

Natural Resources Inventory

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New Jersey's Endangered and Threatened Wildlife

BIRDS			
Endangered		Threatened	
<u>Bittern, American</u>	<i>Botaurus lentiginos</i> BR	<u>Bobolink</u>	<i>Dolichonyx oryzivorus</i> BR
<u>Eagle, bald</u>	<i>Haliaeetus leucocephalus</i> BR **	<u>Eagle, bald</u>	<i>Haliaeetus leucocephalus</i> NB **
<u>Falcon, peregrine</u>	<i>Falco peregrinus</i>	<u>Hawk, Cooper's</u>	<i>Accipiter cooperii</i>
<u>Goshawk, northern</u>	<i>Accipiter gentilis</i> BR	<u>Hawk, red-shouldered</u>	<i>Buteo lineatus</i> NB
<u>Grebe, pied-billed</u>	<i>Podilymbus podiceps</i> *	<u>Night-heron, black-crowned</u>	<i>Nycticorax nycticorax</i> BR
<u>Harrier, northern</u>	<i>Circus cyaneus</i> BR	<u>Night-heron, yellow-crowned</u>	<i>Nyctanassa violaceus</i>
<u>Hawk, red-shouldered</u>	<i>Buteo lineatus</i> BR	<u>Knot, red</u>	<i>Calidris canutus</i> BR
<u>Owl, short-eared</u>	<i>Asio flammeus</i> BR	<u>Osprey</u>	<i>Pandion haliaetus</i> BR
<u>Plover, piping</u>	<i>Charadrius melodus</i> **	<u>Owl, barred</u>	<i>Strix varia</i>
<u>Sandpiper, upland</u>	<i>Batramia longicauda</i>	<u>Owl, long-eared</u>	<i>Asio otus</i>
<u>Shrike, loggerhead</u>	<i>Lanius ludovicianus</i>	<u>Rail, black</u>	<i>Laterallus jamaicensis</i>
<u>Skimmer, black</u>	<i>Rynchops niger</i> BR	<u>Skimmer, black</u>	<i>Rynchops niger</i> NB
<u>Sparrow, Henslow's</u>	<i>Ammodramus henslowii</i>	<u>Sparrow, grasshopper</u>	<i>Ammodramus savannarum</i> BR
<u>Sparrow, vesper</u>	<i>Pooecetes gramineus</i> BR	<u>Sparrow, Savannah</u>	<i>Passerculus sandwichensis</i> BR
<u>Tern, least</u>	<i>Sterna antillarum</i>	<u>Sparrow, vesper</u>	<i>Pooecetes gramineus</i> NB
<u>Tern, roseate</u>	<i>Sterna dougallii</i> **	<u>Woodpecker, red-headed</u>	<i>Melanerpes erythrocephalus</i>
<u>Wren, sedge</u>	<i>Cistothorus platensis</i>		
**Federally endangered or threatened			
BR - Breeding population only; NB - non-breeding population only			

REPTILES			
Endangered		Threatened	
<u>Rattlesnake, timber</u>	<i>Crotalus h. horridus</i>	<u>Snake, northern pine</u>	<i>Pituophis m. melanoleucus</i>
<u>Snake, corn</u>	<i>Elaphe g. guttata</i>	<u>Turtle, Atlantic green</u>	<i>Chelonia mydas</i> **
<u>Snake, queen</u>	<i>Regina septemvittata</i>	<u>Turtle, wood</u>	<i>Clemmys insculpta</i>
<u>Turtle, bog</u>	<i>Clemmys muhlenbergii</i> **		
<u>Atlantic hawksbill</u>	<i>Eretmochelys imbricata</i> **		
<u>Atlantic leatherback</u>	<i>Dermochelys coriacea</i> **		
<u>Atlantic loggerhead</u>	<i>Caretta caretta</i> **		
<u>Atlantic Ridley</u>	<i>Lepidochelys kemp</i> **		
**Federally endangered or threatened			

AMPHIBIANS			
Endangered		Threatened	
<u>Salamander, blue-spotted</u>	<i>Ambystoma laterale</i>	<u>Salamander, eastern mud</u>	<i>Pseudotriton montanus</i>
<u>Salamander, eastern tiger</u>	<i>Ambystoma tigrinum</i>	<u>Salamander, long-tailed</u>	<i>Eurycea longicauda</i>
<u>Treefrog, southern gray</u>	<i>Hyla chrysocelis</i>	<u>Treefrog, pine barrens</u>	<i>Hyla andersonii</i>

INVERTEBRATES			
Endangered		Threatened	
<u>Beetle, American burying</u>	<i>Nicrophorus mericanus</i> **	<u>Elfin, frosted</u> (butterfly)	<i>Callophrys irus</i>
<u>Beetle, northeastern beach tiger</u>	<i>Cincindela d. dorsalis</i> **	<u>Floater, triangle</u> (mussel)	<i>Alasmidonta undulata</i>
<u>Copper, bronze</u>	<i>Lycaena hyllus</i>	<u>Fritillary, silver-bordered</u> (butterfly)	<i>Bolaria selene myrina</i>
<u>Floater, brook</u> (mussel)	<i>Alasmidonta varicosa</i>	<u>Lampmussel, eastern</u> (mussel)	<i>Lampsilis radiata</i>
<u>Floater, green</u> (mussel)	<i>Lasmigona subviridis</i>	<u>Lampmussel, yellow</u> (mussel)	<i>Lampsilis cariosa</i>
<u>Satyr, Mitchell's</u> (butterfly)	<i>Neonympha m.</i>	<u>Mucket, tidewater</u> (mussel)	<i>Leptodea</i>

	<i>mitchellii</i> **		<i>ochracea</i>
<u>Skipper, arogos</u> (butterfly)	<i>Atrytone arogos arogos</i>	<u>Pondmussel, eastern</u> (mussel)	<i>Ligumia nasuta</i>
<u>Skipper, Appalachian grizzled</u> (butterfly)	<i>Pyrgus wyandot</i>	<u>White, checkered</u> (butterfly)	<i>Pontia protodice</i>
<u>Wedgemussel, dwarf</u>	<i>Alasmodonta heterodon</i> **		
**Federally endangered or threatened			

