SUPPLEMENT TO
1992 NATURAL RESOURCES INVENTORY

PREPARED FOR:

MANCHESTER TOWNSHIP
ENVIRONMENTAL COMMISSION

MANCHESTER TOWNSHIP
OCEAN COUNTY, NEW JERSEY

PREPARED BY:

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ADOPTED: APRIL 19, 2005

SUPPLEMENT TO 1992 NATURAL RESOURCES INVENTORY
MANCHESTER TOWNSHIP

This supplemental Environmental Natural Resources Inventory was prepared on behalf of the Manchester Township Environmental Commission and the Manchester Township Governing Body by Thomas Planning Associates, L.L.C. through a matching grant by ANJEC. The Township prepared a Natural Resource Inventory (N.R.I.) in 1992. The N.R.I. was summarized and incorporated into the Township Master Plan that was adopted on October 1993. The 1992 N.R.I. was completed prior to the development of N.J.D.E.P. Geographic Information System (G.I.S.) that provided environmental resources mapping within the State. This supplement maps and describes natural, cultural and important environmental features utilizing the N.J.D.E.P. and other G.I.S. data sources. Several new maps were included in the supplement including threatened and endangered species, known contaminated sites, areas subject to the new 300 foot buffer (as defined in the state stormwater management rules), surface water quality standards (as designated in N.J.A.C. 7:9B) and well head protection areas.

Some of the information and mapping provided in the 1992 inventory has not changed and therefore will remain as part of the final Natural Resources Inventory. A final document incorporates this supplement into the 1992 N.R.I. and will be known as the 2005 Manchester Township Natural Resources Inventory.

THREATENED AND ENDANGERED SPECIES HABITAT

Threatened and endangered species habitat has been studied and mapped throughout the state by the New Jersey Division of Fish and Wildlife Habitat in a document entitled "The Landscape Project". This project is a pro-active, ecosystem-level approach for the long-term protection of imperiled species and their important habitats in New Jersey. The project began in 1994 with a goal to protect New Jersey's biological diversity by maintaining and enhancing imperiled wildlife populations within healthy, functioning ecosystems.

The Landscape Project was especially designed for those individuals and agencies that have the responsibility for making land-use decisions, such as municipal and county planning boards, state agencies, natural resource specialists, developers and private and public land managers.

The Landscape Project focuses on large land areas called "landscape regions" that are ecologically similar with regard to their plant and animal communities. Using an extensive database that combines imperiled and priority species location information with land-use/land-cover data, the Endangered and Non-game Species Program has identified and mapped areas of critical importance for imperiled species within each

landscape region. The mapped habitats include wetland-forest, grassland, forest and emergent areas. Habitats are further divided into 5 ranked areas:

Rank 1 - Suitable Habitat - is assigned to patches that meet habitat-specific suitability requirements such as minimum size criteria for endangered, threatened or priority wildlife species, but that do not intersect with any confirmed occurrences of such species.

Rank 2 - Special Concern - is assigned to patches containing one or more occurrences of at least one non-listed State priority species.

Rank 3 - State Threatened - is assigned to patches containing one or more occurrences of at least one State threatened species.

Rank 4 - State Endangered - is assigned to patches containing one or more occurrences of at least one State endangered species.

Rank 5 - Federal Threatened & Endangered Species - is assigned to patches containing one or more occurrences of at least one wildlife species listed as endangered or threatened on the Federal list of endangered and threatened species.

The Landscape Project plan and G.I.S. mapping is available on the internet at: http://www.njfishandwildlife.com/ensp/landscape/index.htm

Figure 1 utilizes the G.I.S. data from the Landscape Project to map the threatened and endangered species habitats located in Manchester Township. Most habitat areas in the Township are located along stream corridors such as the Toms River and within State and Federal properties including the Lebanon State Forest, the Pasadena Wildlife Management Area, the Manchester Wildlife Management Area, the Whiting Wildlife Management Area and the Fort Dix Military Reservation. Another critical habitat area is located at the Heritage Minerals property south of Route 70.

WELLHEAD PROTECTION AREAS

A Well Head Protection Area (WHPA) is defined as that area calculated around a Public Community Water Supply (PCWS) well that delineates the horizontal extent of ground water captured by a well pumping at a specific rate over a two-, five-, and twelve-year period of time. The confined wells have a

fifty foot radius delineated around each well serving as the well head protection area to be controlled by the water purveyor in accordance with Safe Drinking Water Regulations (see NJAC 7:10-11.7(b)1).

WHPA delineations are conducted in response to the Safe Drinking Water Act Amendments of 1986 and 1996 as part of the Source Water Area Protection Program (SWAP). The delineations are the first step in defining the sources of water to a public supply well. Within these areas, potential contamination will be assessed and appropriate monitoring will be undertaken as subsequent phases of the NJDEP SWAP. WHPA delineation methods are further described in "Guidelines for Delineation of Well Head Protection Areas in New Jersey" . Figure 2 maps the wellhead protection areas in Manchester Township. The wellhead protection areas are located in retirement communities including Leisure Village West, Leisure Knoll, and Crestwood Village and also occur in the Ridgeway area along the Toms River east of Pine Lake Park, in Whiting and in Beckerville.

AREAS SUBJECT TO 300 FOOT STORMWATER BUFFER

On January 6, 2004 the Commissioner of the N.J.D.E.P. approved the Stormwater Management Rule (N.J.A.C. 7:15) which went into effect on February 2, 2004. This rule established an additional requirement for projects which are located along a Category 1 stream and those projects located upstream of a Category 1 segment within the subwatershed or HUC-14 (hydrologic unit code) [1]. The stream classifications and anti-degradation designations are established in the Surface Water Quality Standards. The GIS mapping in Figure 3 was delineated by the N.J.D.E.P. and is designed to assist public, DEP staff, property owners, builders and municipal officials in determining whether a property is located in an area of the State now subject to 300 foot buffers pursuant to the new Stormwater Management Rule. The Figure 3 map integrates the Surface Water Quality Standards, specifically the Category 1 streams for HUC 14's (Watershed - subwatershed name by DEPHUC14).

[1] The term "HUC-14" is from the hydrologic unit code system developed by the United States Geological Service for delineating and identifying drainage areas. The system starts with the largest possible drainage areas and progressively smaller subdivisions of the drainage area are delineated and numbered in a nested fashion. A drainage area with a hydrologic unit code (HUC) designation with 14 numbers, or HUC-14, is one of several sub watersheds of a larger watershed with 11 numbers, or a HUC-11. There are 921 HUC 14 sub watersheds in New Jersey that range in size from 0.1 to 42 square miles. The average size of a HUC 14 is 8.5 square miles. There are 150 HUC 11 watersheds in New Jersey ranging in size from 0.1 to 143 square miles with an average size of 51.9 square miles.

