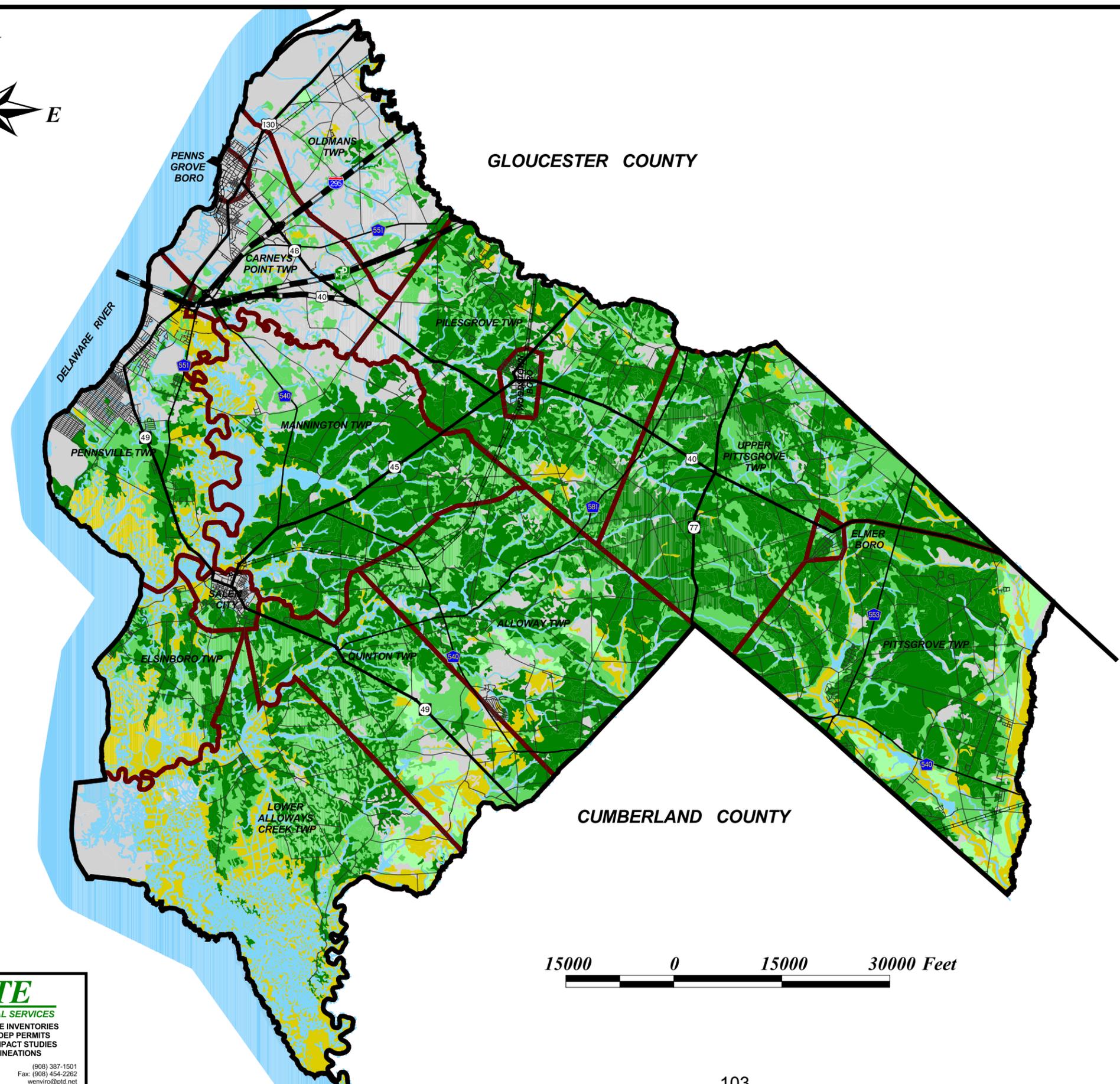
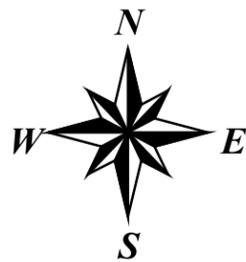


## Salem County Soils

Sum of ACRES		
SERIES	SOIL TYPE	Total
Adelphia	Adelphia sandy loam, 2 to 5 percent slopes	189.066
Adelphia Total		189.066
Alloway	Alloway loam, 2 to 5 percent slopes	5995.836
	Alloway loam, 5 to 10 percent slopes	890.702
	Alloway sandy loam, 2 to 5 percent slopes	524.844
	Alloway silt loam, 0 to 2 percent slopes	2693.981
	Alloway silt loam, 2 to 5 percent slopes	3072.713
Alloway Total		13178.076
Appoquinimink-Broadkill	Appoquinimink-Broadkill complex, 0 to 1 percent slopes, very frequentl	4350.635
Appoquinimink-Broadkill Total		4350.635
Aura	Aura gravelly sandy loam, 2 to 5 percent slopes	2703.757
	Aura gravelly sandy loam, 5 to 10 percent slopes	143.326
	Aura loam, 0 to 2 percent slopes	1358.125
	Aura loam, 2 to 5 percent slopes	3996.937
	Aura loamy sand, 0 to 5 percent slopes	186.198
	Aura sandy loam, 2 to 5 percent slopes	5078.202
	Aura sandy loam, 5 to 10 percent slopes	271.666
Aura Total		13738.211
Berryland and Mullica	Berryland and Mullica soils, 0 to 2 percent slopes, occasionally flood	589.702
Berryland and Mullica Total		589.702
Chicone	Chicone silt loam, 0 to 1 percent slopes, frequently flooded	4487.229
Chicone Total		4487.229
Chillum	Chillum silt loam, 0 to 2 percent slopes	394.971
	Chillum silt loam, 2 to 5 percent slopes	11397.064
Chillum Total		11792.035
Downer	Downer loamy sand, 0 to 5 percent slopes	6690.702
	Downer loamy sand, 5 to 10 percent slopes	360.567
	Downer sandy loam, 0 to 2 percent slopes	772.816
	Downer sandy loam, 2 to 5 percent slopes	704.163
Downer Total		8528.248
Downer-Galestown	Downer-Galestown complex, 0 to 5 percent slopes	9945.31
Downer-Galestown Total		9945.31
Downer-Urban	Downer-Urban land complex, 0 to 5 percent slopes	1358.665
Downer-Urban Total		1358.665
Evesboro	Evesboro sand, 0 to 5 percent slopes	4380.94
	Evesboro sand, 5 to 10 percent slopes	1348.92
Evesboro Total		5729.86
Fluvaquents	Fluvaquents, loamy, 0 to 3 percent slopes, frequently flooded	338.304
Fluvaquents Total		338.304

Fort Mott	Fort Mott loamy sand, 0 to 5 percent slopes	2129.368
Fort Mott Total		2129.368
Galestown	Galestown sand, 0 to 5 percent slopes	3776.04
Galestown Total		3776.04
Galloway	Galloway loamy sand, 0 to 5 percent slopes	531.332
Galloway Total		531.332
Hammonton	Hammonton loamy sand, 0 to 5 percent slopes	4916.162
	Hammonton sandy loam, 0 to 2 percent slopes	60.744
Hammonton Total		4976.906
Hammonton-Urban	Hammonton-Urban land complex, 0 to 2 percent slopes	726.944
Hammonton-Urban Total		726.944
Keyport	Keyport loam, 5 to 10 percent slopes	24.297
Keyport Total		24.297
Manahawkin	Manahawkin muck, 0 to 1 percent slopes, frequently flooded	5348.806
Manahawkin Total		5348.806
Mannington-Nanticoke	Mannington-Nanticoke complex, 0 to 1 percent slopes, very frequently f	5982.417
Mannington-Nanticoke Total		5982.417
Marlton	Marlton silt loam, 2 to 5 percent slopes	378.616
	Marlton silt loam, 5 to 10 percent slopes	800.316
Marlton Total		1178.932
Matapeake	Matapeake silt loam, 0 to 2 percent slopes	2810.601
	Matapeake silt loam, 2 to 5 percent slopes	3833.766
	Matapeake silt loam, 5 to 10 percent slopes	505.901
Matapeake Total		7150.268
Mattapex	Mattapex silt loam, 0 to 2 percent slopes	5432.611
	Mattapex silt loam, 2 to 5 percent slopes	7416.62
Mattapex Total		12849.231
Mattapex-Urban	Mattapex-Urban land complex, 0 to 5 percent slopes	726.664
Mattapex-Urban Total		726.664
Muttontown	Muttontown sandy loam, 0 to 2 percent slopes	2238.649
Muttontown Total		2238.649
Othello and Fallsington	Othello and Fallsington soils, 0 to 2 percent slopes	8083.675
Othello and Fallsington Total		8083.675
Othello, Fallsington, and Trussum	Othello, Fallsington, and Trussum soils, 0 to 2 percent slopes	18412.482
Othello, Fallsington, and Trussum Total		18412.482
Pedricktown, Askecksy, and Mullica	Pedricktown, Askecksy, and Mullica soils, 0 to 2 percent slopes, rarel	11776.429
Pedricktown, Askecksy, and Mullica Total		11776.429
Pits	Pits, clay	5.43
	Pits, sand and gravel	623.442
Pits Total		628.872
Sassafras	Sassafras loam, 0 to 2 percent slopes	62.053
	Sassafras sandy loam, 0 to 2 percent slopes	1272.114
	Sassafras sandy loam, 2 to 5 percent slopes	8706.905

	Sassafras sandy loam, 5 to 10 percent slopes	977.547
Sassafras Total		11018.619
Sassafras-Woodstown	Sassafras-Woodstown complex, 0 to 2 percent slopes	220.913
Sassafras-Woodstown Total		220.913
Sharptown	Sharptown silt loam, 0 to 2 percent slopes	872.385
	Sharptown silt loam, 2 to 5 percent slopes	4427.233
Sharptown Total		5299.618
Swedesboro	Swedesboro loamy sand, 0 to 5 percent slopes	2127.082
	Swedesboro loamy sand, 5 to 10 percent slopes	1206.422
Swedesboro Total		3333.504
Transquaking	Transquaking mucky peat, 0 to 1 percent slopes, very frequently flooded	13597.671
Transquaking Total		13597.671
Udorthents	Udorthents, dredged fine material, 0 to 8 percent slopes	6199.551
	Udorthents, refuse substratum, 0 to 8 percent slopes	11.933
	Udorthents, sandy substratum, 0 to 8 percent slopes	683.573
Udorthents Total		6895.057
Urban	Urban land	1830.275
Urban Total		1830.275
Water	Water	11372.634
Water Total		11372.634
Woodstown	Woodstown sandy loam, 0 to 2 percent slopes	9445.564
Woodstown Total		9445.564
Grand Total		223780.508



**REFERENCES & NOTES:**

Farmland Soils based upon NRCS Soils Mapping and Classification, 2005.