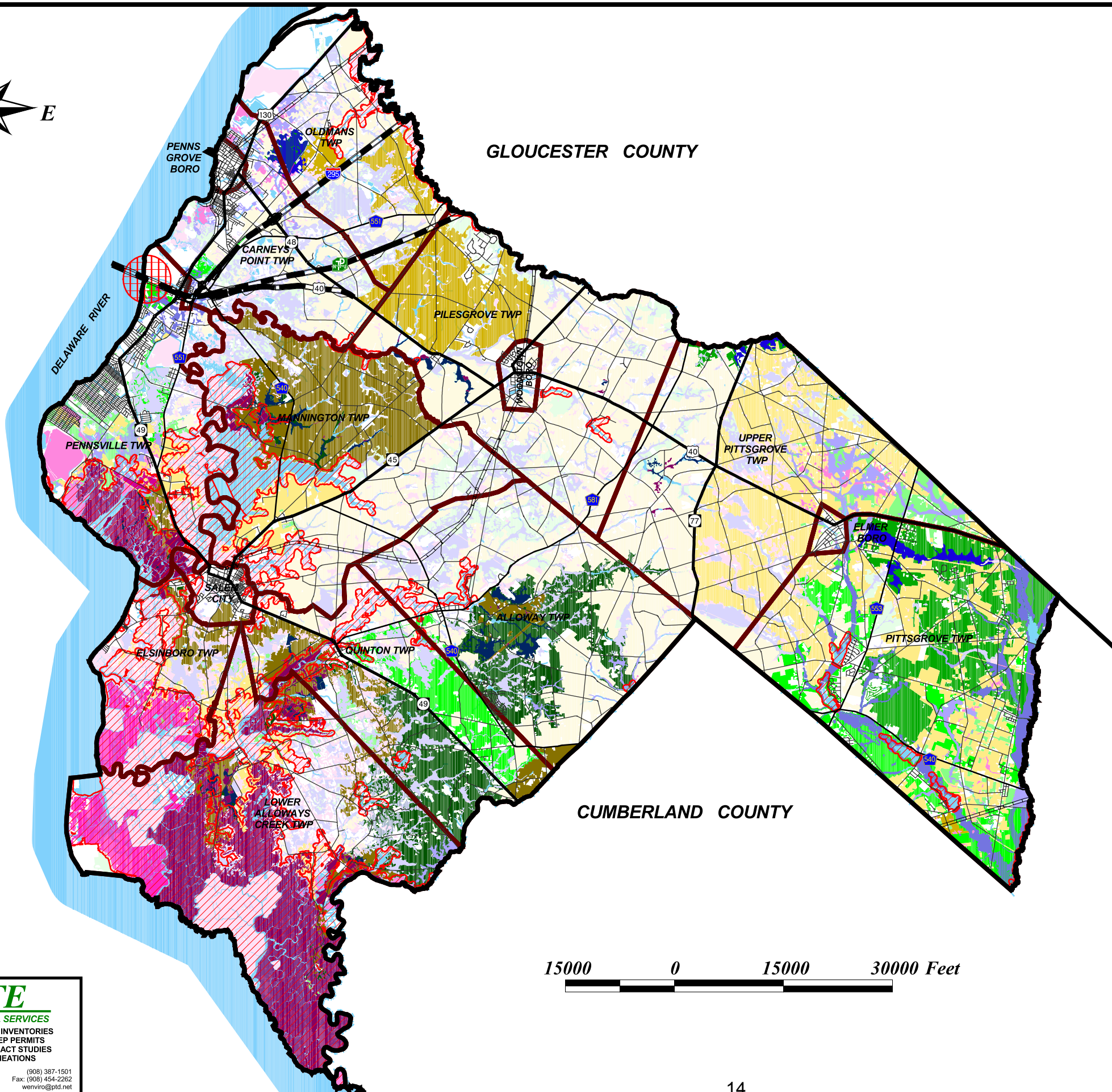
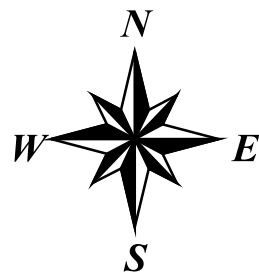
MAMMALS	
Endangered	
<u>Bat, Indiana</u>	<i>Myotis sodalis</i> **
<u>Bobcat</u>	<i>Lynx rufus</i>
<u>Whale, black right</u>	<i>Balaena glacialis</i> **
<u>Whale, blue</u>	<i>Balaenoptera musculus</i> **
<u>Whale, fin</u>	<i>Balaenoptera physalus</i> **
<u>Whale, humpback</u>	<i>Megaptera novaeangliae</i> **
<u>Whale, sei</u>	<i>Balaenoptera borealis</i> **
<u>Whale, sperm</u>	<i>Physeter macrocephalus</i> **
<u>Woodrat, Allegheny</u>	<i>Neotoma floridana magister</i>
**Federally Endangered	

FISH	
Endangered	
<u>Sturgeon, shortnose</u>	<i>Acipenser brevirostrum</i> **
**Federally Endangered	

Source: NJ Division of Fish & Wildlife (List updated 3/11/04)

CAFRA Boundary Map





REFERENCES & NOTES:

Threatened and Endangered Species Habitat based upon the NJDEP GIS database of "The Landscape Project", 2004.

Rivers and Lakes taken from NJDEP GIS database, 1986.

This map has been prepared as a guide for the Salem County Natural and Cultural Resources Inventory. Data on this map should not be relied upon for individual lot planning.

This map was developed using NJDEP & NJGS Geographic Information System digital data, but this secondary product has not been verified by the NJDEP or NJGS and is not State - authorized.

MAP LEGEND:

Threatened and Endangered Species Habitat

Forested Wetland Habitat

- Suitable Habitat
- Special Concern
- State Threatened
- State Endangered
- Federal T & E

Emergent Wetlands Habitat

- Suitable Habitat
- Special Concern
- State Threatened
- State Endangered
- Federal T & E

Grassland Habitat

- Suitable Habitat
- Special Concern
- State Threatened
- State Endangered
- Federal T & E

Forest Habitat

- Suitable Habitat
- Special Concern
- State Threatened
- State Endangered
- Federal T & E

- Peregrine Falcon Habitat

- Eagle Foraging Habitat

WHITE
ENVIRONMENTAL SERVICES
NATURAL RESOURCE INVENTORIES
GIS MAPPING - NJDEP PERMITS
ENVIRONMENTAL IMPACT STUDIES
WETLANDS DELINEATIONS

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15000 0 15000 30000 Feet

Critical Wildlife Habitat
Natural and Cultural
Resource Inventories
Salem County, New Jersey

Scale: 1" = 15,000'

Date: 1/15/06

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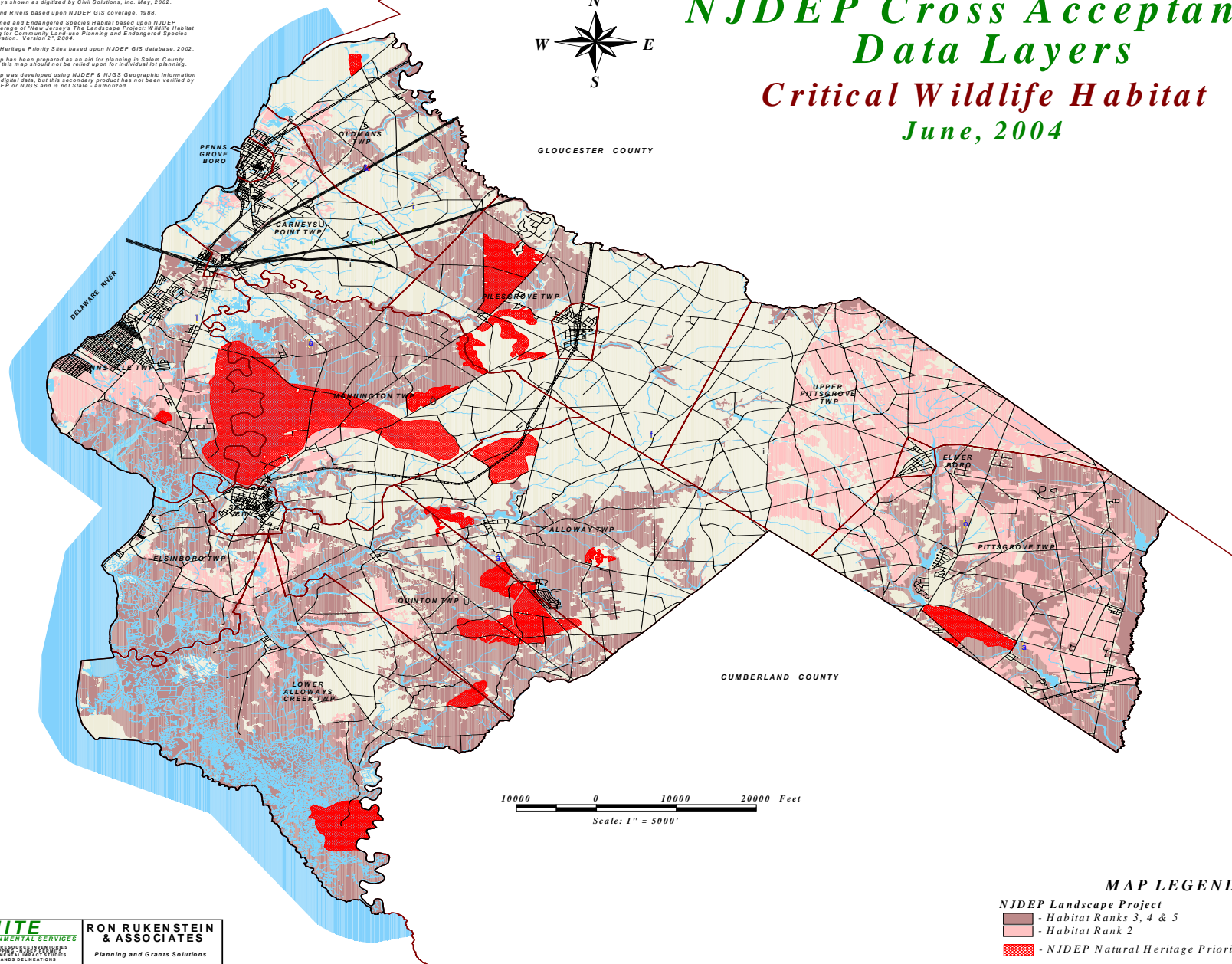
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REFERENCES & NOTES:

