MUNICIPAL STORMWATER MANAGEMENT PLAN
MASTER PLAN ELEMENT

BOROUGH OF EATONTOWN
MONMOUTH COUNTY, NEW JERSEY

Adopted: January 14, 2008
First Draft dated: March 18, 2005
Amended: November 20, 2007

PREPARED FOR

BOROUGH OF EATONTOWN PLANNING BOARD

PREPARED BY:

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MARCH 2005

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Members of the 2008 Planning Board

Gerald J. Tarantolo, Mayor

Paul Kirzow, Chairman

Jennifer Piazza, Vice Chairman

Rudolph Trask

Roger Greene

Carleton Sohl

Mark Woloshin

Amy Peak

Michael Napolitan

Mark Steinberg, Esq., Planning Board Attorney

Peggy Ciok, Land Use Administrator

RESOLUTION

WHEREAS, the New Jersey Municipal Land Use Act Law (N.J.S.A. 40:55D-89) requires that a municipality, by its Planning Board, provide a general reexamination of its Master Plan and development regulations every six years; and

WHEREAS, the Planning Board of the Borough of Eatontown has approved a general reexamination of the Eatontown Master Plan and development regulations prepared by Richard S. Cramer, Jr., P.P., A.I.C.P., of T&M Associates, dated September, 2007, in full satisfaction of its requirements, as set forth in the Municipal Land Use Law aforesaid on October 8, 2007, as memorialized by Resolution dated October 22, 2007; and

WHEREAS, the aforesaid reexamination of the Eatontown Master Plan has been sent to the Monmouth County Planning Board for review and comment; and

WHEREAS, the same is required to be amended to included the new Municipal Stormwater Management Plan as required by regulations amended November, 2007, to be included in the Master Plan; and

WHEREAS, Richard S. Cramer, Jr., has prepared a Municipal Stormwater Management Plan Master Plan Element Amended November 20, 2007, with amendments and corrections as required by the Monmouth County Planning Board; and

WHEREAS, the Planning Board of the Borough of Eatontown held public hearings upon notice as required by law, and the Board has reviewed the proposed Municipal Stormwater Management Plan Master Plan Element as above indicated, and has had the opportunity to discuss same with the Borough Planner and members of the public, if any.

NOW, THEREFORE, BE IT RESOLVED, by the Planning Board of the Borough of Eatontown, that it hereby adopts the Municipal Stormwater Management Plan Master Plan Element, dated November 20, 2007, prepared by Richard S. Cramer, Jr., P.P., A.I.C.P., of T&M Associates, in full satisfaction of its requirements, as set forth in the Municipal Land Use Law as aforesaid.

BE IT FURTHER RESOLVED, by the Planning Board of the Borough of Eatontown, that a copy of this Resolution and the Municipal Stormwater Management Plan Master Element, dated November 20, 2007, be forwarded to the Monmouth County Planning Board and the Municipal Clerks of each adjoining municipality to the Borough of Eatontown.

DATED: January 14, 2008

MOVED BY: Mayor Tarantolo

SECONDED BY: Mr. Sohl

ROLL CALL VOTE

AYES: Messrs. Kirzow, Trask, Sohl, Woloshin, Napolitan, Miss Piazza and Mayor Tarantolo

NAYS: None

ABSENT: Mrs. Peak and Mr. Greene

ABSTAIN: None

MOVED BY: Mayor Tarantolo

SECONDED BY: Miss Piazza

ROLL CALL VOTE

AYES: Messrs. Trask, Sohl, Woloshin, Napolitan, Miss Piazza and Mayor Tarantolo

NAYS: None

ABSENT: Mr. Kirzow

ABSTAIN: None

NOT ELIGIBLE: Mrs. Peak and Mr. Greene

DATED: January 28, 2008

Paul J. Kirzow

PAUL J. KIRZOW, Chairman
Eatontown Planning Board

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1.0 INTRODUCTION

As a result of the publication of the United States Environmental Protection Agency (USEPA) Phase II rules in December 1999, the New Jersey Department of Environmental Protection (NJDEP) promulgated new stormwater regulations to address non-point source pollution entering surface and ground waters of the State of New Jersey. Under these regulations, municipalities were issued a New Jersey Pollutant Discharge Elimination System (NJPDES) Permit that established various statewide basic requirements. One of these requirements is the development and adoption of an amendment to their overall Master Plan to address stormwater pollution associated with major development.

As required by the Municipal Stormwater Regulations (N.J.A.C. 7:14A-25), the Borough of Eatontown has developed this Municipal Stormwater Management Plan (MSWMP) to outline their approach to address the impacts resulting from stormwater related issues associated with future development and land use changes. The MSWMP addresses groundwater recharge, stormwater quantity, and stormwater quality impacts through the incorporation of stormwater design and performance standards for new development and redevelopment projects that disturb one or more acres of land. The standards are intended to minimize negative or adverse impacts of stormwater runoff such as decreased water quality, increased water quantity, and reduction of groundwater recharge that provides base flow to receiving bodies of water. Also, the MSWMP provides long term operation and maintenance measures for existing and proposed stormwater management facilities.

Ordinance changes are recommended to expedite the implementation of stormwater management strategies. A build-out analysis is not included since the Borough has less than one square mile of developable or vacant land. It should be noted that Fort Monmouth was not included in these calculations, as it is governed under its own New Jersey Public Complex Stormwater General Permit. The MSWMP also includes a mitigation plan to permit the Borough to grant variances or exemptions from proposed design and performance standards set forth in this document.

1.1 GOALS & OBJECTIVES

The goals of this Plan are to:

- ***Reduce flood damage, including damage to life and property;***
- ***Minimize, to the extent practicable, any increase in stormwater runoff from a new development;***
- ***Reduce soil erosion from development, redevelopment, or construction projects;***
- ***Encourage the adequacy of existing and proposed culverts, bridges, and other in-stream structures;***
- ***Maintain groundwater recharge and base flow of streams during periods of drought;***
- ***Prevent, to the greatest extent feasible, an increase in non-point source pollution;***
- ***Maintain the integrity of stream channels for their biological function, as well as for drainage;***
- ***Minimize pollutants and the amount of total suspended solids in stormwater runoff from new and existing development to restore, enhance, and maintain the chemical, physical, and biological integrity of the waters of the state, to protect public health, to safeguard fish and aquatic life and scenic and ecological values, and to enhance the domestic, municipal, recreational, commercial, industrial, and other uses of water;***
- ***Protect public safety through the proper design and operation of stormwater basin and Best Management Practices;***

In addition to the State mandated goals noted above, the Borough also recommends the following goals:

- ***Provide conservation areas as well as passive and active recreation facilities;***
- ***Assure that present buffer requirements are both adequate and reasonable and that they are consistently administered;***
- ***Adequately safeguard freshwater wetlands and transition areas to ensure that they***

are not developed;

- ***Encourage the reduction of sedimentation to the Shrewsbury River and its associated shellfish beds.***

To achieve these goals, the MSWMP outlines specific stormwater design and performance standards for new development and redevelopment projects and proposes stormwater management controls for addressing impacts from existing developments. Preventive and corrective maintenance strategies are also included in the MSWMP to ensure the long-term effectiveness of the stormwater management facilities. Finally the MSWMP outlines safety standards for stormwater infrastructure to be implemented to protect public safety.

2.0 DEFINITIONS

- ***AMNET Impairment Level***
  - *Non-impaired*: benthic community comparable to other undisturbed streams within the region; community characterized by a maximum taxa richness, balanced taxa groups, and good representation of intolerant individuals.
  - *Moderately Impaired*: macroinvertebrate richness reduced, in particular EPT taxa; reduced community balance and numbers of intolerant taxa.
  - *Severely Impaired*: benthic community dramatically different from those in less impaired situations; macroinvertebrates dominated by a few taxa, but with many individuals; only tolerant individuals present.
- ***Best Management Practices Manual*** – NJDEP document providing design, performance and maintenance criteria related to non-structural and structural stormwater management strategies, legal requirements, and the impacts of stormwater runoff, as described in N.J.A.C. 7:8.
- ***Evapo-transpiration*** - The combination of the processes of removing water from wet surfaces via evaporation and from leaves of plants via transpiration and returning it to the atmosphere.
- ***Groundwater Flow*** - Movement of water through the subsurface.
- ***Groundwater Recharge*** - The amount of water from precipitation that infiltrates into the ground and is not evapo-transpired.
- ***Hydrologic Units (HUC-14s)*** - USGS designated subwatershed with a minimum basin area of 3,000 acres. These subwatersheds are designated with a 14 digit unit code.
- ***Impervious Cover*** - A surface that has been covered by a layer of material that is highly resistant to infiltration by water.
- ***Infiltration*** - Penetration of water through the ground surface.
- ***Municipal Stormwater Management Regulations*** **(N.J.A.C. 7:8 and N.J.A.C. 7:14A-25)** - Regulations authorizing the NJPDES Tier A Municipal Stormwater Master General Permit, which outlines the various statewide basic requirements, the municipal stormwater management plan and stormwater control ordinance.