SURFACE WATER QUALITY STANDARDS

Figure 3 also shows a digital representation of New Jersey's Surface Water Quality Standards in accordance with "Surface Water Quality Standards for New Jersey Waters" as designated in N.J.A.C. 7:9B. The streams within the Township have been color coded to reflect the location written in the standards text. When interpreting the surface water quality standards, the Surface Water Quality Standards regulations at N.J.A.C. 7:9B always take precedence. The Figure 3 GIS map is supplemental only and is not legally binding. The following surface water quality standards are mapped:

FW1 - Fresh waters as designated in N.J.A.C. 7:9B-1.15h

FW2 - General surface water classification applied to those fresh waters that are not designated as FW1 or pineland waters.

PL - General surface water classification applied to pineland waters.

SE1 - General surface water classification applied to saline waters of estuaries.

C1 or Category One - waters are designated for purposes of implementing the anti-degradation policies set forth at N.J.A.C. 7:9B-1.5(d), for protection from measurable changes in water quality characteristics because of their clarity, color, scenic setting, other characteristics of aesthetic value, exceptional ecological significance, exceptional recreational significance, exceptional water supply significance, or exceptional fisheries resource(s)

C2 or Category Two - waters are those waters not designated as Outstanding National Resource Waters or Category One at N.J.A.C. 7:9B-1.15 for purposes of implementing the anti-degradation policies set forth at N.J.A.C. 7:9B-1.5(d).

"TM" or "Trout Maintenance waters" - means waters designated at N.J.A.C. 7:9B-1.15(b) through (g) for the support of trout throughout the year.

"NT" or "Nontrout waters" - means fresh waters that have not been designated in N.J.A.C. 7:9B-1.15(b) through (h) as trout production or trout maintenance. These waters are generally not

suitable for trout because of their physical, chemical, or biological characteristics, but are suitable for a wide variety of other fish species.

The majority of streams in Manchester Township are designated as P.L. (Pinelands Water) due to their location within the Pinelands. Outside of the Pinelands the Toms River is designated as FW2-TM. All other streams are designated as FW2-NT/SE1 with the exception of the headwaters of the Wrangle Branch within the State of New Jersey Whiting Wildlife Management Area being designated FW2-NTC1.

GEOLOGY

The geological formation in Manchester Township is known as the Cohansey Formation and is shown in Figure 4. This formation deposited on the ocean floor between 13 million and 25 million years ago, during a time that geologists call the Miocene period. Much of the land within the 1.1 million acre Pinelands National Reserve contains soils developed from the Cohansey geologic formation. These soils are mostly medium to coarse grained sands, although some thin clay soil layers are present. The soils developed from the Cohansey formation are very porous and infertile because, for the most part, the parent material has a greater proportion of coarse sand particles than finer clay particles. The greater the proportion of coarse particles in a soil the less it is able to retain water and nutrients like calcium, magnesium, phosphorus, and potassium - "food" usually needed for plant growth. Thus, even though the Pinelands may receive the same amount of rainfall as land along the Delaware River or land in northern New Jersey, the water moves so rapidly through the sandy soil that little moisture and few nutrients are kept. The sandy soil acts more like a sieve than a sponge.

Pollutants, like large quantities of water soluble chemicals in liquid form, are able to move quickly through the sandy soil to the water table just as easily as it is for water to flow through a sieve. It is important to remember this when determining the amount of chemicals that may safely be used on both agricultural and residential land, as well as the suitability of on-site disposal of wastewater with the standard septic tank. Without careful planning, it would be easy for pollutants to reach the water table and harm the water supply.

Soils are grouped into series according to the geologic material from which they develop, as well as the makeup of their topsoil, subsoil, and horizons (or layers) that are underneath the subsoil. The Pinelands contains thirteen major soil series. Also, there are 30 additional soil series along the southern and western fringes of the region where other geologic formations are intermixed with the Cohansey formation.

In order to simplify the understanding of Pinelands soils, concentration will be placed on five prevalent soil series that have developed from the Cohansey formation. These five soil series, Lakewood, Lakehurst, Atsion, Berryland, and Muck, are major factors in the Pinelands unique soil-water-plant-animal relationship. Each was formed under the influence of time, position (whether the soil is on a hill or in low areas with a fluctuating water table), parent material (sand or gravel), climate and biological activity.

Although time, parent material, climate, and biological activity remain relatively constant for each of the five series, water table and topographic positions can vary. The soils with the higher fluctuating water table tend to be situated in low level areas that have the ground water table near the surface. (There is virtually no surface runoff in the Pinelands.) The surface colors are black underlain first by a light gray layer and then by reddish-brown and dark brown sandy layers. These soils may be generally categorized as wetland or bog soils.

The organic surface layer of Lakewood and Lakehurst soils decomposes slowly because there are very few microorganisms present to break it down. The decomposition that does occur produces humic acid which moves downward with percolating water. Over a long period of time, this weak acid solution removes virtually all of the organic materials from the surface layer. The subsurface layer becomes almost pure quartz sand. The minerals (mostly iron compounds and iron joined with organic matter that are filtered out at the top of the subsoil) and organic matter form the three to four inch dark-brown layer directly beneath the gray layer.

Bacteria that utilize carbon for food in the Atsion and Berryland soils deplete and remove oxygen in their respiration process. As a result, the iron compounds are used as a substitute. After being used by the bacteria, the iron is said to be in a reduced state. In the reduced state, the mineral compounds are generally gray in color.

Because of the almost constant saturated condition in the muck soils, the organic matter does not completely decompose and there is a slow buildup through the years. Muck soils form generally in shallow pools and in low, level areas adjacent to streams.

Soil scientists feel that the underlying brown sandy layers are the result of iron compounds and fine humus particles leaching downward through the soils to the water table level in the summer. This leaching of iron compounds is part of the process by which bog iron is formed. The coarse textures and

fluctuating water table found in the Atsion and Berryland soils make this process possible. Even minimal amounts of clay will prevent this process from occurring. Bog iron is often seen in stream beds and was important in the manufacture of cannon balls and shot used by George Washington's troops during the Revolutionary War.

Water table depth has a major effect on the sandy Pinelands soils as they develop from the parent material. The types of trees and shrubs that grow in different parts of the Pinelands are related to water table depth and these five major soil series. Plants that grow in the wetlands soils such as Atsion, Berryland and Muck have special adaptations that allow them to extract oxygen from the air rather than the generally saturated soil.