Rivers and Lakes taken from NJDEP GIS database, 1986.

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**MAP LEGEND:**

- 2005 NRCS Soil Survey**
-  Prime Farmland Soils
  -  Farmland Soils of Statewide Importance
  -  Farmland Soils of Local Importance
  -  Farmland Soils of Unique Importance
  -  Not Prime Farmland Soil



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**Farmland Soils**  
Natural and Cultural  
Resource Inventories  
Salem County, New Jersey

Scale: 1" = 15,000' Date: 1/15/06

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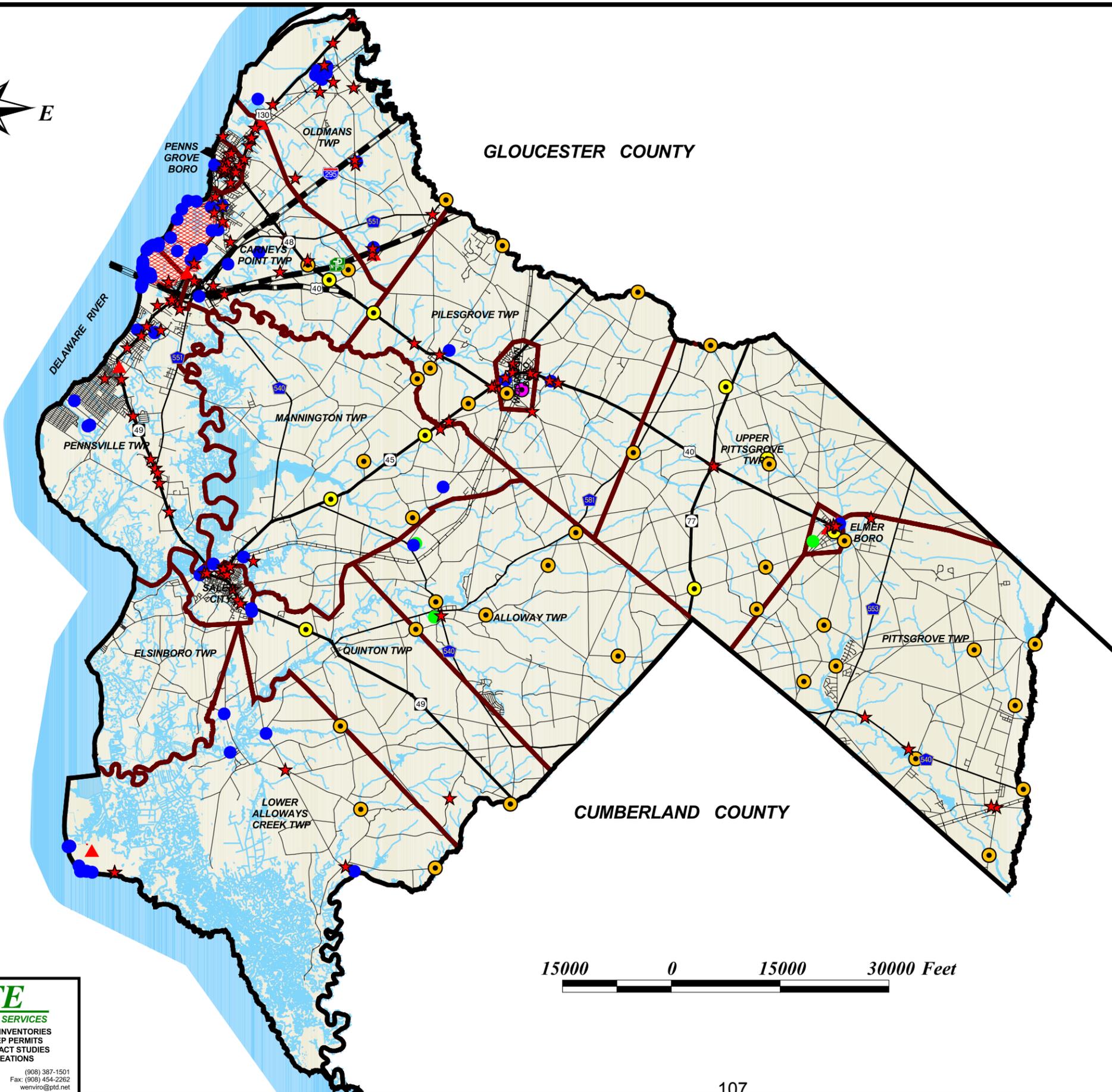
**Salem County  
Natural Resources Inventory**

**KNOWN CONTAMINATED SITES**

## Known Contaminated Sites

SITE ID	COUNTY	MUNICIPALITY	SITE NAME	STREET ADDRESS
74004	Salem	Penns Grove Boro	113 SOUTH BROAD ST	113 S BROAD ST
175482	Salem	Pennsville Twp	119 ANNAPOLIS ROAD	119 ANNAPOLIS RD
75668	Salem	Penns Grove Boro	125 TYRONE ST	125 TYRONE ST
73856	Salem	Penns Grove Boro	13 MITCHELL AVE	13 MITCHELL AVE
74007	Salem	Penns Grove Boro	13 STATE ST	13 STATE ST
145464	Salem	Pennsville Twp	14 WOODSIDE PLACE	14 WOODSIDE PL
73855	Salem	Penns Grove Boro	15 MITCHELL AVE	15 MITCHELL AVE
178768	Salem	Woodstown Boro	16 GRANT STREET	16 GRANT ST
69346	Salem	Carneys Point Twp	184 DELAWARE AVENUE	184 DELAWARE AVE
170158	Salem	Pennsville Twp	240 NORTH BROADWAY	240 N BROADWAY
73320	Salem	Oldmans Twp	266 PENNSVILLE PEDRICKTOWN ROAD	266 PENNSVILLE PEDRICKTOWN RD
129094	Salem	Woodstown Boro	26 KRESSWOLD LANE	26 KRESSWOLD LN
93306	Salem	Carneys Point Twp	27 OAK LN	27 OAK LN
75069	Salem	Salem City	287 EAST BROADWAY	287 E BROADWAY
147824	Salem	Carneys Point Twp	291 C STREET	291 C ST
75072	Salem	Carneys Point Twp	291 N VIRGINIA AVE	291 N VIRGINIA AVE
1973	Salem	Oldmans Twp	295 AUTO TRUCK PLAZA	RT 295 EXIT 7
66866	Salem	Pennsville Twp	661 SOUTH BROAD STREET	661 S BROAD ST
58070	Salem	Penns Grove Boro	80 EAST MAIN ST	80 MAIN ST E
163797	Salem	Pennsville Twp	813 S BROADWAY	813 S BROADWAY
13367	Salem	Alloway Twp	ALLOWAY SERVICENTER INC	32 S GREENWICH ST
16020	Salem	Salem City	ALUCHEM INC	FRONT ST
14618	Salem	Salem City	ANCHOR GLASS CONTAINER CORP	83 GRIFFITH ST
14618	Salem	Salem City	ANCHOR GLASS CONTAINER CORP	RTE 49 & SALEM RIVER DR
87084	Salem	Carneys Point Twp	ASH STREET	ASH ST
50885	Salem	Salem City	BADER'S CITGO	40 W BROADWAY
1965	Salem	Penns Grove Boro	BIG BEAR ASSOC	351 VIRGINIA AVE N
75329	Salem	Penns Grove Boro	BLUE DIAMOND MEAT CO	18 N VIRGINIA AVE
74084	Salem	Penns Grove Boro	BROAD ST S & WALNUT ST	BROAD ST S & WALNUT ST
44951	Salem	Oldmans Twp	BROWNING FERRIS IND CSI	PORCUPINE RD
125327	Salem	Carneys Point Twp	CARNEYS POINT TWP RECREATION AREA	PENNS GRV AUBURN RD
38912	Salem	Pittsgrove Twp	CENTERTON COUNTRY CLUB	1022 ALMOND RD
1976	Salem	Oldmans Twp	CLARA BARTON SERVICE AREA 1-S	NEW JERSEY TPKE MP 5.4 S
19196	Salem	Penns Grove Boro	CLASSIC PAINTS INCORPORATED	76 VIRGINIA AVE S
1925	Salem	Pennsville Twp	COASTAL MART 7219	RTE 49 & MAHONEY RD
45394	Salem	Pennsville Twp	COASTAL MART 7221	MAIN ST
14616	Salem	Pilesgrove Twp	C R WARNER INC	EAST LAKES & DARETOWN RDS
15873	Salem	Pennsville Twp	DEEPWATER GENERATING STATION	373 BROADWAY N
45571	Salem	Penns Grove Boro	DEEPWATER TRUCK TERMINAL	RTE 130
1921	Salem	Pennsville Twp	DRAGONS POINT TEXACO	RTE 49 & HOOK RD
15645	Salem	Pennsville Twp	DUPONT CHAMBERS WORKS	RT 130
56669	Salem	Pennsville Twp	E&R MOTOR PARTS INC	98 CENTRAL SCHOOLHOUSE RD
43331	Salem	Oldmans Twp	EXXON CHEMICAL/TOMAH PRODUCTS	PENNS GROVE PEDRICKTOWN RD
17214	Salem	Pennsville Twp	EXXON STORE 3-5408	RTE 49 & LIPPENCOTT AVE
15098	Salem	Carneys Point Twp	FERRARA CHEVROLET INC	239 TO 245 N VIRGINIA AVE
68727	Salem	Pennsville Twp	FOGG COMPANY	414 SLAPES CORNER RD
57747	Salem	Carneys Point Twp	FRANK KRIVDA	562 HARDING HWY
1952	Salem	Elmer Boro	FRED HARZ AND SON	26 RTE 40 (HARDING HWY)
1952	Salem	Elmer Boro	FRED HARZ & SON	26 RTE 40 (HARDING HWY)
177651	Salem	Salem City	HANCOCK 5TH & HOWELL STREETS	HANCOCK 5TH & HOWELL STS
15647	Salem	Lower Alloways Creek	HOPE CREEK GENERATING STATION	BUTTONWOOD AVE
1984	Salem	Lower Alloways Creek	JOE & SANDYS COUNTRY STORE	986 MAIN ST
19099	Salem	Oldmans Twp	JOHN FENWICK SERVICE AREA 1-N	NJ TPKE MM 5.4
57449	Salem	Lower Alloways Creek	LAC GENERAL STORE	634 HARMERSVILLE RD
44871	Salem	Carneys Point Twp	LAXMI INC VILLAGE GETTY	324 SHELL RD
1910	Salem	Carneys Point Twp	LOU'S SUNOCO	251 SHELL RD
39381	Salem	Carneys Point Twp	LUKOIL - 56777	356 RT 40
74005	Salem	Penns Grove Boro	MAIN & NORTH BROAD STS	MAIN & N BROAD STS
15871	Salem	Mannington Twp	MANNINGTON MILLS INC	MANNINGTON MILLS RD & RTE 45

