

Vital Sign: Colonial Nesting Birds

[shortened name: Colonial_Birds]

Parks Where Vital Sign will be Implemented:

BISC, – SFCN implements monitoring

BICY, DRTO - supplement current Park monitoring

BUIS, EVER, VIIS - being monitored by park

SARI - USFWS, VIDFW conducting monitoring; may need supplementation

Justification/Issues being addressed: Colonial Nesting Birds ranked 8th among the 44 SFCN vital signs. The status of colonial nesting bird colonies, their size and nesting success, indicate the surrounding ecosystems' ability to support foraging of nesting birds (i.e. amount and quality of fish and/or invertebrates available in the surrounding landscape/seascape), predictability of forage and water, freedom from colony (nest) predators, and survivable contaminant levels. Bird's bioaccumulate certain contaminants in their feathers, blood, and eggs. Because of their sensitivity to landscape health, fishery health, and contaminants, colonial nesting birds are almost all either federal or state threatened species, endangered species or species of special concern. Colonial wading birds including wood storks, roseate spoonbills, egrets and ibises have been identified as important performance measures for the CERP RECOVER program. As colonial nesting birds have a moderate foraging range and are affected by both local and larger regional scale forcing functions, the long term monitoring of colonial nesting birds will give insight to overall ecosystem health at this scale.

General Monitoring Questions to be addressed by the Vital Sign:

- What are the status and trends in colony size, distribution, and nesting status of colonial nesting birds (e.g., Great Egret, Wood Stork, White ibis, Snowy Egret, Cattle Egret, Rosette Spoonbill, Tricolor Heron, Little Blue Heron, Black-crowned Night Heron, Least terns, Brown Pelicans, Masked Boobies, Roseate terns, Sooty Terns)? Specifically in South Florida are the populations and distributions of wading birds changing?

Measures

Location and size of rookery (by species), peak nest counts, and fledging success (by species) along with summarized counts of wading birds by region.

Basic Approach:

SFCN is developing a "Colonial Nesting Birds" protocol that will summarize its approach both in terms of new monitoring in BISC and possibly BICY as well as how results will be reported from existing programs. An overview of the protocol's basic approach is below.

1) Survey known colonies with opportunistic surveys of newly reported colonies. At each colony (rookery) assess (by species) the number of nests, status of nests, and fledging with serial surveys to determine fledgling success.

Colonial nest surveys are currently occurring in EVER and sporadically at Big Cypress. BUIS (Pelicans and Least Terns) and VIIS (Pelicans) are being monitored by park. SFCN needs to initiate monitoring in BISC and supplement current monitoring at BICY and DRTO. Sonny Bass's (EVER Wildlife Biologist) current Dry Tortugas study of Sooty Terns is very detailed but lacks whole park surveys. For BISC we will need to generate a probable nesting period and sample at monthly to biweekly intervals to determine number of nests, nest success and fledgling success. USFWS and Virgin Islands Dept. of Fish and Wildlife are conducting monitoring for least terns and brown pelicans at SARI and roseate and least terns at VIIS. SFCN will work with these agencies and park staff to see if further monitoring efforts are needed at SARI and see if these other agency efforts can be reported through the Vital Signs process. SFCN will work with park staff to formalize SOPs and help with database development and analysis and reporting processes for existing programs as needed.

2) Large scale surveys of the park lands and waters for relative abundance for wading and colonial nesting birds in South Florida.

The Systematic Reconnaissance Flights program provides a regional estimation (for Everglades National Park and Big Cypress National Preserve specifically) of wading bird populations in south Florida that compliments colony bird rookery surveys.

The Systematic Reconnaissance Flights program is a base funded monitoring program for Everglades National Park. Big Cypress National Preserve has some monitoring from Everglades National Park Systematic Reconnaissance Flights program and by sampling supported by South Florida Water Management District. The SFCN will pull together the results from these different SRF monitoring to present and general finding for both parks.

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Development Schedule, Budget, and Expected Interim Products:

The “Colonial Nesting Birds” protocol is expected to take about 6 months of SFCN staff time to draft and test the protocols. Full implementation is partially dependant on continued Everglade National Park funding of SRF and colony bird rookery surveys. The Community Ecologist and the Wildlife Technicians will conduct sampling about 8 weeks of the year, including data entry and reporting. Costs include helicopter time and travel and some start-up equipment (good binoculars). However, SFCN will need to evaluate the feasibility of using the SFCN boat for rookery surveys. SFCN will create a single overarching colonial nesting birds protocol document by 2009 with different parks treated as different SOPs within the main document. Pilot work on the SOPs will begin in 2008 and be completed by the end of 2009 with full implementation beginning in 2010. Table indicates proposed SFCN workload upon full monitoring implementation.

Expected SFCN staff time requirements once program is fully implemented in 5 years:

SFCN Staff	Full Time Equivalent (FTE)
Coordinator	
Marine Ecologist	
Fisheries Biologist	
Marine Biologist Technician (So FL)	
Marine Biologist Technician (VI)	
Community Ecologist	0.1
Wildlife Technician (Wildlife)	0.17
Wildlife Technician (Vegetation)	0.07
Quantitative Ecologist	0.06
Data Manager	0.04
GIS/Data Tech	0.02
Interns	
SFCN Total	0.46