NATURAL HERITAGE PRIORITY SITES

The Natural Heritage Priority Sites identify the best habitats for rare plant and animal species and natural communities through analysis of information in the New Jersey Natural Heritage Database. Natural Heritage Priority Sites contain some of the best and most viable occurrences of endangered and threatened species and natural communities, but they do not cover all known habitat for endangered and threatened species in New Jersey.

Through its Natural Heritage Database, the Office of Natural Lands Management (ONLM) identifies critically important natural areas to conserve New Jersey's biological diversity. The database provides detailed, up-to-date information on rare species and natural communities to planners, developers, and conservation agencies for use in resource management, environmental impact assessment, and both public and private land protection efforts. Using the database, ONLM has developed G.I.S. mapping of Natural Heritage Priority Sites that represent some of the best remaining habitat for rare species and exemplary natural communities in the state. These areas are considered to be top priorities for the preservation of biological diversity in New Jersey.

ONLM ranks each site according to its significance for biological diversity using a scale developed by The Nature Conservancy and the network of Natural Heritage Programs. The ranks can be used to distinguish between sites that are of global significance for conservation of biological diversity vs. those that are of state significance. The scale ranges from B1 to B5 with sites ranked B1-B3 generally being of global significance and sites ranked B4-B5 being of state significance. In addition to the biological

diversity rank, each site is categorized as a macrosite or a standard site. Standard sites are smaller in size (usually less than 3200 acres in size), while macrosites tend to be larger (usually greater than 3200 acres in size). It is not unusual to find several standard sites entirely contained within the boundaries of a macrosite. Figure 4 shows the Natural Heritage Priority Sites within Manchester Township. Definitions for each of the sites are as follows:

B1 SITE

Outstanding significance, generally the "last of the least" in the world, such as the only known occurrence of any element (species or natural community), the best or an excellent occurrence of an element ranked critically imperiled globally, or a concentration (4+) of good or excellent occurrences of elements that are imperiled or critically imperiled globally. The site should be viable and defensible for the element or ecological processes contained. Sites are classified as Macrosites (usually greater than 3200 acres in size) or Standard Sites (usually less than 3200 acres in size).

B2 SITE

Very high significance, such as the most outstanding occurrence of any natural community. Also includes areas containing other occurrences of elements that are critically imperiled globally, a good or excellent occurrence of an element that is imperiled globally, an excellent occurrence of an element that is rare globally, or a concentration (4+) of good occurrences of globally rare elements or viable occurrences of globally imperiled elements. Sites are classified as Macrosites (usually greater than 3200 acres in size) or Standard Sites (usually less than 3200 acres in size).

B3 SITE

High significance, such as any other viable occurrence of an element that is globally imperiled, a good occurrence of a globally rare element, an excellent occurrence of any natural community, or a concentration (4+) of good or excellent occurrences of elements that are critically imperiled in the State. Sites are classified as Macrosites (usually greater than 3200 acres in size) or Standard Sites (usually less than 3200 acres in size).

B4 SITE

Moderate significance, such as a viable occurrence of a globally rare element, a good occurrence of any natural community, a good or excellent occurrence or only viable state occurrence of an

element that is critically imperiled in the State, an excellent occurrence of an element that is imperiled in the State, or a concentration (4+) of good occurrences of elements that are imperiled in the State or excellent occurrences of elements that are rare in the State. Sites are classified as Macrosites (usually greater than 3200 acres in size) or Standard Sites (usually less than 3200 acres in size).

B5 SITE

Of general biodiversity interest. Sites are classified as Macrosites (usually greater than 3200 acres in size) or Standard Sites (usually less than 3200 acres in size).

KNOWN CONTAMINATED SITES

The Known Contaminated Sites List for New Jersey 2001 contains those sites and properties within the state where contamination of soil or ground water has been identified or where there has been, or there is suspected to have been, a discharge of contamination. This list of Known Contaminated Sites may include sites where remediation is either currently under way, required but not yet initiated or has been completed.

There are several known contaminated sites in Manchester Township as listed by the NJDEP contaminated sites list from 2001. The sites are mapped in Figure 5 and a listing of the sites is provided in Figure 6. The figure provides the site identification number, name address, status, lead agency and level of site complexity.