82760	Salem	Pennsville Twp	MARLBORO MACHINE COMPANY INCORPORA	962 BROADWAY S
1890	Salem	Woodstown Boro	MAT PETROLEUM SUNOCO	RTES 40 & 45
74001	Salem	Penns Grove Boro	MITCHELL AVE	MITCHELL AVE
15055	Salem	Upper Pittsgrove Twp	NANAK AUTO FUEL INC	RT 40 & 77
45573	Salem	Salem City	NATIONAL FREIGHT SALEM TERMINAL	HANCOCK ST
55153	Salem	Oldmans Twp	NL INDUSTRIES INCORPORATED	PENNS GROVE PEDRICKTOWN RD
1972	Salem	Oldmans Twp	NOVEON INC	76 PORCUPINE RD & RT 130
74138	Salem	Penns Grove Boro	OFRACS INC	80 SOUTH BROAD ST
1958	Salem	Pittsgrove Twp	PARVIN STATE PARK	RT 540
73339	Salem	Oldmans Twp	PEDRICKTOWN POST OFFICE	13 MILL ST W
66453	Salem	Penns Grove Boro	PENNS GROVE COAL GAS (SJG)	PITMAN ST
1970	Salem	Penns Grove Boro	PENNS GROVE TEXACO	MAIN ST
1970	Salem	Penns Grove Boro	PENNS GROVE TEXACO	RT 130 & N VIRGINIA AVE
18878	Salem	Pennsville Twp	PENNSVILLE EXXON	418 N BROAD ST
15647	Salem	Lower Alloways Creek	PSE&G NUCLEAR LLC SALEM GENERATING S	ALLOWAY CREEK NCK RD
15647	Salem	Lower Alloways Creek	PSE&G NUCLEAR PROCESSING FACILIT	BUTTONWOOD AVE
26428	Salem	Oldmans Twp	QUALA SYSTEMS	6 RT 130
66571	Salem	Quinton Twp	QUINTON TWP SOLID WASTE DISPOSAL AREA	GRAVELLY HILL RD
70043	Salem	Carneys Point Twp	RAPPAS GAS STATION	277 VIRGINIA AVE N
46037	Salem	Mannington Twp	SALEM CNTY LAKEVIEW	LAKEVIEW OFFICE COMPLEX
1911	Salem	Pilesgrove Twp	SALEM CNTY ROAD & BRIDGE DEPARTMENT	153 CEMETERY RD
66454	Salem	Salem City	SALEM COAL GAS (SJG)	5TH & HOWELL STS
1911	Salem	Pilesgrove Twp	SALEM COUNTY RD & BRIDGE DEPARTMENT	153 CEMETERY RD
15647	Salem	Lower Alloways Creek	SALEM GENERATING STATION	BUTTONWOOD AVE
1992	Salem	Elmer Boro	SCHALICK MILL INC	FRONT ST E
54412	Gloucester	Swedesboro Boro	SCHRUFER PROPERTY	43 MAIN ST
1976	Salem	Oldmans Twp	SEWAGE TREATMENT PLANT 1-S	NEW JERSEY TPKE MP 5.4 S
1964	Salem	Pittsgrove Twp	SICO 832	1251 LANDIS AVE
13363	Salem	Oldmans Twp	SIEVERS-SANDBERG USARC	RTE 130
1991	Salem	Elmer Boro	SK REAL ESTATE LLC	E FRONT & N MAIN ST
69412	Salem	Carneys Point Twp	SODERS ROAD	SODERS RD
74884	Salem	Oldmans Twp	STAUTGHENS MILL RD	STAUTGHENS MILL RD
13355	Salem	Pennsville Twp	SUNOCO 0016-6462	421 N BROADWAY
1943	Salem	Salem City	SUNOCO 0669-8220	BROADWAY & LINDEN ST
1921	Salem	Pennsville Twp	SUNOCO 0679-4838	RT 49 & HOOK RD
1917	Salem	Pilesgrove Twp	SUNOCO #08098048	843 RT 40
1929	Salem	Pennsville Twp	SUNOCO 0822-3380	161 S BROADWAY
1942	Salem	Salem City	SUNOCO 08857922	RTE 49 & YORK ST
1941	Salem	Salem City	TEJINDER & GURPARKASH SINGH	63 MARKET ST
1924	Salem	Pilesgrove Twp	TIWANA ENTERPRISES LLC	1170 RT 40 &
73390	Salem	Salem City	TOWN & COUNTRY PLANT FOOD INCORPORA	13 MARKET ST
66261	Salem	Carneys Point Twp	UPPER PENNS NECK SANITARY LANDFILL	GAME CREEK RD
1893	Salem	Upper Pittsgrove Twp	US FUEL	760 RT 40 & RT 77
69713	Salem	Pittsgrove Twp	US GRAIN & FEED CORPORATION	1237 LANDIS AVE
53910	Salem	Pennsville Twp	WHITE OAKS PARK	1 OFFICE DR
66970	Salem	Elmer Boro	WHITES WELDING & BODY SHOP INCORPORA	5 MILL ST
1894	Salem	Woodstown Boro	WOODSTOWN AMOCO	90 RTE 40 (WEST AVE)
74653	Salem	Woodstown Boro	WOODSTOWN CENTER	187 EAST AVE
1891	Salem	Woodstown Boro	WOODSTOWN MOBIL	RT 40 & 45
48007	Salem	Pilesgrove Twp	WOODSTOWN STATE POLICE STATION	RT 40
178335	Salem	Penns Grove Boro	10 10 1/2 PEARL STRETT	10 10 1/2 PEARL ST
188780	Salem	Pennsville Twp	11 LAKEVIEW AVENUE	11 LAKEVIEW AVE
188445	Salem	Woodstown Boro	180 EAST AVENUE	180 E AVENUE AVE
178338	Salem	Carneys Point Twp	38 MAPLEWOOD AVENUE	38 MAPLEWOOD AVE
190279	Salem	Pennsville Twp	4 LENAPE DRIVE	4 LENAPE DR
57902	Salem	Carneys Point Twp	FLYING J TRAVEL PLAZA	326 SLAPES CORNER RD
169551	Salem	Penns Grove Boro	GARDEN STATE MOBILE HOME PARK	291 VIRGINIA AVE
88055	Salem	Pilesgrove Twp	ROUTES 45 & 40	RTES 45 & 40
57485	Salem	Oldmans Twp	RUSTIC INN TRUCK STOP & REST	87 US RT 130
94366	Salem	Pilesgrove Twp	SPINOSIS CLOTHING STORE	SPINOSIS CLOTHING STORE



**REFERENCES & NOTES:**

Known Contaminated Sites based upon NJDEP GIS database "NJDEP Known Contaminated Site List for New Jersey", 2005.

Areas of Groundwater Contamination based upon NJDEP GIS database "NJDEP Classification Exception Areas/Well Restriction Areas Polygon Maps for New Jersey", 2004.

Groundwater Contamination Sites based upon NJDEP GIS database "NJDEP Classification Exception Areas/Well Restriction Areas Points Maps for New Jersey", 2004.

Discharge to Surface Water based upon NJDEP GIS database "NJPDES Surface Water Discharges in New Jersey", 2005.

Discharge to Groundwater based upon NJDEP GIS database "NJPDES Ground Water Discharges in New Jersey", 2005.

Surface Water Monitoring Sites based upon NJDEP GIS database "NJDEP Ambient Biomonitoring Network (AMNET)", 2004.

