Supplemental Map Information (User Report)
Outline

Project ID: R05Y07P07, 2006 NY State NWI Updates

Project Title or Area: 2007 Buffalo NE 21Quad Update

PHOTOINTERPRETATION – USFWS

Personnel: USFWS R5 – John Swords

Date Started: 9/2006 Date Completed: 01/2007

Number of Quads: 21

Buffalo: USGS 1:24k quad names:

Gasport
Clarence Center
Clarence
Lewiston
Lancaster
Eden
Wolcottsville
Lockport
East Aurora
Buffalo SE
Ransomville
Cambria
Niagara Falls
Buffalo NW
Buffalo NE
Tonawanda West
Tonawanda East
Hamburg
Angola
Orchard Park
Colden

Source Imagery (type, scale and date): 2002 era 1 foot resolution True Color for enhancement of missing wetlands.

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

Data Sets	Notes
DOQQ	2002 color digital imagery from NY State

1:24K USGS DLG
1:24K USGS DRG
1:24K “Old” NWI
Digital SSURGO Soil Data

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

Enhancement to NWI polygons and linears was aligned to 2002 DOQ imagery.
The majority of interpretation was on screen; however, stereo interpretation of lake bed flat wetlands occurred when judged necessary.
Significant differences in alignment noted between DRG-based data and enhanced DOQ-based data.
Wetland loss/gain polygons were analyzed and attributed using NWI (1979) and Anderson (1976) Land Use/Land Cover classification systems.

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

Cowardin (1979) system for wetlands; Anderson (1976) for land use/land cover change polygons.

General description of the Project Area:
222 Eastern Broadleaf Forest (Continental) Province
(http://www.fs.fed.us/colorimagemap/ecoreg1_provinces.html)
East-Central Drift and Lake-Bed Flats, Ozark Highlands, eastern interior uplands and basins.

Land-surface form.--Most of the area is rolling, and other parts are nearly flat and in the Ozark Highlands the relief is moderate (up to 1,000 ft [300 m]). The northern parts of the province have been glaciated, but not the southern. Elevations range from 80 to 1,650 ft (24 to 500 m).

Climate.--The climate has many characteristics in common with the oceanic broadleaf forest to the east, but precipitation decreases in quantity and effectiveness as one moves inland. Average annual temperatures range from 40F (4C) in the north to 65F (18C) in the south. Summers are hot, with frequent tornadoes. Precipitation varies from 20 in (510 mm) near the 95th meridian to 40 in (1,020 mm) in Ohio, and to 50 in (1,280 mm) in Tennessee. Most precipitation takes place during the growing season.

Vegetation.--Like its counterpart to the east, this province is dominated by broadleaf deciduous forest, but the smaller amounts of precipitation found here favor the drought-resistant oak-hickory association. Although other forests have oak and hickory, only this particular forest association has both species in abundance.

The oak-hickory forest is medium-tall to tall, becoming savanna-like in its northern reaches from eastern Oklahoma to Minnesota, where it gradually turns into prairie (described below for the Prairie Parkland [Temperate] Province). From eastern Kansas to Indiana, it forms a mosaic pattern with prairie.

Widespread dominants are white oak, red oak, black oak, bitternut hickory, and shagbark hickory. The understory is usually well developed, often with flowering dogwood. Other understory species include sassafras and hophornbeam. The shrub layer is distinct, with some evergreens. Many wildflower species occur. Wetter sites typically feature an abundance of American elm, tuliptree, and sweet gum.

Northern reaches of the oak-hickory forest contain increasing numbers of maple, beech, and basswood. The maple-basswood forest, dominated by sugar maple and American basswood, occurs from central Minnesota south through Wisconsin and northeastern Iowa. Glaciated areas of Ohio and Indiana feature a beech-maple forest defined by American beech and sugar maple. In these latter associations, oak and hickory occur on poor sites.

Soils.--As in the oceanic broadleaf forest, the soils change from Alfisols in the north to Ultisols in southerly latitudes. Toward the continental interior, calcification sets in as forest soils give way to the darker soils of the grasslands (Mollisols).

Fauna.--In the oak-hickory forest, acorns and hickory nuts provide abundant food for the ubiquitous gray squirrel. Fox squirrels are often found, as are eastern chipmunks.

Roving flocks of blue jays also feed on forest nuts. In summer, scarlet and/or summer tanagers, rose-breasted grosbeaks, and ovenbirds are common. The wild turkey is also found here. The cerulean warbler is common in the beech-maple forest, and occurs elsewhere as well.

Regional specialized conventions:

Standard Region 5 NWI conventions that include the “E” water regime (seasonally-flooded/saturated) and “EM5” (used to identify Phragmites). The R4x Convention was used for ditches crossing wetlands and for non-vegetated ditches within non-tidal wetlands, at the discretion of the Region. The “a” (acid) modifier is applied in this Region for bogs.

Additionally, the “Pf” and “Pfd” (palustrine farmed/ditched) convention was used for farmed hydric soils in agricultural areas. Interpretation of these areas supported by collateral hydric soils data, saturation and/or ponding in the signatures and till lines visible up to and sometimes through the wet depressions. Reversion of formerly farmed wetland soils (Pf, Pfd) to emergent or woody shrub cover was commonly observed in the time span between 90’s era CIR and 2000 era DOQs, and these areas were typically classified as PEM1B(d), PSS1B(d), or mixes thereof.

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

True color high-resolution 2000 era DOQ’s were high quality. 90’s era CIR imagery quality was also good.

Loss of wetlands (typically forested flats) to residential and commercial development was noted in areas of suburban expansion (ex, Amherst, NY area). We could not document wetland loss in areas undermapped in the 1995 era mapping effort. Reversion of former agricultural use to emergent or shrub wetlands is also noted. Re-directed stream courses and new ditching is noted in the time frame from DRG era to 2000 DOQ era.

References:

Anderson, J.R., E.E. Hardy, J.T. Roach and R.E. Witmer. 1976. A Land Use and land Cover Classification System for Use with Remote Sensor Data. U.S. Geological Survey Professional Paper 96A. U.S. Government Printing Office, Washington, D. C. 28 pp.

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/colorimagemap/ecoreg1_provinces.html (viewed 1/4/2005)