

NATIONAL WETLANDS INVENTORY

LOWER SANTEE, ASHLEY, COOPER PHOTO INTERPRETATION

Georgetown NW (1 quad), Georgetown SW (15 quads),

James Island NW (5 quads), Savannah NE (3 quads),

Augusta NE (8 quads), Augusta SE (2 quads)

PHOTO INTERPRETATION CONVENTIONS

FIELD TRIP: August 8 - 13, 1993

PERSONNEL:

Charlie Storrs	-	U.S. Fish and Wildlife Service
Dennis Fowler	-	U.S. Fish and Wildlife Service
Michael Woods	-	Geonex, Inc.
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MARINE SYSTEM

The marine system encompasses the open ocean and its associated high-energy coastline.

- 1) Open water beyond the coast and any estuaries will be classified M1UBL.
- 2) The M1UBL, M2USN break will be the water edge on the photography.
- 3) The M2USN zone will include all dark wet looking sand from the water's edge landward.
- 4) The M2USP zone will include the lighter, whiter sand that appears to be dry.
- 5) The M2USM zone will include the shallow water zone. Often a light to medium blue tone.
- 6) Not all coastal areas will contain an M2USN, an M2USP and an M2USM zone.

ESTUARINE SYSTEM

The estuarine system encompasses deep water tidal habitats and adjacent tidal wetlands. It is usually semi-enclosed by land, and it often is diluted by freshwater runoff.

- 1) The break between the marine and estuarine systems will be at the mouth of the river, bay or sound.
- 2) The break between the riverine and estuarine systems will be made using collateral data (SCS soil surveys, previous NWI maps, or tidal range indications on U.S.G.S. topographic maps).
- 3) The E2USN, E2USP and E2USM zones will be delineated according to the same criteria as the M2USN, M2USP and M2USM zones.
- 4) The E2EM1N classification is made based on the photo signature of salt marsh cordgrass (Spartina alterniflora). The signature is usually a smooth, dark, murky blue.
- 5) The E2EM1P classification is made based on the photo signature for black needlerush (Juncus roemerianus). The signature is usually an uneven, slightly textured, brownish return.

RIVERINE SYSTEM

Perennial and intermittent streams shrouded by vegetation will be mapped under the palustrine system.

- 1) Breaks between the riverine tidal and the riverine lower perennial systems will be made using collateral data (SCS soil surveys, previous NWI maps, USGS topographic maps).
- 2) The signature for R1UBV and R2UBH is open water.
- 3) The signature for R1USN, R1USP, R2USA or R2USC varies from white to gray to light blue.
- 4) We did not see many R4SBA, C, or F type streams in this study area. Most intermittent streams in this study area were vegetated and will be included in the palustrine system.

LACUSTRINE SYSTEM

All lacustrine systems will be greater than twenty (20) acres. All lacustrine systems influenced by impoundments will carry the impounded (h) modifier. Lakes will be mapped at the pool elevation level cited on the base map. Lacustrine/Riverine System breaks will be at the first contour line at, or above, the pool elevation level cited on the base map. All vegetation around, and/or adjacent to lacustrine systems will be mapped as palustrine with the exception of aquatic bed.

- 1) The signature for L1UBH is open water.
- 2) The L2USA and L2USC zones will be mapped according to photo signature. L2USA will have a whiter, dryer look, while the L2USC will be a wetter looking light to medium blue or gray.
- 3) L2AB3,4,H - Aquatic bed, rooted/floating vascular, permanently flooded. The rooted vascular (water lily, water shield) signature is generally murky and blackish-green to a brownish-yellow color, while the floating vascular (duckweed) signature has a bright pink color. Each is associated with open water areas.

PALUSTRINE SYSTEM

There should be few palustrine linears and none should be extraneous or less than one inch in length unless making a hydrologic connection. Incised perennial streams which are covered by canopy will be classified as palustrine, forested if the signature is wet. Split classes will be avoided. Those areas influenced by beaver will carry the beaver (b) modifier and those areas influenced by impoundments will carry the impounded modifier (h). We found situations in the field where the road impounded a drainage and appropriately will carry the (h) impounded modifier. The saturated water regime was found to be very situational, existing in flat open floodplains and slopes. The excavated modifier (x) as well as the drained modifier (d) may be used as needed.

- 1) PEM1A - Emergent, persistent, temporarily flooded. The signature varied with situation, but generally consisted of a light pink to a dark red smooth signature (wool rush). Dead emergents give a white to light brown return. This was found in depressional areas in Ag fields and open pasture.
- 2) PEM1C,F - Emergent, persistent, seasonally/semi-permanently flooded. The seasonal signature is smooth and white or deep blue-green (maidencane) and found in drainages and along lacustrine systems. The semi-permanently flooded areas will also have a smooth white signature (cattails), but with pockets of open water. The semi-permanently flooded areas are also found in and along drainages and open water areas.