Parcel mapping based upon municipal tax maps as digitized by Civil Solutions, Inc., May, 2002.
Roadways shown as digitized by Civil Solutions, Inc., May, 2002.
Lakes and Rivers based upon NJDEP GIS coverage, 1988.
Threatened and Endangered Species Habitat based upon NJDEP GIS coverage of "New Jersey's The Landscape Project: Wildlife Habitat Mapping for Community Land-use Planning and Endangered Species Conservation, Version 2, 2004."
Natural Heritage Priority Sites based upon NJDEP GIS database, 2002.
This map has been prepared as an aid for planning in Salem County. Data on this map should not be relied upon for individual lot planning.
This map was developed using NJDEP & NJGS Geographic Information System digital data, and this secondary product has not been verified by the NJDEP or NJGS and is not State authorized.



NJDEP Cross Acceptance Data Layers Critical Wildlife Habitat June, 2004



MAP LEGEND:

NJDEP Landscape Project

- Habitat Ranks 3, 4 & 5
- Habitat Rank 2
- NJDEP Natural Heritage Priority Sites

WHITE
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**Salem County
Natural Resources Inventory**

OPEN SPACE

OPEN SPACE

Introduction

Open space lands offer a respite from everyday life, an oasis of nature and fresh air, and an opportunity to experience and learn about the diverse natural environment that contributes to our quality of life in Salem County. Salem County is committed to preserving open space and maintaining the County's rural character and the community character of rural towns and Villages.

Salem County leads the State in preserved farmland and open space. Approximately 300 square miles or 88 percent of the County falls in the environs outside the regional planning area and the proposed or designated centers in Salem City, Alloway, Woodstown, and Elmer. More than 10 percent of the State's farmland is located in Salem County, and 15 percent of the statewide total of development rights purchased by the State Agriculture Development Committee is located in Salem County. The County recently adopted dedicated an open space and farmland preservation tax (\$.03 per \$100 assessment). County and State grant monies will be used to leverage local farmland preservation funding.

Federal and State Open Space

There are several protected areas within Salem County, including Fort Mott State Park, Killcohook National Wildlife Refuge, and Supawna Meadows National Wildlife Refuge.

Salem County Conservation and Open Space Areas

Owner	Location	Site	Acres
FEDERAL	PENNSVILLE	KILLCOHOOK NWR	35
	PENNSVILLE	SUPAWNA MEADOWS NWR	1,718
STATE	CARNEYS PT./OLDMANS	DOD PONDS WMA	320
	LAC	MAD HORSE CREEK WMA	5,826
	LAC	MASKELL'S MILL POND WMA	57
	LAC	HANCOCK HOUSE PARK	1
	MANNINGTON	MANN.MEADOWS WMA	202
	PILESGROVE	HARRISONVILLE LAKE WMA	22
	PITTS GROVE	UNION LAKE WMA	1,058
	PITTS GROVE	GREENWOOD PONDS WMA	57

NWR = National Wildlife Refuge

WMA = Wildlife Management Area

Rail Corridors

There are three active rail lines providing freight service through Salem County. None of these rail lines provide passenger service. The closest passenger rail station is in Wilmington requiring an approximately 15 minute or more drive or bus ride.

The Deepwater Line, owned and operated by Conrail (a subsidiary of CSX Transportation and Norfolk Southern), runs southward through the Corridor from Woodbury through Oldmans and Carneys Point Townships and Penns Grove Borough to the DuPont Chambers Works Plant in Pennsville Township.

Existing Recreation Facilities in Salem County

To the west, Salem County shares 35 miles along the Delaware River and Bay with New Castle, Delaware. Large areas of tidal and freshwater marshlands, with only a few beaches, characterize this shoreline (in a historic anomaly, the mean high water mark rather than the river centerline of the Delaware River marks the Delaware-New Jersey state border for 24 of these shoreline miles). The type of recreational and economic activity that results from this environment is different than what occurs in other coastal communities. Seasonal tourism is not an important part of the County's shore area economy. Popular shore-related recreation activities include fishing, boating, nature walks, and camping.

Salem County has pursued opportunities to increase tourism on the basis of the County's natural and historic resources. Projects that contribute to the County's tourist potential include the Coastal Heritage Trail by the National Park Service, the Fort Mott State Park visitor center, and the Three-Forts ferry boat service operated by the Delaware River & Bay Authority, which links Fort Mott with Fort Delaware and Fort DuPont in Delaware. Bird watchers are drawn to large wetlands areas, which provide nesting and feeding ground for migrating waterfowl. Mannington Meadows, in particular, is recognized as the most important bird habitat in the State for King Rail and Wilson's Snipe, as well as its extraordinary role in international and national waterfowl migration patterns.

Salem County is home to the Cowtown Rodeo, the only professional rodeo in New Jersey and the weekly Cowtown Livestock Auction, one of two surviving livestock auctions in the State. The County contains several golf courses, boat basins, boat launching sites, swim clubs, campgrounds, and bridle trails, as well as the Killcohook National Wildlife Refuge, and Supawna Meadows National Wildlife Refuge.

Within the Corridor, Fort Mott State Park is a 57 acre tract adjacent to the Delaware River in Pennsville Township providing access to the river for fishing, crabbing, picnic facilities, and the historic sites of Fort Mott Civil War Cemetery and Finns Point Lighthouse. Parvin State Park in Pittsgrove Township provides two lakes for swimming, fishing and boating, 15 miles of natural trails, as well as camping, picnicking, and playground facilities.

A summary of municipal parks and recreation facilities is attached (from the Salem County Services and Facilities Report). Some of the highlights include Riverview Beach Park, overlooking the Delaware River and the site of Septemberfest in Pennsville Township, and the ball fields and picnic facilities maintained by Salem County in Oldmans Township. Two federal wildlife areas are located within Pennsville Township, including Killcohook National Wildlife Refuge (35 acres) and Supawna Meadows National Wildlife Refuge (1,718 acres).

In the summer of 2002, the County's first fully accessible playground was erected in the Carneys Point Recreation Facility. "A Place for Sami" is named for 6-year-old Sami Cox who spent her toddler years in a wheelchair. Through their outreach efforts, 9 playgrounds throughout Salem County now contain accessible equipment for children with disabilities.

INTRODUCTION

The Salem County Planning Department is pleased to present the Natural Resources Inventory of Salem County. The purpose of this inventory is to identify and describe the natural resources and environmental features within the County. The NRI provides both visual depictions of natural resources, in the form of mapping information and text that describes these resources. The text has been gathered from existing resources such as the Salem County Smart Growth Plan prepared for the Salem County Board of Chosen Freeholders, the County's Third Round Cross-Acceptance Report prepared for the State Office of Smart Growth and reports and studies provided by County, State and Federal Agencies. The data provided in this NRI is intended to be used as a planning tool for protecting and preserving the County's environmentally sensitive resources and maintaining its rural character.

