Audubon of Florida’s
Gulf Coast Ecosystem / Florida Coastal Islands Sanctuaries Program

Partnerships for Colonial Waterbird Management and Conservation Policy Initiatives
Program Overview

- Gulf Coast Ecosystem / Florida Coastal Islands Sanctuaries Program
  - Manage thirty species of colonial waterbirds nesting on Florida’s Gulf Coast and historic Palm Beach County sanctuaries.
  - Approximately 100,000 birds / 50,000 pairs, the highest diversity of these species in Florida.
  - Nesting colony protection is critical for successful reproduction.
  - Post, monitor, survey, manage, & patrol 115 local colonies & coordinate with colony management agencies & volunteers.

- Annual Program Activities
  - Nesting protection: spring & summer nesting season - Posting, planning, coordination.
  - Comprehensive colony protection & project management, restoration projects – throughout year.
  - Conservation and policy initiatives – throughout year.
Gulf Coast Ecosystem Region – Levy County to Charlotte County, ~350 miles of the Florida Gulf Coast.
Florida Coastal Islands Sanctuaries Program has conducted colonial waterbird research for >75 years throughout Florida.

- Based in Tampa, Florida
- 75 years of colonial waterbird and beach-nesting bird protection on the Gulf Coast and east coast of Florida
- National/international research publications
- IBA publication synthesized FCISP research findings
- FCISP conducts scientific research to establish wise use programs for natural resources:
  - Research
  - Management
  - Policy
Conservation Issue Leadership

- Florida Coastal Islands Sanctuaries Program provides science-based research for conservation policy development.
- We work with government, public and private partners to establish viable conservation strategies statewide.
FCISP Field Research

- Professional science staff
- Conduct terrestrial and aquatic research programs
Partners

- All Gulf Coast Ecosystem Audubon Societies
- US Fish & Wildlife Service
- Florida Fish & Wildlife Conservation Commission
- Florida Department of Environmental Protection Aquatic Preserves
- County Environmental Lands Programs and Parks Departments
- Tampa Bay Estuary Program
- Sarasota Bay Estuary Program
- Charlotte Harbor Estuary Program

- Florida Parks Department
- Cities (Clearwater, St. Petersburg, Safety Harbor, Belleair Beach, Treasure Island, Tampa, Sarasota, etc.)
- Tampa and Clearwater Marine Aquaria
- Southwest Florida Water Management District
- Tampa Port Authority
- Manatee County Port Authority
- Other cooperators
Florida’s Colonially Nesting and Beach-nesting Species

<table>
<thead>
<tr>
<th>Species</th>
<th>FWC Listing</th>
<th>WatchList^</th>
<th>Species</th>
<th>FWC Listing</th>
<th>WatchList^</th>
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<tbody>
<tr>
<td>Brown Pelican</td>
<td>SSC</td>
<td></td>
<td>White Ibis</td>
<td>SSC</td>
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<td>Double-crested Cormorant</td>
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<td>Glossy Ibis</td>
<td>Roseate Spoonbill</td>
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<td>Anhinga</td>
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<td>Wood Stork</td>
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<td>Least Bittern</td>
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<td>Snowy Plover</td>
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<td>WL</td>
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<td>Great Blue Heron</td>
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<td></td>
<td>Wilson’s Plover</td>
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<td>Great Egret</td>
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<td></td>
<td>Willet</td>
<td></td>
<td>WL</td>
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<td>Little Blue Heron</td>
<td>SSC</td>
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<td>Laughing Gull</td>
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<td>Tricolored Heron</td>
<td>SSC</td>
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<td>Gull-billed Tern</td>
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<td>Reddish Egret</td>
<td>SSC</td>
<td>WL</td>
<td>Caspian Tern</td>
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<td>Cattle Egret</td>
<td></td>
<td></td>
<td>Royal Tern</td>
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<td>Green Heron</td>
<td></td>
<td></td>
<td>Sandwich Tern</td>
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<td>Black-crowned Night-Heron</td>
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<td>Least Tern</td>
<td>T</td>
<td></td>
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<tr>
<td>Yellow-crowned Night-Heron</td>
<td></td>
<td></td>
<td>Black Skimmer</td>
<td>SSC</td>
<td></td>
</tr>
</tbody>
</table>

