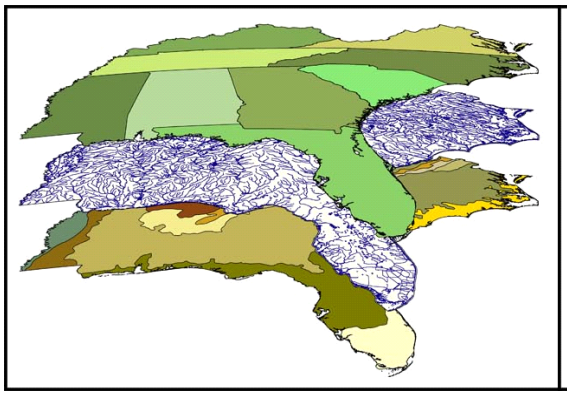


# SOUTHEAST GAP ANALYSIS PROJECT

# Species Modeling Report

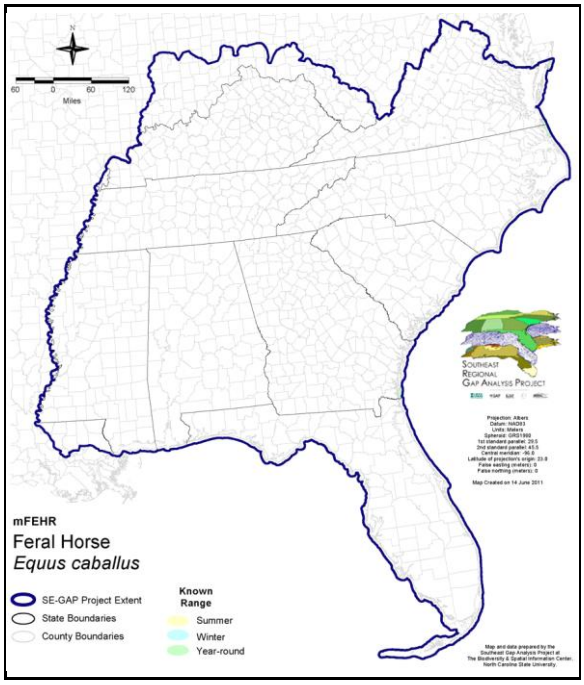
## Feral Horse

*Equus caballus*

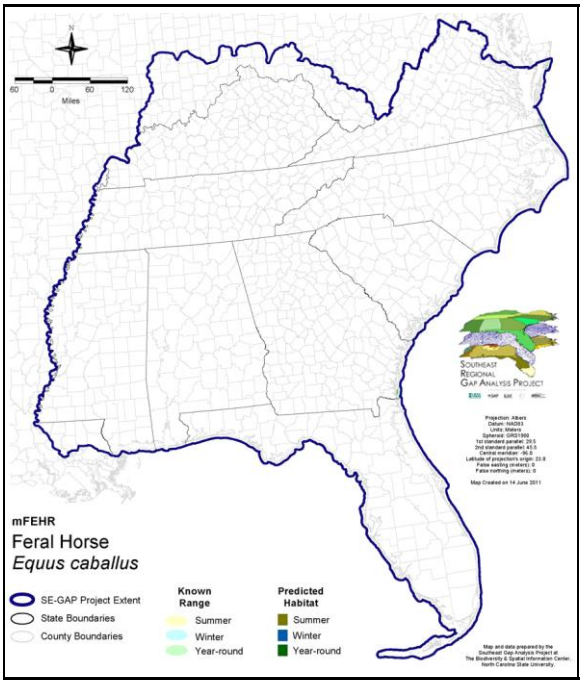
Taxa: Mammalian
Order: Perissodactyla
Family: Equidae

SE-GAP Spp Code: **mFEHR**
ITIS Species Code: 180691
NatureServe Element Code: AMATA01010

**KNOWN RANGE:**




**PREDICTED HABITAT:**




Range Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Range_mFEHR.pdf
Predicted Habitat Map Link: http://www.basic.ncsu.edu/segap/datazip/maps/SE_Dist_mFEHR.pdf
GAP Online Tool Link: http://www.gapserve.ncsu.edu/segap/segap/index2.php?species=mFEHR
Data Download: http://www.basic.ncsu.edu/segap/datazip/region/vert/mFEHR_se00.zip

**PROTECTION STATUS:**

Reported on March 14, 2011

Federal Status: ---

State Status: RI (Not Listed), UT (None), BC (7 (2005)), NS (7 exotic)