Salem County is the 10th largest county in New Jersey covering over 338 square miles and remains by far the least populated and least densely developed county in the State. The goals of the County include:

- Preserving and protecting the County's valued resources, including agricultural lands, historic structures and areas, and air and water quality
- Promoting the growth and revitalization of urban areas and maintain the community character of rural towns and villages
- Maintaining the County's rural character
- Preserving open space
- Providing public services and infrastructure in a cost-efficient manner

Limited natural resources, fragile ecosystems, and the physical characteristics of the land all impose restrictions on where development and growth should occur. Many times, in building cities and clearing the land, man has both knowingly and unknowingly disregarded environmental constraints, resulting in the permanent loss of plants and animals, the pollution of his air and drinking water and the destructions of fertile lands which provide his food. As populations continue to increase and development continues to sprawl into dwindling vacant land, the careful evaluation of limiting environmental factors becomes even more important in planning for future orderly growth and management of our natural resources. More specifically, we need to develop a plan which addresses:

- the preservation of various ecological habitats and natural features, endangered wildlife and vegetation, and open space areas
- the protection of natural "buffers" which filter and recycle our drinking water and air
- the preservation of irreplaceable productive agricultural soils, and
- the physical ability of the land to support structures (and if necessary, private septic and water systems) in areas which are not restricted by the types of constraints previously mentioned

COUNTY OPEN SPACE TAX PROGRAMS (August 2005)

County	Year Approved/Increased	Rate Cents Per \$100	Annual Tax Collected
Atlantic	1990/1998	2 cts.	\$6,000,000
Bergen	1998/2003	1 ct.	\$13,600,000
Burlington	1996/1998	4 cts.	\$13,000,000
Camden	1998	1 ct.	\$2,870,000
Cape May	1989	1 ct.	\$3,440,000
Cumberland	1994	1 ct.	\$550,000
Essex	1998	1 ct.	\$6,100,000
Cloucester	1993/2000/2004	2 cts.	\$5,000,000
Hudson	2003	1 ct.	\$4,000,000
Hunterdon	1999	1-3 cts.	\$6,315,000
Mercer	1989/1998/2004	2 cts.	\$5,600,000
Middlesex	1995/2001	3 cts.	\$25,100,000
Monmouth	1987/1996/2002	2.7 cts.	\$16,000,000
Morris	1992/1998/2001	up to 5.25 cts.	\$30,000,000
Ocean	1997	1.2 cts.	\$8,900,000
Passaic	1996	1 ct.	\$3,000,000
Salem	2002	2 cts.	\$600,000
Somerset	1989/1997	3 cts.	\$15,000,000
Sussex	2000	up to 2 cts.	\$3,000,000
Union	2000	1.5 cts.	\$8,900,000
Warren	1993/1999/2002	6 cts.	\$6,100,000
			\$183,075,000

NJDEP/Green Acres Program, August, 2005

SOURCE: 2004 Open Space Tax Data, New Jersey Department of Community Affairs,
Division of Local Government Services
Steve/coostaxprog

Historic Sites



NJ DEP - Historic Preservation Office New Jersey and National Registers of Historic Places

Last Update: 2/9/2005
Salem County

Alloway Township

SHPO Opinion: 3/11/2004
Village of Alloway Historic District (ID#4308)
Brickyard Road
SR: 8/10/1973
NR: 2/20/1975 (NR Reference #: 75001156)
Dickinson House (ID#2428)
Cohansey-Daretown Road
SR: 8/10/1990
NR: 9/28/1990 (NR Reference #: 90001451)
Philip Fries House (ID#2429)

Elmer Borough

55 Chestnut Street
SHPO Opinion: 8/1/2003
Dodges Market (ID#4220)
25 South Main Street
SHPO Opinion: 8/1/2003
Elmer Trust Company (ID#4219)
104 South Main Street
SR: 11/20/1975
NR: 5/17/1976 (NR Reference #: 76001182)
David Smith House (ID#2430)

Elsinboro Township

Fort Elfsborg-Hancock's Bridge Road
SR: 12/19/1977
NR: 8/31/1978 (NR Reference #: 78001794)
Holmeland (Benjamin Holme's House) (ID#2431)
Hancocks Bridge-Fort Elfsborg Road
COE: 6/19/1995
SR: 4/10/1996
NR: 1/16/1997 (NR Reference #: 96001548)
(National Historic Landmark, 2/16/2000)
Abel and Mary Nicholson House (NHL, ID#3437)
Amwellbury Road near Featherbed Lane
SR: 11/21/1974
NR: 2/24/1975 (NR Reference #: 75001158)
Samuel and Sarah Nicholson House (ID#2432)

Lower Alloways Creek Township

74 Buttonwood Avenue
SR: 10/28/2003
NR: 12/18/2003 (NR Reference #: 03001306)
Alloways Creek Friends Meetinghouse (ID#4208)
Alloway Creek Neck Road
COE: 10/28/1985
Nathaniel Chambless House (ID#3857)
Hancock's Bridge, Locust Island Road
SR: 9/11/1970
NR: 12/18/1970 (NR Reference #: 70000393)
Hancock House (ID#2433)
Salem-Hancocks Road (County Route 658) over Alloway Creek

SHPO Opinion: 10/15/2002

Hancock's Bridge (SI&A #1701300) (ID#4084)
New Bridge Road (County Route 623) over Alloways Creek
SHPO Opinion: 11/3/1997
New Bridge Road (CR623) Bridge (SI&A #1701399) (ID#3439)
Also located in:
Salem County, Quinton Township
134 Poplar Street
SR: 12/15/1989
NR: 1/26/1990 (NR Reference #: 89002418)
Ware-Shourds House (ID#2434)

Mannington Township

Compromise Road
SR: 11/12/1975
NR: 5/13/1976 (NR Reference #: 76001183)
Richard Brick House (ID#2435)
119 Hackett Road
COE: 3/13/2001
Hackett House (ID#4168)
Intersection of NJ Route 45 and Acton Station Road
SHPO Opinion: 7/19/1994
Mannington Blacksmith Shop Site (28-Sa-127) (ID#2436)
NJ Route 45 / Salem-Woodstown Road at Welchville-
Alloway Road
SHPO Opinion: 9/19/1995
Mannington Township Hall (ID#2900)
900 NJ Route 45
SHPO Opinion: 9/3/2002
Salem County Alms House and Insane Asylum (ID#4343)
185 NJ Route 45
SHPO Opinion: 6/9/1998
Salem Motor Vehicle Inspection Station (ID#2576)
NJ Route 45 and Bassett Road
SR: 12/14/1993
NR: 2/24/1994 (NR Reference #: 94000008)
William Smith House (ID#2437)
SHPO Opinion: 7/19/1994
Woodnut Pottery Site (28-Sa-79) (ID#2438)

Oldmans Township

Delaware Road, Camp Pedricktown
SHPO Opinion: 6/22/1998
Nike Missile Master Complex (ID#3720)
US Route 130 over Oldmans Creek
SHPO Opinion: 10/29/1992
US Route 130 (2) Bridge (SI&A #1710152) (ID#2439)
Also located in:
Gloucester County, Logan Township

Penns Grove Borough

193 West Main Street
SHPO Opinion: 9/9/2004
Leap House (ID#4319)
Corner of Main and State streets
SHPO Opinion: 1/27/1978
Penns Grove Municipal Building (ID#2440)