Lake Monitoring Sites based upon NJDEP GIS database "NJDEP Ambient Lakes Monitoring Network in New Jersey", 2004.

Groundwater Monitoring Sites based upon NJGS GIS database "NJGS Ambient Ground Water Quality Monitoring Network", 2005.

Rivers and Lakes taken from NJDEP GIS database, 1986.

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**MAP LEGEND:**

**Contaminated Sites:**

- ★ - Known Contaminated Sites
- ▲ - Groundwater Contamination Sites
- ▨ - Areas of Groundwater Contaminations

**Discharge Sites:**

- - Discharge to Surface Water
- - Discharge to Groundwater

**Monitoring Stations:**

- - Surface Water Monitoring Stations
- - Lake Monitoring Stations
- - Groundwater Monitoring Wells



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**Contaminated Sites and Monitoring Stations**

Natural and Cultural  
 Resource Inventories  
 Salem County, New Jersey

Scale: 1" = 15,000' Date: 1/15/06

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**Salem County  
Natural Resources Inventory**

**NATURAL HERITAGE SITES**

Heritage Sites Pivot Table

SITENAME	QUADNAME	MUNICIPALITY	DESCRIPTION	BOUNDARY JUSTIFICATION	BIODIVR ANK	BIODIVERSITY COMMENTS	AREA
Pedricktown Marsh	Marcus Hook	Oldmans Twp	Freshwater marsh on inner coastal plain approximately 3/4 mile inland of Delaware River.	Boundaries drawn to include habitat for bird species.	B5	Site contains a State endangered bird species.	4269968.580
Sharptown	Woodstown	Pilesgrove Twp	Farmland: 75% in hay, pasture and fallow field.	Boundary encompasses most habitat used by birds as observed by ornithologists. Land use and roads appear to define current boundary.	B4	Site contains one state endangered and three state threatened birds.	59505692.222
Salem River Floodplain	Woodstown	Pilesgrove Twp	very flat clayey sand. The forest is almost free of shrubs with trees (primarily boxelder but occasionally red maple and tulip poplar also) spaced about 15 feet apart. A high diversity of native wildflowers cov	Primary boundaries include forested floodplain and ravine slopes from Kings Highway upstream as far as they extend. Additional floodplain forest may be found downstream, and additional fieldwork may justify extending the primary boundaries further downst	B4	Excellent population of a State Endangered plant species. A more significant rank may be warranted if future fieldwork merits the floodplain forest community on site to be ranked 'A' quality.	11111603.918
Nichomus Run	Woodstown	Pilesgrove Twp	Rich, swampy floodplain woods.	Boundaries primarily follow contour lines and woodland/agricultural field borders.	B4	One state rare species; historic occurrence of globally rare species.	14150840.810
Majors Run	Woodstown ; Penns Grove	Pilesgrove Twp ; Mannington Twp	Floodplain in rich wooded ravine.	Includes ravine habitat bounded by roads to north and south. Additional buffer should be considered.	B5	One state critically imperiled plant species.	12814140.769
Mannington Meadows Macrosite	Salem ; Penns Grove	Mannington Twp ; Pennsville Twp	Tidal brackish marsh, drainage of Salem River and some marsh wood edge.	Boundaries drawn to include brackish marshes and some forested edge that provide resting and feeding habitat for wintering individuals of a State endangered bird species. Boundaries expanded adjacent to Mannington Creek to include a nest site for a State	B4	The macrosite contains a standard site ranked B4 and a large brackish tidal marsh with several wintering sites for a State endangered bird species.	318250526.698
Pigs Eye	Delaware City	Pennsville Twp	Small wet depression at edge of agricultural field.	Includes all wetland habitat occupied by rare plant species and lands draining toward the wetlands.	B4	Contains the only known occurrence for a state listed endangered plant species.	2969201.713
Riddleton	Alloway	Alloway Twp	Wet, and in places swampy, woodlands with scattered shallow intermittent ponds.	Includes known extent of rare plant species occurrences, and adequate buffer.	B3	Contains two State-listed Endangered Plant Species plus a Special Concern Plant Species.	39666720.251
Deep Run	Salem ; Alloway	Alloway Twp ; Quinton Twp	by green ash (Fraxinus pennsylvanica) with a diversity of shrub species. In this tidally influenced community, trees and many shrubs occur on hummocks rising one meter	deciduous shrub/scrub tidal swamp as mapped on US Fish and Wildlife Service National Wetlands Inventory Maps. Secondary boundaries not yet delineated, but should include drainage basins of several small	B3	The site contains a good example of a rare New Jersey wetland natural community which may also be rare globally. A globally rare plant species has also been historically documented at the site.	10218532.983
Roadtown Road Powerline Site	Canton	Lower Alloways Creek Twp ; Quinton Twp	Powerline right-of-way through pine/oak uplands and small stream.	Primary bounds include extent of wetland habitat for plant species. Secondary bound includes uplands draining toward the wetlands.	B3	Contains a globally imperiled plant species.	12049598.398
Stathems Neck and Mad Horse Creek	Canton	Lower Alloways Creek Twp ; Greenwich Twp ; Stow Creek Twp	Open tidal marsh and woods at edge of salt marsh. Also some isolated islands of higher ground dominated by pines.	Bounds drawn to include salt marsh habitat used by state endangered raptor and forests containing rare plants.	B4	Contains a good population of a state endangered bird species, and an excellent population of a plant species of special concern.	49932809.109
Mannington Marsh	Salem	Mannington Twp	Freshwater intertidal marsh along the Salem River. Some areas may get a little brackish in drought years.	Boundary contains marshes immediately adjacent to Mannington Creek that provide primary habitat for rare plant species. Boundaries may need to be expanded to include buffer for the marsh system.	B4	The site contains high quality occurrences of two State Listed Endangered Plant Species, a poor quality occurrence of another State Endangered plant species, and occurrences of two State Endangered bird species.	28150398.276
Parvin Lake	Elmer	Pittsgrove Twp ; Deerfield Twp	Red maple, Atlantic white cedar swamp along Muddy Run.	Includes habitat for rare plant species plus buffer.	B3	Good occurrence of a Federally threatened plant species, as well as a State listed animal species.	38200613.061
Culliers Run	Salem	Mannington Twp	Floodplain in rich, wooded ravine.	Primary boundary includes documented habitat for endangered plant species plus contiguous suitable habitat. Secondary boundary includes undeveloped upland buffer.	B4	Site contains good population of state endangered plant species.	12643064.388
Franks Cabin Site	Alloway	Alloway Twp	The site is a narrow headwater stream corridor with maple-gum-magnolia tree cover and standing water and Sphagnum covered ground. The target species is found on the stream floodplain, in seeps and on the terraces just above the floodplain.	Primary boundary includes wetland habitat for the rare plant species. The secondary boundary follows the minor watershed limits necessary to insure long term population survival.	B3	The site contains a good population of a federally listed threatened species.	7555965.272
Telegraph Road Bog	Alloway	Alloway Twp ; Quinton Twp	Swamp forest in headwaters of tributary to Deep Run. Forest dominated by mixed hardwood-pitch pine in headwaters, more hardwood (gum/maple) dominated downstream. Surrounded by forested uplands.	Primary boundary includes wetland forest that is habitat for a globally rare plant species. Secondary boundary includes lands draining toward the wetland habitat.	B3	The site contains a good population of a globally rare Federally-listed Threatened Plant Species.	12512018.260
Coxhat Pond	Alloway	Alloway Twp ; Quinton Twp	A mixed evergreen-deciduous swamp forest along a stream corridor.	Primary boundary follows wetland habitat occupied by the globally rare plant species. Secondary boundary includes lands that drain toward the habitat.	B4	The site contains a population of a globally rare Federally-listed Threatened Plant Species.	18220000.283
Pecks Corner	Alloway	Alloway Twp ; Quinton Twp	A mixed hardwood-evergreen swamp forest surrounded by forested and nonforested uplands.	Primary boundary follows edge of contiguous wetland habitat. Secondary boundary includes lands draining toward the habitat.	B5	The site contains a population of a globally rare Federally-listed Threatened Plant Species.	55131265.453

Natural Heritage Priority Site  
**Coxhat Pond**

***Locational***

**Quad Name:** Alloway

**County:** Salem

**Municipality:** Alloway Twp ; Quinton Twp

***Description of Site***

A mixed evergreen-deciduous swamp forest along a stream corridor.

***Boundary Justification***

Primary boundary follows wetland habitat occupied by the globally rare plant species. Secondary boundary includes lands that drain toward the habitat.

***Biodiversity Rank*** ***B4***

The site contains a population of a globally rare Federally-listed Threatened Plant Species.

April, 2002

Site Code: S.USNJHP1\*2459

Natural Heritage Priority Site  
**Culliers Run**

***Locational***

**Quad Name:** Salem

**County:** Salem

**Municipality:** Mannington Twp

***Description of Site***

Floodplain in rich, wooded ravine.

***Boundary Justification***

Primary boundary includes documented habitat for endangered plant species plus contiguous suitable habitat.

Secondary boundary includes undeveloped upland buffer.

***Biodiversity Rank*** ***B4***

Site contains good population of state endangered plant species.

April, 2002

Site Code: S.USNJHP1\*1314

## Natural Heritage Priority Site **Deep Run**

### ***Locational***

**Quad Name:** Salem ; Alloway

**County:** Salem

**Municipality:** Alloway Twp ; Quinton Twp

### ***Description of Site***

The site is a tidal swamp forest dominated by green ash (*Fraxinus pennsylvanica*) with a diversity of shrub species. In this tidally influenced community, trees and many shrubs occur on hummocks rising one meter above the muddy substrate. The mud below is often covered with tidal marsh plants such as pickeral weed and arrow arum. At low tide, a mud flat is exposed between the swamp forest and the stream channel. Tidal marsh plants such as arrow arum colonize portions of the mud flats.