- ***MSWMP*** – Municipal Stormwater Management Plan.
- ***NJPDES*** - The New Jersey Pollutant Discharge Elimination System Tier A Municipal Stormwater Master General Permit is the permit that governs municipal stormwater discharges and lays forth the requirements for compliance with the State's stormwater regulations.
- ***Non-point Source Pollution*** - Pollution for which the source is not a discreet location or point.
- ***Non-Structural Stormwater Management Strategies*** - A strategy, practice, technology, process, program, or other method intended to control or reduce stormwater runoff and associated pollutants, or to induce or control the infiltration or groundwater recharge of stormwater or to eliminate illicit or illegal non-stormwater discharges into stormwater conveyances, which do not require structural engineering or designs.
- ***Point Source Pollution*** - Pollution for which the origin is a known location, i.e. a pipe outfall.
- ***Recharge*** - Water that reaches saturated zones.
- ***Regional Plans*** - Stormwater management plans focusing on managing stormwater in a given watershed, or stream, rather than management of stormwater based on municipal boundaries.
- ***Residential Site Improvement Standards (RSIS)*** - New Jersey Administrative Code Title 5 Chapter 21. These rules govern site improvement standards in residential areas.
- ***Runoff*** - Water that travels over the ground surface to a channel.
- ***Stormwater Management Control Ordinance*** - The enabling ordinance to this Master Plan element which is to be adopted within 12 months of the adoption date of this MSWMP.
- ***Structural Stormwater Management Strategies*** - A strategy, practice, technology, process, program, or other method intended to control or reduce stormwater runoff and associated pollutants, or to induce or control the infiltration or groundwater recharge of stormwater or to eliminate illicit or illegal non-stormwater discharges into stormwater conveyances, which requires structural engineering or designs.

3.0 STORMWATER DISCUSSION

3.1 HYDROLOGIC CYCLE

The hydrologic cycle, or water cycle (Figure 1), is the continuous circulation of water between the ocean, atmosphere, and the land. The driving force of this natural cycle is the sun. Water, stored in oceans, depressions, streams, rivers, waterbodies, vegetation and even land surface, constantly evaporates due to solar energy. This water vapor then condenses in the atmosphere to form clouds and fog. After water condenses, it precipitates, usually in the form of rain or snow, onto land surfaces and waterbodies. Precipitation falling on land surfaces is often intercepted by vegetation. Plants and trees transpire water vapor back into the atmosphere, as well as aid in the infiltration of water into the soil. The vaporization of water through transpiration and evaporation is called evapo-transpiration. Infiltrated water percolates through the soil as groundwater, while water that flows overland is called surface water. Water flows across or below the surface to reach major water bodies and aquifers and eventually flows to the Earth's seas and oceans. This constant process of evapo-transpiration, condensation, precipitation, and infiltration comprises the hydrologic cycle.

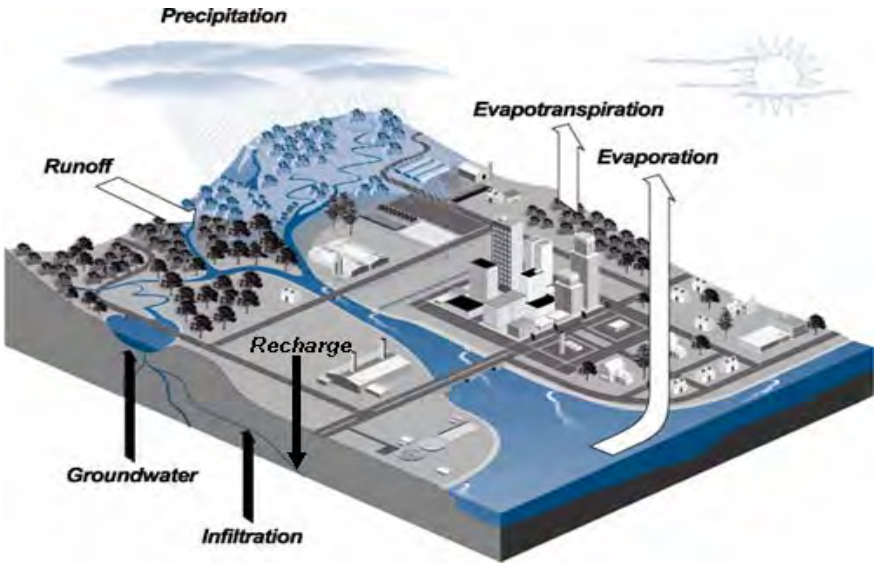
3.2 IMPACTS OF DEVELOPMENT AND STORMWATER

As towns and cities develop from rural agricultural communities, the landscape is altered in dramatic ways. Both residential and non-residential development on former agricultural fields and pastures has a great impact on the hydrologic cycle for the specific site. Localized impacts to the hydrologic cycle will ultimately impact the hydrologic cycle of the entire watershed encompassing the development site.

Prior to any land development, native vegetation often intercepts precipitation directly or absorbs infiltrated runoff into their roots. Development often replaces native vegetation with lawns or impervious cover, such as pavement or structures, thereby reducing the amount of evapo-transpiration and infiltration. Regrading and clearing of lots disturbs the natural topography of

rises and depressions that can naturally capture rainwater and allow for infiltration and evaporation. Construction activities often compact soil, thereby decreasing its permeability or ability to infiltrate stormwater. Development activities also generally increase the volume of stormwater runoff from a given site.

Figure 1: The Hydrologic Cycle

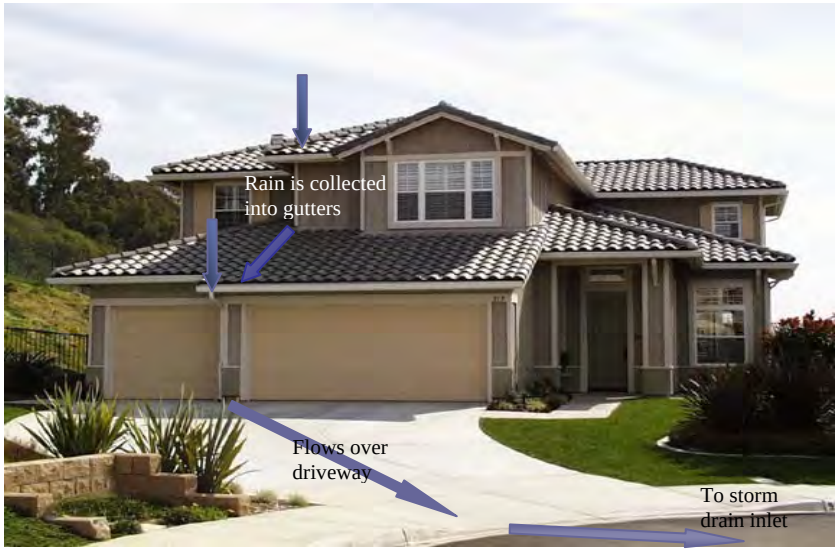


Source: Kern River Connections
http://www.creativille.org/kernriver/watershed.htm

Connected impervious surfaces and storm sewers (such as roof gutters emptying into a paved parking lot that drains into a storm sewer) allow the runoff to be transported downstream more rapidly than natural areas. This shortens travel time and increases the rainfall- runoff response of the drainage area, causing downstream waterways to peak higher and quicker than natural areas, a situation that can cause or exacerbate downstream flooding, and sedimentation in stream channels. Furthermore, connected impervious surfaces do not allow pollutants to be filtered, or for infiltration and ground water recharge to occur prior to reaching the receiving waters. Increased volume combined with reduced base flows results in a greater fluctuation between normal and storm flows causing greater channel erosion. Additionally, reduced base flows, increased fluctuation, and soil erosion can affect the downstream hydrology, impacting ecological integrity.

Water quantity impacts combined with land development often adversely affect stormwater quality. Impervious surfaces collect pollutants from the atmosphere, animal wastes, fertilizers and pesticides, as well as pollutants from motor vehicles. Pollutants such as hydrocarbons, metals, suspended solids, pathogens, and organic and nitrogen containing compounds, collect and concentrate on impervious surfaces. During a storm event, these pollutants are washed directly into the storm sewers (Figure 2). In addition to chemical and biological pollution, thermal pollution can occur from water collected or stored on impervious surfaces or in stormwater impoundments, which has been heated by the sun. Thermal pollution can affect aquatic habitats, adversely impacting cold water fish. Removal of shade trees and stabilizing vegetation from stream banks also contributes to thermal pollution.