NS Global Rank: GNA

NS State Rank: AZ (SNA), CA (SNA), CO (SNA), GA (SNA), ID (SNA), MD (SNA), MT (SNA), NC (SNA), NM (SNA), NV (SNA), OR (SNA), RI (SNA), TX (SNA), UT (SNA), VA (SNA), WY (SNA), BC (SNA), NS (SNA), YT (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 | 655.8 | 8 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Status 2 | 1,247.7 | 15 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Status 3 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Status 4 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Total | 1,903.5 | 23 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |

| | US Dept. of Energy | | US Nat. Park Service | | NOAA | | Other Federal Lands | |
|---|---|---|---|---|---|---|---|---|
| | ha | % | ha | % | ha | % | ha | % |
| Status 1 | 0.0 | 0 | 1,857.8 | 22 | 0.0 | 0 | 0.0 | 0 |
| Status 2 | 0.0 | 0 | 1,992.6 | 24 | 30.2 | < 1 | 0.0 | 0 |
| Status 3 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Status 4 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Total | 0.0 | 0 | 3,850.4 | 46 | 30.2 | < 1 | 0.0 | 0 |

| | Native Am. Reserv. | | State Park/Hist. Park | | State WMA/Gameland | | State Forest | |
|---|---|---|---|---|---|---|---|---|
| | ha | % | ha | % | ha | % | ha | % |
| Status 1 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Status 2 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Status 3 | 0.0 | 0 | 35.2 | < 1 | 4.4 | < 1 | 0.0 | 0 |
| Status 4 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Total | 0.0 | 0 | 35.2 | < 1 | 4.4 | < 1 | 0.0 | 0 |

| | State Coastal Reserve | | ST Nat.Area/Preserve | | Other State Lands | | Private Cons. Easemt. | |
|---|---|---|---|---|---|---|---|---|
| | ha | % | ha | % | ha | % | ha | % |
| Status 1 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Status 2 | 0.5 | < 1 | 579.1 | 7 | 0.0 | 0 | 0.0 | 0 |
| Status 3 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Status 4 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 | 0.0 | 0 |
| Total | 0.5 | < 1 | 579.1 | 7 | 0.0 | 0 | 0.0 | 0 |

| | Private Land - No Res. | | Water | | Overall Total | |
|---|---|---|---|---|---|---|
| | ha | % | ha | % | ha | % |
| Status 1 | 0.0 | 0 | 0.0 | 0 | 2,513.6 | 30 |
| Status 2 | 0.0 | 0 | 0.0 | 0 | 3,849.9 | 46 |
| Status 3 | 0.0 | 0 | 0.0 | 0 | 39.6 | < 1 |
| Status 4 | 1,654.8 | 20 | 244.8 | 3 | 1,899.6 | 23 |
| Total | 1,654.8 | 20 | 244.8 | 3 | 8,302.8 | 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: In Georgia, wild horses are encountered only on Cumberland Island, where there is a population resulting from one or more past releases. Observations indicate that these horses utilize multiple habitat types, all characterized by the presence of grass for grazing. The other population in the southeast is on Assetegue Island. In the western US feral horses breed in, shrubby sagebrush plains and mountains, juniper woodland; ranges include grazing area, shelter, water, and shade (Slade and Godfrey 1982, Miller 1983).

Quoted from state habitat notes - K. Cook - 6-21-05

Selected Map Units:

| Functional Group | Map Unit Name |
|---|---|
| Anthropogenic | Developed Open Space |
| Anthropogenic | Pasture/Hay |
| Anthropogenic | Successional Grassland/Herbaceous |
| Anthropogenic | Successional Grassland/Herbaceous (Other) |
| Anthropogenic | Successional Grassland/Herbaceous (Utility Swath) |
| Anthropogenic | Successional Shrub/Scrub (Clear Cut) |
| Anthropogenic | Successional Shrub/Scrub (Other) |
| Anthropogenic | Successional Shrub/Scrub (Utility Swath) |
| Brackish Tidal Marsh & Wetland | Atlantic Coastal Plain Embayed Region Tidal Salt and Brackish Marsh |
| Brackish Tidal Marsh & Wetland | Atlantic Coastal Plain Northern Sea-Level Fen |
| Coastal Dune & Freshwater Wetland | Atlantic Coastal Plain Northern Dune and Maritime Grassland |
| Coastal Dune & Freshwater Wetland | Atlantic Coastal Plain Southern Dune and Maritime Grassland |
| Forest/Woodland | Atlantic Coastal Plain Fall-Line Sandhills Longleaf Pine Woodland - Loblolly Modifier |
| Forest/Woodland | Atlantic Coastal Plain Fall-line Sandhills Longleaf Pine Woodland - Scrub/Shrub Understory Modifier |
| Forest/Woodland | Atlantic Coastal Plain Northern Maritime Forest |
| Forest/Woodland | Atlantic Coastal Plain Southern Maritime Forest |
| Freshwater Tidal Marsh & Wetland | Atlantic Coastal Plain Central Fresh-Oligohaline Tidal Marsh |
| Freshwater Tidal Marsh & Wetland | Atlantic Coastal Plain Embayed Region Tidal Freshwater Marsh |
| Freshwater Tidal Marsh & Wetland | Atlantic Coastal Plain Northern Fresh and Oligohaline Tidal Marsh |
| Wetlands | Atlantic Coastal Plain Depression Pondshore |
| Wetlands | Atlantic Coastal Plain Northern Pondshore |
| Wetlands | Southern Coastal Plain Hydric Hammock |
| Wetlands | Southern Coastal Plain Nonriverine Cypress Dome |