### ***Boundary Justification***

Primary boundaries drawn to include all contiguous deciduous shrub/scrub tidal swamp as mapped on US Fish and Wildlife Service National Wetlands Inventory Maps. Secondary boundaries not yet delineated, but should include drainage basins of several small tributary streams and the main stream of Alloway Creek and Deep Run upstream to dams at Alloway Lake and Elkinton Millpond.

***B3***

### ***Biodiversity Rank***

The site contains a good example of a rare New Jersey wetland natural community which may also be rare globally. A globally rare plant species has also been historically documented at the site.

April, 2002

Site Code: S.USNJHP1\*197

## Natural Heritage Priority Site **Franks Cabin Site**

### *Locational*

**Quad Name:** Alloway

**County:** Salem

**Municipality:** Alloway Twp

### *Description of Site*

The site is a narrow headwater stream corridor with maple-gum-magnolia tree cover and standing water and Sphagnum covered ground. The target species is found on the stream floodplain, in seeps and on the terraces just above the floodplain.

### *Boundary Justification*

Primary boundary includes wetland habitat for the rare plant species. The secondary boundary follows the minor watershed limits necessary to insure long term population survival.

### *Biodiversity Rank*

**B3**

The site contains a good population of a federally listed threatened species.

April, 2002

Site Code: S.USNJHP1\*1645

Natural Heritage Priority Site  
**Majors Run**

***Locational***

**Quad Name:** Woodstown ; Penns Grove

**County:** Salem

**Municipality:** Pilesgrove Twp ; Mannington Twp

***Description of Site***

Floodplain in rich wooded ravine.

***Boundary Justification***

Includes ravine habitat bounded by roads to north and south. Additional buffer should be considered.

***Biodiversity Rank*** ***B5***

One state critically imperilled plant species.

April, 2002

Site Code: S.USNJHP1\*339

## Natural Heritage Priority Site **Mannington Marsh**

### *Locational*

**Quad Name:** Salem

**County:** Salem

**Municipality:** Mannington Twp

### *Description of Site*

Freshwater intertidal marsh along the Salem River. Some areas may get a little brackish in drought years.

### *Boundary Justification*

Boundary contains marshes immediately adjacent to Mannington Creek that provide primary habitat for rare plant species. Boundaries may need to be expanded to include buffer for the marsh system.

### *Biodiversity Rank* **B4**

The site contains high quality occurrences of two State Listed Endangered Plant Species, a poor quality occurrence of another State Endangered plant species, and occurrences of two State Endangered bird species.

April, 2002

Site Code: S.USNJHP1\*347

Natural Heritage Priority Site  
**Mannington Meadows Macrosite**

***Locational***

**Quad Name:** Salem ; Penns Grove  
**County:** Salem  
**Municipality:** Mannington Twp ; Pennsville Twp

***Description of Site***

Tidal brackish marsh, drainage of Salem River and some marsh wood edge.

***Boundary Justification***

Boundaries drawn to include brackish marshes and some forested edge that provide resting and feeding habitat for wintering individuals of a State endangered bird species. Boundaries expanded adjacent to Mannington Creek to include a nest site for a State endangered bird species.

***Biodiversity Rank*** ***B4***

The macrosite contains a standard site ranked B4 and a large brackish tidal marsh with several wintering sites for a State endangered bird species.

April, 2002

*Site Code:* S.USNJHP1\*68

Natural Heritage Priority Site  
**Nichomus Run**

*Locational*

**Quad Name:** Woodstown  
**County:** Salem  
**Municipality:** Pilesgrove Twp

*Description of Site*

Rich, swampy floodplain woods.

*Boundary Justification*

Boundaries primarily follow contour lines and woodland/agricultural field borders.

*Biodiversity Rank* **B4**

One state rare species; historic occurrence of globally rare species.

April, 2002

Site Code: S.USNJHP1\*392

Natural Heritage Priority Site  
**Parvin Lake**

***Locational***

**Quad Name:** Elmer

**County:** Salem ; Cumberland

**Municipality:** Pittsgrove Twp ; Deerfield Twp

***Description of Site***

Red maple, Atlantic white cedar swamp along Muddy Run.

***Boundary Justification***

Includes habitat for rare plant species plus buffer.

***Biodiversity Rank*** ***B3***

Good occurrence of a Federally threatened plant species, as well as a State listed animal species.

April, 2002

Site Code: S.USNJHP1\*2005

## Natural Heritage Priority Site Pecks Corner

### *Locational*

**Quad Name:** Alloway

**County:** Salem

**Municipality:** Alloway Twp ; Quinton Twp

### *Description of Site*

A mixed hardwood-evergreen swamp forest surrounded by forested and nonforested uplands.

### *Boundary Justification*

Primary boundary follows edge of contiguous wetland habitat. Secondary boundary includes lands draining toward the habitat.

### *Biodiversity Rank* **B5**

The site contains a population of a globally rare Federally-listed Threatened Plant Species.

April, 2002

Site Code: S.USNJHP1\*2462

Natural Heritage Priority Site  
**Pedricktown Marsh**

***Locational***

**Quad Name:** Marcus Hook

**County:** Salem

**Municipality:** Oldmans Twp

***Description of Site***

Freshwater marsh on inner coastal plain approximately 3/4 mile inland of Delaware River.

***Boundary Justification***

Boundaries drawn to include habitat for bird species.

***Biodiversity Rank*** ***B5***

Site contains a State endangered bird species.

April, 2002

Site Code: S.USNJHP1\*423

Natural Heritage Priority Site  
**Pigs Eye**

***Locational***

**Quad Name:** Delaware City

**County:** Salem

**Municipality:** Pennsville Twp

***Description of Site***

Small wet depression at edge of agricultural field.

***Boundary Justification***

Includes all wetland habitat occupied by rare plant species and lands draining toward the wetlands.

***Biodiversity Rank*** ***B4***

Contains the only known occurrence for a state listed endangered plant species.

April, 2002

*Site Code:* S.USNJHP1\*437

Natural Heritage Priority Site  
**Riddleton**

***Locational***

**Quad Name:** Alloway

**County:** Salem

**Municipality:** Alloway Twp

***Description of Site***

Wet, and in places swampy, woodlands with scattered shallow intermittent ponds.

***Boundary Justification***

Includes known extent of rare plant species occurrences, and adequate buffer.

***Biodiversity Rank*** ***B3***

Contains two State-listed Endangered Plant Species plus a Special Concern Plant Species.

April, 2002

*Site Code:* S.USNJHP1\*460

Natural Heritage Priority Site  
**Roadstown Road Powerline Site**

***Locational***

**Quad Name:** Canton

**County:** Salem

**Municipality:** Lower Alloways Creek Twp ; Quinton Twp

***Description of Site***

Powerline right-of-way through pine/oak uplands and small stream.

***Boundary Justification***

Primary bounds include extent of wetland habitat for plant species. Secondary bound includes uplands draining toward the wetlands.

***Biodiversity Rank*** ***B3***

Contains a globally imperiled plant species.

April, 2002

Site Code: S.USNJHP1\*465

## Natural Heritage Priority Site Salem River Floodplain

### *Locational*

**Quad Name:** Woodstown  
**County:** Salem  
**Municipality:** Pilesgrove Twp

### *Description of Site*

The site is a floodplain forest underlain by very flat clayey sand. The forest is almost free of shrubs with trees (primarily boxelder but occasionally red maple and tulip poplar also) spaced about 15 feet apart. A high diversity of native wildflowers covers the floor of the forest in the Spring. The 20 ft. wide Salem River runs through the center of the forest, and the surrounding countryside rises 15 ft. or more above the floodplain.

### *Boundary Justification*

Primary boundaries include forested floodplain and ravine slopes from Kings Highway upstream as far as they extend. Additional floodplain forest may be found downstream, and additional fieldwork may justify extending the primary boundaries further downstream. Additional buffer may be needed to help preserve water hydrology and water quality of the river.

### *Biodiversity Rank*

***B4***

Excellent population of a State Endangered plant species. A more significant rank may be warranted if future fieldwork merits the floodplain forest community on site to be ranked 'A' quality.

April, 2002

Site Code: S.USNJHP1\*471

Natural Heritage Priority Site  
**Sharptown**

***Locational***

**Quad Name:** Woodstown  
**County:** Salem  
**Municipality:** Pilesgrove Twp

***Description of Site***

Farmland: 75% in hay, pasture and fallow field.

***Boundary Justification***

Boundary encompasses most habitat used by birds as observed by ornithologists. Land use and roads appear to define current boundary.

***Biodiversity Rank*** ***B4***

Site contains one state endangered and three state threatened birds.

April, 2002

Site Code: S.USNJHP\*40

Natural Heritage Priority Site  
**Stathems Neck and Mad Horse Creek**

***Locational***

**Quad Name:** Canton

**County:** Salem ; Cumberland

**Municipality:** Lower Alloways Creek Twp ; Greenwich Twp ; Stow Creek Twp

***Description of Site***

Open tidal marsh and woods at edge of salt marsh. Also some isolated islands of higher ground dominated by pines.

***Boundary Justification***

Bounds drawn to include salt marsh habitat used by state endangered raptor and forests containing rare plants.

***Biodiversity Rank***      ***B4***

Contains a good population of a state endangered bird species, and an excellent population of a plant species of special concern.

April, 2002

*Site Code:*    S.USNJHP1\*516

## Natural Heritage Priority Site **Telegraph Road Bog**

### *Locational*

**Quad Name:** Alloway

**County:** Salem

**Municipality:** Alloway Twp ; Quinton Twp

### *Description of Site*

Swamp forest in headwaters of tributary to Deep Run. Forest dominated by mixed hardwood-pitch pine in headwaters, more hardwood (gum/maple) dominated downstream. Surrounded by forested uplands.