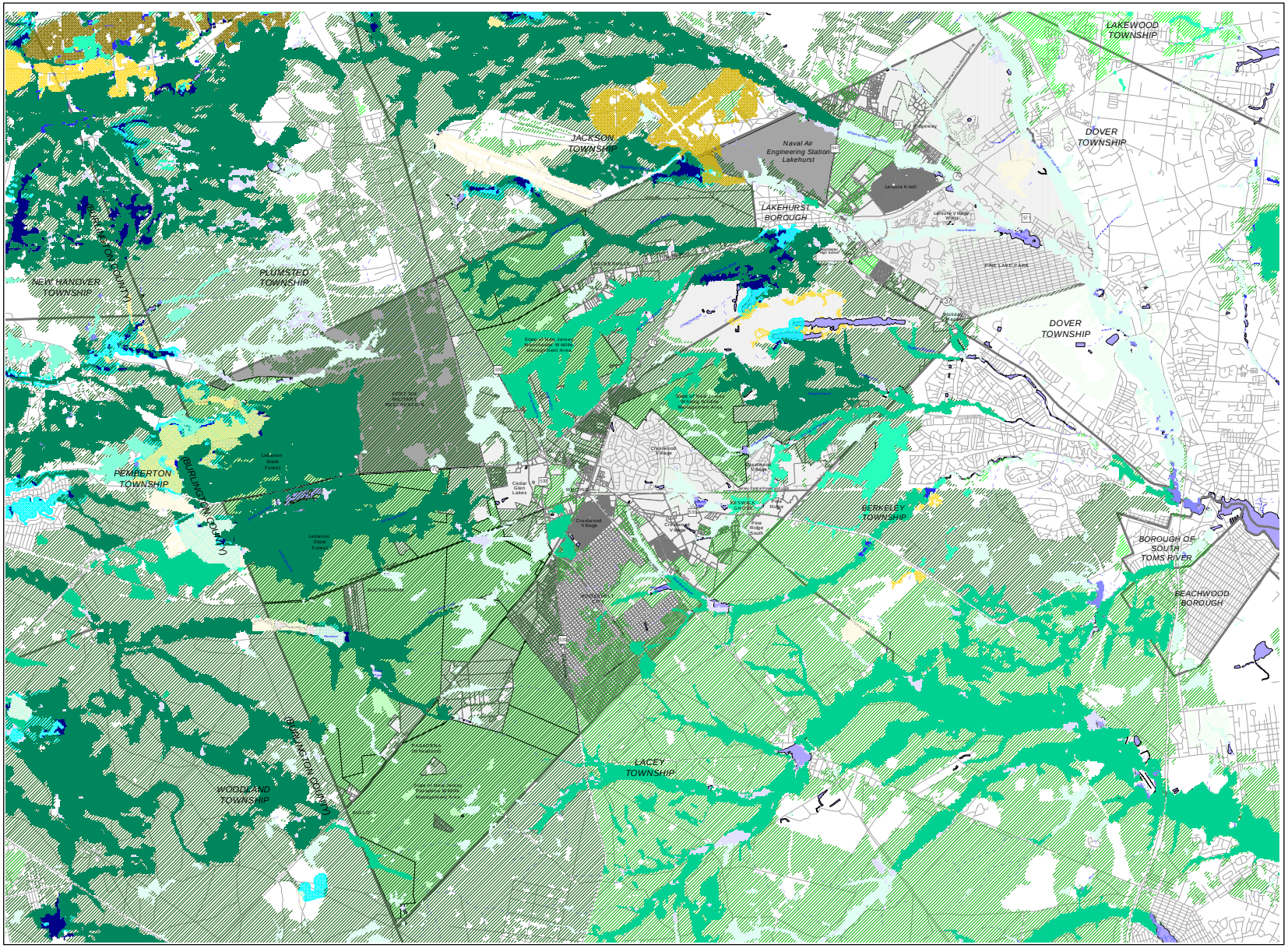
SOILS

Text in 1992 N.R.I. to be combined with this supplement.

FRESHWATER WETLANDS

Text in 1992 N.R.I. to be combined with this supplement.

FIGURE 1
THREATENED & ENDANGERED SPECIES HABITAT



THREATENED AND ENDANGERED SPECIES HABITAT FROM N.J. FISH & WILDLIFE LANDSCAPE PROJECT

ENVIRONMENTAL RESOURCE INVENTORY

MANCHESTER TOWNSHIP

Ocean County, New Jersey

Wetlandforest	Grassland	Forest	Emergent
Suitable Habitat	Suitable Habitat	Suitable Habitat	Suitable Habitat
Special Concern	Special Concern	Special Concern	Special Concern
State Threatened	State Threatened	State Threatened	State Threatened
State Endangered	State Endangered	State Endangered	State Endangered
Federal T & E	Federal T & E	Federal T & E	Federal T & E

Bald Eagle Foraging
Urban Peregrine
Lots
Rivers / Streams
Lakes
Wildlife Management Areas
Military

Sources:
Manchester Tax Maps
Pinelands G.I.S. Mapping
NJDEP G.I.S. Mapping

0 2000 4000 6000 8000 10000 Feet

N

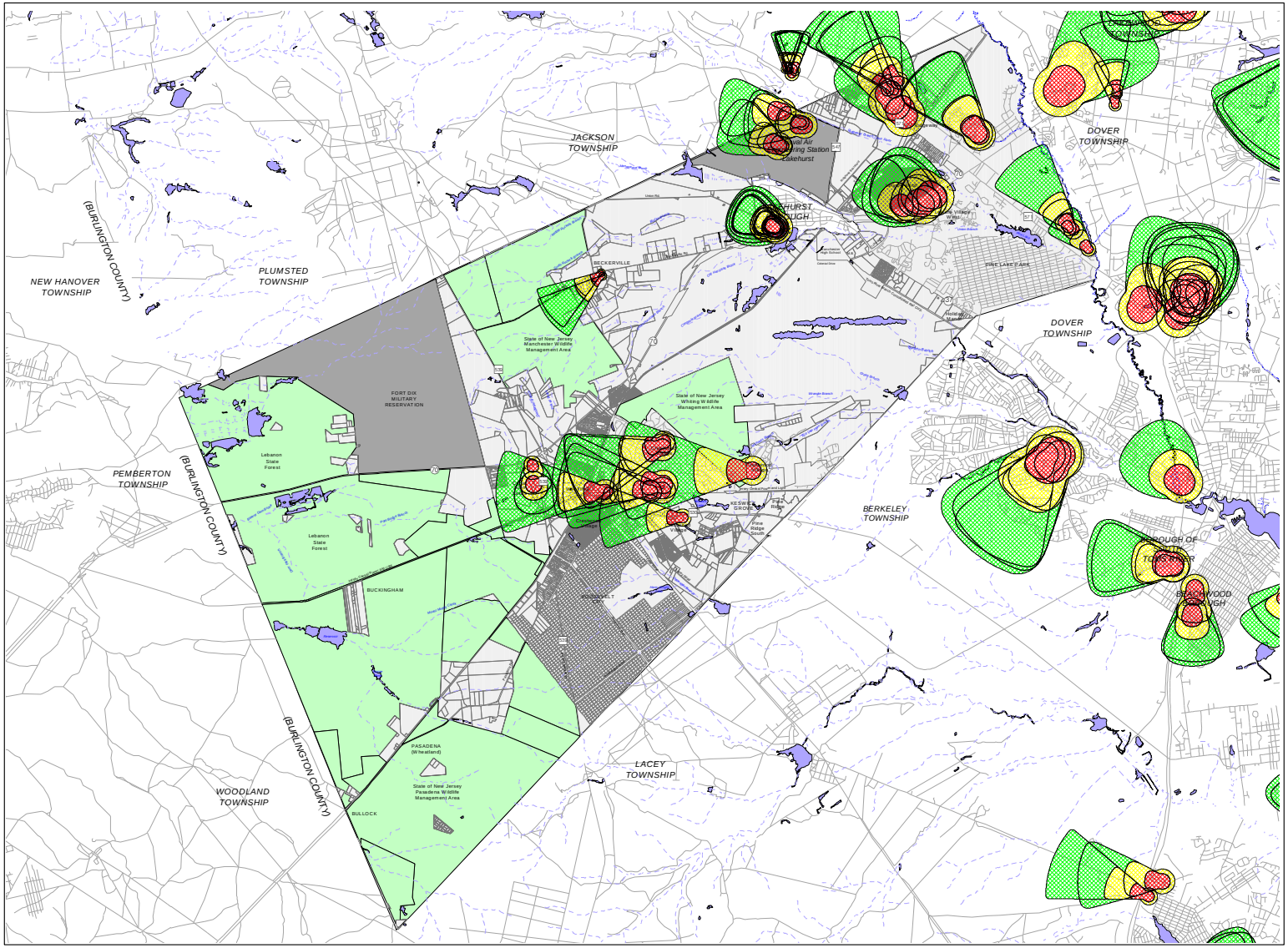
Prepared: November 11, 2004

THOMAS PLANNING ASSOCIATES

BRIELLE
P.O. Box 500
Brielle, N.J. 08730-0500
Phone: 732-223-3020

OCEAN TWP.
1452 Route 37 South
Toms River, N.J. 08753
Phone: 732-505-1154

FIGURE 2
WELLHEAD PROTECTION AREAS



WELLHEAD PROTECTION AREAS

ENVIRONMENTAL RESOURCE INVENTORY
MANCHESTER TOWNSHIP
Ocean County, New Jersey

Lots
Rivers / Streams
Lakes
Wildlife Management Areas
Military

Well Head Protection Area Tiers
2 year time of travel to the well
5 year time of travel to the well
12 year time of travel to the well