*Florida Fish & Wildlife Conservation Commission: E = Endangered, T = Threatened, SSC = Species of Special Concern; ^Partners in Flight “WatchList” species
Implementation

- Species Management: Post, patrol and monitor colonies
- Environmental Education/Outreach: training workshops for agency staff & volunteers, data on each colony to agency biological staff, enhance public awareness of colonies & volunteer participation, distribute boater’s guides, colony literature/information
- Habitat & Ecosystem management: remove non-native invasive plants from colonies, stabilize shorelines, conduct entangling line cleanups, remove mammalian predators
Pinellas County coastline and Tampa Bay
Pinellas County Coastal Bird Colonies
# Beach-nesting Birds Nesting Schedule for the Tampa Bay Region

<table>
<thead>
<tr>
<th>Species</th>
<th>State Listing Status</th>
<th>Onset Of Nesting</th>
<th>Incubation</th>
<th>Hatch Date</th>
<th>Age At First Flight</th>
<th>Fledge Date</th>
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<tbody>
<tr>
<td>Snowy Plover</td>
<td>T</td>
<td>April 1-May 30</td>
<td>26-32</td>
<td>April 27-July 2</td>
<td>28-32</td>
<td>May 25-Aug 4</td>
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<tr>
<td>Wilson’s Plover</td>
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<td>April 1-May 30</td>
<td>23-25</td>
<td>April 24-June 25</td>
<td>21</td>
<td>May 15-July 16</td>
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<tr>
<td>American Oystercatcher</td>
<td>SSC</td>
<td>March 20-May 30</td>
<td>24-28</td>
<td>April 13-June 27</td>
<td>35</td>
<td>May 18-Aug 2</td>
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<tr>
<td>Willet</td>
<td></td>
<td>March 25-May 30</td>
<td>22-29</td>
<td>April 16-June 28</td>
<td>28</td>
<td>May 14-Aug 3</td>
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<tr>
<td>Laughing Gull</td>
<td></td>
<td>May 7-May 30</td>
<td>20</td>
<td>May 27-June 20</td>
<td>35</td>
<td>July 1-July 25</td>
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<tr>
<td>Caspian Tern</td>
<td></td>
<td>May 7-May 30</td>
<td>20-22</td>
<td>May 27-June 22</td>
<td>30-35</td>
<td>June 26-July 27</td>
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<tr>
<td>Royal Tern</td>
<td></td>
<td>May 1-May 15</td>
<td>28-35</td>
<td>May 29-June 19</td>
<td>28-35</td>
<td>June 26-July 24</td>
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<tr>
<td>Sandwich Tern</td>
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<td>May 5-May 15</td>
<td>21-29</td>
<td>May 26-June 13</td>
<td>28-32</td>
<td>May 23-July 15</td>
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<tr>
<td>Gull-billed Tern</td>
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<td>May 7-May 30</td>
<td>22-23</td>
<td>May 29-June 22</td>
<td>28-35</td>
<td>June 26-July 26</td>
</tr>
<tr>
<td>Black Skimmer</td>
<td>SSC</td>
<td>May 10 to June 30</td>
<td>21-23</td>
<td>May 31-July 23</td>
<td>23-25</td>
<td>June 23-Aug 17</td>
</tr>
</tbody>
</table>

Snowy Plovers – early nesting in February supports protection from February 15.
Breeding colonial waterbird species of the Tampa Bay system, 1994-2006: Annual population estimates (*breeding pairs*) by species (John’s Pass south to Egmont Key).
Breeding birds of the Tampa Bay system, 1994-2006: Total annual population estimates (breeding pairs).
American Oystercatcher Research
Adult AMOY are regularly disturbed by recreational boaters

