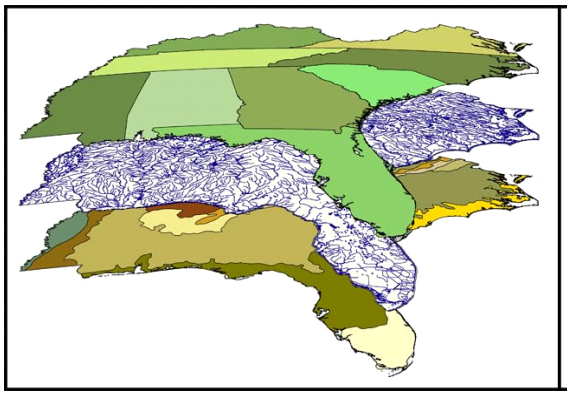


SOUTHEAST GAP ANALYSIS PROJECT

Species Modeling Report

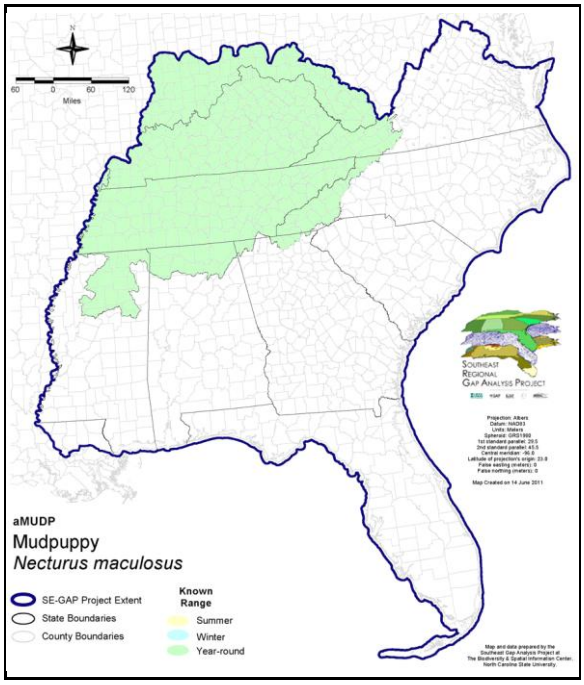
Mudpuppy

Necturus maculosus

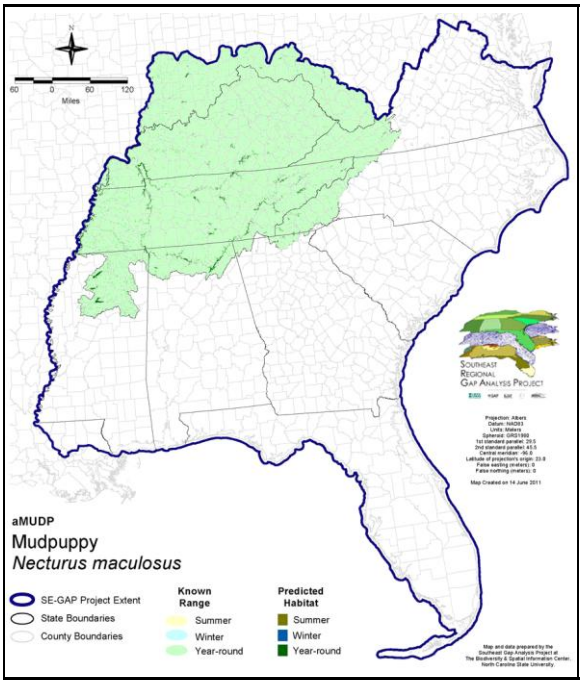
Taxa: Amphibian
Order: Caudata
Family: Proteidae

SE-GAP Spp Code: **aMUDP**
ITIS Species Code: 173630
NatureServe Element Code: AAAAE01040

KNOWN RANGE:



PREDICTED HABITAT:



Range Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_aMUDP.pdf
Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_aMUDP.pdf
GAP Online Tool Link: http://www.gapserve.ncsu.edu/segap/segap/index2.php?species=aMUDP
Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/aMUDP_se00.zip

PROTECTION STATUS:

Reported on March 14, 2011

Federal Status: ---

State Status: IA (T), IL (LT), IN (SSC), KY (N), MD (X), MS (Non-game species in need of management), NC (SC), NY (GN), RI (Not Listed), WI (SC/H), ON (NAR), QC (Non suivie)

NS Global Rank: G5

NS State Rank: AL (S4), AR (S5), CT (SNR), GA (S1), IA (S2), IL (S5), IN (S2), KS (S5), KY (S4), LA (S4), MA (SNA), MD (S1), ME (SNA), MI (S5), MN (SNR), MO (SU), MS (S4), NC (S1), ND (S4), NH (SNA), NY (S4), OH (S4), OK (S3), PA (S3S4), RI (SNA), SD (SH), TN (S5), VA (S2), VT (S2), WI (S3S4), WV (S4), MB (S3S4), ON (S4), QC (S4)