Well Head Protection Areas for public community water supply wells - New Jersey Geologic Survey

Sources:
Manchester Tax Maps
Pinelands G.I.S. Mapping
NJDEP G.I.S. Mapping

0 2000 4000 6000 8000 Feet

Prepared: April, 2005

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BRILLE
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Beach, N.J. 08741-0500
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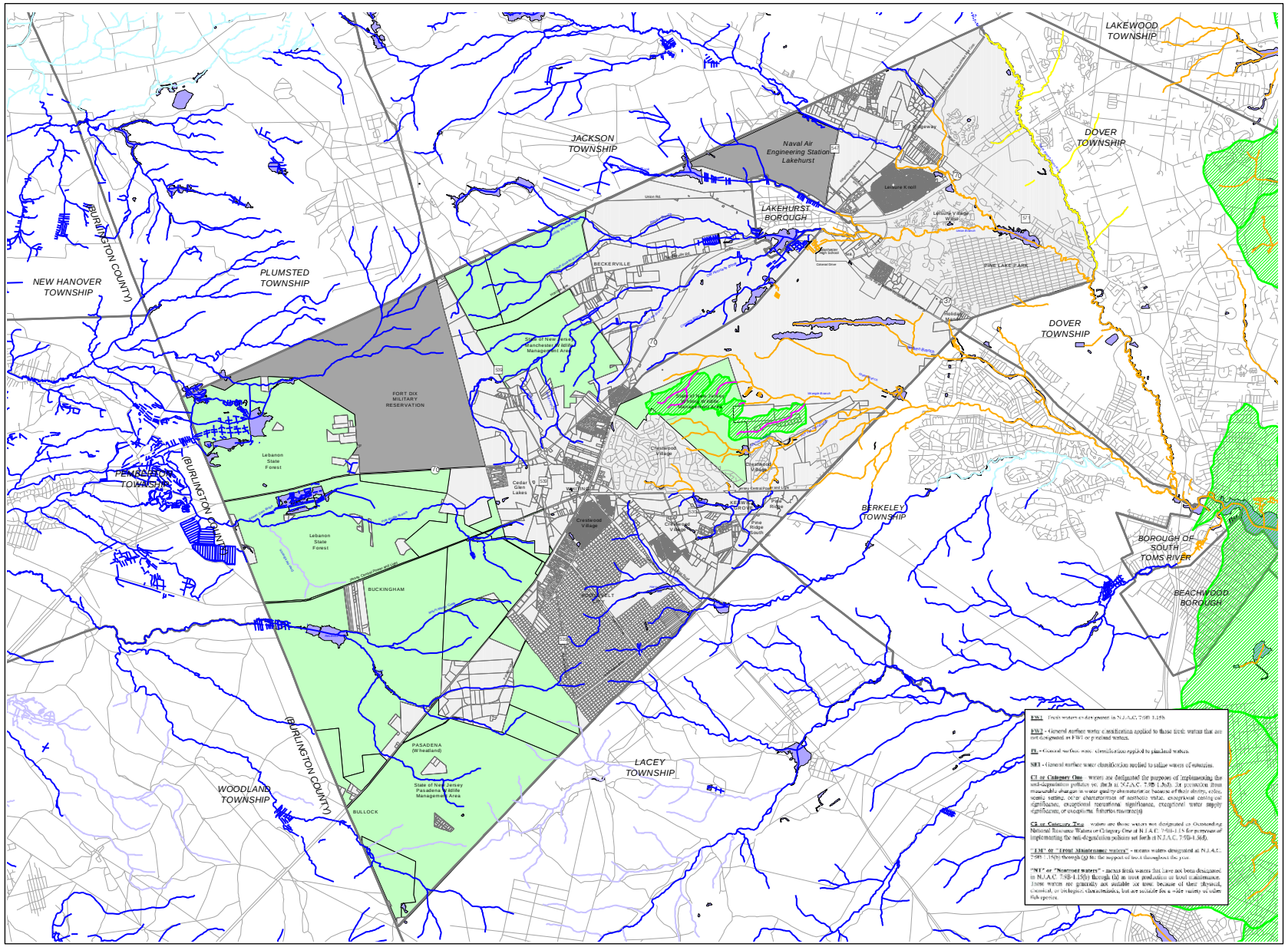
OCEAN TWP.
1111 Route 37 West
Toms River, N.J. 08755
Phone: 732-505-2118

FIGURE 3
SURFACE WATER QUALITY STANDARDS & AREAS SUBJECT TO 300 FT. STORMWATER BUFFER



SURFACE WATER QUALITY STANDARDS
AREAS SUBJECT TO 300 FT. STORMWATER BUFFER

ENVIRONMENTAL RESOURCE INVENTORY

MANCHESTER TOWNSHIP
Ocean County, New Jersey

Lots
Rivers / Streams
Lakes
Wildlife Management Areas
Military

SURFACE WATER QUALITY STANDARDS - N.J.A.C. 7:9B
FW1
FW2-NT
FW2-NT/SE1
FW2-NTC1
FW2-TM
PL
Areas Subject to 300 Foot Buffer as Defined in the Stormwater Rules