Figure 2: Connected Impervious Surfaces



Rainwater is intercepted by roofing and collected into gutters. The water then discharges the downspout onto a paved driveway and flows to the gutter and storm drain inlets. Alternatively, the collected water is piped underground directly to the storm sewer.
Photograph source: Titan Gutters

Proper stormwater management will help to mitigate the negative impact of land development and its effect on stormwater. This MSWMP outlines the Borough's plan to improve stormwater quality, decrease stormwater quantity, and increase groundwater recharge. By managing stormwater, the Borough will improve the quality of aquatic ecosystems and restore some of the natural balance to the environment.

4.0 BACKGROUND

Eatontown Borough is located in the central portion of eastern Monmouth County, New Jersey. It is approximately 5.88 square miles or 3,765 acres in size. The Borough is bordered to the north by Shrewsbury Borough along Parker's Creek. Also bordering the Borough to the north and west is Tinton Falls Borough. Eatontown shares its southern borders of Cranberry Brook and Whale Pond Brook with Ocean Township. To the east of the Borough lies the Boroughs of West Long Branch and Oceanport. Eatontown is primarily considered a mix of residential and commercial development, with industrial uses contained primarily in the southeast quadrant. Figure 3 shows the Borough's boundary delineated in a United States Geological Survey (USGS) quadrangle map.

This MSWMP is a new element to the Borough's comprehensive Master Plan. It is intended to build on the research, background information, goals, objectives and recommendations included in the Planning Board's *Master Drainage Plan (*dated February 1972); the *Eatontown Master Plan (dated 1986);* the *Master Plan Amendments* (dated 2000, 2002 and 2003); and the *Master Plan Re-Examination Reports* (dated November 2001 and January 2004).

4.1 DEMOGRAPHICS AND LAND USE

Eatontown experienced a population explosion during the Post World War II/Baby Boomer era. The Borough's population increased over seven hundred percent between 1940 and 1970, raising from 1,758 to 14,619 people in that thirty-year period. Eatontown grew nearly three times as fast as Monmouth County and more than seven times faster than the State over the same thirty years. Eatontown's population then decreased significantly between 1970 and 1980. Since 1980, Eatontown's population growth has slowed considerably indicating the population may have stabilized to a steady growth rate. In fact, the population as of the 2000 census still has not reached the high of the 1970's. See Table 1: Historical Population Growth 1930 - 2000 for the State, County and Borough population trends.

Figure 3: Topographic Map
Borough of Eatontown
Monmouth County, New Jersey

Source: USGS Long Branch (1981)
NJ Quadrangle Map

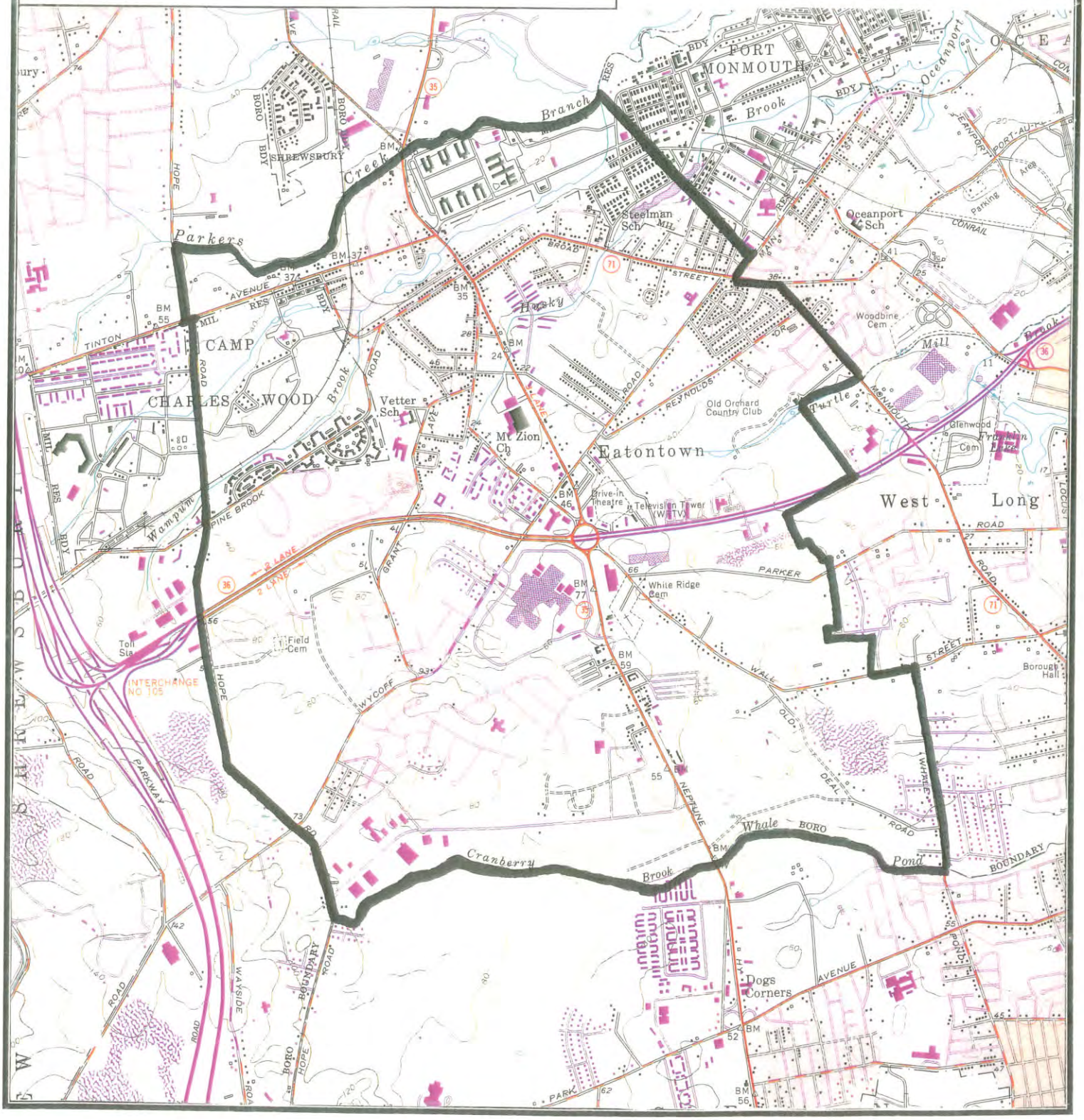


Table 1: Historical Population Growth 1930 – 2000

Year	*Eatontown Borough*		*Monmouth County*		*New Jersey*	
	Total Population	*Percent Change*	*Total Population*	*Percent change*	*Total Population*	*Percent Change*
1930	1,938	--	147,209	4.0%	4,041,334	2.8%
1940	1,758	- 9.3	161,238	0.9%	4,160,165	0.3%
1950	3,044	73.2	225,327	4.0%	4,835,329	1.6%
1960	10,334	239.4	334,401	4.8%	6,066,782	2.6%
1970	14,619	41.5	461,849	3.8%	7,171,112	1.8%
1980	12,703	- 13.2	503,173	0.9%	7,364,823	0.3%
1990	13,800	8.6	553,124	1.0%	7,730,118	0.5%
2000	14,008	1.5	615,305	1.1%	8,414,350	0.9%
2004 Estimate	14,227	1.6				
2010 Estimate	14,298	0.05				

Sources: Eatontown Borough Master Plan Background Studies, dated August 2001, Tables 2-1 and Table 2-2; and http://www.wnjpin.net/OneStopCareerCenter/LaborMarketInformation/lmi01/poptrd6.htm

Development in Eatontown has historically been guided by inclusionary housing and land use policies. This has led to a variety of housing types, of which over 80% of the housing stock has been constructed since the 1950's. Most of the remaining vacant acreage within the Borough is subject to constraints making it unsuitable for residential development. Per the Borough's November 2001 *Borough of Eatontown Master Plan Reexamination Report*, the Borough is largely developed and most of the recent development activity has been residential or commercial infill or the intensification or modification of existing developed sites.

In general, the Borough is composed of intensely developed residential areas north of Route 36, while lower residential densities are located predominantly in the southern portion below Route 36. Commercial and retail land uses are concentrated at the intersections of Route 36 and Route 35. Other Borough land uses include Fort Monmouth and the Eatontown Business Park.

Fort Monmouth is a well maintained research and office campus which is split into two distinct areas. The Main Post is approximately 637 acres in size and falls within the municipal boundaries of Eatontown and Oceanport. The Charles Wood area is approximately 489 acres in size and is located partially in Eatontown and partially in Tinton Falls. Of the over 1,125 acres of the total complex, 453 acres, or approximately 40 percent, falls within the Eatontown municipal boundaries.