Pennsville Township

Intersection of Fort Mott and Lighthouse roads
SR: 12/19/1977
NR: 8/30/1978 (NR Reference #: 78001792)
Finn's Point Rear Range Light (ID#2441)
On the Delaware River at Finn's Point
SR: 9/6/1973
NR: 8/31/1978 (NR Reference #: 78001793)
Fort Mott and Finn's Point National Cemetery Historic District (ID#2442)
Delaware Bay
SR: 4/26/1996
(Fort Mott Pier)
Fort Mott and Finns Point National Cemetery Historic District
Boundary Increase (ID#20)
698 South Broadway
COE: 3/29/2000
Redstrake House (ID#55)
NJ Route 49 over Salem River
SHPO Opinion: 2/18/1993
Penns Neck [NJ Route 49 (2)] Bridge (SI&A #1708150) (ID#2443)
See Main Entry / Filed Location:
Salem County, Salem City
Lighthouse Road, Supawna National Wildlife Refuge
SHPO Opinion: 2/9/1994
Samuel Urion / Yerkes Farmstead (ID#3611)

Pilesgrove Township

947 US Highway 40
COE: 4/7/1999
Charles Engel Allen House (ID#288)
29 Fox Road
COE: 3/30/2000
Samuel and Anne Bassett House (ID#47)
Old Salem Road
SHPO Opinion: 8/9/1991
Champneys-Reed House (ID#2444)
East Lake Road near Woodstown-Alloway Road
SR: 11/10/1975
NR: 8/10/1977 (NR Reference #: 77000905)
Zaccheus Dunn House (ID#2453)
Sharptown-Swedesboro Road and Woodstown-Auburn Road
SR: 11/5/1975
NR: 5/17/1976 (NR Reference #: 76001184)
Seven Stars Tavern (ID#3440)

Pittsgrove Township

Parvin State Park
COE: 8/16/1988
CCC Cabins Historic District (ID#3435)

Quinton Township

New Bridge Road (County Route 623) over Alloways Creek
SHPO Opinion: 11/3/1997

New Bridge Road (CR623) Bridge (SI&A #1701399) (ID#3439)

See Main Entry / Filed Location:
Salem County, Lower Alloways Creek Township
NJ Route 49 over Alloways Creek
SHPO Opinion: 2/18/1993
NJ Route 49 Bridge (SI&A #1708151) (ID#2445)

Salem City

West Broadway, East Broadway, and small portions of Johnson, New Market, and Yorke streets
SR: 12/9/1991
NR: 3/5/1992 (NR Reference #: 92000098)
(Local Certified District: 3/11/83 [reduced boundaries])
Broadway Historic District (ID#2448)
Chestnut Street
SHPO Opinion: 7/8/1991
Chestnut Street Streetscape (ID#2446)
Bounded by Hedge, Thompson, South Third streets and Oak Street
Alley
SR: 1/25/2001
NR: 3/26/2001 (NR Reference #: 01000236)
Hedge-Carpenter-Thompson Historic District (ID#3752)
Market Street from East Broadway to Fenwick Creek
SR: 12/9/1974
NR: 4/10/1975 (NR Reference #: 75001157)
Market Street Historic District (ID#2449)
SHPO Opinion: 7/8/1991
Oak Street Streetscape (ID#2447)
NJ Route 49 over Salem River
SHPO Opinion: 2/18/1993
Penns Neck [NJ Route 49 (2)] Bridge (SI&A #1708150) (ID#2443)
Also located in:
Salem County, Pennsville Township
Salem County
4A New Market Street
SHPO Opinion: 7/19/1994
Salem Armory (YMCA) (ID#2450)
Portions of Elm, Olive, Church, Sinnickson, Eakin, Linden streets
SHPO Opinion: 9/8/1999
Salem Working Class Historic District (ID#3543)
185 Grant Street
COE: 1/10/1996
Telegraph Building (ID#21)
Walnut Street
SHPO Opinion: 7/8/1991
Walnut Street Streetscape (ID#2451)

Upper Pittsgrove Township

26 Daretown - Alloway Road
SHPO Opinion: 8/28/1999
26 Daretown - Alloway Road (ID#333)
US Route 40 and Woolman Road
SHPO Opinion: 8/1/2003
Greenberg Farm Complex (ID#4221)
20 Newkirk - Station
SHPO Opinion: 8/1/2003
Mayhew - Johnson - Lippincott House (ID#4222)
Daretown Road At Alloway-Daretown Road and Alloway-Bridgeton Roads
SR: 6/15/1973
NR: 9/19/1977 (NR Reference #: 77000904)
Pittsgrove Presbyterian Church (ID#2452)

Woodstown Borough

209 North Main Street

SR: 12/1/2000

NR: 2/16/2001 (NR Reference #: 01000042)

James and Mary Lawson House (ID#3794)

68 North Main Street

SR: 8/2/1978

NR: 3/7/1979 (NR Reference #: 79001518)

Joseph Shinn House (ID#2454)

SHPO Opinion: 8/9/1991

South Woodstown Historic District (ID#2455)

South Main Street / North Main Street at East Avenue / West Avenue

SHPO Opinion: 4/8/1998

Woodstown Town Center Commercial Historic District (ID#366)

Salem County Open Space Data Base

Facility Name: If followed by - DIV = parcel was entirely diverted; if followed by - P/DIV = parcel was partially diverted; and if followed by - COMP = parcel was a compensation piece for previous diversion.

Interest: ET/FE - Entire Taking/Fee Simple; PT/FE - Partial Taking/Fee Simple; LEASE - Leased Land; ET/CE - Entire Taking/Conservation Easement; PT/CE - Partial Taking/Conservation Easement

Type: M - Municipal; C - County; N - Non Profit

Funded?: Y - Park received Green Acres funding; N - Park did not receive Green Acres funding

County: SALEM

Municipality: MANNINGTON TWP

Block	Lot	Facility Name	Interest	Type	Funded?
19	15	FENWICK REC AREA	ET/FE	M	Y
59	1	FENWICK GROVE PARK	ET/FE	C	N

County: SALEM

Municipality: OLDMANS TWP

Block	Lot	Facility Name	Interest	Type	Funded?
12	5	ALLAN JONES PARK (EXP 1/31/03)	LEASE	M	Y
41	1	SALEM CO REC SITE	ET/FE	C	N

County: SALEM

Municipality: PENNS GROVE BORO

Block	Lot	Facility Name	Interest	Type	Funded?
40	4	BARBER AVE PARK	ET/FE	M	Y

County: SALEM

Municipality: PENNS GROVE

Block	Lot	Facility Name	Interest	Type	Funded?
40	4	BARBAR AVE PARK	ET/FE	M	Y

County: SALEM

Municipality: PENNS GROVE BORO

Block	Lot	Facility Name	Interest	Type	Funded?
40	5	PENNS GROVE REC AREA	ET/FE	M	N

County: SALEM

Municipality: PENNS GROVE

Block	Lot	Facility Name	Interest	Type	Funded?
40	5	BARBAR AVE PARK	ET/FE	M	Y
43	19	TOT LOT	ET/FE	M	N

County: SALEM

Municipality: PENNS GROVE BORO

Block	Lot	Facility Name	Interest	Type	Funded?
43	19	MAIN STREET TOT LOT	ET/FE	M	N
57	1	RIVERWALK	PT/FE	M	N
59	17	RIVERWALK	PT/FE	M	N