### *Boundary Justification*

Primary boundary includes wetland forest that is habitat for a globally rare plant species. Secondary boundary includes lands draining toward the wetland habitat.

### *Biodiversity Rank*

**B3**

The site contains a good population of a globally rare Federally-listed Threatened Plant Species.

April, 2002

*Site Code:* S.USNJHP1\*2325



**REFERENCES & NOTES:**

NJDEP Natural Heritage Sites taken from NJDEP GIS database, "NJDEP Natural Heritage Priority Sites", 2002.

Roadway information supplied by NJ Office of State Planning.

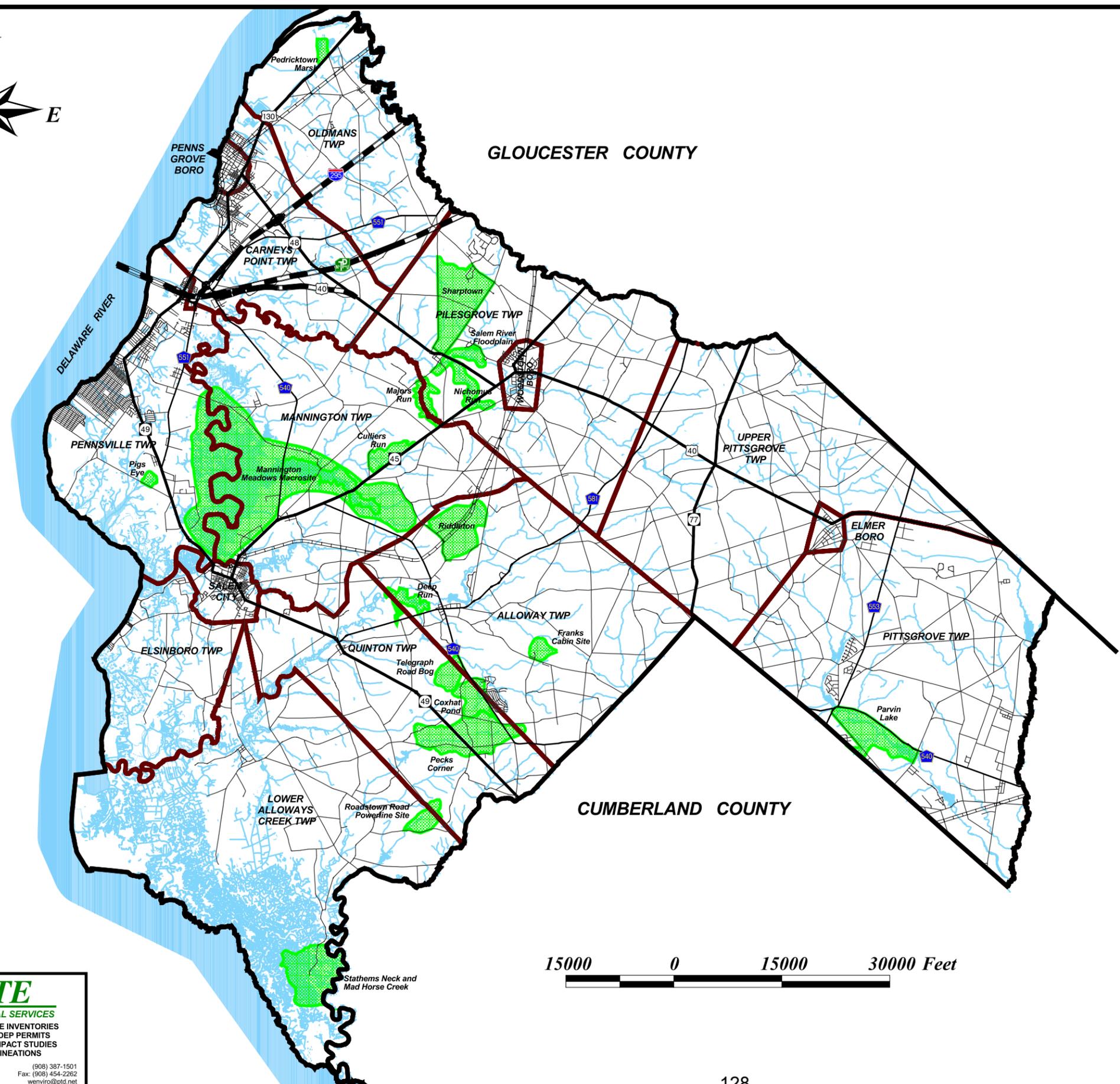
Rivers and Lakes taken from NJDEP GIS database, 1986.

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:**

 NJDEP Natural Heritage Priority Sites



**WHITE**  
 ENVIRONMENTAL SERVICES  
 NATURAL RESOURCE INVENTORIES  
 GIS MAPPING - NJDEP PERMITS  
 ENVIRONMENTAL IMPACT STUDIES  
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**Natural Heritage Priority Sites**  
 Natural and Cultural  
 Resource Inventories  
 Salem County, New Jersey

Scale: 1" = 15,000'

Date: 1/15/06

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**Salem County  
Natural Resources Inventory**

**DEVELOPED LAND**

## **Developed Land**

### **Introduction**

Salem County is located in the southwestern corner of the State of New Jersey bordered by Gloucester County to the north, Cumberland County to the east and south, and the Delaware River to the west. While only 15 minutes from Wilmington, Delaware and 35 minutes to Philadelphia, Salem remains by far the least populated county in New Jersey. In spite of its close proximity to these urban and regional centers, and major roadways such as the NJ Turnpike, I-295, US Routes 40 and 130, and NJ State Highways 45 and 49, only 10 percent of the County's land has been developed for residential, commercial, or industrial use. The remaining 90 percent of the County is dedicated to either farmland or environmental uses such as tidal and freshwater wetlands, lakes, ponds, and forests.

Salem County has, for the most part, maintained its traditional industries and land use patterns. The original settlements were made in the western end of the County where a network of rivers, streams, and creeks feed into the Delaware River. Lumber and grain mills were established among the major creeks as early industry was supported by timber and agriculture. Indeed, agriculture has played an important role in Salem County from the time it was inhabited by the Lenni Lenape tribe through the 17<sup>th</sup> Century arrival of the Swedes, Finns, and Quakers.

Today, approximately 40 percent of the County contains productive farmland, largely concentrated in rural central and eastern sections. According to the Census of Agriculture, more than \$67.9 million worth of agricultural products were grown and raised on the 660 farms in Salem County in 1997. Salem ranks first in the State for wheat, barley, sweet corn, and potatoes, and second for milk production, soybeans, asparagus, and corn harvested for grain. Representing more than 10 percent of the State's agricultural market, Salem County is among the State leaders for many other agricultural products as well.

While agriculture is the mainstay of eastern and central sections, western Salem County remains home to industry and the County's major employers. For more than a century, E.I. DuPont de Nemours and Company (DuPont) formed the backbone of that industry. At its peak in 1917, DuPont reportedly employed 25,000 people. By the 1960's, DuPont Chambers Works was the largest chemical factory in the world and DuPont employed 25 percent of Salem County households. Since then, the manufacturing industry in the United States declined, as have the payrolls and outputs of DuPont and other companies in Salem County. Global competition and environmental regulations have led DuPont to relocate many of the site's business lines, cease operations of some altogether, and otherwise downsize its operation at the Chambers Works facility. The corresponding reduction in the industrial tax base, diminished employment opportunities, and significant loss of disposable income in the community

have compromised the high quality of life associated with Salem County. By 1999, the County's per capita income was \$20,874 or 23 percent lower than the State's per capita income of \$27,006. Only neighboring Cumberland County was lower than Salem, ranking them as the first and second lowest county per capita incomes in the State.

In recent years, Salem County officials have embraced a growing recognition that economic development is needed to augment the local tax base and to increase employment opportunities for residents.

From 1996 onwards, county officials, municipal representatives, business groups, and citizens have collaborated in numerous pre-planning workshops and forums to determine the future of the County. The 2-part consensus of these efforts is that: 1) future growth should be directed to the western end of the County, where infrastructure and major roadways already exist, and 2) growth in the eastern and central portions of the County should be contained to protect the traditional agrarian economy of that area. Meanwhile, recent trends indicate that development is not occurring as would be fully desired. For example, the eastern, rural portions of the County have seen a population increase. A county that is relatively unscarred by "sprawl development" now finds itself at risk.

### **Recent Development**

Salem County has recently benefited from significant developments along the major highway interchanges, specifically along the Delaware River and I-295/NJ Turnpike planned growth corridor. With the assistance of the project developers and host communities, Salem County is now capitalizing upon the market for highway-oriented commercial development. Recent business enterprises are summarized below:

- Interchange 1, I-295: the Hampton Inn and Cracker Barrel Restaurant in Pennsville. The Cracker Barrel has become one of the highest-grossing restaurants in its chains – due, Cracker Barrel officials say, to its superb location. Pennsville Township has initiated a redevelopment planning process in the surrounding area.
- Interchange 1, NJ Turnpike and Interchange 2, I-295: the Holiday Inn Express and Flying J Travel Plaza in Carneys Point. Carneys Point Township has initiated a redevelopment planning process for the surrounding area.
- Interchange 4, I-295: the Delaware River & Bay Authority (DRBA) opened the Business Centre, a 70-acre business park in Carneys Point Township. Conectiv is the first tenant and opened its 120,000 square foot Customer Care Center in September 1999. Approximately 450 employees work in the Conectiv building, responding to billing inquiries and emergency power outages. The Business Centre has the capacity for 5 more buildings. In June 2002, the DRBA completed construction of a new \$8 million, 80,000 square foot office flex-space building at this location to attract additional tenants. The state-of-the-art office building is designed to accommodate

the needs of individual or multiple tenants. DRBA officials expect that the new building will employ approximately 400 workers.