The Fort Monmouth Complex has over 300 acres of buildable area and currently provides high tech research and development facilities with state of the art fiber optic communication systems. Other uses of the Fort include climate controlled warehouse facilities, an educational campus with dorm rooms, indoor and outdoor recreational facilities, golf course, dining facilities, an auditorium, Patterson Army Health Clinic and the Veterans' Administration Clinic.

Table 2: 2000 Housing Units

HOUSING OCCUPANCY	Housing Units	Percent
Total housing units	6,341	100.0
Occupied housing units	5,780	91.2
Vacant housing units	561	8.8
For seasonal, recreational, or occasional use	30	0.5
Homeowner vacancy rate (percent)		1.7
Rental vacancy rate (percent)		4.9
HOUSING TENURE	**Housing Units**	**Percent**
Occupied housing units	5,780	100.0
Owner-occupied housing units	2,841	49.2
Renter-occupied housing units	2,939	50.8
Average household size	2.35	
Average household size of owner-occupied unit	2.64	
Average household size of renter-occupied unit	2.07	

Source: U. S. Census 2000 Summary File 1 (SF 1)

4.2 WATERWAYS

Eatontown has a number of water bodies, as shown in Figure 4. According to the *Borough of Eatontown Natural Resource Inventory* prepared in April 1979 and the *Master Drainage Plan* (1972), the following streams and waterbodies are located within the Borough.

- Husky Brook/Oceanport Creek — drains over 1.5 square miles of the Borough. This area is developed and noted to be prone to severe flooding in times of heavy rainfall.
- Wampum Brook—drains 2.7 square miles of the northern section of the Borough. This area experienced minimal flooding in 1979, though flooding was expected to become an issue with the increase in development to the west of this brook.
- Wampum Lake — originally a millpond, this small lake is fed by Wampum Brook. As with the Brook, flooding issues were expected to increase with upstream development. In 1979, it was intended that this lake be improved to increase its capacity for flood storage.
- Turtle Mill Brook/Branchport Creek—drains approximately 1 square mile in the eastern portion of the Borough. It drains the Old Orchard Golf Course and some of Rt. 35.
- Parker's Creek/Shrewsbury—the northern border of the Borough, it joins with Wampum Lake and drains approximately 1.56 square miles, though only 150 acres of the drainage lie within the Borough's boundaries.
- Cranberry Brook/Whale Pond Brook—forms the southern boundary along with Whale Pond Brook. Cranberry Brook drains 3.4 square miles (660 acres within the Borough).

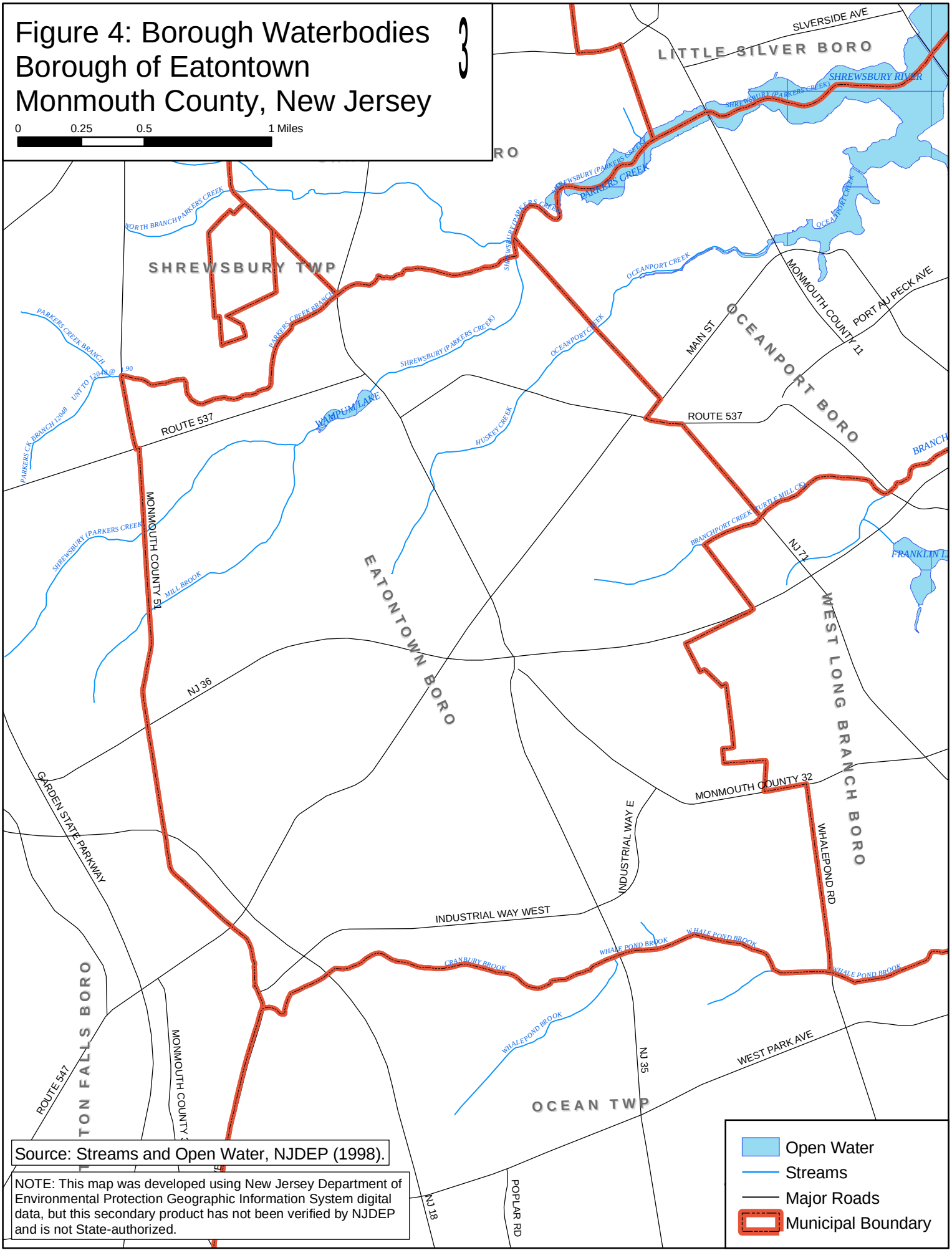


Figure 4: Borough Waterbodies
Borough of Eatontown
Monmouth County, New Jersey
3
0
0.25
0.5
1 Miles
LITTLE SILVER BORO
SLVERSIDE AVE
SHREWSBURY RIVER
SHREWSBURY (PARKERS CREEK)
PARKERS CREEK
NORTH BRANCH PARKERS CREEK
SHREWSBURY TWP
PARKERS CREEK BRANCH
OCEANPORT CREEK
MONMOUTH COUNTY 11
PORT AU PECK AVE
MAIN ST
OCEANPORT BORO
ROUTE 537
WAMPUM LAKE
HUSKEY CREEK
BRANCHPORT CREEK
TURTLE MILL CK
NJ 71
FRANKLIN L
MONMOUTH COUNTY 54
MILL BROOK
EATONTOWN BORO
NJ 36
WEST LONG BRANCH BORO
GARDEN STATE PARKWAY
MONMOUTH COUNTY 32
INDUSTRIAL WAY E
WHALEPOND RD
INDUSTRIAL WAY WEST
CRANBURY BROOK
WHALE POND BROOK
WHALEPOND BROOK
ROUTE 547
NJ 35
WEST PARK AVE
OCEAN TWP
NJ 18
POPLAR RD
Source: Streams and Open Water, NJDEP (1998).
NOTE: This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not State-authorized.
Open Water
Streams
Major Roads
Municipal Boundary

4.4 WATER QUALITY

The Ambient Biomonitoring Network (AMNET) was established by the NJDEP to monitor and document the health of New Jersey's waterways. AMNET currently has 820 sites in five drainage basins that it monitors for benthic macro-invertebrates on a five-year cycle. Waterways are scored based on the data to generate the New Jersey Impairment Score (NJIS) and then categorized as severely impaired, moderately impaired, and non-impaired. The NJIS is based on biometrics and benthic macro-invertebrate health. (http://www.state.nj.us/dep/wmm/bfbm/).

In addition to the biological health, chemical data are gathered by the NJDEP, the Monmouth County Health Department, and other organizations, and used to determine the health of waterways. The impaired waterways are summarized on the New Jersey 2004 Integrated List of Water Bodies. This list is then broken down into five sublists based on priority. The streams on Sublist 5 are classified as being the most severely impaired or threatened, whereas the streams on Sublist 1 are the least threatened or impaired. Eatontown is located within Watershed Management Area 12, Monmouth Watersheds. A summary of the Borough streams listed on the Integrated List is present in Table 3 below.

