



SOUTHEAST GAP ANALYSIS PROJECT



Species Modeling Report

Gull-billed Tern

Sterna nilotica

Taxa: Avian

Order: Charadriiformes

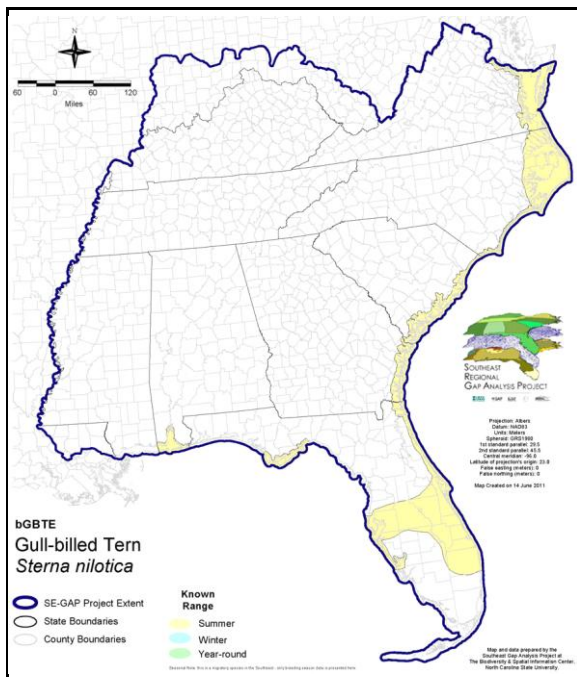
Family: Laridae

SE-GAP Spp Code: **bGBTE**

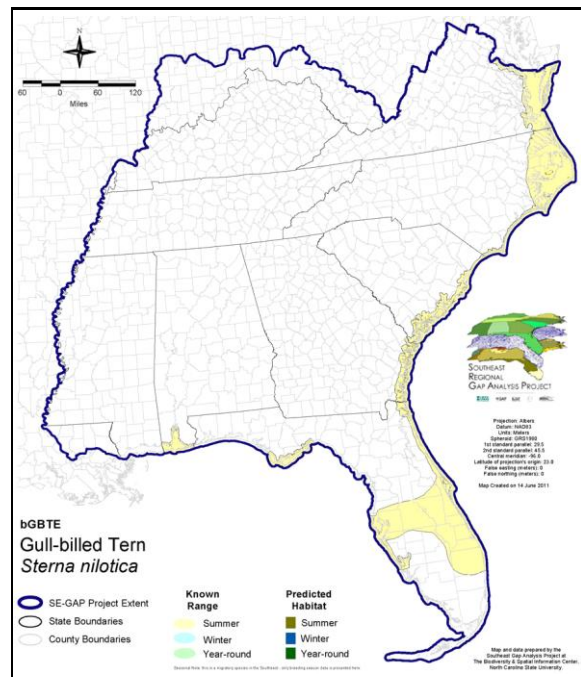
ITIS Species Code: 176926

NatureServe Element Code: ABNNM08010

KNOWN RANGE:



PREDICTED HABITAT:



Range Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_bGBTE.pdf

Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_bGBTE.pdf

GAP Online Tool Link: <http://www.gapservice.ncsu.edu/segap/segap/index2.php?species=bGBTE>

Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/bGBTE_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: AL (SP), CA (None), GA (T), KY (N), MD (E), NC (T), NC (T), NJ (SC), NY (PB), RI (Not Listed), VA (LT), VA (LT), QC (Non suivie)

NS Global Rank: G5

NS State Rank: AL (S2B,S4N), AZ (SNA), CA (S1), CT (SNA), DC (SNA), DE (SHB,S2N), DE (SHB,S2N), FL (S2), GA (S1), KY (SNA), LA (S2B,S2S3N), MD (S1B), ME (SNA), MS (S1B,S3S4N), NC (S3B), NC (S3B), NJ (S3B,S3N), NY (S1), RI (SNA), SC (SNR), TX (S4B), VA (S2B), VA (S2B), NB (SNA), NS (SNA), QC (SNA)

SUMMARY OF PREDICTED HABITAT BY MANAGMENT AND GAP PROTECTION STATUS:

	US FWS		US Forest Service		Tenn. Valley Author.		US DOD/ACOE	
	ha	%	ha	%	ha	%	ha	%
Status 1	32,985.3	7	0.0	0	0.0	0	0.0	0
Status 2	14,829.5	3	55.0	< 1	0.0	0	0.0	0
Status 3	617.8	< 1	332.8	< 1	0.0	0	9,929.2	2
Status 4	0.0	0	0.0	0	0.0	0	4.6	< 1
Total	48,432.5	11	387.8	< 1	0.0	0	9,933.8	2
	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	278.0	< 1	886.2	< 1	3,580.3	< 1
Status 2	0.0	0	24,566.0	5	21,128.1	5	0.0	0
Status 3	0.0	0	1,304.6	< 1	0.0	0	0.0	0
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	0.0	0	26,148.6	6	22,014.4	5	3,580.3	< 1
	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	1.4	< 1	0.0	0	0.0	0
Status 2	0.0	0	0.0	0	24,191.7	5	0.0	0
Status 3	0.0	0	6,307.8	1	3,283.0	< 1	827.3	< 1
Status 4	0.0	0	0.0	0	424.8	< 1	0.0	0
Total	0.0	0	6,309.2	1	27,899.6	6	827.3	< 1
	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	335.7	< 1	0.0	0	0.0	0
Status 2	8,952.8	2	16,023.6	4	0.0	0	0.0	0
Status 3	0.0	0	0.0	0	0.0	0	2.8	< 1
Status 4	0.0	0	0.0	0	0.8	< 1	0.0	0
Total	8,952.8	2	16,359.3	4	0.8	< 1	2.8	< 1
	Private Land - No Res.		Water		Overall Total			
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	38,066.9 8			
Status 2	0.0	0	0.0	0	109,746.7 24			
Status 3	0.0	0	0.0	0	22,605.3 5			
Status 4	278,978.8	61	4,098.6	< 1	283,932.4 63			
Total	278,978.8	61	4,098.6	< 1	454,351.2 100			