Sources:
Manchester Tax Maps
Pinelands G.I.S. Mapping
NJDEP G.I.S. Mapping

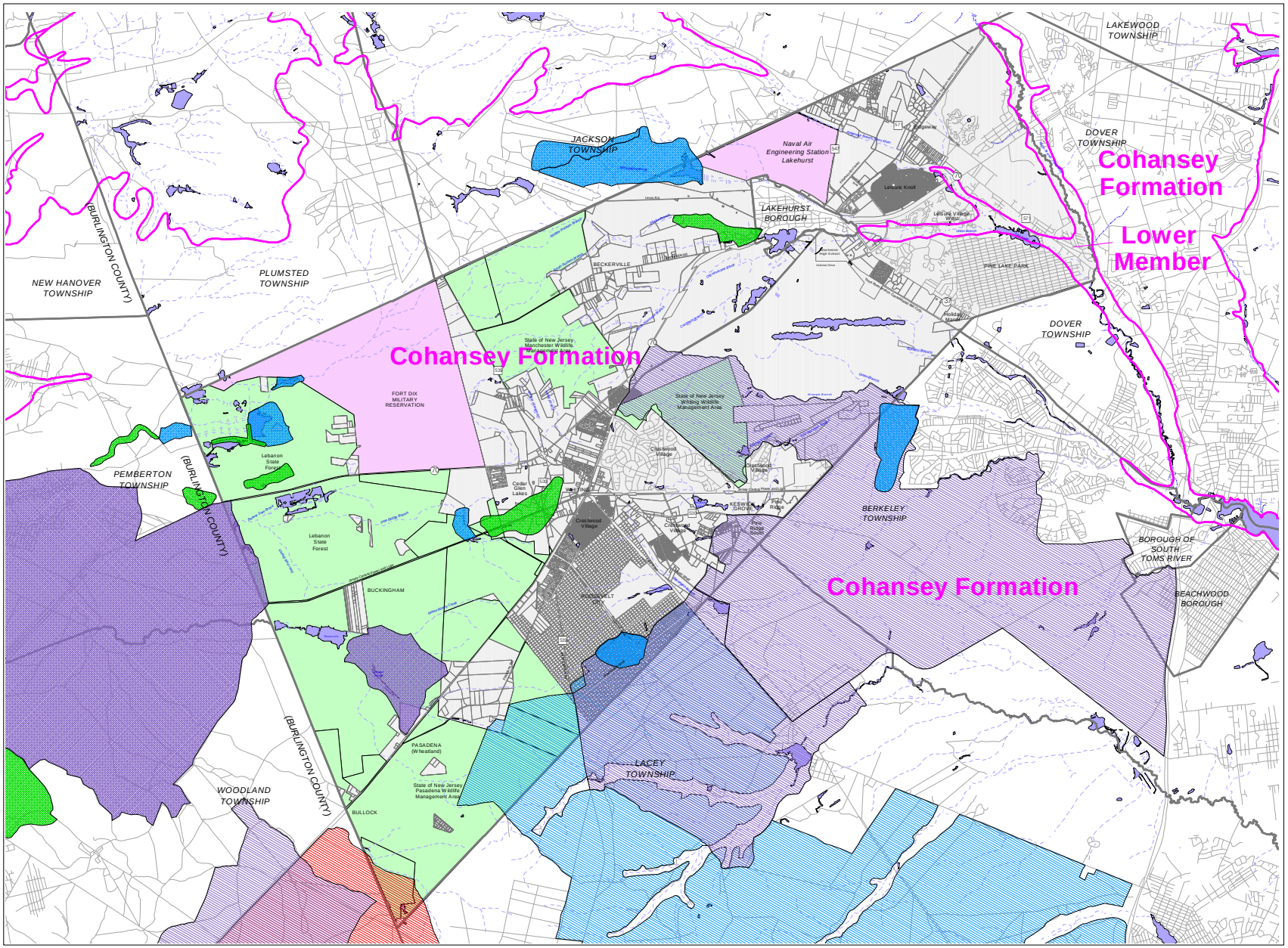
0 2000 4000 6000 8000 10000 Feet

N

Prepared: November 11, 2004

THOMAS PLANNING ASSOCIATES

FIGURE 4
GEOLOGY & NATURAL HERITAGE PRIORITY SITES



GEOLOGY & NATURAL HERITAGE PRIORITY SITES

ENVIRONMENTAL RESOURCE INVENTORY
MANCHESTER TOWNSHIP
Ocean County, New Jersey

Bedrock Geology
New Jersey Geologic Survey

Lots
Rivers / Streams
Lakes
Wildlife Management Areas
Military

Natural Heritage Priority Sites - September 2001 Version
Critical Habitat for Rare Species and Natural Communities

Standard Site (usually < 3200 acres in size)
- B1 Standard Site (Outstanding Significance)
- B2 Standard Site (Very High Significance)
- B3 Standard Site (High Significance)
- B4 Standard Site (Moderate Significance)
- B5 Standard Site (General Biodiversity Interest)

Macrosite (usually > 3200 acres in size)
- B1 Macrosite (Outstanding Significance)
- B2 Macrosite (Very High Significance)
- B3 Macrosite (High Significance)
- B4 Macrosite (Moderate Significance)
- B5 Macrosite (General Biodiversity Interest)