Table 3: 2004 Eatontown Borough Integrated List Water Bodies

Sublist	Station Name/Waterbody	Site ID	Impairment Parameters	Data Source
3	Husky Brook at South St In Eatontown	33	pH, Total Suspended Solids	Monmouth Co HD
1	Husky Brook at South St in Eatontown	33	Phosphorus, Nitrate	Monmouth Co HD
4	Husky Brook at South St in Eatontown	33	Fecal Coliform	Monmouth Co HD
3	Husky Brook at South St in Eatontown	MB-33	Benthic Macroinvertebrates	Monmouth Co HD
1	Whale Pond Brook at Route 35 in Eatontown	01407617, 31	Phosphorus, Temperature, Dissolved Oxygen, Nitrate, Dissolved Solids, Total Suspended Solids, Unionized Ammonia	NJDEP/USGS Data, Monmouth Co HD
4	Whale Pond Brook at Route 35 in Eatontown	01407617, 31	Fecal Coliform	NJDEP/USGS Data, Monmouth Co HD
5	Whale Pond Brook at Route 35 in Eatontown	01407617, 31	pH	NJDEP/USGS Data, Monmouth Co HD

Sources: <http://www.state.nj.us/dep/wmm/bfbm/> Sub-list 1-5, New Jersey's 2004 Integrated List of Water Bodies, dated June 22, 2004

This water quality data is used by the NJDEP to develop Total Maximum Daily Loads (TMDL). A TMDL is the quantity of a pollutant that can enter a waterbody without exceeding water quality standards or interfering with the ability to use the waterbody for its designated usage. Point and non-point source pollution, surface water withdrawals and natural background levels are included in the determination of a TMDL, as required by Section 303(d) of the Clean Water Act. Point source pollution includes, but is not limited to NJPDES permitted discharges, while non-point source pollution can include stormwater runoff from agricultural lands or impervious surfaces. TMDLs determine the allowable load from each source, with a factor of safety for the pollutant entering the water body. TMDLs can be used to limit further deterioration of a water body, or to improve the current water quality.

Currently the NJDEP has proposed two fecal coliform TMDLs for streams in Eatontown. The Husky Brook at South Street has a proposed TMDL for fecal coliform extending for 1.7 river miles. Whale Pond Brook at Rt. 35 is also listed as having a TMDL for fecal coliform. This stream is listed as impaired for 3.7 river miles. Since Whale Pond Brook shares its watershed with Ocean Township, the impairments are not necessarily only from Eatontown. It is important to note, however, that these are not stormwater specific TMDLs, and as such are not covered under this MSWMP.

In addition to State monitoring, the Monmouth County Planning Board has compiled a list of issues within the North Coast and Mid Coast Subwatersheds. In their 2001 report, the County Planning Board noted that the region suffered from lack of maintenance along stream corridors, lack of groundwater recharge, high fecal coliform and nutrient loadings, lack of wetlands protection, overgrowth of invasive and non-native plant species, and lack of stormwater volume control to shellfish beds. The North Coast and Mid Coast Subwatersheds are also both listed as having issues with sedimentation, water quality, and erosion. In addition, the North Coast has issues relating to stormwater infrastructure, and its natural resource management list, while the Mid Coast has issues with water quantity.

The Monmouth County Health Department also has ambient monitoring sites for the Whale Pond Brook in Eatontown, and Branchport Creek in Long Branch. These sites are monitored on average of four times per year for fecal coliform, pH, phosphorous, ammonia, TSS, and turbidity. Branchport Creek routinely has ammonia and phosphorous readings well above standard, as well as frequent above standard seasonal high levels for fecal coliform. Whale Pond Brook, also has above standard ammonia levels, and frequent seasonal above standard high levels for fecal coliform. Whale Pond Brook also had pH levels ranging from 6.1 in 2001, and 4.2 in October of the same year. Branchport Creek, however, has a fairly steady neutral pH over the same time period.

4.5 WATER QUANTITY

Stormwater also often causes water quantity issues. There are several flood prone areas in Eatontown Borough including, but not limited to, the following:

1. Husky Brook at Clinton Avenue culvert crossing – Caused by midsize culverts at Route 35 and Clinton Avenue.
2. Eaton Crest Drive – A privately owned old and undersized drainage system carrying the discharge of stormwater from Route 18 and a portion of Route 36.
3. Wyckoff Road adjacent to Meadowbrook Park – This is caused by runoff from adjacent residential development to a branch of Husky Brook flowing undetained to a County owned drainage system.
4. Lewis Street adjacent to Borough Public Works Property – This flooding is currently being addressed by the replacement of a substandard culvert by Monmouth County. The construction is anticipated to begin in the Spring of 2008.
5. Old Orchard Golf Course – Several areas of this public/private golf course flood during heavy storms due to insufficient ditch capacity.
6. Cranberry Brook – This area bordering the Borough's Southeast quadrant, contains an extremely wide floodplain, heavily wooded, with a flat grade. During periods of heavy storms, the ill-defined stream overflows and becomes a natural wetland. The stream is functioning as nature intended.

7. Branch of Husky Brook at South Street Culvert Crossing – This flooding is exacerbated by the downstream undersized culverts at Wyckoff Road and Route 35.

It is important to note that many of the flooding areas within the Borough are associated with County and State roads that do not have to comply with the MSWMP.

4.6 GROUNDWATER RECHARGE

Impervious surface is increased as vacant sites are developed. Impervious surface is that portion of a site covered with structures and paving, which prevents the underlying soil from absorbing rainwater. Instead of entering the soil, rainwater from rooftops and pavement flow onto the adjacent ground, where it is partially absorbed into the ground (depending upon hydrologic soil classifications) or into drainage facilities and streams. The greater the amount of impervious surface on a site, the greater volume of stormwater runoff that drains away from a site. Greater volumes of stormwater can result in high water elevations in some locations along streams and can exacerbate streambed erosion, with the added impact of downstream siltation. These dynamics alter the floodplain and have negative impacts on the stream and river ecosystems.

In addition to streambeds, the volume of runoff allowed to infiltrate the ground affects natural aquifers. According to the *Natural Resources Inventory*, the Hornerstown and Vincentown Formations underlie Eatontown. There are six aquifers of varying sizes underlying the Borough. These aquifers include Raritan and Magothy Formations, Englishtown Formation, Wenoah-Mount Laurel Sand Formation, Red Bank Sand, Vincentown Formation, and the Kirkwood Formation. Though these aquifers are not currently exposed within the Borough, groundwater recharge may reach these aquifers at depth further downstream. A map showing the groundwater recharge areas within the Borough is located in Figure 5.

Husky Brook has also been observed to have very low base flow during seasons of drought. The supplemental flow to streams in the groundwater recharge areas is the single most important factor maintaining the stream flow during periods of annual low flow (hot, dry summer and early fall months) and during periods of drought. During these times, base flow of the stream is