GAP Status 1: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a natural state within which disturbance events (of natural type, frequency, and intensity) are allowed to proceed without interference or are mimicked through management.

GAP Status 2: An area having permanent protection from conversion of natural land cover and a mandated management plan in operation to maintain a primarily natural state, but which may receive use or management practices that degrade the quality of existing natural communities.

GAP Status 3: An area having permanent protection from conversion of natural land cover for the majority of the area, but subject to extractive uses of either a broad, low-intensity type or localized intense type. It also confers protection to federally listed endangered and threatened species throughout the area.

GAP Status 4: Lack of irrevocable easement or mandate to prevent conversion of natural habitat types to anthropogenic habitat types. Allows for intensive use throughout the tract. Also includes those tracts for which the existence of such restrictions or sufficient information to establish a higher status is unknown.

PREDICTED HABITAT MODEL(S):

Summer Model:

Habitat Description: Nests on sandy beaches or on sandy barrier islands in coastal waters (Parnell et al. 1995). In Florida, according to the FL BBA, nests in phosphate mines of Hillsborough and Polk counties and agricultural fields in Palm Beach county (Florida Fish and Wildlife Conservation Commission 2003). Forages primarily over salt marshes and beaches (Parnell et al. 1995). M. Rubino, 30dec04.

Customized Model: In Florida (only), this species is known to nest on phosphate mines in Polk and Hillsborough counties and agricultural fields of Palm Beach county. Limit modeling for these map units to these counties. Do NOT limit with water buffer in central Florida.

I began implementing the hand modeling aspects for this species by including agricultural areas in Palm Beach County per FL BBA notes. However, the area southeast of Lake Okeechobee in Palm Beach County is a large ag region of lettuce, tomatoes, celery and some citrus crops. FL BBA maps show a single record in this region. Adding the entire agricultural landscape here as potential habitat I think would be a mistake for this species' model, especially since this species prefers to nest on sandy or shell bar substrates. The single record does not fit GAP criteria of confirmed breeding 5 of the last 10 years. So, I eliminated this land use type from the model. However, phosphate mines would provide suitable nesting substrates, so I included these areas in Polk and Hillsborough Counties per the FL BBA account. MJR 31aug07.

Hydrography Mask:

Brackish/Saltwater Only

Utilizes open water features with buffers of 500m from and 500m into selected water features.

Utilizes wet vegetation features with buffer of unlimited into selected vegetation features.

Selected Map Units:

Functional Group	Map Unit Name
Anthropogenic	Quarry/Strip Mine/Gravel Pit
Beach	Atlantic Coastal Plain Northern Sandy Beach
Beach	Atlantic Coastal Plain Sea Island Beach
Beach	Atlantic Coastal Plain Southern Beach
Beach	Florida Panhandle Beach Vegetation
Beach	South Florida Shell Hash Beach
Beach	Southeast Florida Beach
Beach	Southwest Florida Beach
Beach	Unconsolidated Shore (Beach/Dune)
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Central Salt and Brackish Tidal Marsh
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Embayed Region Tidal Salt and Brackish Marsh
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Indian River Lagoon Tidal Marsh
Brackish Tidal Marsh & Wetland	Atlantic Coastal Plain Northern Tidal Salt Marsh
Brackish Tidal Marsh & Wetland	Florida Big Bend Salt-Brackish Tidal Marsh
Brackish Tidal Marsh & Wetland	Mississippi Sound Salt and Brackish Tidal Marsh
Brackish Tidal Marsh & Wetland	South Florida Everglades Sawgrass Marsh
Brackish Tidal Marsh & Wetland	Southwest Florida Perched Barriers Salt Swamp and Lagoon - Marsh Modifier
Coastal Dune & Freshwater Wetland	Atlantic and Gulf Coastal Plain Interdunal Wetland
Coastal Dune & Freshwater Wetland	Atlantic Coastal Plain Northern Dune and Maritime Grassland
Coastal Dune & Freshwater Wetland	Atlantic Coastal Plain Southern Dune and Maritime Grassland
Coastal Dune & Freshwater Wetland	East Gulf Coastal Plain Dune and Coastal Grassland
Coastal Dune & Freshwater Wetland	Southwest Florida Dune and Coastal Grassland
Water	Open Water (Brackish/Salt)

CITATIONS: American Ornithologists' Union (AOU), Committee on Classification and Nomenclature. 1983. Check-list of North American Birds. Sixth Edition. American Ornithologists' Union, Allen Press, Inc., Lawrence, Kansas.

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