Sources:
Manchester Tax Maps
Pinelands G.I.S. Mapping
NJDEP G.I.S. Mapping

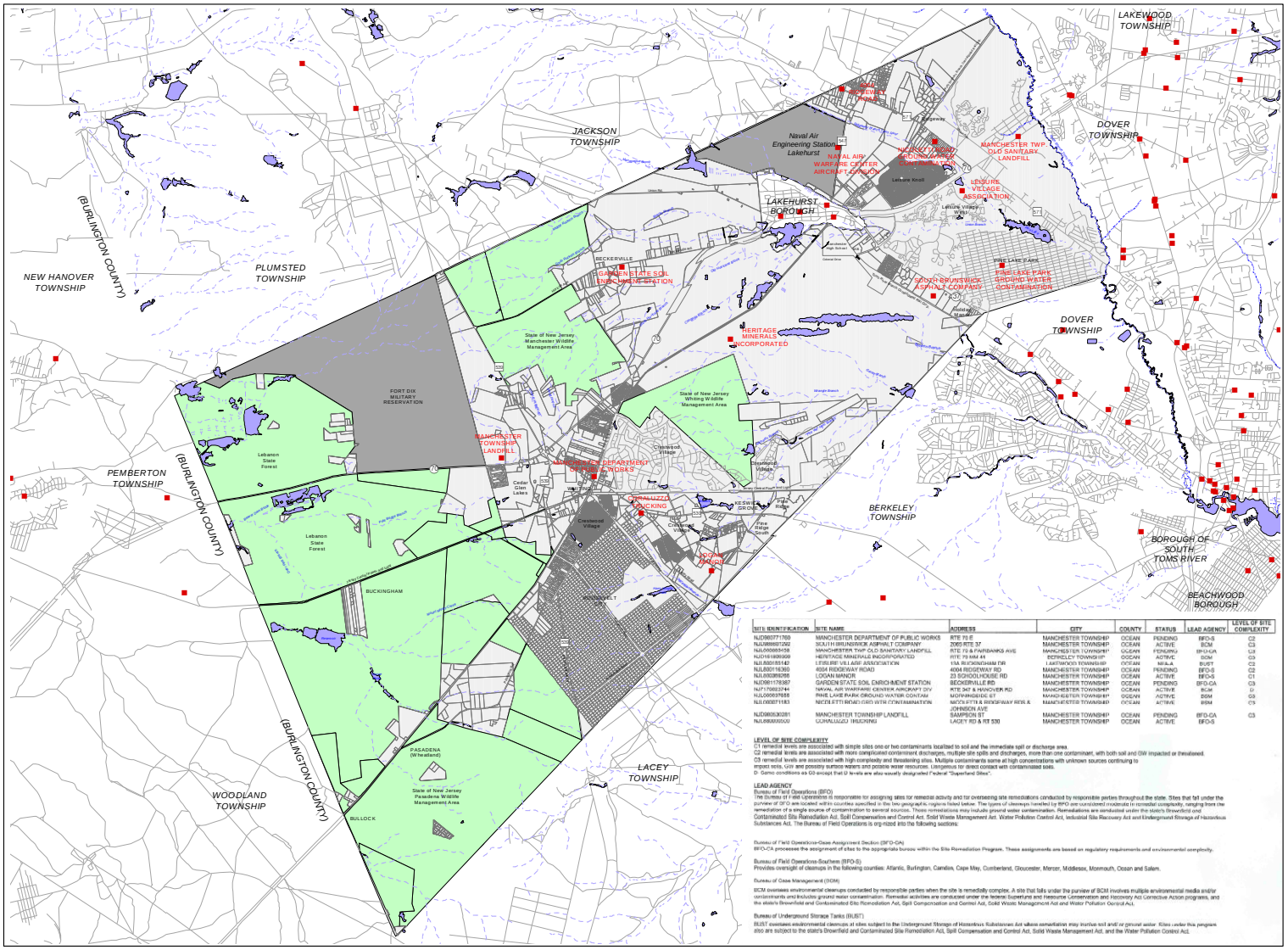
0 2000 4000 6000 8000 10000 Feet

N

Prepared: November 11, 2004

THOMAS PLANNING ASSOCIATES

FIGURE 5
KNOWN CONTAMINATED SITES



SITE IDENTIFICATION	SITE NAME	ADDRESS	CITY	COUNTY	STATUS	LEAD AGENCY	LEVEL OF SITE COMPLEXITY
NJD980771760	MANCHESTER DEPARTMENT OF PUBLIC WORKS	RTE 70 E	MANCHESTER TOWNSHIP	OCEAN	PENDING	BFO-S	C2
NJU000001260	SOUTH BRUNSWICK ASPHALT COMPANY	2065 RTE 37	MANCHESTER TOWNSHIP	OCEAN	ACTIVE	BCM	C3
NJU000065458	MANCHESTER TWP OLD SANITARY LANDFILL	RTE 70 & FAIRBANKS AVE	MANCHESTER TOWNSHIP	OCEAN	PENDING	BHGA	C3
NJD161869000	HERITAGE MINERALS INCORPORATED	RTE 70 MM 44	BERKELEY TOWNSHIP	OCEAN	ACTIVE	BCM	C3
NJU800185140	LEISURE VILLAGE ASSOCIATION	11A BUCKINGHAM DR	LAKEWOOD TOWNSHIP	OCEAN	NFA_A	BUST	C2
NJU000116360	4004 RIDGEWAY ROAD	4004 RIDGEWAY RD	MANCHESTER TOWNSHIP	OCEAN	PENDING	BFO-S	C2
NJU000086088	LOGAN MANOR	23 SCHOOLHOUSE RD	MANCHESTER TOWNSHIP	OCEAN	ACTIVE	BFO-S	C1
NJD981178387	GARDEN STATE SOIL ENRICHMENT STATION	BECKERVILLE RD	MANCHESTER TOWNSHIP	OCEAN	PENDING	BFO-CA	C3
NJT170002244	NAVAL AIR WARFARE CENTER AIRCRAFT DIV	RTE 547 & WANCHAN RD	MANCHESTER TOWNSHIP	OCEAN	ACTIVE	BCM	D
NJU000097688	PINE LAKE PARK GROUND WATER CONTAM	MORNINGSIDE ST	MANCHESTER TOWNSHIP	OCEAN	ACTIVE	BSM	C3
NJU000071183	NICOLETTI ROAD CSRO WTR CONTAMINATION	NICOLETTI & RIDGEWAY RDS & JOHNSON AVE	MANCHESTER TOWNSHIP	OCEAN	ACTIVE	BRM	C3
NJD980636081	MANCHESTER TOWNSHIP LANDFILL	SAMPSON ST	MANCHESTER TOWNSHIP	OCEAN	PENDING	BFO-CA	C3
NJU000000500	CORALUZZO TRUCKING	LACEY RD & RT 530	MANCHESTER TOWNSHIP	OCEAN	ACTIVE	BFO-S	

LEVEL OF SITE COMPLEXITY

C1 remedial levels are associated with simple sites one or two contaminants localized to soil and the immediate spill or discharge area.
C2 remedial levels are associated with more complicated contaminant discharges, multiple site spills and discharges, more than one contaminant, with both soil and GW impacted or threatened.
C3 remedial levels are associated with high complexity and threatening sites. Multiple contaminants some at high concentrations with unknown sources continuing to impact soils, GW and possibly surface waters and potable water resources. Dangerous for direct contact with contaminated soils.
D Some conditions as C3 except that D levels are also usually designated Federal "Superfund Sites".

LEAD AGENCY

Bureau of Field Operations (BFO)
The Bureau of Field Operations is responsible for assigning sites for remedial activity and for overseeing site remediations conducted by responsible parties throughout the state. Sites that fall under the purview of BFO are located within counties specified in the two geographic regions listed below. The types of cleanups handled by BFO are considered moderate in remedial complexity, ranging from the remediation of a single source of contamination to several sources. These remediations may include ground water contamination. Remediations are conducted under the state's Brownfield and Contaminated Site Remediation Act, Spill Compensation and Control Act, Solid Waste Management Act, Water Pollution Control Act, Industrial Site Recovery Act and Underground Storage of Hazardous Substances Act. The Bureau of Field Operations is organized into the following sections:

Bureau of Field Operations-Case Assignment Section (BFO-CA)
BFO-CA processes the assignment of sites to the appropriate bureau within the Site Remediation Program. These assignments are based on regulatory requirements and environmental complexity.

Bureau of Field Operations-Southern (BFO-S)
Provides oversight of cleanups in the following counties: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Middlesex, Monmouth, Ocean and Salem.

