Vegetation of Effigy Mounds National Monument

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NVCS PLANT COMMUNITIES (ASSOCIATIONS)

NVCS plant communities (associations) are arranged into Ecological System* units. Each association is represented by a unique color on the map. Listed below each association is the map class name. Some map classes are mapped finer than the association. Although not depicted on the map via a unique color, these map class "phases" are listed below each map class where applicable.

** Ecological System units developed by NatureServe and defined as a group of plant community types co-occurring within landscapes with similar ecological processes, substrates, and/or environmental gradients.*

North-Central Interior Maple-Basswood Forest Ecological System

Acer saccharum - Tilia americana / Ostrya virginiana - Carpinus caroliniana Forest
North-central Maple - Basswood Forest Map Class (with six map class phases)
east-facing maple phase
north-facing maple phase
north-facing red oak phase
disturbed oak phase
disturbed maple - basswood phase
disturbed hardwoods phase

Fraxinus pennsylvanica - Ulmus americana - (Juglans nigra, Celtis occidentalis) Forest
Ash - Elm - Walnut - Hackberry Semi-natural Forest Map Class

North-Central Interior Dry-Mesic Oak Forest and Woodland Ecological System

Quercus alba - Quercus rubra - Carya ovata Glaciated Forest
Midwestern White Oak - Red Oak Forest Map Class (with five map class phases)
*white oak - chinquapin oak phase***
oak - hickory phase
shagbark hickory phase
bigtooth aspen phase
trembling aspen phase

*** This map class phase also maps in part the Quercus muehlenbergii - Quercus (alba, velutina) - (Juniperus virginiana var. virginiana) Bluff Woodland*

Paleozoic Plateau Bluff and Talus Ecological System

Quercus muehlenbergii - Quercus (alba, velutina) - (Juniperus virginiana var. virginiana) Bluff Woodland
Chinquapin Oak Bluff Woodland Map Class (with two map class phases)
red-cedar phase
hillside prairie phase

Central Tallgrass Prairie Ecological System

Andropogon gerardii - Sorghastrum nutans - (Sporobolus heterolepis) - Liatris spp. - Ratibida pinnata Herbaceous Vegetation
Central Mesic Tallgrass Prairie Map Class

North-Central Interior Floodplain Ecological System

Acer saccharinum - Ulmus americana - (Populus deltoides) Forest
Silver Maple - Elm - (Cottonwood) Forest Map Class (with four map class phases)
maple phase
hackberry phase
swamp white oak phase
bur oak phase

Populus deltoides - Salix nigra Forest
Eastern Cottonwood - Black Willow Forest Map Class

Salix interior Temporarily Flooded Shrubland
Sandbar Willow Shrubland Map Class

Cephalanthus occidentalis / Carex spp. Northern Shrubland
Buttonbush Shrubland Map Class

Phalaris arundinacea Eastern Herbaceous Vegetation
Reed Canary Grass Eastern Marsh Map Class

Schoenoplectus fluviatilis - Schoenoplectus spp. Herbaceous Vegetation
River Bulrush Marsh Map Class

Schoenoplectus tabernaemontani - Typha spp. - (Sparganium spp., Juncus spp.) Herbaceous Vegetation
Bulrush - Cattail - Burreed Shallow Marsh Map Class

Sagittaria latifolia - Leersia oryzoides Herbaceous Vegetation
Arrowhead - Rice Cutgrass Marsh Map Class (with two map class phases)
rice cutgrass phase
arrowhead phase

Potamogeton spp. - Ceratophyllum spp. Midwest Herbaceous Vegetation
Midwest Pondweed Submerged Wetland Map Class

Nelumbo lutea Herbaceous Vegetation
American Lotus Aquatic Wetland Map Class

Nuphar lutea ssp. advena - Nymphaea odorata Herbaceous Vegetation
Water Lily Aquatic Wetland Map Class

NVCS FORMATION TYPES

NVCS Formation types define either cultivated or highly disturbed vegetation. For display purposes, Formations sharing similarities are shown in one of four categories. Each group is depicted on the map by a unique color. Formation types and their respective map classes are listed below each category.

Upland Shrubland and Herbaceous Vegetation Formations

Cold-deciduous Shrubland Formation
Upland Scrub Mix Map Class
Tall Sod Temperate Grassland Formation
Upland Herbaceous Mix Map Class
Medium-tall Sod Temperate or Subpolar Grassland Formation
Goat Prairie Remnant Map Class

Wetland Herbaceous Vegetation Formations

Temporarily Flooded Temperate or Subpolar Grassland Formation
Bottomland Herbaceous Mix Map Class
Seasonally Flooded Temperate or Subpolar Grassland Formation
Emergent Marsh Farm Pond Map Class
Permanently Flooded Temperate or Subpolar Hydromorphic-rooted Vegetation Formation
Submersed Aquatic Farm Pond Map Class

Forest Plantation Formation

Plantations (evergreen) Formation
Conifer Plantation Forest Map Class

Pasture and Cropland Formations

Perennial Grass Crops (hayland, pastureland) Formation
Perennial Grass Crop Map Class
Annual Close-grown Forbs and Grasses and/or Annual Row-crop Forbs and Grasses Formations
Crop Field Map Class

NON-VEGETATION TYPES

For display purposes, map classes depicting non-vegetation units are shown in one of two categories; open water and land use. Each group is depicted on the map by a unique color. Map classes are listed below each category.