- Interchange 7, I-295: Planned development of a 143-acre business park in Oldmans Township called the Gateway Business Park. The business park is being developed under a public-private partnership between Salem County, the New Millennium Fund (the development arm of PSE&G), and Matrix Development Group. This \$100 million project has secured all funding and approvals, and in August 2002, received \$1.4 million from the State of New Jersey for improvements to the County's wastewater management system. When completed and occupied, the Gateway Business Park is expected to create 3,150 new jobs.

These new developments represent years of planning and negotiation. With the active participation of County officials, these new projects have been developed consistently with the Salem County Growth Management Plan, directing development to the Corridor. These developments address the long-term need to replace lost employment opportunities and facilitate the transition to service sector and growth industries.

Consistent with the expansion of the national and state economies, Salem County experienced significant increased economic activity during the past three years. The County unemployment rate dropped from 4.7 percent in 1998 and 1999 to 4.4 in 2000 while 500 new jobs were created in the County in the last year alone. The County's recent economic development initiatives are concentrated within the Corridor. Recent retail developments include:

- The commercial development in Pilesgrove featuring an Acme Super Store, a Wendy's, an Eckerd Drug Store, and several smaller retail establishments.
- Franklin Savings, which serves Salem, Gloucester, and Cape May Counties, recently opened an operations and administration center in Pilesgrove Township.
- Pennsville saw the openings of Peebles Department Store and Harvest Community Bank, the first community owned bank to open in Salem County in the past 30 years.
- New golf courses were built in Pilesgrove (Town and Country Golf Links) and Pittsgrove (Running Deer Golf Club).
- New manufacturing developments include facilities for Phoenix Glass and A Cheerful Giver and expanded plans for facilities at Ganes Chemical, Anchor Glass, DuPont Pharmaceuticals, PolyOne Corporation, Wistar Equipment, and Thomas Coatings.

More extensive commercial development has commenced across the Corridor:

- The proposed Riverwalk project at Penns Grove has secured more than \$24 million in private funding commitments and is expected to begin construction in 2003. As a

Delaware River “destination point,” the Riverwalk will feature 191,000 square feet of retail, entertainment, dining, and hotel facilities, an 800-by-30 foot Riverwalk along the waterfront; and over time, a marina, all designed to attract tourism to the area. To facilitate this project, the Borough has re-zoned the waterfront area and designated the waterfront and central business district as a redevelopment zone.

- In June 2001, the Riverwalk project received a boost by legislation introduced in Delaware that would allow access to offshore video lottery or slot machines from a barge or floating structure moored at the West Main Street Pier. The West Main Street Pier extends beyond the mean low water mark of the Delaware River, the official boundary line between the States of Delaware and New Jersey. Delaware currently allows for video lottery facilities at the State’s racetracks, including Dover Downs, Delaware Park, and Harrington Race Track.
- Fenwick Commons LLC, the sponsor of the Riverwalk project and owner of the West Main Street pier, has emphasized that it intends to proceed with the upland retail, hotel, dining, and entertainment facilities even if the proposed video lottery legislation does not become a reality.
- Garden State Ethanol expressed interest in developing an ethanol production plant on the DuPont Chambers Works property in Carneys Point Township. The proposed plant would distill ethanol from grain for sale as an additive to reduce toxic emissions from gasoline. The ethanol plant would thereby provide a market for grains used in producing ethanol such as corn or unusable store grains, all of which are grown in Salem County. Garden State Ethanol estimates the ethanol plant requires a \$60 million investment and would serve as a catalyst for spin-off businesses such as dry ice manufacturing and cattle-feed processing plants. The sponsors of the project ultimately elected to locate the plant in Gloucester County, however it remains an example of the kind of economic development that would most compatible with Salem County.
- The McLane Company has identified the intersection of NJ Route 40 and Courses Landing Road in Carneys Point Township as the site for a 215,000 square foot food distribution center. The proposed facility will service convenience stores and fast food establishments throughout New Jersey, Delaware, Pennsylvania, Maryland, and Virginia. McLane’s capital investment is projected to be \$18.5 million in real estate (land and building) and \$11 million in equipment and create 300 new jobs in the first year and a total of 450 jobs over 5 years. McClane anticipates the food distribution center will be operational in early 2004.

## **Infrastructure**

The availability of public sewer and water, electric and gas service, and solid waste are detailed below. However, it should be noted that one significant, and possibly overlooked, asset is the availability of fiber optic cable within the Corridor. Fiber optic cable represents an advanced, high volume method of telecommunications and is installed in the right-of-way along the length of the NJ Turnpike and Delaware Memorial Bridge.

### **Public Sewer**

Public sewer facilities are currently limited to 5 municipalities in Salem County (Salem City, Penns Grove, Pennsville, Carneys Point, and Woodstown). Both DuPont and PSE&G maintain their own private water and sewer facilities in Carneys Point and Lower Alloways Creek, respectively.

Carneys Point and Pennsville possess excess capacity capable of meeting increased demand. Public sewer is available in both Townships and capable of meeting increased demand. Both communities share the added advantage of access to fiber optic cable, which runs along the NJ Turnpike/I-295 corridor.

However, the excess sewer capacity in Carneys Point and Pennsville is insufficient to meet the projected development needs in the Corridor for Oldmans, Penns Grove, and Pilesgrove. In addition, these participating municipalities could not support the cost of extending service or developing their own wastewater treatment facilities. Penns Grove's sewerage facility is already operating at capacity, which raises concerns over whether the 45 year-old facility can meet additional projected demand consistently within permitted discharge standards. Oldmans and Pilesgrove do not maintain public wastewater treatment facilities. Pilesgrove's draft wastewater management plan states that, "The Carneys Point plant will service the Limited Manufacturing Zone and tie-in to the Carneys Point facility, is the leading wastewater treatment option considered for development around the I-295 (Commercial/Industrial Zone) in Oldmans Township."

Based upon a feasibility study funded by the Regional Efficiency Development Incentive Program (REDI), the most cost-effective, long-term solution for regional wastewater management is a shared service arrangement. Recently, in Salem County, a major step has been taken toward the completion of a similar shared sewerage system. Salem City, Alloway Township, and Quinton Township have contracted to construct sewerage lines that would connect to the Salem Wastewater Treatment Plant. The lines will run through both Quinton and Alloway Townships and will add 127,600 gallons of sewerage capacity per day for these municipalities.

## **Public Water**

In Salem County, four municipalities including Salem City, Pennsville, Woodstown, and Elmer support municipal water systems. Approximately one-third of Pennsville Township is served by public water and sanitary sewer systems. Nearly 60 miles of water lines serve the Township, and carry water to homes and businesses from four wells, three treatment plants, and two elevated pressure tanks.

The Penns Grove Water Supply Company, a private company based in Mullica Hill, provides public water for areas in Penns Grove, Oldmans and Carneys Point. Approximately 70 percent of the population within these municipalities is served with public water and the remaining 30 percent is served by individual wells. The population served is approximately 17,216, and represents an annual use of 534 mgd based upon 1990 water use data. The Penns Grove Water Supply Company has requested additional permitted capacity from DEP to meet the projected demand.

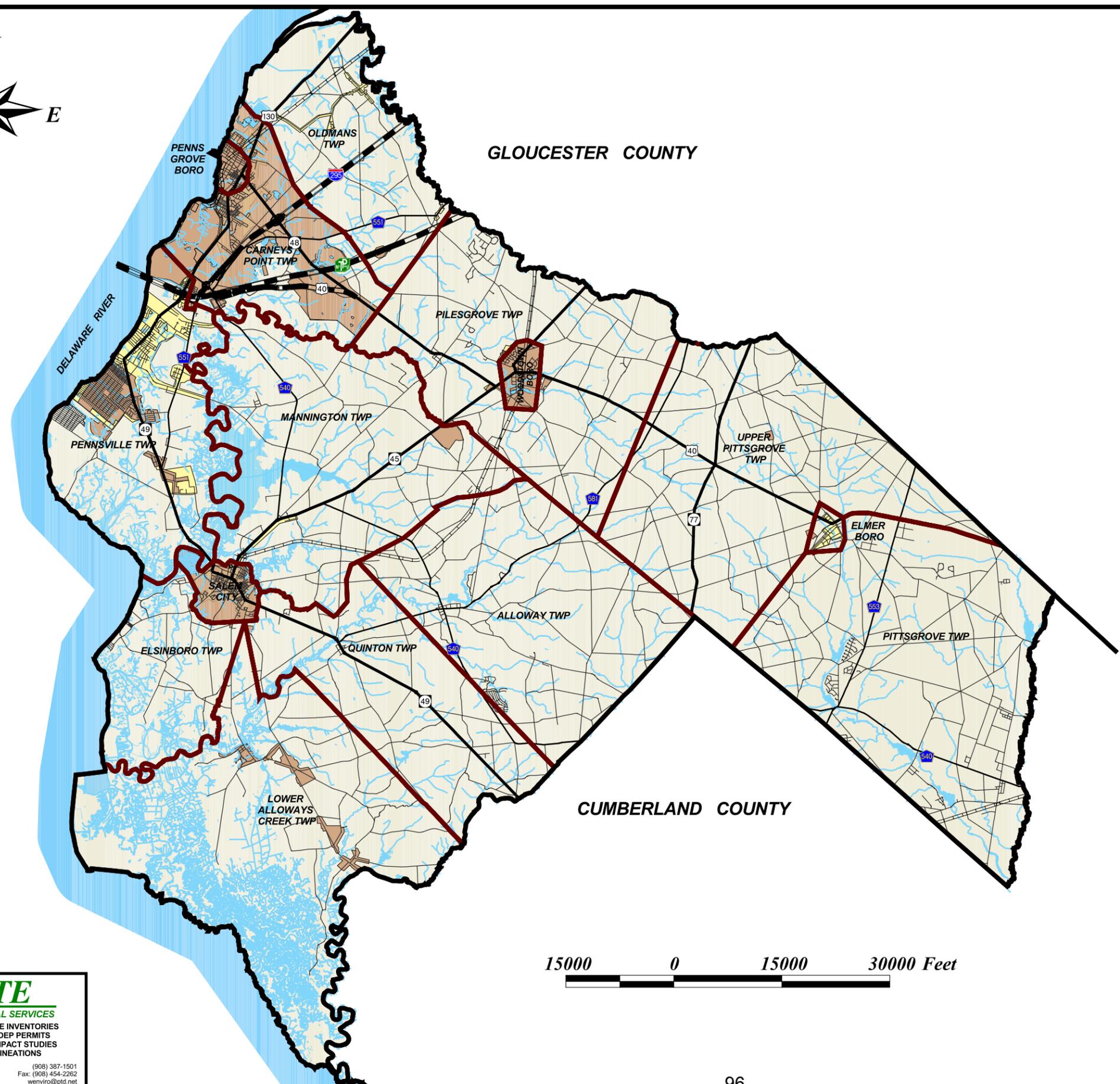
In addition, the Penns Grove Water Supply Company's storage facilities are currently at the 80 percent minimum required by the New Jersey Water Supply Management Rules. To provide additional storage capacity, Carneys Point Township secured federal and state grants to construct a 500,000-gallon elevated water storage tank and a 2.5 mile water line extending the public water system to the Township's Commercial Interchange and Business Park Zones. The new water line will run parallel to the new wastewater main along NJ Route 48, adding significant capacity for development within the Corridor.