Bureau of Case Management (BCM)
BCM oversees environmental cleanups conducted by responsible parties when the site is remedially complex. A site that falls under the purview of BCM involves multiple environmental media and/or contaminants and includes ground water contamination. Remedial activities are conducted under the federal Superfund and Resource Conservation and Recovery Act Corrective Action programs, and the state's Brownfield and Contaminated Site Remediation Act, Spill Compensation and Control Act, Solid Waste Management Act and Water Pollution Control Act.

Bureau of Underground Storage Tanks (BUST)
BUST oversees environmental cleanups at sites subject to the Underground Storage of Hazardous Substances Act where remediation may involve soil and/or ground water. Sites under this program also are subject to the state's Brownfield and Contaminated Site Remediation Act, Spill Compensation and Control Act, Solid Waste Management Act, and the Water Pollution Control Act.

KNOWN CONTAMINATED SITES

ENVIRONMENTAL RESOURCE INVENTORY
MANCHESTER TOWNSHIP
Ocean County, New Jersey

Lots
Rivers / Streams
Lakes
Wildlife Management Areas
Military
Known Contaminated Site 2001 List (NJDEP)

Sources:
Manchester Tax Maps
Pinelands G.I.S. Mapping
NJDEP G.I.S. Mapping

0 2000 4000 6000 8000 Feet

N

Prepared: November 11, 2004

THOMAS PLANNING ASSOCIATES

FIGURE 6
KNOWN CONTAMINATED SITES - 2001 NJDEP LIST
TOWNSHIP OF MANCHESTER

SITE IDENTIFICATION	SITE NAME	ADDRESS	CITY	COUNTY	STATUS	LEAD AGENCY	LEVEL OF SITE COMPLEXITY
NJD980771760	MANCHESTER DEPARTMENT OF PUBLIC WORKS	RTE 70 E	MANCHESTER TOWNSHIP	OCEAN	PENDING	BFO-S	C2
NJD986601292	SOUTH BRUNSWICK ASPHALT COMPANY	2065 RTE 37	MANCHESTER TOWNSHIP	OCEAN	ACTIVE	BCM	C3
NJL000065458	MANCHESTER TWP OLD SANITARY LANDFILL	RTE 70 & FAIRBANKS AVE	MANCHESTER TOWNSHIP	OCEAN	PENDING	BFO-CA	C3
NJD151809399	HERITAGE MINERALS INCORPORATED	RTE 70 MM 41	BERKELEY TOWNSHIP	OCEAN	ACTIVE	BCM	C3
NJL800185142	LEISURE VILLAGE ASSOCIATION	13A BUCKINGHAM DR	LAKEWOOD TOWNSHIP	OCEAN	NFA-A	BUST	C2
NJL800116360	4004 RIDGEWAY ROAD	4004 RIDGEWAY RD	MANCHESTER TOWNSHIP	OCEAN	PENDING	BFO-S	C2
NJL800369266	LOGAN MANOR	23 SCHOOLHOUSE RD	MANCHESTER TOWNSHIP	OCEAN	ACTIVE	BFO-S	C1
NJD981178387	GARDEN STATE SOIL ENRICHMENT STATION	BECKERVILLE RD	MANCHESTER TOWNSHIP	OCEAN	PENDING	BFO-CA	C3
NJ7170023744	NAVAL AIR WARFARE CENTER AIRCRAFT DIV	RTE 547 & HANOVER RD	MANCHESTER TOWNSHIP	OCEAN	ACTIVE	BCM	D
NJL000037655	PINE LAKE PARK GROUND WATER CONTAM	MORNINGSIDE ST	MANCHESTER TOWNSHIP	OCEAN	ACTIVE	BSM	C3
NJL000071183	NICOLETTI ROAD GRD WTR CONTAMINATION	NICOLETTI & RIDGEWAY RDS & JOHNSON AVE	MANCHESTER TOWNSHIP	OCEAN	ACTIVE	BSM	C3
NJD980530281	MANCHESTER TOWNSHIP LANDFILL	SAMPSON ST	MANCHESTER TOWNSHIP	OCEAN	PENDING	BFO-CA	C3
NJL880000500	CORALUZZO TRUCKING	LACEY RD & RT 530	MANCHESTER TOWNSHIP	OCEAN	ACTIVE	BFO-S	

LEVEL OF SITE COMPLEXITY

C1 remedial levels are associated with simple sites one or two contaminants localized to soil and the immediate spill or discharge area.

C2 remedial levels are associated with more complicated contaminant discharges, multiple site spills and discharges, more than one contaminant, with both soil and GW impacted or threatened.

C3 remedial levels are associated with high complexity and threatening sites. Multiple contaminants some at high concentrations with unknown sources continuing to impact soils, GW and possibly surface waters and potable water resources. Dangerous for direct contact with contaminated soils.

D- Same conditions as C3 except that D levels are also usually designated Federal "Superfund Sites".

LEAD AGENCY

Bureau of Field Operations (BFO)

The Bureau of Field Operations is responsible for assigning sites for remedial activity and for overseeing site remediations conducted by responsible parties throughout the state. Sites that fall under the purview of BFO are located within counties specified in the two geographic regions listed below. The types of cleanups handled by BFO are considered moderate in remedial complexity, ranging from the remediation of a single source of contamination to several sources. These remediations may include ground water contamination. Remediations are conducted under the state's Brownfield and Contaminated Site Remediation Act, Spill Compensation and Control Act, Solid Waste Management Act, Water Pollution Control Act, Industrial Site Recovery Act and Underground Storage of Hazardous Substances Act. The Bureau of Field Operations is org-nized into the following sections:

Bureau of Field Operations-Case Assignment Section (BFO-CA)

BFO-CA processes the assignment of sites to the appropriate bureau within the Site Remediation Program. These assignments are based on regulatory requirements and environmental complexity.

Bureau of Field Operations-Southern (BFO-S)

Provides oversight of cleanups in the following counties: Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Mercer, Middlesex, Monmouth, Ocean and Salem.

Bureau of Case Management (BCM)

BCM oversees environmental cleanups conducted by responsible parties when the site is remedially complex. A site that falls under the purview of BCM involves multiple environmental media and/or contaminants and includes ground water contamination. Remedial activities are conducted under the federal Superfund and Resource Conservation and Recovery Act Corrective Action programs, and the state's Brownfield and Contaminated Site Remediation Act, Spill Compensation and Control Act, Solid Waste Management Act and Water Pollution Control Act.

Bureau of Underground Storage Tanks (BUST)

BUST oversees environmental cleanups at sites subject to the Underground Storage of Hazardous Substances Act where remediation may involve soil and/ or ground water. Sites under this program also are subject to the state's Brownfield and Contaminated Site Remediation Act, Spill Compensation and Control Act, Solid Waste Management Act, and the Water Pollution Control Act.