



Our Birds, Our Coast

South Carolina Coastal Bird Conservation Program



www.sccoastalbirds.org



Christy Hand

The Opportunity

Our beaches, sandbars, and tidal creeks host hundreds of thousands of birds each year. Summer brings 38 percent of the nesting Brown Pelicans on the East Coast to South Carolina. Winter brings one-third of the American Oystercatchers on the East and Gulf coasts.

South Carolina's coast plays a vital role in the protection of seabirds, shorebirds, marsh birds, and wading birds. Through the loss of habitat, these birds are threatened here too. Groins and jetties erode critical beach habitat. Population growth puts people and pets on a collision course with nesting and migrating birds.

As a result, nearly three-quarters of South Carolina's coastal birds are listed at the "high" or "highest" level of conservation concern. Worldwide, seabird populations have dropped 70 percent since the 1950s. Shorebird populations are dropping even faster — 70 percent since the 1970s.

But, you can protect our state's birds. The SC Coastal Bird Conservation Program, an exciting public-private collaboration, is using modest amounts of local funding to secure sizable federal grants. It's a tried and true way to protect land, but it's never been applied to coastal bird habitat on a large scale. With enough local funding, we can protect coastal birds and their habitats.

And birds aren't the only ones that will benefit. Nine billion dollars per year is spent on coastal tourism in our state and nearly 85 percent of these outdoor enthusiasts are wildlife watchers.* Where birds thrive, people prosper.

The Coastal Bird Conservation Program's first project is to restore Crab Bank, a Charleston hot spot for nesting and migratory birds that's eroding out of existence. **We've got a now-or-never chance to save this critical bird sanctuary. Help us meet our initial goal of \$2 million by December 2018.**

If you love the South Carolina coast, please consider making a generous contribution to protect this extraordinary place that all of us — birds and people alike — call home.

* Willis, David B., and Thomas J. Straka. The Economic Contribution of Natural Resources to South Carolina's Economy. Clemson, SC: Clemson University, 2016.



Christy Hand

Crab Bank

Crab Bank is a crescent of sand in Charleston Harbor that once supported an astonishing number of nesting birds — up to 5,000 in a single summer and thousands of offspring. It also provides rest and nourishment for hundreds of migrating shorebirds. **A slice of true wilderness in our bustling urban harbor, Crab Bank provides tremendous economic, recreational, and educational benefits for Charleston.**

But wind and waves have taken a toll on this unique resource. Created in the 1950s from sand dredged from the harbor, Crab Bank is now a tiny fraction of its original size. In 2017, Hurricane Irma washed away most of the remaining high ground, removing any opportunity for nesting birds in 2018.

Happily, there's a solution. In 2019, the US Army Corps of Engineers will dredge the Charleston Harbor to make room for larger ships, allowing us to deposit dredged sand on Crab Bank. This will require an estimated \$2 million local investment, plus potentially more than \$3 million in federal funds.

The restored bird sanctuary will be a spacious 28 acres, with plenty of high-ground nesting habitat. The Corps of Engineers estimates that it will take half a century for Crab Bank to erode back to a half-acre in size — enough time to hatch tens of thousands of young birds.

The Charleston Harbor dredging provides an extraordinary opportunity to restore Crab Bank. **But there's no time to lose — if we miss this opportunity, there may not be another one for decades.** Coastal birds and everyone else who benefits from Crab Bank's presence in the harbor, including businesses on Shem Creek, homeowners in Mount Pleasant, and children throughout the Charleston area will lose an essential symbol of Charleston Harbor.





Everyone Benefits

Local Businesses: More than 10,000 people each year rent kayaks, paddleboards, or seats in motorboats from outfitters on Shem Creek. Crab Bank is a popular wildlife viewing area, especially during nesting season. These people then return to Shem Creek to patronize local stores and restaurants. Coastal tourism adds \$9 billion per year to South Carolina's economy* — a cash infusion that depends in part on healthy, abundant wildlife populations.

Local Homeowners: Crab Bank protects homes in Mount Pleasant's historic district, as well as boats and businesses. The island blocks wave energy, sheltering Mount Pleasant from storms and ship wakes.

Local Kids: Since 2013, 9,000 middle schoolers have paddled around Crab Bank for free, thanks to grant funding for science education, with local outfitters.

Worldwide Audiences: Even larger numbers of people enjoy nature while watching nesting birds via Crab Bank's "Pelicam" online. Over two summers, the "Pelicam" attracted 34,500 unique viewers online, prior to the loss of it to Hurricane Irma.

The Birds: Last, but certainly not least, the birds will benefit too. Crab Bank is a National Audubon Society Globally Important Bird Area and just one of five "Seabird Sanctuaries" protected by the South Carolina Department of Natural Resources.

* Willis, David B., and Thomas J. Straka. The Economic Contribution of Natural Resources to South Carolina's Economy. Clemson, SC: Clemson University, 2016.