Adult AMOY driven off the nest by a boater
## AMOY survey results 2006

<table>
<thead>
<tr>
<th>Colony Name</th>
<th>Pairs/Nests</th>
<th>Bay Region</th>
<th>County</th>
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<tr>
<td>Cross Florida Barge Canal Islands</td>
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<td>11</td>
<td>Gulf of Mexico</td>
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<tr>
<td>Anclote Bar</td>
<td>2</td>
<td>8</td>
<td>St. Joseph Sound</td>
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<tr>
<td>Anclote River Mouth Spoil Island</td>
<td>1</td>
<td>2</td>
<td>St. Joseph Sound</td>
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<tr>
<td>South Anclote Bar</td>
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<td>2</td>
<td>St. Joseph Sound</td>
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<tr>
<td>Three Rooker Island</td>
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<td>2</td>
<td>St. Joseph Sound</td>
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<tr>
<td>St. Joseph Sound Marker 28</td>
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<td>2</td>
<td>St. Joseph Sound</td>
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<tr>
<td>St. Joseph Sound Marker 26</td>
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<td>2</td>
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<tr>
<td>Ozona Spoil East</td>
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<td>2</td>
<td>St. Joseph Sound</td>
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<td>Clearwater Harbor I-25</td>
<td>3</td>
<td>2</td>
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<tr>
<td>Belleair Beach Bird Island</td>
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<tr>
<td>Indian Rocks Beach Bird Island</td>
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<td>2</td>
<td>Boca Ciega Bay</td>
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<tr>
<td>Little Bird Key NWR</td>
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<td>2</td>
<td>Boca Ciega Bay</td>
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<tr>
<td>Egmont Key NWR &amp; State Park</td>
<td>3</td>
<td>2</td>
<td>Tampa Bay mouth</td>
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<tr>
<td>Tampa Port Authority Spoil Island 2D</td>
<td>35</td>
<td>2</td>
<td>Hillsborough Bay</td>
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<td>Alafia Bank Bird Colony</td>
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<td>2</td>
<td>Hillsborough Bay</td>
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<tr>
<td>Tampa Port Authority Spoil Island 3D</td>
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<td>2</td>
<td>Hillsborough Bay</td>
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<tr>
<td>Apollo Beach &amp; Fishhook Spoil</td>
<td>7</td>
<td>2</td>
<td>Hillsborough Bay</td>
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<tr>
<td>Passage Key NWR</td>
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<td>2</td>
<td>Tampa Bay mouth</td>
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<tr>
<td>Port Manatee Key</td>
<td>5</td>
<td>30</td>
<td>East Tampa Bay</td>
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<tr>
<td>Skiers Island</td>
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<td>Pelican Cove Point</td>
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<td>Sarasota Bay</td>
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<td>Little Sarasota Bay Marker 34</td>
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<td>2</td>
<td>Sarasota Bay</td>
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<tr>
<td>Blackburn Bay Marker 20</td>
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<td>2</td>
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<tr>
<td>Total</td>
<td>122</td>
<td>10</td>
<td>65</td>
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AMOY, WIPL, SNPL breeding census 1994-2006, Tampa Bay, FL

![Graph showing bird population trends for different species from 1994 to 2006.](image-url)
Anclote River, St. Joseph Sound & Clearwater Harbor
Clearwater Harbor ICWW – small mangrove and dredge material islands.

I-25 sanctuary

Eroding ICWW island
Typical shorebird roosting and foraging habitats – small mangrove islets, oyster bars, and mudflats.
White Ibis nesting in seagrapes (*Cocoloba uvifera*) at 3 Rooker Island, Pinellas County, FL.
Green Heron nests low in mangroves – nests are vulnerable to disturbance from fishing and small watercraft recreation.
Total Pairs Breeding census 2003-2006, Clearwater, FL
Breeding census 2003-2006, Clearwater, FL

![Graph showing nesting pairs for various bird species from 2003 to 2006. The graph highlights Laughing Gull with a significant increase in nesting pairs from 2003 to 2006.]
Breeding census 2003-2006, Clearwater, FL

