

Seabird Conservation in a Coastal Urban Setting: An Adaptive Management Challenge



CONSERVE. CONNECT. PROTECT.

Becky Gwynn, Virginia Department of Wildlife Resources
Becky.Gwynn@dwr.virginia.gov

Species of Conservation Priority

Common Terns - SGCN



Sandwich Terns



Royal Terns - SGCN



Black Skimmers – SGCN



Gull-billed Terns – state threatened



Laughing Gulls - SGCN



South Island – HRBT Colony





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Project components:

- Expand the east/west approaches to the HRBT from four lanes to six lanes with two additional drivable shoulders
- Construct two new subaqueous tunnels
- Replace existing marine approach bridges

Project Cost: ~\$3.8 Billion

Project's avian objective:

- The permanent removal of breeding birds from South Island.





Photo credit: VDOT



DIRECTIVES FROM GOVERNOR NORTHAM

February 14, 2020



CREATE NEW TEMPORARY HABITAT

DWR prepare habitat on Rip Raps Island (Ft. Wool) and barges in the embayment between South Island and Ft. Wool

POLICY BACKSTOP MIGRATORY BIRDS

Develop regulations that define and permit “incidental take” of migratory birds in Virginia for major commercial, industrial and construction projects

BIRD MANAGEMENT PLAN

HRBT contractor develop, in consultation with VDOT and DWR, a plan for deterring nesting on South Island

CREATE NEW LONG-TERM HABITAT

DWR to work with Army Corps of Engineers and its beneficial uses of dredge spoils program to determine feasibility of developing a new artificial island



FT. WOOL CONVERSION



Rock revetment connecting both islands



South Island



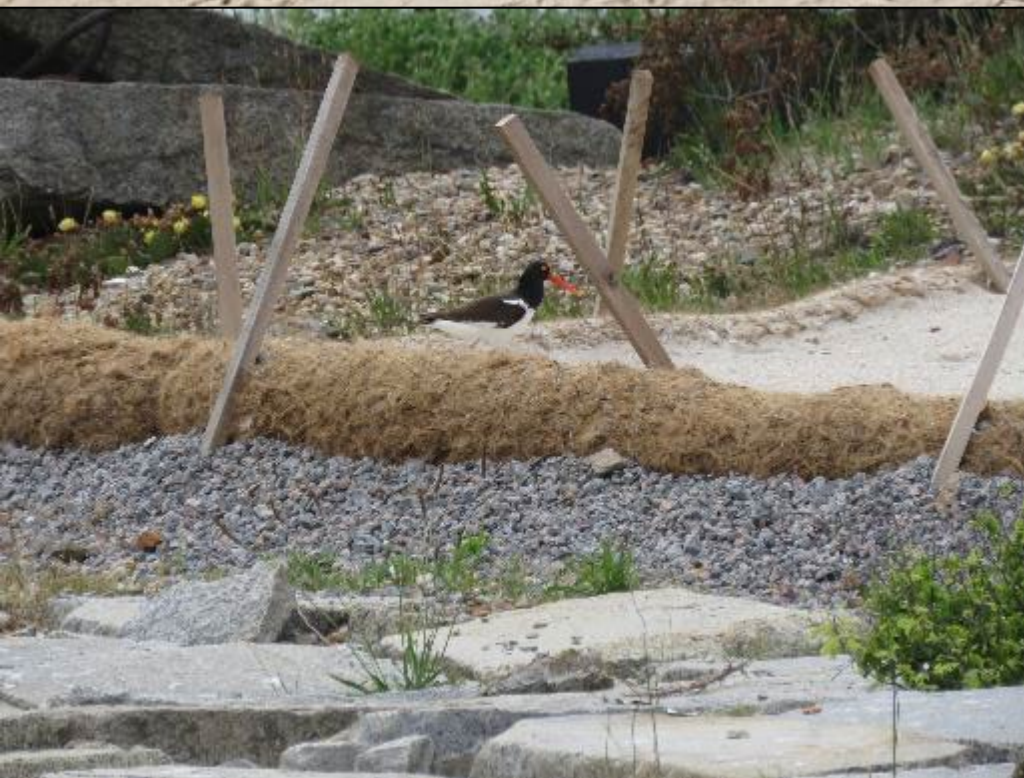
- ~ Five-acre state and national historic military landmark.
- Decommissioned and turned over to the Commonwealth in 1953.
- Managed as a park by the City of Hampton until 2020.