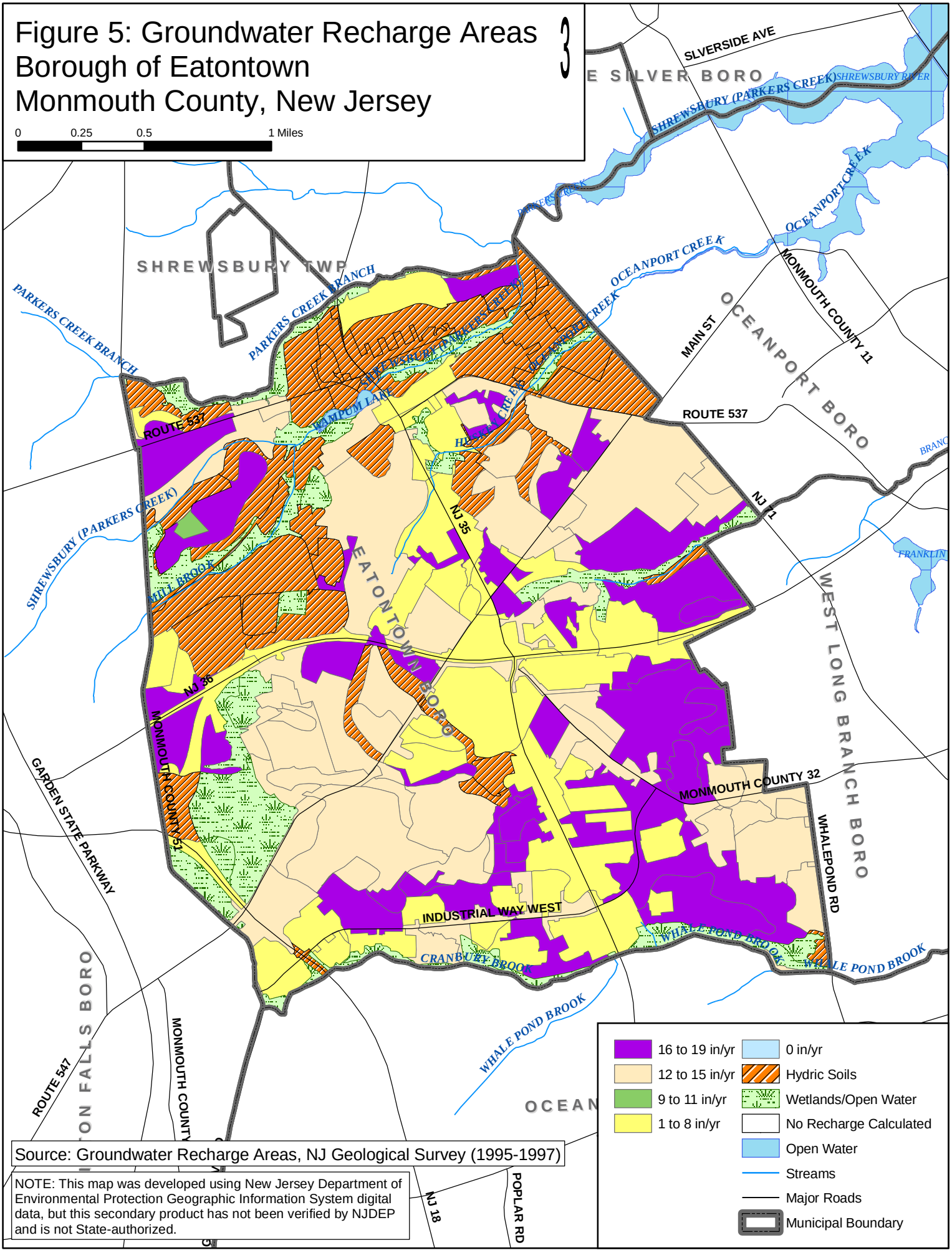
maintained via discharging groundwater. The maintenance of quantity of flow, the water quality and the survival of the aquatic and wetlands communities are directly dependent upon this groundwater discharge.

In addition to the protection of surface water, maintaining groundwater quality and quantity is important due in part to the presence of private wells for drinking water. Furthermore, the Borough operates two wells for the irrigation of fields located at 80 Acre Park. It should be noted that there are no public drinking water wells within the Borough, and therefore no wellhead protection areas. See Figure 6 - Wellhead Protection Areas.

Figure 5: Groundwater Recharge Areas
Borough of Eatontown
Monmouth County, New Jersey

3

0 0.25 0.5 1 Miles



Source: Groundwater Recharge Areas, NJ Geological Survey (1995-1997)

NOTE: This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not State-authorized.

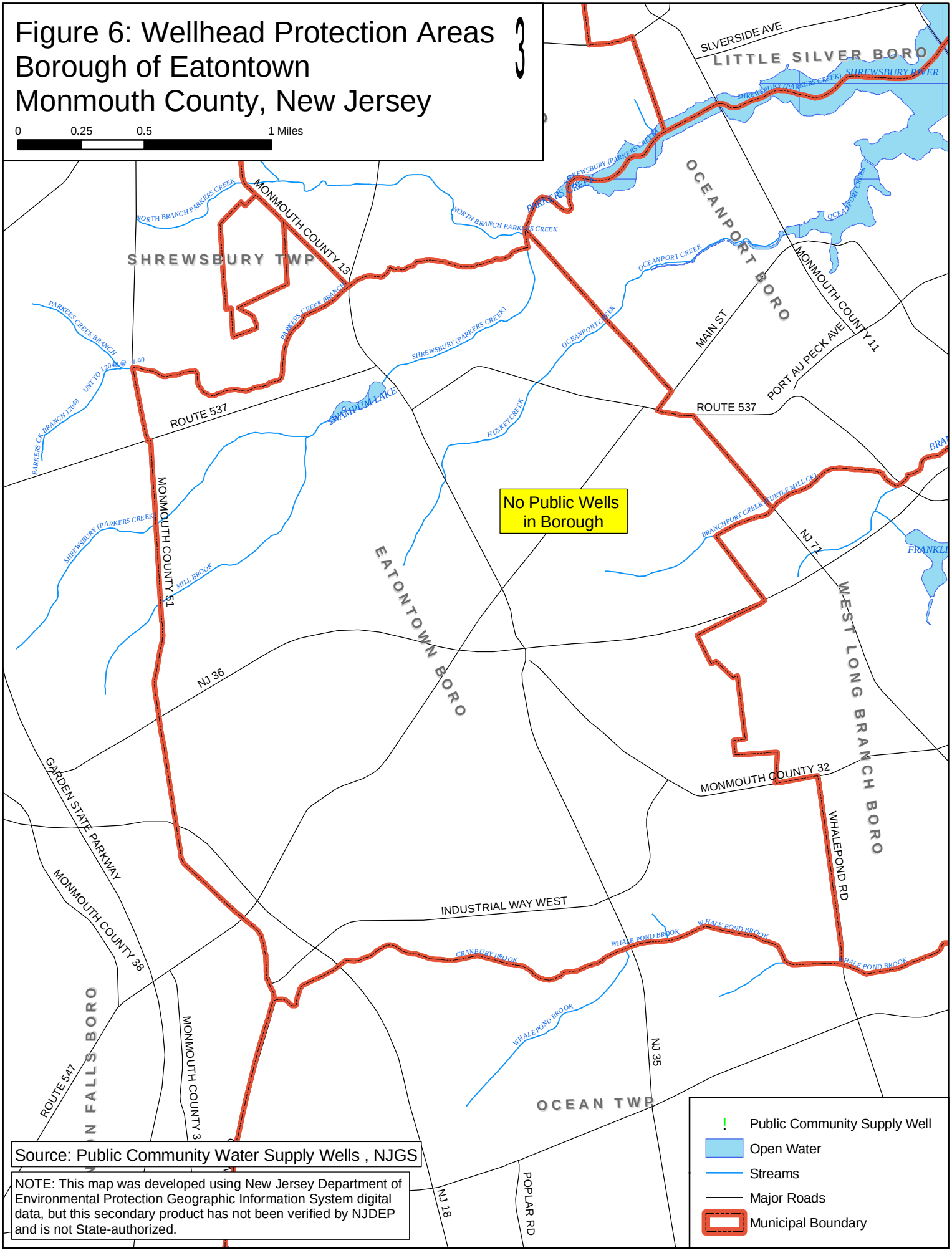


Figure 6: Wellhead Protection Areas
Borough of Eatontown
Monmouth County, New Jersey
3
0
0.25
0.5
1 Miles
SLVERSIDE AVE
LITTLE SILVER BORO
SHREWSBURY RIVER
SHREWSBURY (PARKERS CREEK)
OCEANPORT BORO
OCEANPORT CREEK
MONMOUTH COUNTY 11
MAIN ST
PORT AU PECK AVE
ROUTE 537
SHREWSBURY TWP
NORTH BRANCH PARKERS CREEK
MONMOUTH COUNTY 13
PARKERS CREEK BRANCH
PARKERS CK BRANCH 12048
UNT TO 12048 @ I-90
SHREWSBURY (PARKERS CREEK)
SWIMMUM LAKE
HUSKEY CREEK
MONMOUTH COUNTY 51
MILL BROOK
No Public Wells in Borough
EATONTOWN BORO
BRANCHPORT CREEK
TURTLE MILL CK
NJ 71
WEST LONG BRANCH BORO
NJ 36
GARDEN STATE PARKWAY
MONMOUTH COUNTY 32
WHALEPOND RD
INDUSTRIAL WAY WEST
MONMOUTH COUNTY 38
CRANBURY BROOK
WHALE POND BROOK
ROUTE 547
MONMOUTH COUNTY 3
NJ 35
OCEAN TWP
NJ 18
POPLAR RD
Source: Public Community Water Supply Wells , NJGS
NOTE: This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not State-authorized.
Public Community Supply Well
Open Water
Streams
Major Roads
Municipal Boundary

5.0 DESIGN AND PERFORMANCE STANDARDS

In 2006, the Borough adopted applicable design and performance standards for stormwater management measures as presented in N.J.A.C. 7:8-5 to reduce the negative impact of stormwater runoff on water quality and quantity, and loss of groundwater recharge. Section 6.0 of this MSWMP, entitled Stormwater Management Strategies, indicates actions appropriate for various types of development in Eatontown. Design and performance standards were added to the existing standards to contain the necessary language to maintain stormwater management measures consistent with applicable stormwater management rules at N.J.A.C. 7:8-5.8 - Maintenance Requirements. This included language for safety standards consistent with N.J.A.C. 7:8-6 - Safety Standards for Stormwater Management Basins. The ordinances establishing these new design and performance standards were submitted to the county for review and approval within 12 months of the adoption of this MSWMP.