Join Us Please

If you're reading this, it's because you understand that beautiful surroundings and abundant wildlife create tangible value for our coastal communities. **Please consider a significant donation that will lift us toward our \$2 million goal.**

On the South Carolina coast, bird habitat is vanishing fast. Groins, jetties, and busy public beaches limit the places where birds can nest and rest. Even critical habitat that's earned the highest degree of legal protection faces rising seas and more intense storms.

To support South Carolina's vital coastal bird populations, we need the SC Coastal Bird Conservation Program.

Currently, we're seeking donations as part of a high-energy crowdsourced funding campaign to "Save Crab Bank".

If sufficient funds aren't raised to restore Crab Bank, then ultimately the funds raised will be utilized to restore, protect and enhance other areas along South Carolina's coast for our coastal birds. These funds will be utilized by the

South Carolina Department of Natural Resources or another conservation organization to accomplish these goals for coastal birds.

Our nation's coastal communities urgently need new strategies to help growing populations live in harmony with the beauty and bounty of natural areas. The restoration of Crab Bank, a model of public-private innovation and crowdsourced conservation, will be Charleston's legacy. Because **only a community this strong can protect a place this magnificent.**



www.sccoastalbirds.org

How to Donate

Donations to the Coastal Bird Program [help us to restore, protect and enhance coastal bird habitat in South Carolina.](#)

Because of the desire of many interested organizations to protect and restore Crab Bank, the South Carolina Department of Natural Resources (SCDNR) established a new program designated as the Coastal Bird Conservation Program under the Nongame and Natural Areas Trust Fund (SC Code of Laws §50-1-280). This program provides a means for SCDNR and supporting organizations to collect donations to support the renourishment of Crab Bank and future coastal bird conservation efforts.

To donate, checks may be mailed to:

SCDNR – Coastal Bird Conservation Program
Attention: WFF Business Manager
PO Box 167
Columbia, SC 29202

Or online at:
www.sccoastalbirds.org

For questions regarding this Program, please contact the SCDNR Bird Conservation Coordinator at 803-521-2119.

SCDNR is listed as a charity and qualifies under IRS guidelines.



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Coastal Bird Conservation Program

Opportunities for Further Protection

Need for Conservation



Coastal birds face multiple challenges throughout their annual cycle. The primary threats include habitat loss and degradation, human disturbance, increased predation, and incompatible management actions. Lack of knowledge is also a current threat when it limits our ability to identify, implement, and assess the most effective management strategies.

Of the 65 seabird, shorebird, and wading bird species, collectively known as waterbirds, that utilize South Carolina's coastal habitats throughout the year, 47 are listed in the SC State Wildlife Action Plan as highest or high conservation concern, 3 are federally listed and 5 are state listed. Shorebirds are of highest conservation concern due to small and highly threatened global populations. Shorebird populations have shrunk by 70 percent across North America since 1973 (Scientific American 2017).

The coast of South Carolina is the most rapidly developing area of the state and much of this is occurring along shorelines, which has the potential to decrease abundance and distribution of coastal waterbirds throughout their life cycle. In addition, increased recreational use further limits available nesting habitat.

South Carolina provides the majority of habitat for entire populations of a number of seabirds, shorebirds and wading birds. Efforts to conserve birds in South Carolina will help region-wide populations rebound. Seabirds, such as pelicans, terns, skimmers, and gulls gather in large groups to nest together in colonies during the breeding season. South Carolina has approximately 38 percent of all brown pelicans nesting on the Atlantic coast and some of the largest colonies of skimmers, and terns in the Southeast.

Shorebirds are some of the world's most amazing migrants. Many species nest in the arctic and sub-arctic zones of the globe and spend the winter in the Southern Hemisphere. During their travels, they stop in large groups to rest and fuel themselves to sustain their migration. South Carolina provides both migration stop over sites for flocks of thousands of these birds and also wintering grounds for birds that do not travel as far south. For example, South Carolina is an important stopover for the federally listed red knot. South Carolina winters a large proportion (over $\frac{1}{3}$) of all American oystercatchers on the Atlantic and Gulf coasts of the United States and is the most important winter site for this species.



Thus, we propose to use this program for the recovery of declining and otherwise vulnerable high priority species to healthy population levels. Some of the possible projects are listed below.

Objectives and Projects

1. Restoration and Protection of Habitats

Coastal habitats that are essential for conservation of waterbirds include island and mainland beaches, mud and sand flats, spoil islands, oyster reefs, marshes, and other wetlands. Habitat can be degraded by erosion, coastal development, shoreline/inlet stabilization, berm construction and climate change. Increasing the quality and quantity of important waterbird habitat is important for conservation of waterbirds.