FORT WOOL CONVERSION

- Removal of grass and trees from the parade grounds.
- Installation of erosion and sediment control structures and bird closure signs.
- Placement of sand/gravel substrate on the parade grounds.
- Installation of barriers at building openings and over turret wells to prevent adults and chicks from entering hazardous spaces.
- Removal of predatory Norway rats.

Created 1.5 acres of nesting habitat!



CREATION OF ADDITIONAL NESTING HABITAT ON BARGES

- Leased and secured flat-topped barges in the embayment between South Island and Ft. Wool.
- Placed sand/gravel substrate on the topsides of the barges.
- Installed seabird chick barriers on the topsides of wall-less barges.
- Placed wooden shelters on the topsides to provide cover and shade for flightless young.

Created an additional acre of habitat!



2020: Seven barges

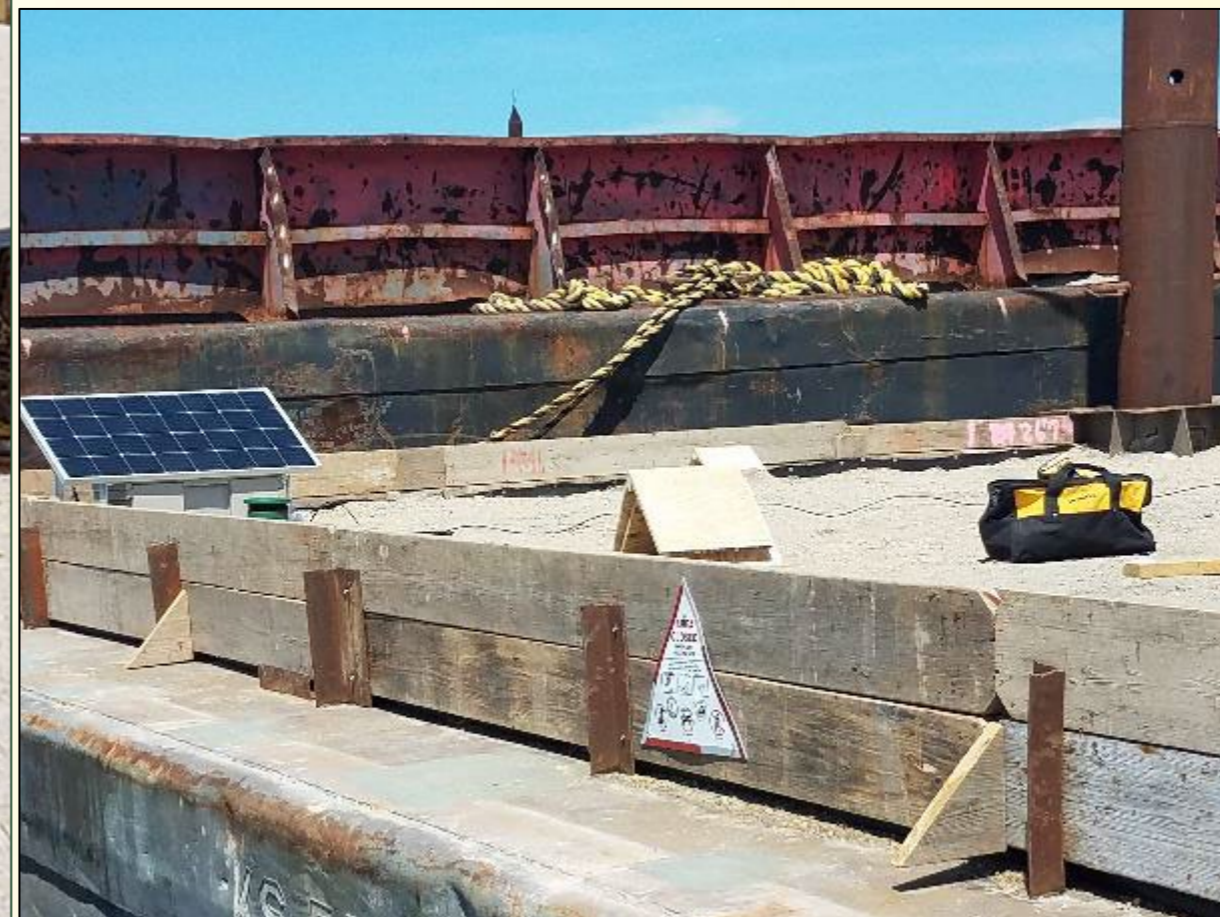


2021 and 2022: Three barges



SOCIAL ATTRACTION ON FT. WOOL AND THE BARGES

Placed audio lures and decoys on Ft. Wool and the barges to attract breeding terns & skimmers.