A number of structural and non-structural strategies require water to be retained for long periods of time. These requirements may increase the promulgation of mosquito breeding habitats. New development and redevelopment activities should be coordinated with the Monmouth County Mosquito Extermination Commission so that the facilities can be properly maintained.

Proper construction and maintenance are critical to the successful performance of a stormwater management system. Inspectors from the Borough's Engineering Office observe the construction of the projects, site plans, and subdivisions to ensure that the stormwater management measures are constructed and function as designed.

The Borough also prepared a Stormwater Pollution Prevention Plan (SPPP) that establishes a maintenance schedule for all existing stormwater related maintenance requirements. The Borough also initiated a local education program to educate property owners on the control of household waste, fertilizers, solids, floatable controls, pesticides and other methods to reduce stormwater pollutants that may adversely affect the Borough's waterways. For new development

and redevelopment projects meeting the stormwater management threshold, the Borough requires an operation and maintenance plan for all new development in accordance with the NJDEP's *New Jersey Stormwater Best Management Practices Manual* (BMP Manual). Copies of each maintenance plan are filed with the Borough's Department of Public Works.

Personnel from the Borough's Department of Public Works will perform inspections during the first two years of operation and/or after significant storms to ensure that the system is functioning properly. After this, annual checks will be done to identify maintenance needs. As part of these inspections, blockages must be cleared from inlets and outlets. Unhealthy vegetation may need to be tended or replaced. The design of stormwater management practices for water quality improvement is based primarily on removal of sediment. Therefore, at some point, accumulated material must be removed. Borough ordinances indicate that the inspection of systems is permissible on private property, upon giving reasonable notice, provided the necessary easements are in place. Ordinances also indicate a time frame for maintenance procedures to occur upon receiving notice from the Borough that maintenance is required and include penalties for non-compliance.

6.0 PLAN CONSISTENCY

6.1 REGIONAL STORMWATER MANAGEMENT PLANS

Currently, there are no adopted Regional Stormwater Management Plans (Regional Plans) developed for waters "within" the Borough. However, Regional Plans for the Parker's Creek (Shewsbury River) watershed are being developed. This MSWMP will be updated to be consistent with any Regional Plans or TMDLs that are established in the future. The Borough plans to take part in the development of any Regional Plans that affects waterbodies within or adjacent to the municipality.

6.2 TOTAL MAXIMUM DAILY LOADS

The Husky Brook at South Street has a proposed TMDL for fecal coliform extending for 1.7 river miles. Whale Pond Brook at Rt. 35 is also listed as having a TMDL for fecal coliform. This stream is listed as impaired for 3.7 river miles. It is important to note, however, that these are not stormwater specific TMDLs, and as such are not covered under this MSWMP. This MSWMP will be updated to be compliant with any TMDLs issued in the future. It should be noted that although the fecal coliform TMDL's are not stormwater specific, they are related in that stormwater is often a vehicle by which it migrates from land to open water. Therefore, the Borough should work to identify the source(s) and work to mitigate the impairments.

6.3 RESIDENTIAL SITE IMPROVEMENT STANDARDS (RSIS)

This Municipal Stormwater Management Plan is consistent with regulations established under the Residential Site Improvement Standards (RSIS) at N.J.A.C. 5:21, and will be updated to remain consistent with any future updates of RSIS. Additionally, the Borough will use the latest version of the RSIS during its reviews of residential developments for stormwater management.

6.4 SOIL CONSERVATION

The Borough's Stormwater Management Control Ordinance will require that all new development and redevelopment projects comply with the Soil Erosion and Sediment Control Standards of New Jersey. In cooperation with the Freehold Soil Conservation District, Borough personnel will observe on-site soil erosion and sediment control measures as part of the construction site inspections and contact the District if corrective measures are needed.

All development and redevelopment projects shall use the most recent DelMarVa unit hydrograph for stormwater calculations. In addition the Freehold Soil Conservation District requires the use of the most recent design storm rainfall data for stormwater calculations. The National Oceanographic and Atmospheric Administration (NOAA), the agency that develops statistical estimates of rainfall amounts, has increased its estimates for the majority of storm events, particularly the larger events. The following table indicates the old and new twenty-four hour rainfall amounts in inches for Monmouth County.

Table 4: NRCS 24 Hour Design Storm Rainfall Depth (inches) – September 2004

Storm Period	1 yr.		2 yr.		5 yr.		10 yr.		25 yr.		50 yr.		100 yr.	
	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New	Old	New
Monmouth County	2.8	**2.9**	3.4	**3.4**	4.4	**4.4**	5.3	**5.2**	6.0	**6.6**	6.5	**7.7**	7.5	**8.9**

Source: NOAA, New Jersey Department of Agriculture

6.5 MONMOUTH COUNTY GROWTH MANAGEMENT GUIDE

The Monmouth County Growth Management Guide, adopted in December 1995, sets forth a series of goals and objectives designed to enhance the quality of life for residents of Monmouth County. This plan is consistent with those objectives, which include:

- Encouraging the protection of the County's unique, diverse, natural and scenic natural resources; and
- Promote the protection of non-renewable natural resources; and

- Encouraging the protection and conservation of all water resources; and
- Promote the preservation and improvements of coastal water resources; and
- Promote the preservation and improvements of surface water quality; and
- Encourage the preservation and improvements of groundwater quality and quantity; and
- Promote the preservation, restoration, and enhancement of wetlands and stream corridors in order to protect the adjacent water bodies, such as streams, rivers, lakes, bays and oceans.

This plan is consistent with the County Growth Management Guide by encouraging the protection of stream corridors and encouraging flood control and ground water recharge and through the implementation of the principals of non-structural and structural strategies. This Plan is also consistent with the County Growth Management Guide, by preserving and protecting valuable natural features within the Borough.

The Monmouth County Planning Board is currently working on a Coastal Monmouth Regional Plan which will become part of the County's Growth Management Guide. This plan will be updated, as necessary, to be consistent with the County's Coastal Monmouth Plan, as it is established in the future.

6.6 STATE DEVELOPMENT OR REDEVELOPMENT PLAN (SDRP)

This plan is consistent with the plans and policies of the SDRP, which was adopted in 2001. The SDRP places the Borough of Eatontown with the Metropolitan Planning Area (PA1). The SDRP also identifies Eatontown at a Regional Center. According to the State Plan, most of the communities within the PA1 planning area are fully developed or almost fully developed with little vacant land available for new development. A Regional Centers provides for development along or near a Transportation Corridor and provides for high-intensity mixed used development with a density of more that 5,000 persons per square mile and has an emphasis on employment. This Plan is consistent with the State Plan by preserving and protecting the established character of the Borough, preserving and upgrading the existing utility infrastructure, providing adequate

open space facilities, and preserving and protecting valuable natural features within the Borough. The plan is also consistent in that it promotes redevelopment and development in areas with existing infrastructure and limits development is environmentally sensitive areas.

7.0 STORMWATER MANAGEMENT STRATEGIES

7.1 MASTER PLAN & ORDINANCE REVIEW

In 2005, the Borough had undertaken a review of its Master Plan and the Borough's Land Use and Zoning Ordinances, Chapter 89 of the Borough's code, entitled *Borough of Eatontown Land Use Ordinance* for consistency with the new stormwater regulations. Based on this review, the Board found that the following sections needed to be modified as follows to incorporate non-structural stormwater management strategies:

- **Section 89.7.8 Off-street Parking and Loading**: This section outlines the Borough's requirements for off street parking and loading. All off street parking (except 1 and 2 family residential) were required to be curbed and provide drainage. Additionally, loading areas were required to be screened. Shade trees were required in lots of ten or more spaces. *This section needed to be modified to allow for flush curbing or curb cuts. Also, this section required modification to encourage the use of the use of native vegetation in screening areas. Finally, this section needed to be amended to encourage landscape islands to aid in the disconnection of impervious surfaces.*

- **Section 89.7.10: Preservation of Natural Features**: Natural features, including trees, shrubs, streambeds and topsoil are to be preserved when practical. *This section needed to be updated to be in accordance with Soil Erosion and Sediment Control standards to help preserve topsoil during the construction process*. This section also describes the Borough's stream corridor buffering requirements and also sets the encroachment limit on residential development for streams. *This section needed to be updated to include a buffer zone at least as stringent as that required by the State's Stream Corridor Buffer Limits for any Category One Stream for both residential and non-residential development.*

- **Section 89.7.11: Landscaping, Buffering and Screening**: This section of code outlines the Borough's requirements for buffer zones and screening between all residential and non-residential uses. The section also describes the use of earthen berms, fences, walls, and landscaping and when they are required. *This section needed to be updated to encourage the use of native vegetation, which requires less water and fertilizer. Additionally, this section needed to encourage the use of these buffer zones as vegetated filter strips or non-structural conveyances for stormwater.*