County: SALEM

Municipality: PENNSVILLE TWP

Block	Lot	Facility Name	Interest	Type	Funded?
202	1	RIVERVIEW BEACH PARK	ET/FE	M	Y
202	2	RIVERVIEW BEACH PARK	ET/FE	M	Y
202	3	RIVERVIEW BEACH PARK	ET/FE	M	Y
202.A	1	PARKS & REC DEPT	ET/FE	M	N
202.A	7	PARKS & REC DEPT	ET/FE	M	N
202.C	1	PARKS & REC DEPT	ET/FE	M	N
26	1	DEEPWATER PLAYGROUND	ET/FE	M	N
26	2	DEEPWATER PLAYGROUND	ET/FE	M	N
26	3	DEEPWATER PLAYGROUND	ET/FE	M	N
26	4	DEEPWATER PLAYGROUND	ET/FE	M	N
280	926.D	RIVIERA DR	ET/FE	M	N
317	2202	EATON RD PLAYGROUND	ET/FE	M	N
317	2203	EATON RD PLAYGROUND	ET/FE	M	N
317	2204	EATON RD PLAYGROUND	ET/FE	M	N
317	2205	EATON RD PLAYGROUND	ET/FE	M	N
317	2206	EATON RD PLAYGROUND	ET/FE	M	N
409.A	6448.A	RIVIERA DR	ET/FE	M	N
409.A	6448.B	RIVIERA DR	ET/FE	M	N
483.A	10771.B	RIVIERA DR	ET/FE	M	N

501.I	1	FORT SUMPTER PLAYGROUND	ET/FE	M	N
520	18	VALLEY PARK PLAYGROUND	ET/FE	M	N
538	15	LENAPE PLAYGROUND	ET/FE	M	N
548	3	TUFTS ROAD	ET/FE	M	N
548	3.A	TUFTS ROAD	ET/FE	M	N
548.I	8	SEAGULL STADIUM	ET/FE	M	N
549	15849.C	MILES CREEK	ET/FE	M	N
549.A	15849.D	MILES CREEK	ET/FE	M	N
550	13891.A	MILES CREEK	ET/FE	M	N
551	13891.B	MILES CREEK	ET/FE	M	N
580	15849.A	MILES CREEK	ET/FE	M	N
580	15849.B	MILES CREEK	ET/FE	M	N
625.A	15577.A	MILES CREEK	ET/FE	M	N
630	3.1	LIGHTHOUSE TRIANGLE	ET/FE	M	N
78	1	LITTLE LEAGUE	ET/FE	M	N
88	8.1	FRANKLIN PLAYGROUND	ET/FE	M	N
94	29	WINGATE DR	ET/FE	M	N
94.D	7.A	WOODSIDE PLAYGROUND	ET/FE	M	N

County: SALEM

Municipality: PILESGROVE TWP

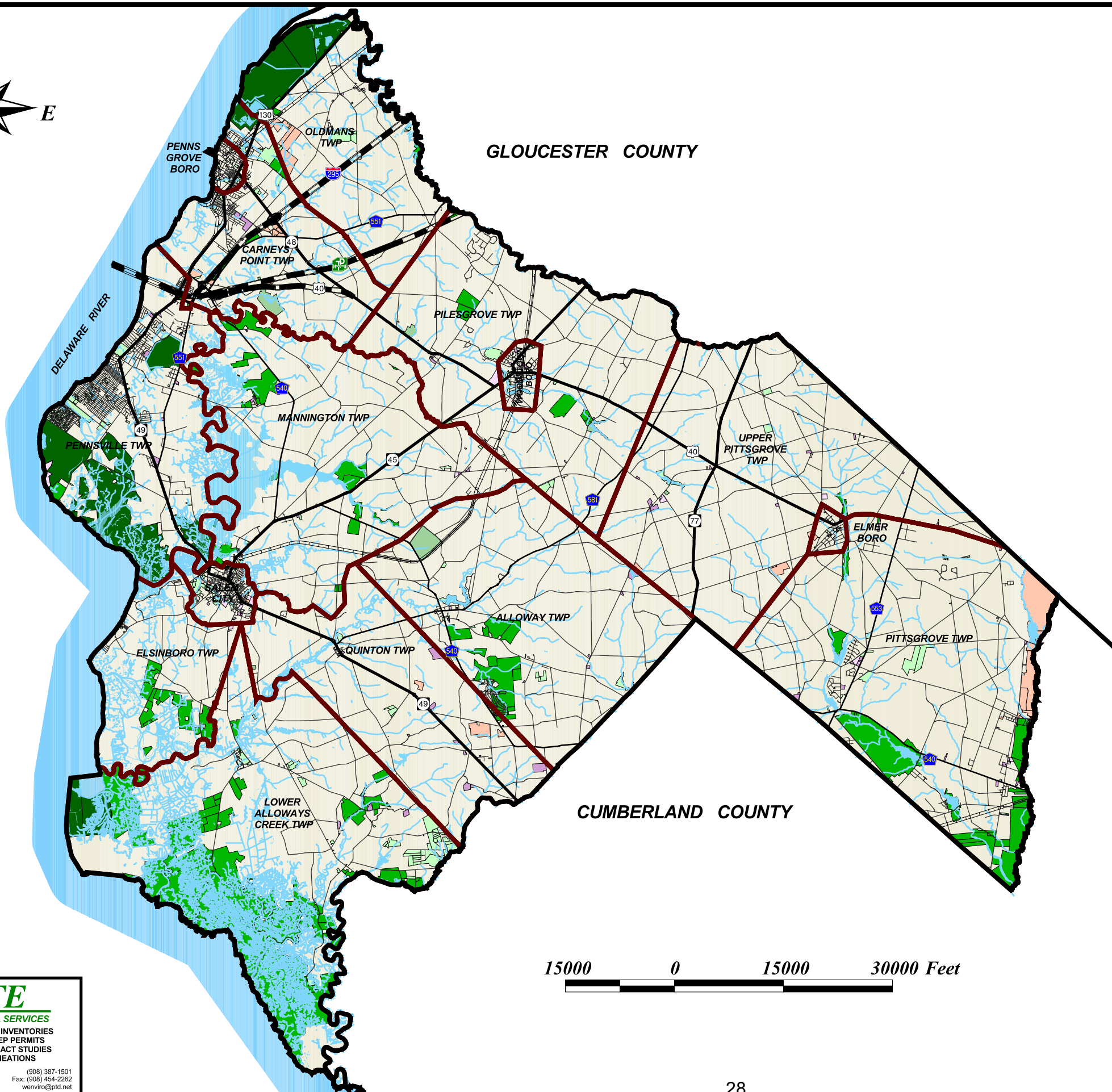
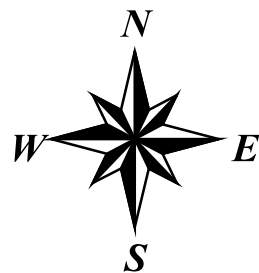
Block	Lot	Facility Name	Interest	Type	Funded?
21	38A	GARRISON PARK	ET/FE	M	N
30	14	MARLTON REC AREA	ET/FE	M	Y
57	9	MARLTON REC AREA	ET/FE	M	Y
81	14	SALEM RIVER AREA ACQ	ET/FE	C	Y
81	4	SALEM RIVER AREA ACQ	ET/CE	C	Y

County: SALEM

Municipality: PITTS GROVE TWP

Block	Lot	Facility Name	Interest	Type	Funded?
1101	21	DEER PEN PARK	ET/FE	M	N
701	10	GREEN BRANCH PARK	ET/FE	M	Y
701	12	GREEN BRANCH PARK	ET/FE	M	Y
401	11	WILLOW GROVE LAKE	ET/FE	N	Y
401	12	WILLOW GROVE LAKE	ET/FE	N	Y
504	20	WILLOW GROVE LAKE	ET/FE	N	Y

The above information is the Recreation and Open Space Inventory (ROSI) on file with Green Acres. Please note that Green Acres relies on the accuracy of the information provided to us by the Local Unit(s) in maintaining the accuracy of our database. Since it is the responsibility of the Local Unit(s) to ensure compliance with Green Acres rules, it is strongly recommended that you confirm this information with the Local Unit(s).



REFERENCES & NOTES:

Public Lands based upon 2002 Municipal Tax Assessor Records supplied by Civil Solutions, Inc., May, 2002.

Rivers and Lakes taken from NJDEP GIS database, 1986.