FT. WOOL & BARGES MONITORING EFFORTS

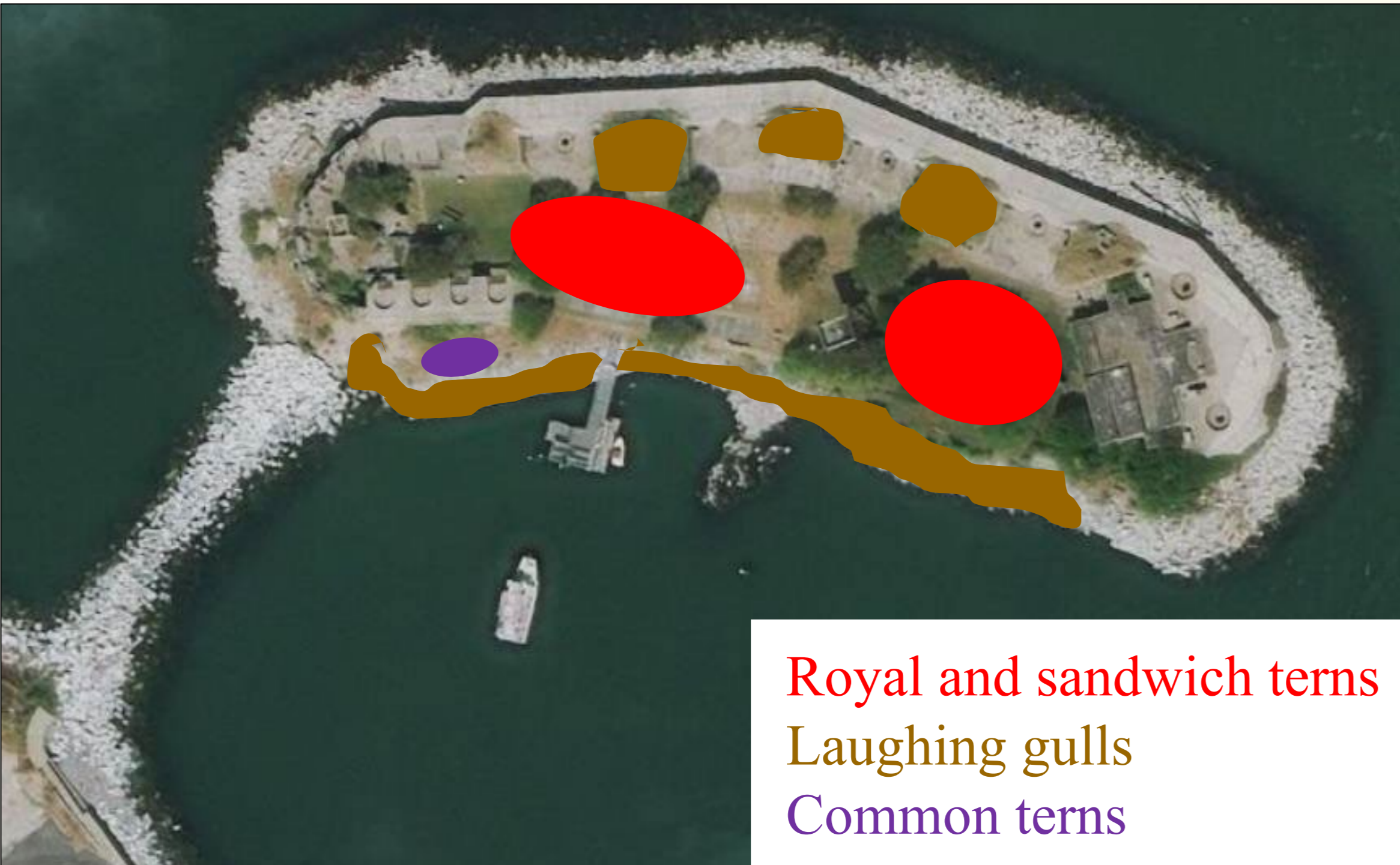
Contracted with the Virginia Tech Shorebird Program to:

1. Install and maintain the seabird attraction equipment and remote monitoring cameras.
2. Conduct weekly incubating adult and chick counts, by species.
3. Band tern, Black Skimmer and Laughing Gull adults and young.
4. Conduct weekly resighting surveys of banded adults and young to obtain on-site survival and breeding productivity estimates.

