  
2008-2015



Monthly surveys have been conducted by DEP since 2008 indicating nesting occurs year-round. State-listed species include American oystercatcher, little blue heron, tricolored heron, and reddish egret. Other nesting species include brown pelican, double-crested cormorant, great blue heron, great egret, snowy egret, black-crowned night heron, yellow-crowned night heron, and anhinga.

# Estero Bay – Coconut Point East

## Lee County

Average Number of Nesting Birds Observed  
2008-2015



Monthly surveys have been conducted by DEP since 2008 indicating nesting occurs year-round. Nesting species include brown pelican, double-crested cormorant, great blue heron, great egret, snowy egret, black-crowned night heron, yellow-crowned night heron, and osprey.

# Estero Bay – Public Comments

## Lee County



Photo by Jean Hall



- 39 people attended the public meeting
- Summary of Public Input:
  - Concern about future proposals and potential loss of fishing areas or ecotour access
  - Navigational channels and boater safety
  - More or better data needed to support closures
  - Economic impacts to marina owners, charter fisherman, and photographers/ecotour operators

The public meeting to discuss the proposal for the Estero Bay CWA was held on August 10 at the Ft. Myers Regional Library in Fort Myers. Thirty-nine people attended the meeting, representing the Florida House of Representatives, the Town of Fort Myers Beach, Charlotte Harbor National Estuary Program, Estero Bay Aquatic Preserve, the Conservancy of Southwest Florida, Florida Guides Association, several marinas, bait, charter and ecotour businesses, local Audubon chapters, West Coast Inland Navigation District, Coastal Conservation Association and the general public. Concerns were expressed that the establishment of CWAs this year would lead to more CWAs in the future and fewer locations for fishing/photography. Posting near navigation channels was also of concern. Some people also expressed concerns about potential limitations of activities outside of the CWA boundaries.

Photo by Jean Hall.

# Matanzas Pass Island – Revised Proposal

## Lee County



- 100 foot buffer around island
- Year-round closure



### NEW establishment

**Ownership:** Division of State Lands, Army Corps of Engineers spoil easement

**Birds:** pelicans, cormorants, little blue heron, tricolored heron, reddish egret, great blue heron, great egret, snowy egret, black-crowned night heron, yellow-crowned night heron

**Changes from original proposal:** Remove the Establishment Area, shown in yellow on the original proposal

**Acres:** 1.5 upland; 2.8 water

**Justification:** Three species that meet the criteria for state-Threatened nest or roost on Matanzas Pass Island. Little blue herons and tricolored herons have an estimated population size reduction of at least 30% over the last 36 years, and similar decline is projected into the future. Reddish egrets meet the criteria for listing because of small population size and an estimated continuing decline of 10%. The Species Action Plan for these species includes development of CWAs to support successful breeding and improve population size, and identification and protection of important foraging and roosting sites during the non-nesting season. Nesting has been documented year round. Brown pelicans have been documented breeding from March through September, and little blue herons and tricolored herons also nest through September. The great blue heron, a Species of Greatest Conservation Need, begins breeding as early as November. Other SGCN will also benefit from the proposed buffer zones and year round closure. Year round closure will protect nesting species and the 100 foot buffer will provide protection while still providing for safe navigation.

# Big Carlos Pass M52 – Revised Proposal

## Lee County



- 100 foot buffer around island
- Year-round closure



### NEW establishment

**Ownership:** Division of State Lands, Army Corps of Engineers spoil easement

**Birds:** American oystercatcher, pelicans, cormorants, little blue heron, tricolored heron, reddish egret, great blue heron, great egret, snowy egret, black-crowned night heron, yellow-crowned night heron

**Changes from original proposal:** Remove the Establishment Area, shown in yellow on the original proposal; the establishment area was significantly decreased to only include M52. M50/52 was dropped from the proposal after additional data review.