This map has been prepared as a guide for the Salem County Natural and Cultural Resources Inventory. Data on this map should not be relied upon for individual lot planning.

This map was developed using NJDEP & NJGS Geographic Information System digital data, but this secondary product has not been verified by the NJDEP or NJGS and is not State - authorized.

MAP LEGEND:

Open Space Parcels

- Federal Land
- State Land
- County Land
- Municipal Land
- Schools
- Church / Charity
- Cemetery
- Other Non-Profit Land

15000 0 15000 30000 Feet



WHITE
ENVIRONMENTAL SERVICES

NATURAL RESOURCE INVENTORIES
GIS MAPPING - NJDEP PERMITS
ENVIRONMENTAL IMPACT STUDIES
WETLANDS DELINEATIONS

(908) 387-1501
985 Belvidere Road
Phillipsburg, NJ 08865
Fax: (908) 454-2262
wenviro@pntd.net

Open Space
Natural and Cultural
Resource Inventories
Salem County, New Jersey

Scale: 1" = 15,000'

Date: 1/15/06

RON RUKENSTEIN & ASSOCIATES

Planning and Grants Solutions

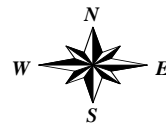
P.O. Box 1
Titusville, NJ 08560

(609) 730-8138
Fax: (609) 730-8139

REFERENCES & NOTES:

Parcel mapping based upon municipal tax maps as digitized by Civil Solutions, Inc., May, 2002.
 Roadways shown as digitized by Civil Solutions, Inc. May, 2002.
 Lakes and Rivers based upon NJDEP GIS coverage, 1986.
 Open Space based upon NJDEP GIS database "Dedicated Open Space, Cross Acceptance (OPENSPOE_CA)", 2004.
 Sewer Service Areas based upon NJDEP GIS database "Sewer Service Status, Cross Acceptance (SEWER_CA)", 2004.
 This map has been prepared as an aid for planning in Salem County. Data on this map should not be relied upon for individual lot planning. This map was developed using NJDEP & NJGIS Geographic Information System digital data, and this proprietary product has not been verified by the NJDEP or NJGIS and is not State-authorized.

NJDEP Cross Acceptance Data Layers Open Space and Sewer Service Areas June, 2004



GLOUCESTER COUNTY

CUMBERLAND COUNTY

10000 0 10000 20000 Feet
 Scale: 1" = 5000'

MAP LEGEND:

- NJDEP Open Space
- NJDEP Sewer Service Areas

WHITE
 ENVIRONMENTAL SERVICES
 NATURAL RESOURCES, ENVIRONMENTAL
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By looking at several physical characteristics (such as geology, soil type, existing vegetation and ecosystems, hydrology of both surface and ground water systems, existing air quality, waste disposal sites and remaining open space/conservation areas) and their inter-relationships, we can identify those areas most and least suited for accommodating future growth.

Of course, in those areas which are already built-up, very little can be done to reverse any negative effects of development which may have occurred, other than the regulation of waste disposal and water usage. In Salem County, the most urbanized area is the northwestern portion of the County along the Delaware riverfront from Penns Grove to Pennsville. Other development has taken place in small to medium nodes throughout the County, such as at the intersection of busy roads, or along navigable inland rivers. Conversely, large and small tracts of land have been set aside by all levels of government for protection and recreational purposes. These areas face little or no development pressure. It is the remaining portions of the County, particularly in the eastern and north-central portions, where development pressures are greatest, that must be most carefully analyzed for environmental constraints and development suitability.

**Salem County
Natural Resources Inventory**

**WILDLIFE
AND
VEGETATION**

WILDLIFE AND VEGETATION

There is an abundance and great diversity of plant and animal wildlife found in Salem County. However, the species and distribution are not uniform throughout the County. The presence of particular flora and fauna is highly dependent upon one another, as well as the natural features of the environment. The wildlife found in a particular ecosystem is directly dependent upon the vegetation found there (for food and shelter) which is dependent upon the soil structure and moisture content, which are in turn, determined by geology, topography, and climate. A geographic area which supports a particular combination of plant and animal species, each of which performs a specific function within the community, is defined as an ecosystem. These ecosystems account for the variation in vegetation and wildlife throughout the County. Each system has undergone the processes of natural selection and evolution, such that a careful balance among the species is maintained. The introduction or removal of a species either by natural processes or as the result of human intervention destroys the equilibrium. Sometimes the changed are easily absorbed and the equilibrium is quickly re-established with little change to the system. Other time, the change is so great that the existing ecosystem evolves into an entirely new one, or may be totally destroyed.

There are four major ecosystems found in Salem County: woodland, open land, aquatic and wetland. A representative sample of the species found in each system is listed in Table 6. Initially, all of Salem County, with the exception of tidal marshes and some other wetland areas, was covered with dense forest growth. The vegetation within the forested area varies, based on soil types and moisture content. The eastern and south-central areas, general sandy and thus drier in nature, were covered with pine, oak, chestnut, and hickory, while mixed hardwood predominated in the western portions of the County. More water-tolerant species such as Atlantic white cedar, red maple. Blackgum and sweetbay magnolia could be found along streams and in swampy areas. Over time, repeated cutting, poor forest management techniques and fire destruction have resulted in the predominance of lower quality timber stands consisting of pitch and shortleaf pine and mixed oak species in the remaining wooded areas of the County. Small concentrations of conifers can be found in Quinton and Alloway Townships. One species in particular, the Atlantic white cedar, is an endangered and rare species nationwide. A significant stand is located near Maskell's Mill Pond in Lower Alloways Creek Township. Deciduous trees predominate in the remainder of the County. Shrubs such as blueberry, laurel, huckleberry, sweet pepperbush, arrowwood, leatherleaf honeysuckle and swamp azalea are abundant in woodland areas. Ferns, rushes, mosses and sedges can be found on the forest floor, as well as poison ivy and wild garlic. Woodland trees and the accompanying undergrowth not only provide food and shelter for a variety of wildlife species, but also provide erosion control, windbreaks, shade, recreational and aesthetic pleasure.

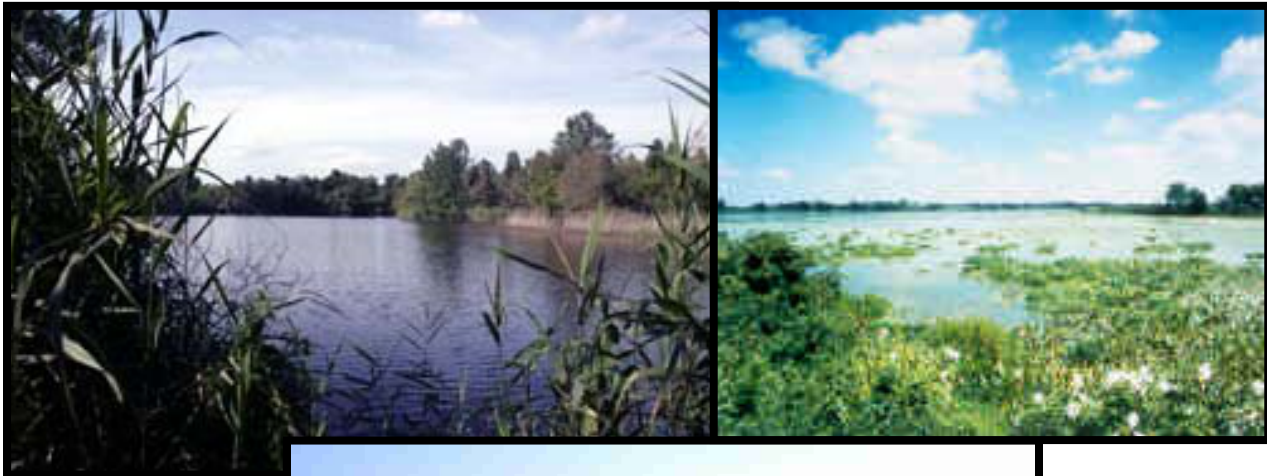
Open land was created by the clearing of forested land for agricultural and development purposes. This drastic removal of vegetation, and subsequent exposure to sun and wind created a habitat unsuitable for most woodland animal species. Open land is not, however, barren. Croplands and abandoned cleared areas which are now covered by grasses and shrubs, also support a great deal of wildlife, including game birds such as pheasant and quail, small mammals

such as field mice, rabbits and foxes, and other species which can not survive in any other ecosystem. This “man-made” ecosystem should be a constant reminder of the potential of human activity to greatly alter or destroy the delicate balance of an environmental system.