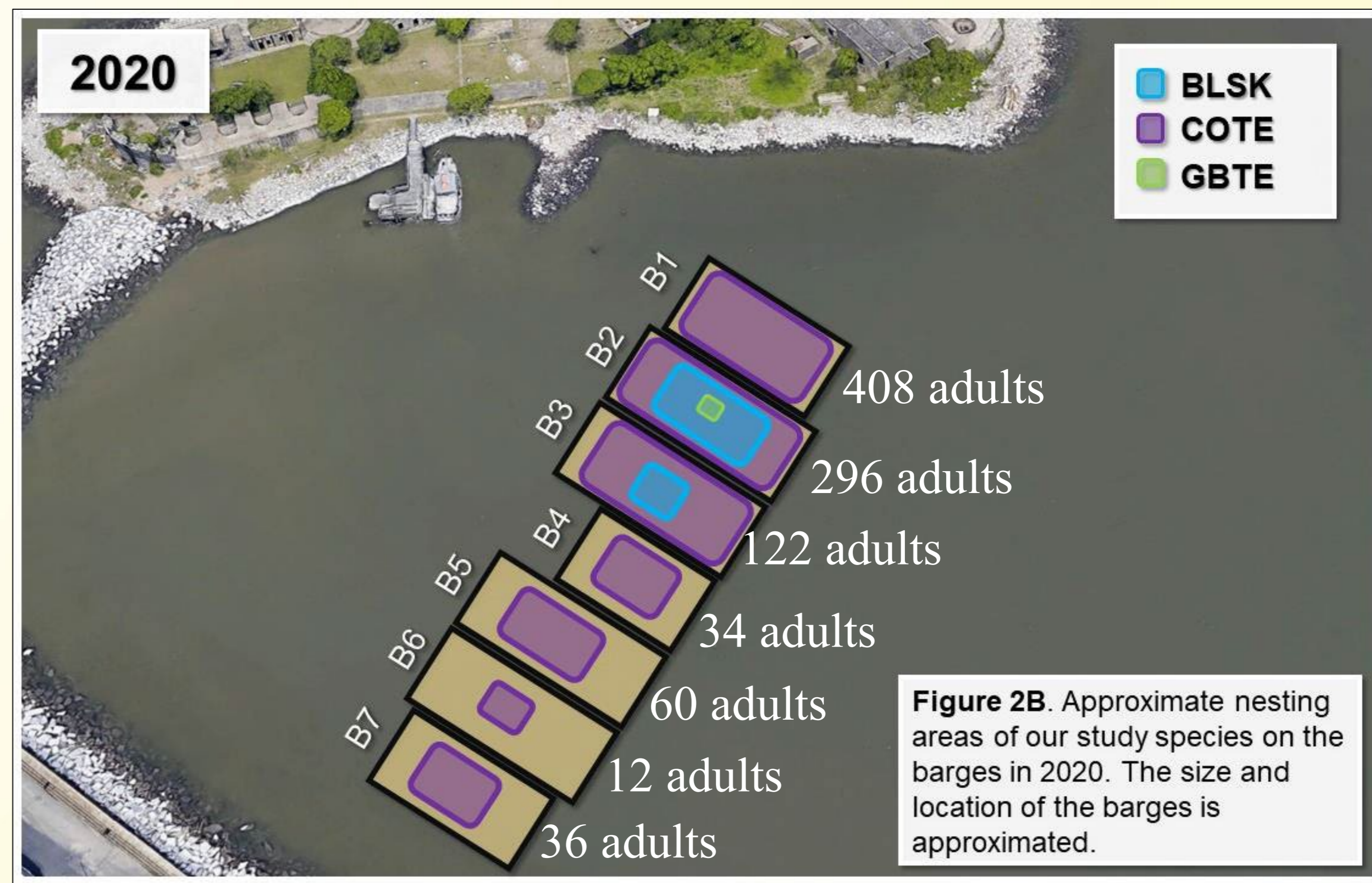


2020 BREEDING DISTRIBUTION, BY SPECIES¹

Ft. Wool



Barges

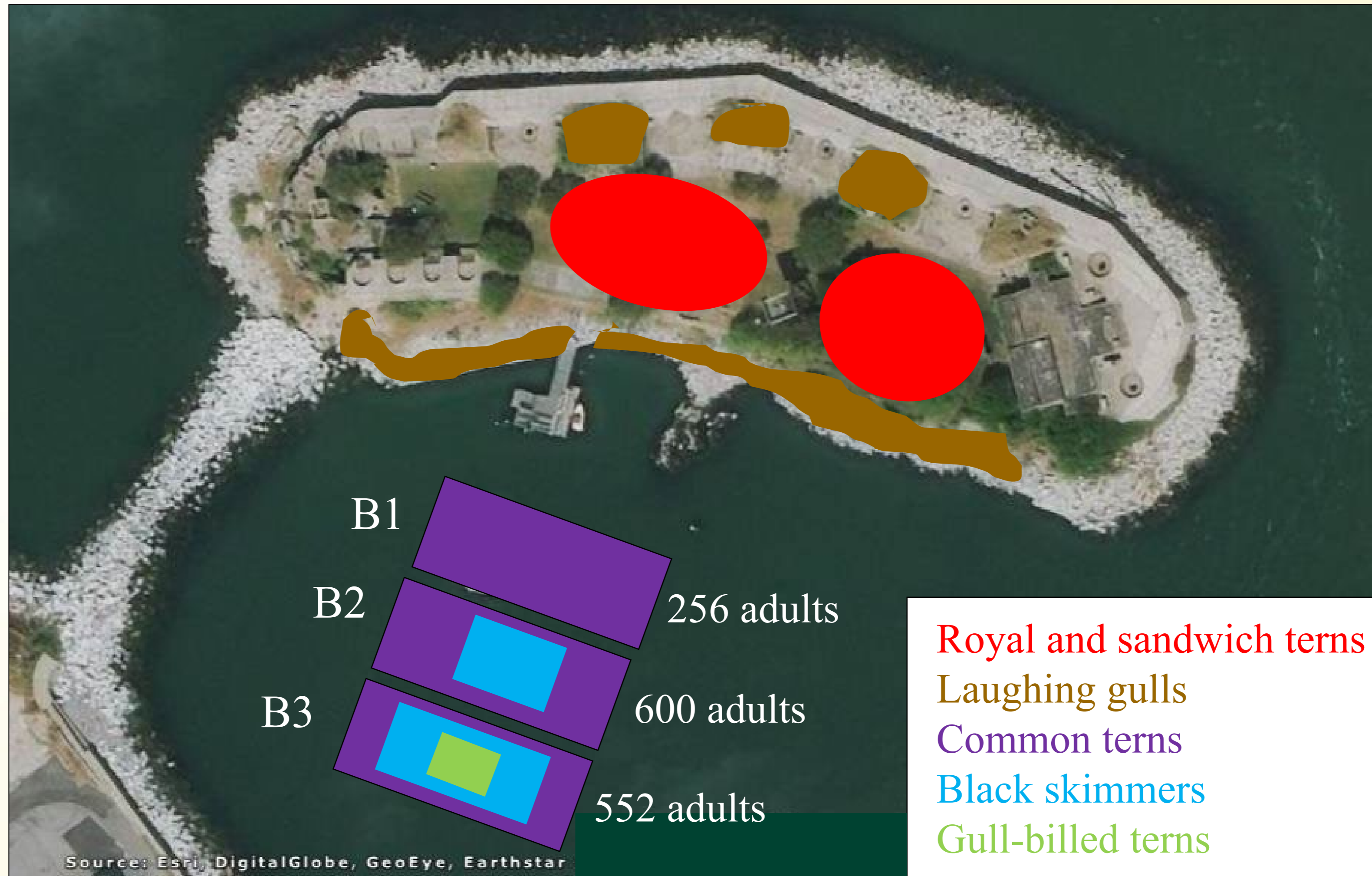


BLSK = Black skimmer; COTE = Common tern; GBTE = Gull-billed tern.



¹Hunt *et al.*, 2021

2021 BREEDING DISTRIBUTION, BY SPECIES¹



Barge use
↑
by 45%

¹Hunt *et al.*, 2022



2022 PRELIMINARY BREEDING DISTRIBUTION, BY SPECIES¹



Barge use
↓
by 7%

- Royal and sandwich terns
- Laughing gulls
- Common terns
- Black skimmers
- Gull-billed terns

¹Data provided by VA Tech Shorebird Program



GENERAL CONCLUSIONS

- Results suggest efforts to provide alternative nesting habitat on Ft. Wool and the barges has been a success.
- Overall breeding abundance estimates on Ft. Wool and the barges increased over the three years.
- Success can be attributed to the lack of human disturbance, abundant food in surrounding waters and a lack of mammalian predators.
- It will be huge challenge to relocate the colonies from this bird magnet to a new artificial island.