**Acreage:** 0.46 upland; 1.7 water

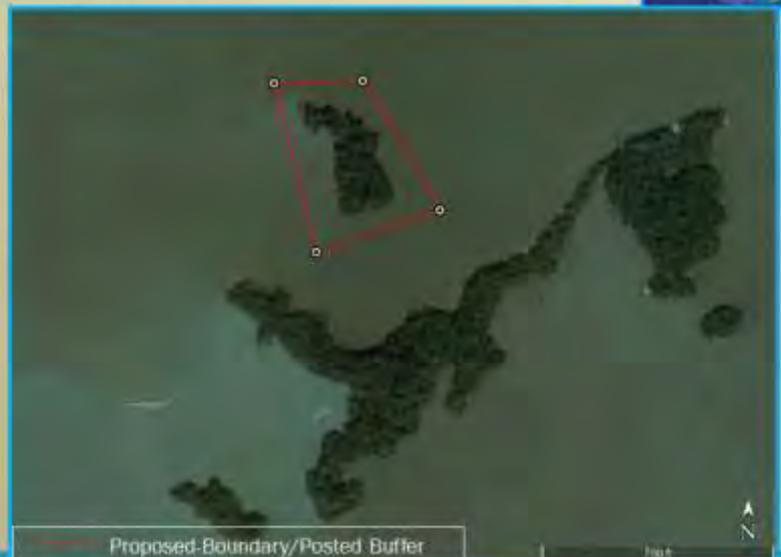
**Justification:** Three species that meet the criteria for state-Threatened nest or roost on M52. Little blue herons and tricolored herons have an estimated population size reduction of at least 30% over the last 36 years, and a similar decline is projected into the future. Reddish egrets meet the criteria for listing because of small population size and an estimated continuing decline of 10%. The Species Action Plan for these species includes development of CWAs to support successful breeding and improve population size. Brown pelicans, listed as a Species of Special Concern, also have a Species Action Plan that includes actions to identify and post important colonies. Nesting has been documented year round. Brown pelicans have been documented breeding from March through October. The great blue heron, a Species of Greatest Conservation Need, begins breeding as early as November. Other Species of Greatest Conservation Need will also benefit from the proposed buffer zones and year round closure.

# Coconut Point East– Revised Proposal

## Lee County



- 100 foot buffer around island
- Year-round closure



### NEW establishment

**Ownership:** Division of State Lands

**Birds:** pelicans, cormorants, great blue heron, great egret, snowy egret, black-crowned night heron, yellow-crowned night heron

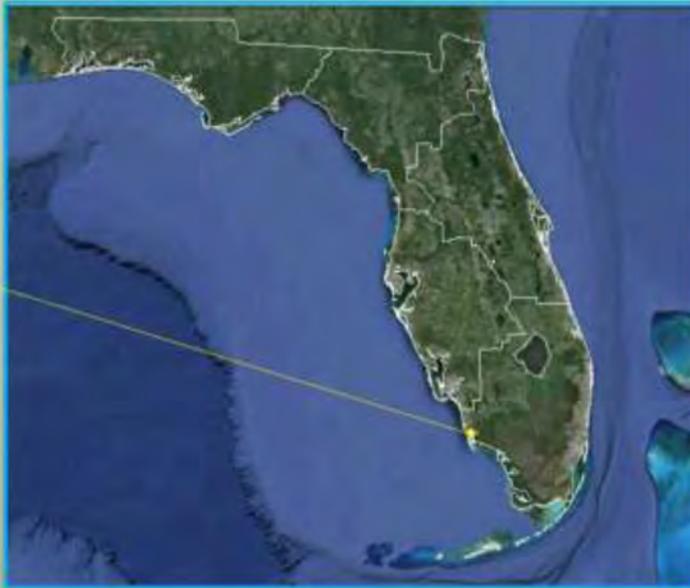
**Changes from original proposal:** Remove the Establishment Area, shown in yellow on the original proposal; the establishment area was decreased to only include the east island and not the west island.