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	277.1	< 1	228.1	< 1	0.0	0	0.0	0
Status 2	989.5	< 1	795.4	< 1	0.0	0	36.8	< 1
Status 3	31.1	< 1	6,102.9	4	1,052.5	< 1	1,091.3	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	1,297.7	< 1	7,126.4	5	1,052.5	< 1	1,128.2	< 1

	US Dept. of Energy		US Nat. Park Service		NOAA		Other Federal Lands	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	2,193.7	1	0.0	0	0.0	0
Status 2	0.0	0	37.8	< 1	0.0	0	0.0	0
Status 3	166.1	< 1	335.3	< 1	0.0	0	1.3	< 1
Status 4	0.0	0	0.0	0	0.0	0	0.0	0
Total	166.1	< 1	2,566.7	2	0.0	0	1.3	< 1

	Native Am. Reserv.		State Park/Hist. Park		State WMA/Gameland		State Forest	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	1.5	< 1	0.7	< 1	0.0	0
Status 2	0.0	0	0.0	0	4,089.4	3	0.0	0
Status 3	130.1	< 1	329.0	< 1	1,220.6	< 1	51.7	< 1
Status 4	0.0	0	0.0	0	29.8	< 1	0.0	0
Total	130.1	< 1	330.5	< 1	5,340.5	3	51.7	< 1

	State Coastal Reserve		ST Nat.Area/Preserve		Other State Lands		Private Cons. Easemt.	
	ha	%	ha	%	ha	%	ha	%
Status 1	0.0	0	11.4	< 1	0.0	0	0.0	0
Status 2	0.0	0	642.2	< 1	0.8	< 1	25.1	< 1
Status 3	0.0	0	6.8	< 1	28.7	< 1	13.0	< 1
Status 4	0.0	0	0.0	0	1.5	< 1	0.0	0
Total	0.0	0	660.5	< 1	31.1	< 1	38.1	< 1

	Private Land - No Res.		Water		Overall Total	
	ha	%	ha	%	ha	%
Status 1	0.0	0	0.0	0	2,712.5	2
Status 2	0.0	0	0.0	0	6,617.1	4
Status 3	0.0	0	0.0	0	10,560.2	11
Status 4	124,553.8	80	4,332.9	3	128,947.8	83
Total	124,553.8	80	4,332.9	3	148,837.6	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):

Year-round Model:

Habitat Description: Mudpuppies are completely aquatic salamanders that can be found in clear or turbid waters of medium and large streams and in mud-bottomed ponds, lakes and other reservoirs (Martof et al. 1980, Petranka 1998). Mudpuppies prefer locations possessing abundant underwater cover in the form of rocks, logs, leaf litter or other debris. They are bottom dwellers and are often under rocks, debris, and bank overhangs during daylight. They may move into slack water shallows in late fall and early winter and may move upstream to spawn (Green and Pauley 1987). Their Eggs are attached to the undersides of objects in water. They lay a clutch of about 20-200 eggs in spring or early summer. The eggs hatch in 5-9 weeks and the female may attend eggs until hatching. Paedomorphic, attains sexual maturity in 4-6 years. S. Smith 18Feb05

Hydrography Mask:

Freshwater Only

Utilizes flowing water features with buffer of unlimited into selected water features.

Utilizes open water features with buffer of unlimited into selected water features.

Selected Map Units:

Functional Group	Map Unit Name
Water	Open Water (Fresh)
Wetlands	Central Appalachian Floodplain - Forest Modifier
Wetlands	Central Appalachian Floodplain - Herbaceous Modifier
Wetlands	Central Appalachian Riparian - Forest Modifier
Wetlands	Central Appalachian Riparian - Herbaceous Modifier
Wetlands	Central Interior Highlands and Appalachian Sinkhole and Depression Pond
Wetlands	Cumberland Riverscour
Wetlands	East Gulf Coastal Plain Large River Floodplain Forest - Forest Modifier
Wetlands	East Gulf Coastal Plain Large River Floodplain Forest - Herbaceous Modifier
Wetlands	East Gulf Coastal Plain Northern Depression Pondshore
Wetlands	East Gulf Coastal Plain Small Stream and River Floodplain Forest
Wetlands	Lower Mississippi River Bottomland and Floodplain Forest
Wetlands	Lower Mississippi River Bottomland Depressions - Forest Modifier
Wetlands	Mississippi River Low Floodplain (Bottomland) Forest
Wetlands	Mississippi River Riparian Forest
Wetlands	North-Central Appalachian Seepage Fen
Wetlands	South-Central Interior Large Floodplain - Forest Modifier
Wetlands	South-Central Interior Large Floodplain - Herbaceous Modifier
Wetlands	South-Central Interior Small Stream and Riparian

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Compiled: 15 September 2011

This data was compiled and/or developed by the Southeast GAP Analysis Project at The Biodiversity and Spatial Information Center, North Carolina State University.