Black Skimmer decline
Breeding census 2003-2006, Clearwater, FL

<table>
<thead>
<tr>
<th>Year</th>
<th>Nesting Pairs</th>
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<tr>
<td>2003</td>
<td>15</td>
</tr>
<tr>
<td>2004</td>
<td>20</td>
</tr>
<tr>
<td>2005</td>
<td>10</td>
</tr>
<tr>
<td>2006</td>
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</table>

- Little Blue Heron
- Reddish Egret
- Cattle Egret
- Green Heron
- Black-crowned Night Heron
- Yellow-crowned Night Heron
- Snowy Plover
- Wilson's Plover
- American Oystercatcher
- Willet
- Caspian Tern
- Sandwich Tern
- Least Tern
Breeding census 2003-2006, Clearwater, FL

- Brown Pelican
- Double-Crested Cormorant
- Great Blue Heron
- Great Egret
- Snowy Egret
- Tricolored Heron
- White Ibis
- Roseate Spoonbill
- Royal Tern
- Black Skimmer
Beach-nesting shorebird protection is labor-intensive!
Human threats to nesting birds.
Predatory wildlife threats to nesting birds.
Project ColonyWatch

- Goal: To protect the important breeding colonies of Florida through the involvement of volunteers.
- Birds in colonies are sensitive to disturbance.
- The colonial nesting behavior means that many nesting pairs can be protected at once.
- Local participation creates local expertise, advocacy, and involvement.
- Colonies offer educational opportunities.
St. Petersburg Audubon Society Activities

- Leadership in organizing the beach-nesting bird committee
- Beach Stewards
- Shell Key volunteerism
- Roof-top colonies protection, recruiting sites, educating owners, rescuing fallen chicks with the chick-a-boom
- Tina Tern booklet for 4th graders
Clearwater Audubon Society Activities

- Clearwater Audubon Society protects, posts, and assists in surveying:
  - 3 Rooker Bar
  - Anclote Bar
  - South Anclote Bar
  - Honeymoon Island.
Roseate Spoonbill Banding Study

- Support Tavernier Science Center roseate spoonbill banding program to identify adult and fledgling behavior and dispersal patterns;
- We banded 364 fledgling chicks in 2006;
- We banded 800 chicks total between 2003-2006.
Roseate Spoonbill research project - Tampa Bay banding study
Roseate Spoonbill research project - Tampa Bay banding study

Roseate spoonbill stage III chick fitted with A/N band, April 2006.
Roseate Spoonbill phenology.
Re-sighting banded Roseate Spoonbills
Juvenile Brown Pelicans are frequently entangled in fishing tackle.

Hundreds of Brown Pelicans are saved annually.

Heightened angler responsibility is needed.
Summary

- Monitoring of nesting colonies guides timely & appropriate management responses.
- Audubon worked with partners, agency staff, & volunteers to increase protection on 22 nesting colonies in Tampa Bay & Pinellas County, nesting habitat for 95+% of the local waterbird population.
- Habitat management activities included non-native species removal, erosion control plantings, fishing line cleanup, mammalian predator control, etc.
- Outreach & coordination activities allow partners to increase expertise and become advocates for protection.
Accomplishments

- Annual Surveys of Gulf Coast Ecosystem nesting colonies.
- Roseate Spoonbill Banding Project - long-term research study.
- AMOY and REEG data analysis and mgmt.
- Education and engagement of managing agencies & citizen scientists.
- Comprehensive conservation and policy initiatives.
Results

- Long-term conservation of viable bird populations, institutions that effectively manage and protect local populations, and a public that understands and supports measures needed to secure habitats.

Looking Forward

- Ecosystem conservation initiatives and colony protection directly involves volunteers, agencies, and the public to protect regional bird colonies and habitat for > 200,000 colonial waterbirds of 30 species, including 14 listed species.
Audubon of Florida
Florida Coastal Islands Sanctuaries Program

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Questions?