The two remaining ecosystems are both dominated by the presences of water, and are actually highly interconnected. The aquatic ecosystem consists of bodies of both fresh and salt water. They are the home to many varieties of fish and shellfish, water plants, algae and micro-organisms. This ecosystem is closely intertwined with the adjacent wetland areas which are highly fertile and support diverse life forms. (The functions and general nature of wetlands was discussed in the hydrologic section of this report.) Together, the tidal areas of these two ecosystems are often referred to as an estuarine ecosystem.

Wetland vegetation is dominated by two types of grasses, Spartina alterniflora, a coarse stiff grass known as Salt Marsh Cord Grass, and Spartina patens, or Salt Meadow Hay, a slender delicate plant. Along with *Phragmites communis*, common reed, these plants not only provide a dense cover for numerous ducks, shore and migrating birds, as well as mink, muskrat and beaver, but also act as windbreak and erosion control mechanisms. These animals feed directly on wetland plant and on the abundant fish and shellfish found in tidal pools and meadows. The rapid nutrient cycling which occurs in these fertile areas aids in their use as breeding, spawning and nesting grounds. Mannington Meadow is the most important habitat area in New Jersey for kingrail and Wilton’s snipe. Along with other County meadows, these areas are used by thousands of migrating waterfowl every year.

In 1991, the NJDEP officially recognized the ecological importance of the Mannington Meadows by creating a plan, called the Salem River Meadows Project, to protect the unique wildlife habitat from development pressures. The designated area contains 17,000 acres proposed for creating a protected wildlife habitat buffer zone. The majority of the property will be acquired through purchase of easements, although 4,500 are slated for outright purchase. In addition, the restoration of 3,000 acres of saltmarsh, deteriorated by the presence of introduced European *Phragmites* species is planned. The phragmite plants have successfully out-competed native wetland vegetation which provided shelter and food for numerous birds and other animals. The removal of the phragmites should allow the marsh to return to its former, more highly ecologically diverse status. Funding for these projects is to be provided through a joint effort among the State and Federal governments and several private environmental agencies.



Source:
www.outdoors.org
 Photo: Thomas Briglia



The Supawna Meadows National Wildlife Refuge

The 2,000-acre Supawna Meadows National Wildlife Refuge adjoins Mannington Meadows along its southwestern flank. The refuge provides wintering and migrating waterfowl with an important feeding and resting area.

Aquatic and wetland plant and animal species change as the salinity of the water decreases. Inland freshwater habitats support wild rice, cattails and reed grass, among other freshwater species of plants, as well as some saltwater species which have adapted to freshwater conditions. Excessive growth of water lilies and other plants may occur in areas which have undergone eutrophication.

Delaware Estuary / Coastal Area

The Delaware River Estuary, of which Salem County is part, is not only biologically diverse, but also socio-economically important to the region as well. Much industry and development have been located along the Delaware River and Bay since the area was first settled.

The Delaware Estuary stretches from Trenton, New Jersey and Morrisville, Pennsylvania, south to Cape May, New Jersey and Cape Henlopen, Delaware, including all of the Delaware Bay and the tidal reaches of the Delaware River. A majority of the Delaware Estuary's 5 million people live in one of the regions three largest cities, including Philadelphia, PA, Camden, NJ, and Wilmington, DE. This highly commercialized area hosts the largest freshwater port in the United States, accommodates the third largest petrochemical port, and five of the largest east coast refineries with over 42 million gallons of crude transported on the river daily. But the Delaware Estuary is also a vital ecosystem, home to over 130 species of finfish as well as clams, oysters, and crabs. The second largest concentration of migrating shorebirds in the western hemisphere is found in the Delaware Estuary, along with habitat for 15 different species of waterfowl, totaling half a million individuals who either migrate through or spend the winter here. Also found in the Delaware Estuary is the largest population of spawning horseshoe crabs in the world.

Nearly 200 years of misuse of the estuary as a dumping ground for industrial and toxic wastes, as well as for sewerage, have resulted in high toxin levels and low levels of dissolved oxygen for use by water dwelling organisms. The water becomes not only unfit for human usage (drinking, swimming) but also unable to support the many creatures which rely of the estuary directly or indirectly for food or shelter. Although stricter regulations for dumping and pollution have been enacted, and sewerage problems have been somewhat ameliorated by improved treatment facilities, the estuary is still not entirely swimmable or fishable. Toxic substances such as DDT, mercury, lead, zinc, chromium and polycyclic aromatic hydrocarbons are still found in the water samples and sediments. The river continues to be polluted from both point and non-point sources and, as a result, dissolved oxygen levels in the river (although on the rise) are still inadequately low.

Because the estuary is greatly affected by development, care must be taken to manage and protect its natural resources. In 1988, The Delaware Estuary Program was established. (see attached program area map) The Delaware Estuary Program recognizes that growth and development are important to Estuary watershed communities and that they are not necessarily incompatible with a "greener vision" that conserves natural lands and special places. Accordingly, the Delaware Comprehensive and Conservation Management Plan recommends actions that promote a regional, watershed approach to land use by offering support for environmentally-sound land use practices. Through technical support and education for local governments, the Program will highlight practical planning alternatives and suggest opportunities for such approaches as promoting infill and redevelopment in previously developed areas; linking green spaces within and between communities; conserving important terrestrial habitat; reducing storm water loadings; and increasing flexibility for wastewater reclamation and reuse.

The State, through the Coastal Area Facility Review Act (CAFRA) (N.J.S.A. 13:19) has taken steps to protect the coastal resources along the Delaware River. CAFRA applies to projects near coastal waters in the southern part of the State. The CAFRA area begins where the Cheesapeake Creek enters Raritan Bay in Old Bridge, Middlesex County. It extends south along the coast around Cape May, and then north along the Delaware Bay ending at the Kilcohook

National Wildlife Refuge in Salem County. The inland limit of the CAFRA area follows an irregular line drawn along public roads, railroad tracks, and other features. The CAFRA area varies in width from a few thousand feet to 24 miles, measured straight inland from the shoreline. [View the attached CAFRA Boundary Map](#) for a rough idea.

The law divides the CAFRA area into pieces or zones, and regulates different types of development in each zone. Generally, the closer you are to the water, the more likely it is that your development will be regulated.

The CAFRA law regulates almost all development activities involved in residential, commercial, or industrial development, including construction, relocation, and enlargement of buildings or structures; and all related work, such as excavation, grading, shore protection structures, and site preparation.

Endangered Species

Increased development of land for human usage usually results in decreased geographic habitat for plant or animal species. Sometimes the impact is minimal, and the ecosystem can adjust without significant damage. Other times the loss of habitat results in reduced numbers of a particular plant or animal. These environmentally sensitive organisms are frequently classified as “endangered” (facing extinction because its existence is jeopardized by habitat destruction or alteration, excessive exploitation, predation, disease or other natural or man-made factors) or “threatened” (likely to become endangered if present trends continue). As more species are permanently lost, the entire ecosystem breaks down. See attached list of New Jersey’s Endangered and Threatened Wildlife.