## **Electric and Gas Service, and Solid Waste**

In Salem County, Conectiv, a regional supplier of electric service throughout South Jersey, provides electric service. Conectiv recently relocated its customer care facilities to the DRBA Business Centre in Carneys Point Township. South Jersey Gas Company provides natural gas service both in Salem County and throughout South Jersey. The Salem County Utilities Authority operates a countywide landfill that opened in April 1988.

2005 Sewer Service Data (NJDEP)

WQMP	WMP	TYPE	FACNAME	WMPAGCY	NJPDES	DESIGNFL	NJPDESFL	PLANNINGFL	AREA_FEET	PERIMETER_	ACRES
Lower Delaware		SW	Pennsville Sewer Authority STP Service Area	DEP	NJ0021598	1.88000	1.88000	0	66154689.544	76349.306	1518.703
Lower Delaware	Woodstown	SW	Woodstown Wastewater Treatment Facility Service Area	Woodstown	NJ0022250	0.53000	0.53000	0.53	58026927.436	63059.369	1332.115
Lower Delaware		GW > 20,000	SJ Hospital - Elmer	DEP	NJ0099571	0.00000	0.00000	0.02400	1197119.817	4894.198	27.482
Lower Delaware	Carneys Point	SW	Layton's Well Pit	Carneys Point Sewerage Authority	NJ0105724	2.00000	0.00000		4336365.993	24994.050	99.549
Lower Delaware	Carneys Point	GW < 20,000	Clemente Landfill	Carneys Point Sewerage Authority	NJ0056448	0.00000	0.00000		739367.501	3852.228	16.974
Lower Delaware	Carneys Point	GW < 20,000	Carneys Point Generating Station	Carneys Point Sewerage Authority	NJ0108111	0.00000	0.00000		1330287.735	5336.774	30.539
Lower Delaware	Carneys Point	GW < 20,000	DuPont Landfill	Carneys Point Sewerage Authority	NJ0105872	0.00000	0.00000		742989.874	3578.218	17.057
Lower Delaware	Carneys Point	SW	DuPont Chambers Works WTP	Carneys Point Sewerage Authority	NJ0005100	3.00000	3.00000	3.00000	57463167.495	89218.542	1319.173
Lower Delaware	Carney's Point	SW	Penns Grove Service Area	DEP	NJ0024023	0.75000	0.00000		24024986.474	19886.959	551.538
Lower Delaware	Lower Alloways Creek Township	SW	Hancocks Bridge Village STP	Lower Alloways Creek Township	NJ0050423	0.05000	0.05000	0.038	18558340.999	53323.984	426.041
Lower Delaware	CCWMPRDE	GW < 20K, < 2K	Cumberland Rural District DGW <20K, <2K	Cumberland County	N/A	0.00000	0.00000	0	910061.214	14527.304	20.892
Lower Delaware	Landis	GW > 20,000	Landis SA Service Area	Cumberland County	NJ0025364	8.20000	8.20000	0	890240.504	33889.429	20.437
Lower Delaware	CCWMPRDE	GW < 20,000	Cumberland Rural District DGW < 20K	Cumberland County	N/A	0.00000	0.00000	0	267888.550	11649.603	6.150
Lower Delaware	Salem City	SW	City of Salem STP Service Area	Salem City	NJ0024856	1.40000	1.40000	0	70684021.821	116283.286	1622.682
Lower Delaware	Lower Alloways Creek Township	SW	Canton Village STP	Lower Alloways Creek Township	NJ0062201	0.05000	0.05000	0	12746974.503	33166.063	292.630
Lower Delaware		GW < 20,000	Upper Pittsgrove Elem. School	DEP	NJ0100625	0.00000	0.00000		979962.384	4061.026	22.497
Lower Delaware	Carneys Point	SW	Carneys Point STP Service Area	Carneys Point Sewerage Authority	NJ0021601	1.30000	1.30000	1.18520	306362497.273	249462.611	7033.115
Tri-County	Franklin Township	GW < 20,000	general designation	Franklin Township	N/A	0.00000	0.00000	0	252930.199	8932.464	5.806
Tri-County	Logan Township	SW	LTMUA STP	Logan Township MUA	NJ0027545	1.00000	1.00000	3.45	509822.314	15315.153	11.704



**REFERENCES & NOTES:**

Sewer Service Areas based upon NJDEP GIS database "New Jersey Statewide Sewer Service Area", 10/05.

Water Service Areas based upon GIS information supplied by the Salem County Planning Office.

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:**

- Utilities:**
-  - Sewer Service Areas
  -  - Public Water Supply
  -  - Individual Onsite Septic and Well



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**Public Utilities**  
Natural and Cultural  
Resource Inventories  
Salem County, New Jersey

Scale: 1" = 15,000' Date: 1/15/06

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**Salem County  
Natural Resources Inventory**

**SOILS**

## SOILS

There is a strong relationship between soils and geology. Of the five factors which determine the structure of the soil (climate, parent material, relief, biological processes and time), parent material or, more specifically, geological formations, are the most important in Salem County. The formations which comprise the foundations of the County consist of clay, silt, sand and gravel. Soils are the surface layer of the geologic substructure and therefore the most recent depositions from both the Quarternary Period and the post-glacial period.

There are nearly on hundred different soil types found in Salem County, based on classification by parent material and slope. The group has been divided into nine soil associations which can be defined as a portion of the landscape with a distinctive pattern and proportional mix of soil types. Normally an association consists of one or more major soil types found in one association may occur in another, but in different proportions or patterns. The nine soil associations found in Salem County are:

1. Tidal Marsh-Made Lands
2. Galestown-Sassafras-Berryland
3. Mattapex-Othello-Woodstown
4. Sassafras-Woodstown-Fallsington
5. Mattapex-Matapeake
6. Keyport-Elkton
7. Saasafras-Evesboro-Downer
8. Chillum-Othello-Mattapex
9. Aura-Sassafras-Downer

In general, silty soils cover approximately one-half of the County, while sandy soils cover the other hald. Saome loamy soils can be found in the central portions of the County, near Alloway, but the accounty for only a small percentage of total soil coverage. Minor soils, including heavy and clayey soils, can be found throughout the County in both regular and random dispersal patterns. The presence of a minor soil within a major soil association area may make that particular area unsuitable for the types of development which are normally appropriate for the major soil association. The location of each association is shown in Figure 6, while Table 1 provides an overview of the characteristics of each soil. For a more extensively detailed description of each soil type in the County, consult either the "Soil Survey: Salem County, New Jersey", USDA, 1969 of "Land Capabilities", Salem County Planning Board, 1969.

Soils can also be classified by their capability to support development and agriculture, rather than by soil association type. A system which consists of eight Soil Classes examines each group of soils for its limitations for farming, damage risk for use as cropland and response to agricultural and development purposes. Because of this dual capability, these soils are often the subject of growth versus farmland preservation debates. According to the Soil Conservation Service, 95,660 acres (of a total 224,000 acres in the County) are of Class I stature.

The following list briefly describes the limitation of each class.

<u>CLASS</u>	<u>LIMITATIONS</u>
I	few limitations on use
II	some limitations on plant choices; may require moderate conservation practices
III	severe limitation on plant choice; may require special conservation practices
IV	very sever limitations on plant choice; requires careful management
V	subject to little or no erosion, but have other limitations; soil impractical to remove; use limited to pasture, woodland, or wildlife cover
VI	sever limitation for cultivation; use limited to pasture, woodland, or wildlife cover
VII	very sever limitations for cultivation; use restricted to grazing, woodland or wildlife cover
VIII	soils and land form have limitation which preclude their use for commercial plant production without major reclamation; use restricted to recreation, wildlife, water supply or conservation purposes

(Note: These classifications represent the soil's potential rather than agricultural value. Value may be enhanced by means of proper management techniques, just as the value of prime soils can be reduced by improper management which results in erosive destruction.)