

# National Wetlands Inventory Activities in the Hackensack River Watershed

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# Types of Activities

- Wetland Mapping
  - Classification and Inventory
- Preliminary Wetland Assessment
- Remotely-sensed Watershed Assessment

All based on photointerpretation of aerial photography and map interpretation



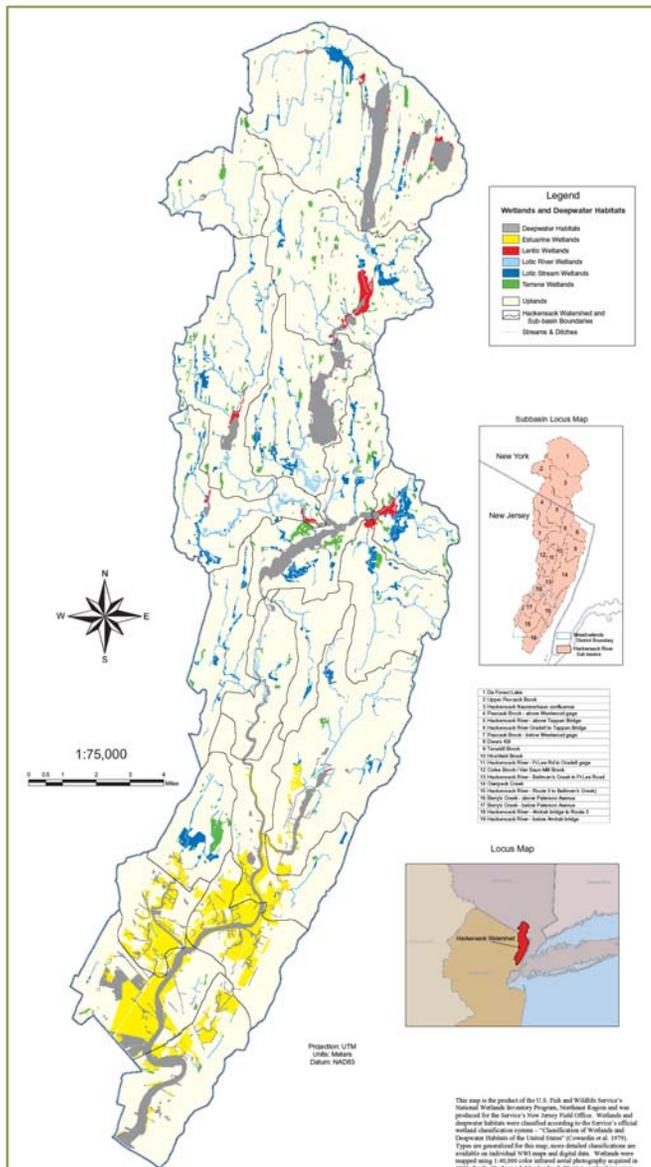
# Wetland Classification and Inventory

- Updated NWI data
  - 2003 for the Meadowlands District
- Enhanced Classification
  - Landscape Position
  - Landform
  - Water Flow Path
  - Waterbody Type



The Hackensack Watershed, NJ & NY  
Wetlands and Classified by Landscape Position