**Acreage:** 1.21 upland; 2.5 water

**Justification:** Brown pelicans, listed as a Species of Special Concern, have a Species Action Plan that includes actions to identify and post important colonies to prevent the need for future listing. Nesting has been documented year round. Brown pelicans have been documented breeding from March through September. The great blue heron begins breeding as early as November. Although less than the recommended 300 foot buffer, the proposed buffer of 100 feet will protect the nesting and roosting species while allowing for safe navigation and fishing access. Other Species of Greatest Conservation Need such as the night-herons and great egret, will also benefit from the proposed buffer zones and year round closure.

## South Region Sites

Rookery  
Island



Rookery Island is a CWA currently being considered for re-establishment, and is the only site in FWC's South Region included in the proposals.

# Rookery Island

## Collier County



Average Number of Birds Observed  
Island 1  
2011-2015



The islands of Rookery Bay have been monitored since the 1936. Both nest and roost surveys have been conducted by DEP, Audubon, and volunteers since the 1970s and monthly counts have occurred since the 1991. Rookery Island was established as a CWA in 1993 with a year-round closure. In 2010, bird use shifted to Island 1, a nearby island, which is depicted above. Historical data shows 3 islands in the bay have been used for either roosting, nesting, or both. State listed species include little blue heron, tri-colored heron, and reddish egret. Other species include brown pelican, great egret, snowy egret, cattle egret, white ibis, glossy ibis, double-crested cormorant, and anhinga.

# Rookery Island – Public Comments

## Collier County



- 32 people attended the public meeting
- Summary of Public Input:
  - Concern about closures in future w/out public comment
  - Navigation between Island 1 and shoreline
  - Would like more data on disturbance and bird use, particularly in non-nesting season



The public meeting to discuss the proposal for the re-establishment of Rookery Island CWA was held on August 8 at the FGCU Kapnick Center in Naples. Thirty-two people attended the meeting, representing the Marco Sportfishing Club, Rookery Bay National Estuarine Research Reserve, Florida Shorebird Alliance, Coastal Conservation Association, Marco Island Charter Captains Association, local Audubon chapters, the Conservancy of Southwest Florida, ecotour companies, and the general public. Discussion included questions regarding the posted buffer, with requests for both larger and smaller buffers around Island 1. The potential to post additional islands without future public comment was also of concern. Public comments from a sport fishing group indicated support for closure of 2 islands, with limitations, and the proposal now incorporates this.

Photo by Alex Kropp.

# Rookery Island CWA Re-establishment

## Collier County



- Boundary encompassing the bay and all historically used islands (yellow)
- Posted buffer of Island 1 (red) from 100 to 200 feet
- Move or add island posting with specific criteria
  - No more than 2 islands posted at any one time
- Year-round closure
- Rename as Rookery Islands CWA

### Re-establishment

**Ownership:** Audubon; managed by Rookery Bay National Estuarine Research Reserve

**Birds:** pelicans, cormorants, great egret, snowy egret, little blue heron, tricolored heron, reddish egret, white ibis, glossy ibis

**Changes from original proposal:** Reduced buffer around Island 1 to allow wider passage along shoreline. Applied criteria for when additional posting will be considered. Placed a limit on island closures such that no more than 2 islands will be posted at any one time.

**Acreage:** 4 water; 0.19 uplands

**Justification:** Three species that meet the criteria for state-Threatened nest or roost on islands in Rookery Bay. Little blue herons and tricolored herons have an estimated population size reduction of at least 30% over the last 36 years, and a similar decline is projected into the future. Reddish egrets meet the criteria for listing because of small population size and an estimated continuing decline of 10%. The Species Action Plan for these species includes development of CWAs to support successful breeding and improve population size, and identification and protection of important foraging and roosting sites during the non-nesting season. The 100 to 200 foot buffer is smaller than the recommended 300 foot buffer, but still allows for protection of the species and safe navigation in the bay. The original establishment order for Rookery Island included only Island 0, which is no longer used.

Criteria for posting 2<sup>nd</sup> island:

- Imperiled species nests are documented for two consecutive seasons on an island
- Twenty or more imperiled species nests are documented on the island and
- Human disturbance is documented during the two years imperiled species are documented utilizing the island .