Living Shorelines

Important waterbird nesting and wintering sites will be restored or created using living shorelines. Instead of using hardened structures, such as bulkheads, revetment, and concrete seawalls which often increase the rate of coastal erosion and remove the ability of the shoreline to carry out natural processes, the “living shorelines” approach uses plants, sand, and limited use of rock to provide shoreline protection and maintain valuable habitat. A variety of structural and organic materials, such as wetland plants, submerged aquatic vegetation, oyster reefs, fiber logs, sand fill, and stone are parts of the living shoreline method of erosion control.

(<http://www.habitat.noaa.gov/restoration/techniques/livingshorelines.html>)

The benefits of living shorelines include:

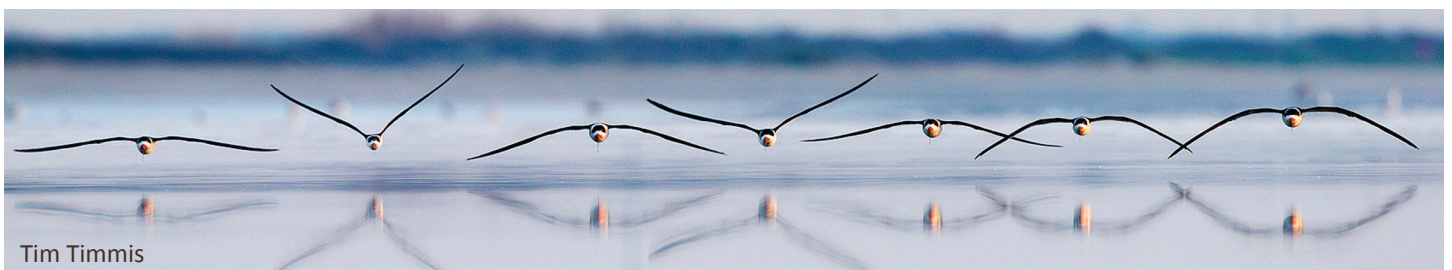
- Stabilization of the shoreline.
- Protection of surrounding riparian and intertidal environment.
- Improvement of water quality via filtration of upland run-off.
- Creation of habitat for aquatic and terrestrial species.

Vegetation Management

- Planting of desirable vegetation for dune accretion at key nesting sites.
- Removal of undesirable vegetation to promote nesting habitat.
- Management of herbaceous aquatic plants in wading bird colonies to eliminate over-water pathways for mammalian predators.

2. Increase Nesting Success

Waterbirds concentrate in wetlands and beaches each spring and summer to nest. Seabirds nest above the high tide line on bare sand with little or no vegetation and lay their eggs in nests that are little more than scrapes in the sand. The eggs and chicks are camouflaged perfectly to match their sandy environment. Shorebird downy chicks, looking like tiny fluff balls, leave their nests soon after hatching. Chicks often





hang out on the beach with their parents for several weeks or months until they are able to fly and fend for themselves. Management actions can reduce mortality of waterbird nests.

Reduce Disturbance

Posting signs is critical to the success of nesting shorebirds and seabirds. Nests, eggs, and young chicks can easily get trampled and destroyed where pedestrian or vehicle traffic is present. In addition, waterbirds are very sensitive to disturbance. When people, pets, or vehicles approach too closely to a nest or colony, adults will depart and leave the eggs or chicks temporarily exposed to the elements or nearby predators. Placing signs demarcating nesting areas help educate the public and can reduce nest loss.

Reduce Predators

Predators can destroy waterbird nests but there are many techniques to reduce their negative effect on nesting success. Predator management may include preventing pets from entering nesting areas, fire ant control or mammalian exclosures.

Monitor Nests

Nest monitoring will help managers identify additional actions needed to reduce nest mortality. Monitoring allows projects to be evaluated for effectiveness.

3. Integration of Nature Experiences with Community Awareness

Teaching communities about the environment and its associated problems, making them aware of the solutions motivates people to work together to improve surrounding conditions. The added benefits of environmental education can improve people's lives. It connects people to environment, heightening their imagination and enthusiasm. Outdoor experiences promote healthy lifestyles and strengthens communities.

- Support programs that teach students to appreciate the natural world.
- Engage volunteers to assist with waterbird conservation and build stewardship programs.
- Support Crab Bank Pelican video feed online for the public to watch wildlife and learn about coastal species.

4. Increase Knowledge

Increasing monitoring can ensure continued stability of waterbird species. Obtaining better population estimates for nesting species allows us to evaluate changes in population numbers, trends, and habitat use. Waterbird monitoring is a means for checking wetland systems because waterbirds are proven to serve as sentinels for the health of our marine environment. For example, pelican populations plummeted with widespread use of pesticides, such as DDT in the 1940s, due to lack of breeding success. This alerted scientists to the dangers of pesticides which caused the prohibition of DDT-use in the United States.

- Conduct waterbird surveys for distribution and abundance during nesting and winter seasons.
- Test for contaminants in waterbirds to estimate distribution in aquatic environments.
- Identify waterbird feeding areas and forage items.



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