Map 2HW

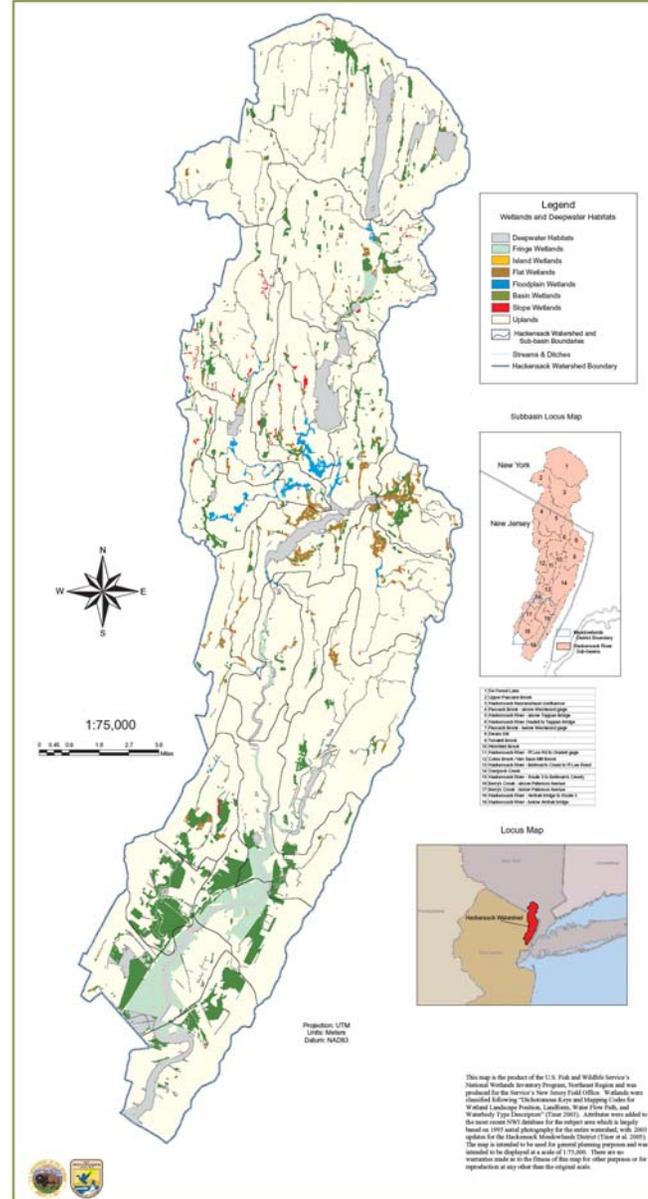


This map is the product of the U.S. Fish and Wildlife Service's National Wetlands Inventory Program, Northeast Region and was produced for the Service's New Jersey Field Office. Wetlands and deepwater habitats were classified according to the Service's official wetland classification system, "Classification of Wetlands and Deepwater Habitats of the United States" (Cowardin et al., 1979). Types are presented for this map using classification codes as presented on individual 1:50,000 scale maps and digital files. Wetlands were mapped with a 100,000 scale contour and photography acquired in 1995. For the Hackensack River subbasin, contour and wetland data were updated using 2003 orthophotography. The map is intended to be used for general planning purposes and was created to be displayed at a scale of 1:75,000. There are no warranties made as to the fitness of the map for other purposes or for reproduction in any other than the original scale.



# Hackensack River Watershed, New Jersey/New York Wetlands Classified by Landform

Map 3HW



# Preliminary Wetland Assessment (for the Watershed Only)

- 10 Functions
  - Surface Water Detention
  - Streamflow Maintenance
  - Nutrient Transformation
  - Sediment/Particulate Retention
  - Coastal Storm Surge Detention
  - Shoreline Stabilization
  - Fish and Shellfish Habitat
  - Waterfowl and Waterbird Habitat
  - Other Wildlife Habitat
  - Conservation of Biodiversity