## CITATIONS:


Berger, J. 1986. Wild horses of the Great Basin. Social competition and population size. Univ. Chicago Press, Chicago. xxii + 326 pp.

Bowling, A. T., and R. W. Touchberry. 1990. Parentage of Great Basin feral horses. J. Wildl. Manage. 54:424-429.

Boyles, J. S. 1986. Managing America's wild horses and burros. J. Equine Vet. Sci. 6:261-265.

Eberhardt, L. L., A. K. Majorowicz, and J. A. Wilcox. 1982. Apparent rates of increase for two feral horse herds. J. Wildl. Manage. 46:367-374.

Ganskopp, D., and M. Vavra. 1986. Habitat use by feral horses in the northern sagebrush steppe. J. Range Manage. 39:207-212.

Garrot, R. A., and L. Taylor. 1990. Dynamics of a feral horse population in Montana. J. Wildl. Manage. 54:603-612.

Garrott, R. A. 1991. Feral horse fertility control:potential and limitations. Wildl. Soc. Bull. 19:52-58.

Garrott, R. A. 1991. Sex ratios and differential survival of feral horses. J. Anim. Ecol. 60:929-937.

Garrott, R. A., D. B. Siniff, and L. L. Eberhardt. 1991. Growth rates of feral horse populations. J. Wildl. Manage. 55:641-648.

Garrott, R. A., T. C. Eagle, and E. D. Plotka. 1991. Age-specific reproduction in feral horses. Can. J. Zool. 69:738-743.

Goodloe, R. B., et al. 1991. Genetic variation and its management implications in eastern U.S. feral horses. J. Wildl. Manage. 55:412-421.

Jones, J. K., Jr., et al. 1992. Revised checklist of North American mammals north of Mexico, 1991. Occas. Pap. Mus., Texas Tech Univ. (146):1-23.

Kirkpatrick, J. F., and J. W. Turner, Jr. 1991. Compensatory reproduction in feral horses. J. Wildl. Manage. 55:649-652.

Kirkpatrick, J. F., I. K. M. Liu, and J. W. Turner, Jr. 1990. Remotely-delivered immunocontraception in feral horses. Wildl. Soc. Bull. 18:326-330.

Kramer, R. J. 1971. Hawaiian land mammals. Charles E. Tuttle Co., Rutland, Vermont, and Tokyo, Japan.

Miller R. 1983. Seasonal movements and home ranges of feral horse bands in Wyoming's Red Desert. Journal of Range Management 36(2):199-201.

Monagan, D. 1982. Horse of a different culture:when horses return to the wild, does their ancient nature reappear? Science 82 3(4):46-53.

Seal, U. S., and E. D. Plotka. 1983. Age-specific pregnancy rates in feral horses. J. Wildl. Manage. 47:422-429.

Slade, L. M., and E. B. Godfrey. 1982. Wild horses. Pages 1089-1098 in Chapman, J. A., and G. A. Feldhamer, eds. Wild mammals of North America. Johns Hopkins Univ. Press, Baltimore.

Tomich, P. Q. 1986. Mammals in Hawai'i. A synopsis and notational bibliography. Second edition. Bishop Museum Press, Honolulu. 375 pp.

Turner, J. W., Jr., and J. F. Kirkpatrick. 1991. New developments in feral horse contraception and their potential application to wildlife. Wildl. Soc. Bull. 19:350-359.

Waring, G. T. 1983. Horse behavior:the behavioral traits and adaptations of domestic and wild horses, including ponies. Park Ridge:Noyes. 292 pp.

Wilson, D. E., and D. M. Reeder (editors). 1993. Mammal Species of the World:a Taxonomic and Geographic Reference. Second Edition. Smithsonian Institution Press, Washington, DC. xviii + 1206 pp.

Woodward, S. L., and D. P. Sponenberg. 1992. Feral livestock in America:identification of populations important for the conservation of genetic diversity. Abstract, 6th Annual Meeting of the Society for Conservation Biology, p. 148.

Zarn, M., T. Heeler, and K. Collins. 1977. Wild free roaming horses--status of present knowledge. USDI Bureau ofLand Manage., USDA For. Serv., DSC Federal Center, Tech. Note 294.

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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.