- 3) PAB3,4H - Aquatic bed, rooted/floating vascular, permanently flooded. The rooted vascular (water lily, water shield) signature is generally murky and blackish-green to a brownish-yellow color, while the floating vascular (duckweed) signature has a bright pink color. Each is associated with open water are generally as a result of impoundment or beaver activity.
- 4) PSS1A - Scrub-shrub, broad-leaved deciduous, temporarily flooded. This signature has a short, fluffy or rough texture, varying from a light greenish-brown to a light blue-green color. This classification usually is found in conjunction with drainages. Species include elderberry, chinese privet, and trees less than twenty feet high (listed under PFO1A).
- 5) PSS1C,F - Scrub-shrub, broad-leaved deciduous, seasonally/semi-permanently flooded. The seasonal signature is a short, rough blue-green to gray color. The semi-permanent signature has a very smooth, tight signature and is deep blue in color with pockets of open water often showing. Species include black willow, sweet bay, titi and alder.
- 6) PSS1B - Scrub-shrub, broad-leaved deciduous, saturated. The signature is a light or pale blue-grey color having a short fluffy appearance (black willow, bay) with a red understory. This is a situational classification often extending up slopes and far up drainages.
- 7) PSS4A - Scrub-shrub, needle-leaved evergreen, temporarily flooded. Signature has a short, rough appearance and is brick red in color. This classification may be found along drainages. Planted pine were the main species included in this classification.
- 8) PSS3,4B - Scrub-shrub broad-leaved, needle-leaved evergreen, saturated. The signature for this classification is a deep or brick red and this signature was associated with saturated soil types. Species include pine and sweet bay.
- 9) PSS2C,F - Scrub-shrub, needle-leaved deciduous, seasonally/semi-permanently flooded. The seasonal signature has a dark green to a blue-green appearance with white fluffy crown (bald cypress), but slightly tighter in grouping and more of a deep blue/open water signature underneath.

- 10) PFO1A - Forested, broad-leaved deciduous, temporarily flooded. This classification has a light to dark blue appearance and often an understory and a canopy of large fluffy crowns. The photography had many temporarily flooded areas with many red crowns. These trees proved to be tardily deciduous oaks and a few magnolias. Species for this classification include tulip poplar, water oak and sweet gum.
- 11) PFO1/3C - Forested, broad-leaved deciduous, broad-leaved evergreen, seasonally flooded. The signature for this classification is a dark blue-green with a mix of red crowns from sweet bay trees.
- 12) PFO1C - Forested, broad-leaved deciduous, seasonally flooded. The signature for this classification is a dark green/bluish color, often including the red crowns of tardily deciduous trees. There is usually minimal understory and the crowns are somewhat compact. There is a wide range within the seasonal classification. Species include black willow, red maple, sweet gum and willow oak.
- 13) PFO1F - Forested, broad-leaved deciduous, semi-permanently flooded. This classification has a very deep blue or green, tight and smooth signature. Open water may be seen under the canopy. Species for this classification include black gum and water tupelo.
- 14) PFO2F - Forested, needle-leaved deciduous, semi-permanently flooded. This classification has a deep blue or deep green signature with white fluffy crowns for an overstory. These crowns are generally not as tight or smooth as the broad-leaved deciduous, semi-permanent crowns. Species include bald cypress.
- 15) PFO4A - Forested needle-leaved evergreen, temporarily flooded. This signature is a brick red and cover consists mainly of planted pine.
- 16) PFO3,4B - Forested, broad-leaved, needle-leaved, evergreens saturated. The signature for this classification is nearly the same as for the scrub-shrub, the only difference, being the height of the trees. Species include pine and sweet bay. Usually an evergreen understory is seen.
- 17) PUBH - Unconsolidated bottom, permanently flooded. This classification has an open water signature and will be limited to greater than one (1) but less than twenty (20) acres in size.
- 18) PUSA,C - Unconsolidated shore, temporarily/seasonally flooded. This is a situational classification usually found in dry or breached ponds. The temporary signature is scoured white while the seasonal signature may vary from grey to light blue.

SPECIFICS:

1. Soil surveys will be followed (whenever available) for upland/wetland breaks.
2. Impounded (h), drained (d), excavated (x), beaver (b), and spoil (s) modifiers will be used when appropriate.
3. Hydrological connections will be made when possible.
4. Sewage ponds will be classified as PUBK with the "h" or "x" modifier as necessary.
5. Previously drafted NWI maps will be used as collateral data.
6. Uplands will be mapped following Anderson's A Land Use and Land Cover Classification System for use with Remote Sensor Data.