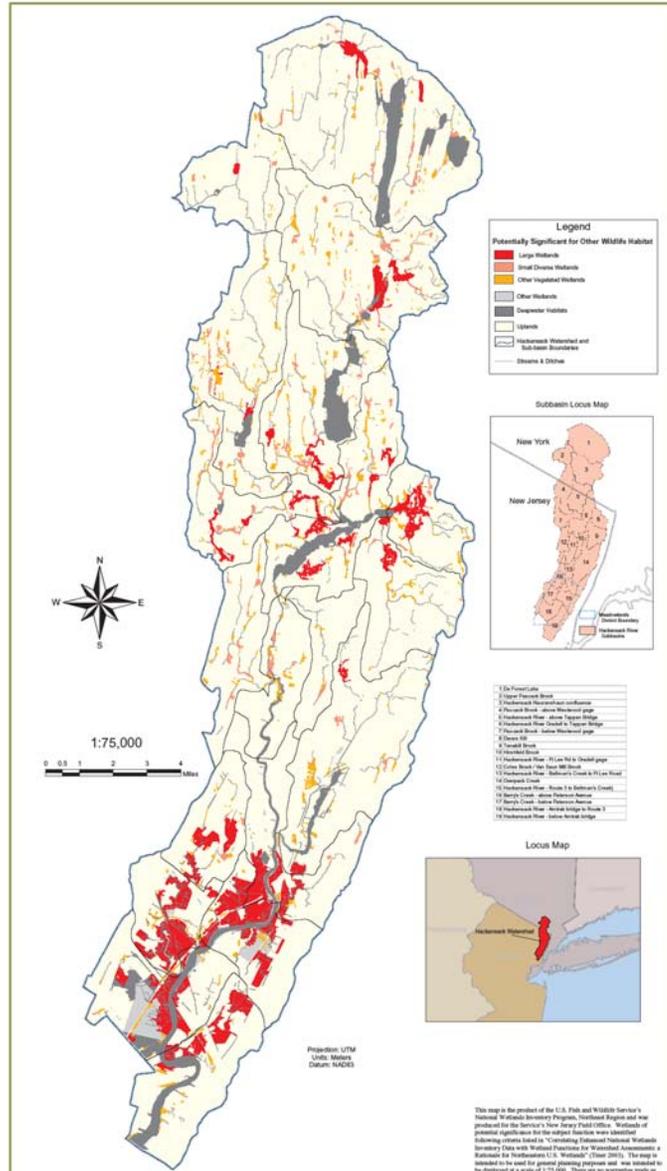
# Wetland Assessment (cont'd)

- Based on data in the NWI database
- Correlates properties with functions (NWI type, LLWW type, or combination of properties)
- Highlights wetlands of potential significance (High/Moderate) for each function
- Level One (Landscape-level) Assessment - preliminary derived from remotely-sensed and map information
- Not based on site-specific, field-collected data



# Hackensack River Watershed, New Jersey/New York Potential Wetlands of Significance for Other Wildlife Habitat

Map 13HW



This map is the product of the U.S. Fish and Wildlife Service's National Wetlands Inventory Program. Hackensack Region and was produced for the Service's New Jersey Field Office. Wetlands of potential significance for the region for other wildlife habitat are identified following criteria listed in "Considering Enhanced National Wetlands Inventory Data with Wetland Functions for Watershed Assessment: a Workshop for the Hackensack U.S. Wetlands" (June 2011). The map is intended to be used for general planning purposes and was intended to be displayed at a scale of 1:75,000. There are no warranties made as to the fitness of this map for other purposes or the reproduction in any other than the original scale.



