

Supplemental Map Information (User Report) Outline

Project ID: R04Y10P11 NC_and SC_Refuge_Updates

Project Title or Area: NC and SC Coastal Refuges

Source Imagery (type, scale and date):

North Carolina (excluding Currituck and Mackay);

North Carolina delineation, except for Currituck and Mackay refuges, was completed using 2008 true color 1-meter resolution imagery from the National Agriculture Imagery Program (NAIP) (<http://datagateway.nrcs.usda.gov/>) as our primary imagery source, and 1998 1-meter resolution CIR DOQQ imagery published by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) as a secondary imagery source (ftp://204.211.239.203/outgoing/raster/doqq/cir_1998/image/).

Currituck and Mackay;

We used 2009 true color 1-meter resolution imagery from the National Agriculture Imagery Program (NAIP) (<http://datagateway.nrcs.usda.gov/>) as our primary imagery source, and 1998 1-meter resolution CIR DOQQ imagery published by the U.S. Department of Agriculture's Natural Resources Conservation Service (NRCS) as a secondary imagery source (ftp://204.211.239.203/outgoing/raster/doqq/cir_1998/image/).

South Carolina;

We used 2009 true color 1-meter resolution imagery from the National Agriculture Imagery Program (NAIP) (<http://datagateway.nrcs.usda.gov/>) as our primary imagery source, and 2006 1-meter resolution CIR DOQQ imagery from the USGS (https://www.dnr.sc.gov/pls/gisdata/download_data.login) as a secondary imagery source.

Collateral Data (include any digital data used as collateral):

Older NWI mapping, SSURGO Soil Data, and NHD data was used as well (<http://www.csc.noaa.gov/digitalcoast/>).

Inventory Method (original mapping, map update, techniques used):

We then made changes to the base data through heads-up photo interpretation of the most recent imagery available in a GIS. Wetlands were identified and delineated at a scale of approximately 1:5,000. Older NWI data was used to identify additional wetland locations.

Classification (Cowardin wetlands, riparian, uplands, hydrogeomorphic, etc.):

We used the Cowardin *et al.* (1979) system for wetlands and deepwater habitats.

Data Limitations:

None

General description of the Project Area:

Land-surface form.--This province comprises the flat and irregular Atlantic and Gulf Coastal Plains down to the sea. Well over 50 percent of the area is gently sloping. Local relief is less than 300 ft (90 m), although some areas are gently rolling. Most of the region's numerous streams are sluggish; marshes, swamps, and lakes are numerous.

Climate.--The climate regime is equable, with a small to moderate annual temperature range. Average annual temperature is 60 to 70F (16 to 21C). Rainfall is abundant and well distributed throughout the year; precipitation ranges from 40 to 60 in (1,020 to 1,530 mm) per year.

Vegetation.--Temperate rainforest, also called temperate evergreen forest or laurel forest, is typical in this province. Temperate rainforest has fewer species of trees than its equatorial or tropical counterparts, and hence larger populations of individual species. Trees are not as tall here as in low-latitude rainforests; leaves are usually smaller and more leathery, and the leaf canopy less dense. Common species include evergreen oaks and members of the laurel and magnolia families. There is usually a well-developed lower stratum of vegetation that may

variously include tree ferns, small palms, shrubs, and herbaceous plants. Lianas and epiphytes are abundant. At higher elevations, where fog and clouds persist, the trunks and branches of trees are often sheathed in moss. A striking example of epiphyte accumulation at lower elevations is the Spanish "moss" that festoons the Evangeline oak, baldcypress, and other trees of the eastern Gulf coast.

Along the Atlantic coast, the extensive coastal marshes and interior swamps are dominated by gum and cypress. Most upland areas are covered by subclimax pine forest, which has an understory of grasses and sedges called savannas. Undrained shallow depressions in savannas form upland bogs or pocosins, in which evergreen shrubs predominate.

A word about the vegetation of the coastal Southeastern United States may prevent some misunderstanding. On forest maps of the United States and on numerous maps of world vegetation, this coastal zone is shown as having needleleaf evergreen or coniferous forest. It is true that sandy uplands have forests of loblolly and slash pine, and that baldcypress is a dominant tree in swamps; but such vegetation represents either xerophytic and hydrophytic forms in excessively dry or wet habitats, or second-growth forest following fire and deforestation. The climax vegetation of mesophytic habitats is the evergreen-oak and magnolia forest.

Soils.--Soils are mainly Ultisols, Spodosols, and Entisols. Temperate rainforest grows on a wide variety of upland soils, but most tend to be wet, acidic, and low in major plant nutrients. The soils are derived mainly from coastal plain sediments ranging from heavy clay to gravel, with sandy materials predominant. Silty soils occur mainly on level expanses. Sands are prevalent in hilly areas, but they also cover broad flats in central Florida.

Fauna.--This region provides habitat for a wide variety of animals. Except for a few isolated areas where black bear or the endangered Florida panther are found in small numbers, the whitetail deer is the only large indigenous mammal. Common small mammals include raccoons, opossums, flying squirrels, rabbits, and numerous species of ground-dwelling rodents.

Bobwhite and wild turkey are the principal game birds. Migratory nongame bird species are numerous, as are migratory waterfowl. Winter birds are diverse and numerous. The red-cockaded woodpecker is an endangered species.

Of the numerous species of reptiles found in this province, the American alligator is the largest.

Other discussion of mapping issues (image quality, water conditions, etc.):

The most recent 2009 NAIP imagery did not cover a small area within the Florida Keys portion of the study area. While these gaps were limited to areas of open water, updates in these sections are based off of older imagery.

References:

Cowardin, L.M., V. Carter, F.C. Goulet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. FWS/OBS-79/31. Office of Biological Services, Fish and Wildlife Service, US Department of the Interior,

Washington D.C.

US Forest Service Website, Ecosystem Provinces -

http://www.fs.fed.us/land/ecosysmgmt/colorimagemap/ecoreg1_provinces.html

(viewed 6/17/10)