Supplemental Map Information (User Report)
Outline

Project ID: R05Y04P23

Project Title or Area: James River Spiny Mussel Habitat

Photointerpretation – Contractor
Areas (1:100K): Bluefield NE, Charlottesville SE, Richmond NW, Roanoke NE, Roanoke NW
Personnel: Lauren S.M. Whitaker (PI) and Todd Nuerminger (PIQC)
UMASS Natural Resources Assessment Group
Date Started: 03/03 Date Completed: 12/03
Number of Quads: 20

Source Imagery (type, scale and date):

Photography: 1999 and 2000 era 1:40K CIR/BW

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

Data Sets	Number of Quads
1:24K USGS DLG	20 of 20
1:24K USGS DRG	20 of 20
1:24K "Old" NWI	20 of 20
Digital SSURGO Soil Data	8 of 20
US Census Tiger Roads	20 of 20

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

- USGS DLG polygon delineations were used in place of existing NWI polygons to update NWI layers
- Alignment of linears/polygons was made to the USGS DRG topo maps as a base layer

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

Cowardin System

Data Limitations:

Digital soils were only available for select quads

General description of the Project Area:

Very little wetlands were added in this work area due to the terrain. Most rivers had very little floodplain development. Those that did were the main focus of this work area. In most cases the wetlands along the perennial rivers were classified using the "A" water regime. The "C" water regime was also used. PFO1, PSS1, and PEM1 were the most common classification found within this area.

Field Trip Report (April 26-May1, 2003)

Wetlands in the Rappahannock and James River, Virginia area were field checked for changes in plant composition, to determine water regime codes, and to determine the accuracy of the hydric soil data. The majority of the water regime codes were accurate. The plant composition needed adjusting if timber harvest was occurring. In certain wetland sites code changes were made from a PFO4 to a PSS4 or PSS1 because of the harvesting. Only in the Rappahannock area did we come across timber harvesting. Also, in the Rappahannock area, *Phragmites australis* had begun to grow and spread in the estuary areas, and thus needed code changing from an E2EM1P to an E2EM5P. Due to increasing development along the shore, the *Phragmites australis* seemed to be growing due to the disturbance.

In the James River area, wetlands were very sparse. Due to the landscape (mountains and steep elevations), there were mainly river beds and streams. The hydric soil that was being used as collateral data was found to be not accurate. According to the data, there were hydric soils along the sides of mountains, and along the edges of large R2UBH's. From performing field checks, the areas along the sides of some R2UBH's were too narrow to pull out any wetlands. In certain areas, R4SBA's were mapped according to the soil data and photo interpretation.

The PEM areas that were mapped in the farm fields were found to be accurate, and some areas needed expansion or addition of a wetland according to the field checks/drive bys.

Traveling became difficult due to the mountains. It took time to pass over one mountain range to another in order to get to certain quads. (Thus 9 quads being field checked). Also, James River and the Rappahannock areas are not located right next to each other, so many hours traveling to quads via car were done.

- Geography:
- Vegetation, soils, land use:
- Natural history or important cultural features:

Description of wetland habitats:

- Organize by Cowardin classification type:
- Wetland classification codes and corresponding community type(s):

Description of other habitats:

<u>Palustrine System</u>

PEM1E Seasonally flooded/Saturated persistent emergent wetlands. These wetlands usually occur in flat or in depressed landforms. Standing water is usually present at the beginning of the growing season and or remains saturated to the surface for extended periods of time. In this area these wetlands are dominated by various grasses. Associated plants species may include *Solidago sp.* and *Viola cucullata*. These areas may be surrounded by *Acer rubrum* and *Smilax sp.*

PSS1A Temporarily flooded wetlands consisting of broad-leaved deciduous shrubs. Where it occurs is generally restricted to small depressions or on floodplains of streams. Standing water is present for only brief periods of times during the growing season. Common plants in these wetlands are primarily *Betula nigra, Acer rubrum, Rosa sp., and Smilax sp.*. The understory vegetation may contain *Rhus radicans, Solidago sp., Viola cuculatta,* and various Fern species.

PFO1/EM1A Temporarily flooded wetlands that occur along on river and stream floodplains that consist of broad-leaved deciduous trees and persistent emergents. Dominant plants species include *Fraxinus sp., Quercus sp., and Rhus radicans*

PFO1E Seasonally flooded/Saturated broad-leaved deciduous wetlands. The substrate remains saturated to the surface throughout the growing season and may have standing water at times. These areas are predominantly dominated by *Acer rubrum.* Other common plants found amongst the understory and at the edges include *Symplocarpus foetidus, Liriodendron tulipifera, Vaccinium sp., Pinus strobes, Parthenocissus quinquefolia, Sphagnum spp., Rhus radicans, Nyssa sylvatica, Pinus virginia and Kalmia latifolia.*

<u>Riverine System</u>

R3RS2C Upper Perennial stream that is seasonally flooded that has a rocky shore with no vegetation amongst the boulders.

- Riparian – N/A
- Uplands – N/A

List of wetland plant species with indicator status:

Plant Species	Northeast Indicator Status
Acer rubrum	FAC
Acer saccharinum	FACW
Betula nigra	FACW
Fern spp.	
Fraxinus pennsylvanica	FACW
Kalmia latifolia	FACU
Liriodendron tulipifera	FACU
Nyssa sylvatica	FAC
Parthenocissus quinquefolia	FACU
Pinus strobus	FACU
Plantus occidentalis	FACW-
Podophyllum peltatum	FACU
Quercus spp.	
Rhus radicans spp.	FAC
Rosa spp.	
Rubus spp.	
Smilax spp.	
Solidago spp.	
Sphagnum spp.	
Symplocarpus foetidus	OBL
Thelypteris thelypteroides	FACW +
Vaccinimum spp.	
Viola cucullata	FACW+
Vitis spp.	
Woodwardia virginica	OBL

Regional specialized conventions:

The R4x convention was used for narrow ditches crossing wetlands and for nonvegetated ditches within nontidal wetlands at the discretion of the Region. Numerous R4SBAs were also added to this area.

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

Many of the Pf and Pfd areas that were visible with the 1:40K CIR were lacking any (if not all) signature on the 2000 B&W updates. Hydric soil maps provided little guidance in mapping of wetlands as most turned out to be uplands (see field report) and were located on steep hill sides.

The 2000 B&W photos were used to update the CIR photo. Due to the poor quality of the photos, wetland changes may have been missed.

References:

Cowardin, L. M., V. Carter, F. C. Golet, 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 Dept. of the Interior, Washington D.C.