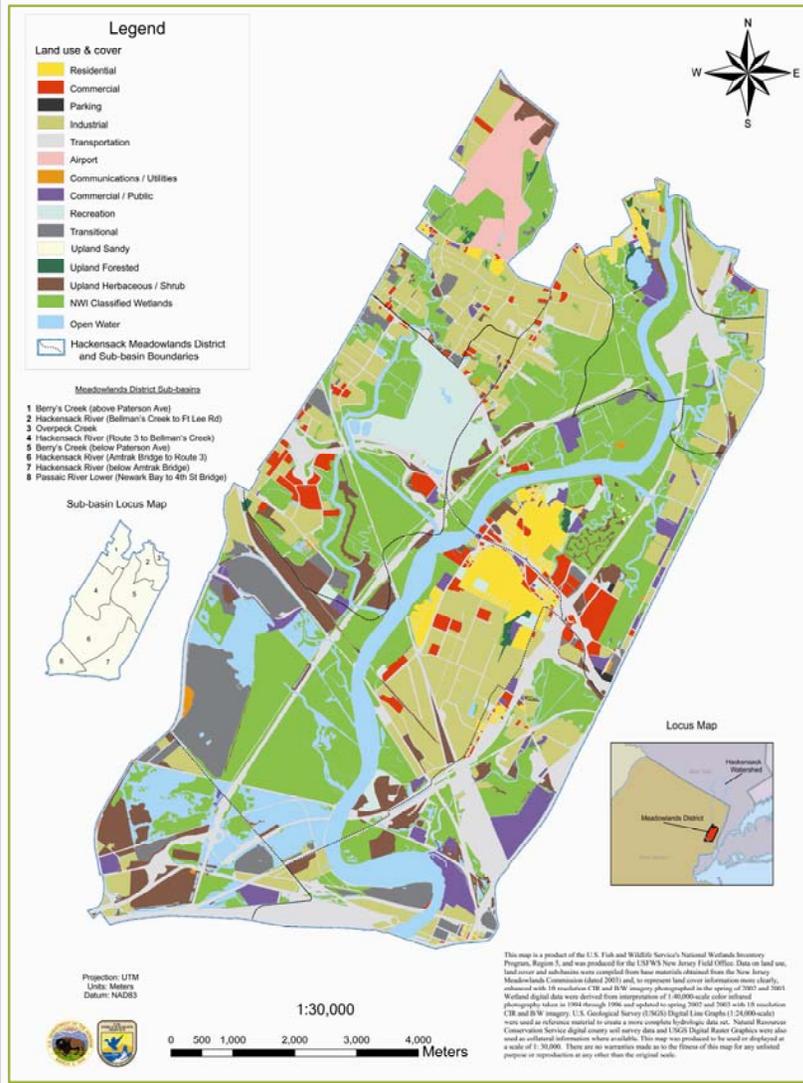
# Watershed Assessment

- For both District and the Watershed
- Examines extent of “natural habitat”
  - Entire area
  - Stream corridors
  - Wetland and other waterbody buffers
- Extent of today’s wetlands vs. historic #s
- Extent of habitat alterations
  - Stream channelization/damming
  - Wetland disturbance
  - Fragmentation by roads
- Generates Natural Habitat Integrity Index (0-1.0)



Land use and cover of the Hackensack Meadowlands District, New Jersey  
 \*Classified and Grouped by Anderson Coding System

Map 3HMD



# Range of Indices for District Subbasins

- Natural Cover = 0.25 to 0.46
- River/Stream Corridors = 0.11 to 0.48
- Vegetated Wetland Buffer = 0.07 to 0.24
- Pond/Lake Buffer = 0.00 to 0.48
- Vegetated Wetland Extent = 0.14 to 0.44
- Channelized Stream Length = 1.0
- Wetland Disturbance = 0.67 to 1.00



Condition of Wetland and Waterbody Buffers\* (100m)  
 Hackensack Watershed, New Jersey/New York

Map 184W



1:75,000  
 0 0.5 1 1.5 2 2.5 3

**Legend**

**Landuse/Landcover Within the Buffer Zone**

- Developed Area
- Agricultural Area
- Forest/Woodland Area
- Open Water
- Wetlands

**Other**

- Limits
- Streams & Channels
- Hackensack Watershed Boundary
- Major Roads



Projection: UTM  
 Units: Meter  
 Datum: NAD83



This map is a product of the U.S. Army Corps of Engineers National Wetlands Inventory Program, Region 1, and was produced for the NFWF State Incentive Fund (SIF). It was compiled from wetland data derived from aerial photography, satellite imagery, and other data sources collected between 1995 and 2005, and updated to spring 2007. It includes wetlands (SIF category) and buffers.

Wetland data were derived from a combination of 1:25,000 scale color aerial and photography. Land cover data were acquired by digitizing from the State of New Jersey State of New Jersey Wetlands Inventory, and updated for NFWF for wetlands inventory. Digital Elevation Data (DEM) were used to create stream channels. Land use data were derived from the State of New Jersey State of New Jersey Wetlands Inventory, and updated for NFWF for wetlands inventory. The map was produced with ArcGIS and is based on a scale of 1:75,000. There are no warranties made as to the accuracy of the map for any particular purpose or representation, or any other use for which it was not intended.

# Reports

- Meadowlands District
  - Wetland Inventory
  - Watershed Assessment for 8 Subbasins  
(Natural Habitat Integrity Indices)
- Hackensack Watershed
  - Wetland Inventory
  - Preliminary Wetland Functional Assessment
  - Watershed Assessment (Natural Habitat Integrity Indices for 19 subbasins)



# Report Now Available Online

<http://library.fws.gov/Wetlands/HackensackRiverWatershed07.pdf>

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