Open Water

Open Water Farm Pond Map Class
Shallow Water and Mud Flat Map Class
River and Stream Map Class

Land Use

Residential Map Class
Commercial Map Class
Road and Railroad Map Class
Farmstead Map Class
Quarry Map Class

BOUNDARY FEATURES

Boundary locations are approximate

- Effigy Mounds National Monument Boundary
- Iowa Yellow River State Forest Boundary

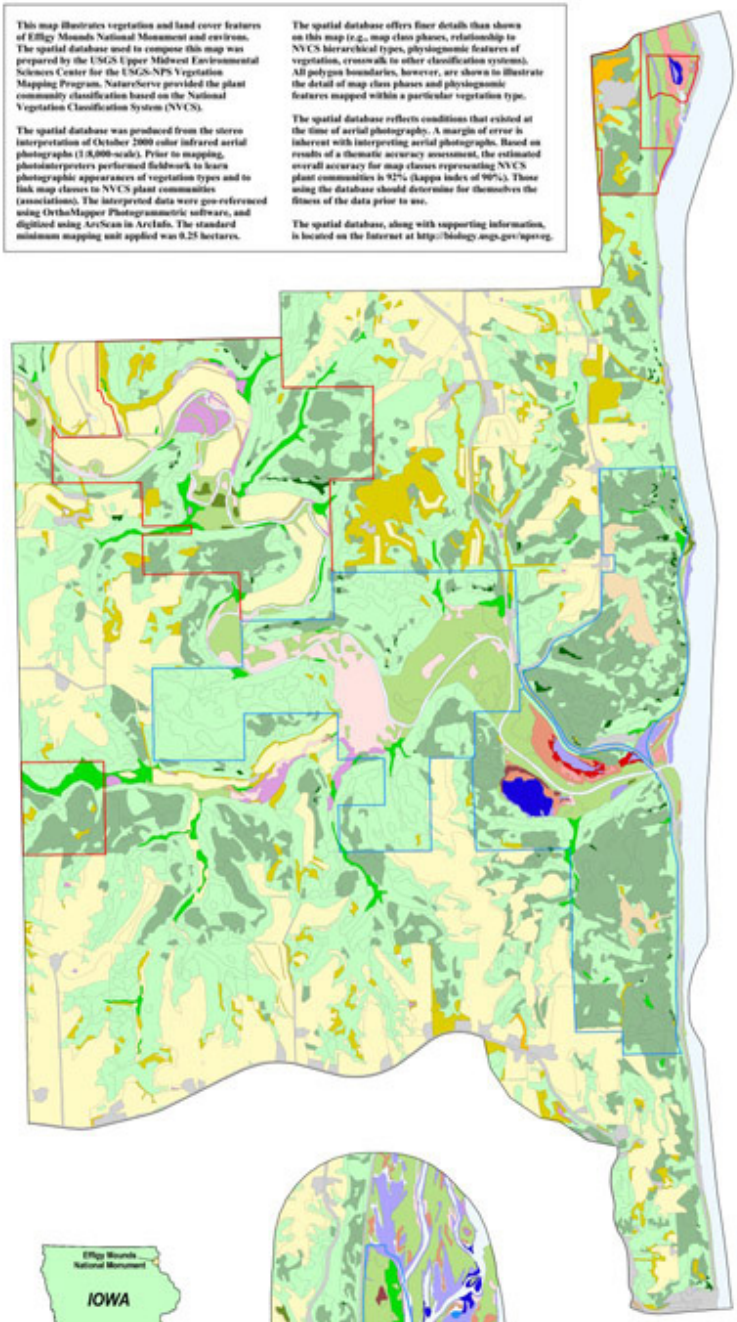
This map illustrates vegetation and land cover features of Effigy Mounds National Monument and environs. The spatial database used to compose this map was prepared by the USGS Upper Midwest Environmental Sciences Center for the USGS-NPS Vegetation Mapping Program. NatureServe provided the plant community classification based on the National Vegetation Classification System (NVCS).

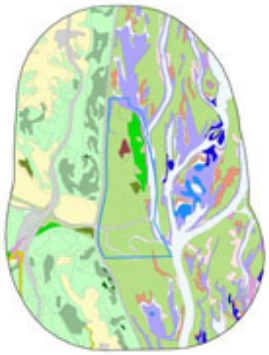
The spatial database was produced from the stereo interpretation of October 2000 color infrared aerial photographs (1:8,000-scale). Prior to mapping, photointerpreters performed fieldwork to learn photographic appearances of vegetation types and to link map classes to NVCS plant communities (associations). The interpreted data were geo-referenced using OrthoMapper Photogrammetric software, and digitized using ArcScan in ArcInfo. The standard minimum mapping unit applied was 0.25 hectares.

The spatial database offers finer details than shown on this map (e.g., map class phases, relationship to NVCS hierarchical types, physiognomic features of vegetation, crosswalk to other classification systems). All polygon boundaries, however, are shown to illustrate the detail of map class phases and physiognomic features mapped within a particular vegetation type.

The spatial database reflects conditions that existed at the time of aerial photography. A margin of error is inherent with interpreting aerial photographs. Based on results of a thematic accuracy assessment, the estimated overall accuracy for map classes representing NVCS plant communities is 92% (kappa index of 90%). Those using the database should determine for themselves the fitness of the data prior to use.

The spatial database, along with supporting information, is located on the Internet at http://biology.usgs.gov/upveg.





Distance between park units are not to scale.

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USGS-NPS Vegetation Mapping Program

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Hanging Rock, Effigy Mounds National Monument

Universal Transverse Mercator, Zone 15
North American Datum of 1983

0.5 0 0.5 1 1.5 2 2.5 Miles

0.5 0 0.5 1 1.5 2 2.5 3 3.5 4 Kilometers

Map Composition Date: January 2005