- **Section 89.7.18 Performance Standards**: *This section needed to be amended to include the performance standards detailed in this MSWMP for stormwater management and as outlined in N.J.A.C. 7:8.*

- **Section 89.8: Required Improvements:** This section mandates curbs or curbs and gutters be installed on all streets, as well as sidewalks. *This section needed to be altered to encourage the use of permeable paving for sidewalks where not prohibited by engineering standards. In addition, this section needed to be amended to encourage the use of non-structural stormwater conveyances along with the use of curb cuts and curb stops.*

- **Section 89.8.2: Off-tract Improvements:** This section states the Borough's requirements for off-tract improvements. *The drainage portion needed to be updated to conform to the design and performance standards stated within this MSWMP and as outlined in N.J.A.C. 7:8.*

- **Section 89.9.4 Cluster Development**: This section states the requirements of the Borough for Cluster Development. Currently there's a 20% Open Space requirement, as well as, the preservation of natural features. *This section needed to be modified to allow for a greater percentage of Open Space. In addition, this section needed to be revised to encourage the use of native vegetation and landscaping to allow for the disconnection of impervious surfaces and groundwater recharge.*

- **Section 89.9.6: Curb and Gutter:** This section also states the Borough's requirement for curbs and gutters to be installed along all streets. *This section needed to be updated to allow the use of flush cut curbing and curb stops where safety will not be compromised. Additionally this section needed to be modified to encourage the use of non-structural stormwater BMPs.*

- **Section 89.9.16 Sidewalks and Aprons**: This section requires concrete sidewalks to be constructed along all streets. *This section needed to be updated to allow for the use of pervious paving materials or alternatives to sidewalks, such as paths, to be constructed where allowable by safe engineering practices.*

- **Section 89.9.18 Storm Drainage Facilities:** This section describes the design, construction, and performance standards that are required for the construction of storm drainage facilities. *This section needed to be updated to comply with the design, performance, and safety standards described in this MSWMP and those recommended in the NJDEP BMP Manual.*

Revisions of the ordinances identified above allowed the incorporation of the non-structural strategies. Amended ordinances were submitted to the County for review and approval in February 2007. A copy was also sent to the Department of Environmental Protection at that time.

7.2 NON-STRUCTURAL STRATEGIES

This MSWMP encourages the use of Low Impact Design Methods and recommends the practical use of the following non-structural strategies for all major developments' in accordance with the NJDEP BMP Manual:

1. Protect areas that provide water quality benefits or areas particularly susceptible to erosion and sediment loss.

2. Minimize impervious surfaces and break up or disconnect the flow of runoff over impervious surfaces.
3. Maximize the protection of natural drainage features and vegetation.
4. Minimize the decrease in the pre-construction "time of concentration."
5. Minimize land disturbance including clearing and grading.
6. Minimize soil compaction.
7. Provide vegetated open-channel conveyance systems that discharge into and through stable vegetated areas.
8. Provide preventative source controls.

In addition, the NJDEP BMP Manual further requires an applicant seeking approval for a major development[1] to specifically identify how these non-structural strategies have been incorporated into the development's design. Finally, for each of those non-structural strategies that were not able to be incorporated into the development's design due to engineering, environmental, or safety reasons, the applicant must provide a basis for this contention.

Recommended Measures

Recommendations in the BMP Manual may be implemented through the use of:

- **Vegetated Filter Strips**

  Vegetated filter strips are best utilized adjacent to a buffer strip, watercourse or drainage swale since the discharge will be in the form of sheet flow, making it difficult to convey the stormwater downstream in a normal conveyance system (swale or pipe).

- **Stream Corridor Buffer Strips**

  Buffer strips are undisturbed areas between development and the receiving waters. There are two management objectives associated with stream and valley corridor buffer strips:

[1] Major Development – means any 'development' that provides for ultimately disturbing one or more acres of land or increasing impervious surface by one-quarter acre or more. Disturbance for the purpose of this rule is the placement of impervious surface or exposure and/or movement of soil or bedrock or clearing, cutting, or removing of vegetation. Projects undertaken by any government agency which otherwise meet the definition of 'major development' but which do not require approval under the Municipal Land Use Law, N.J.S.A. 40:55D-1 et seq., are also considered "major development".

- To provide buffer protection along a stream and valley corridor to protect existing ecological form and functions; and
- To minimize the impact of development on the stream itself (filter pollutants, provide shade and bank stability, reduce the velocity of overland flow).

Buffers only provide limited benefits in terms of stormwater management; however, they are an integral part of a system of best management practices.

- **The Stabilization of Banks, Shoreline and Slopes**

  The root systems of trees, shrubs and plants effectively bind soils to resist erosion. Increasing the amount of required plant material for new and redeveloped residential and non-residential sites should be encouraged throughout the Borough. Planting schemes should be designed by a certified landscape architect to combine plant species that have complementary rooting characteristics to provide long-term stability.

- **Deterrence of Geese and Deer**

  Maintaining or planting dense woody vegetation around the perimeter of a pond or wetland is the most effective means of deterring geese from taking over and contaminating local lakes and ponds. Minimizing the amount of land that is mowed will limit the preferred habitat for geese. Also the planting of deer tolerant vegetation adjacent to waterbodies is a means of deterring deer by minimizing food sources. However, if these actions are not sufficient the Borough should investigate other means of deterrence.

- **Fertilizers**

  The use of fertilizers to create the “perfect lawn” is an increasing common problem in many residential areas. Fertilizer run-off increases the level of nutrients in water bodies

and can accelerate eutrophication[2] in the lakes and rivers and continue on to the coastal areas. The excessive use of fertilizers causes nitrate contamination of groundwater and may lead to levels of contamination in drinking water that are above recommended safety levels. Good fertilizer maintenance practices help in reducing the amount of nitrates in the soil and thereby lower its content in the water. Initially, the Borough should work with the NJDEP to educate homeowners of the impacts of the overuse of fertilizers. This discussion should include other techniques to create a "green lawn" without over fertilizing. Almost as important as the use of fertilizer, is the combination of over fertilizing and over watering lawns. In many cases this leads to nutrient rich runoff, which ultimately migrates to a nearby stream, lake or other water body. If fertilizer is applied correctly, the natural characteristics as the underlying soils will absorb or filter out the nutrients in the fertilizer.

- **Minimizing Lawns**

  Reducing the amount of manicured lawn area and increasing the amount of woods and native vegetation provides several benefits. Native vegetation requires less fertilizer; it filters out more pollutants; and it promotes groundwater recharge.

- **Unpaved Roads and Driveways**

  While there are no unpaved public roads in the Borough, there are a few privately maintained unpaved roads or driveways. There is a need to manage the runoff from these roadways. Poorly maintained roads and driveways may contribute to water quality problems and erosion from unpaved roads may increase non-point source pollution. This MSWMP recommends utilizing BMPs to properly manage existing unpaved roads.

7.3 STRUCTURAL STORMWATER MANAGEMENT[3]

In Chapter 9 of its BMP Manual the NJDEP identifies several structural stormwater management options. Structural methods should only be used after all non-structural strategies are deemed

[2] Eutrophication – The normally slow aging process by which a lake evolves into a bog or marsh and ultimately assumes a completely terrestrial state and disappears.
[3] Definitions provided in the NJDEP – Stormwater Best Management Practices Manual at: http://www.njstormwater.org/tier_A/ bmp_manual.htm

impracticable or unsafe. Specifically, the Borough encourages the use of structural stormwater management systems in a manner that maximizes the preservation of community character:

- **Bioretention Systems**

  A bioretention system consists of a soil bed planted with native vegetation located above an underdrained sand layer. It can be configured as either a bioretention basin or a bioretention swale. Stormwater runoff entering the bioretention system is filtered first through the vegetation and then the sand/soil mixture before being conveyed downstream by the underdrain system. Runoff storage depths above the planting bed surface are typically shallow. The adopted Total Suspended Solids (TSS) removal rate for bioretention systems is 90%.

- **Constructed Stormwater Wetlands**

  Constructed stormwater wetlands are wetland systems designed to maximize the removal of pollutants from stormwater runoff through settling and both uptake and filtering by vegetation. Constructed stormwater wetlands temporarily store runoff in relatively shallow pools that support conditions suitable for the growth of wetland plants. The adopted removal rate for constructed stormwater wetlands is 90%.

- **Dry Wells**

  A dry well is a subsurface storage facility that receives and temporarily stores stormwater runoff from roofs of structures. Discharge of this stored runoff from a dry well occurs through infiltration into the surrounding soils. A dry well may be either a structural chamber and/or an excavated pit filled with aggregate. Due to the relatively low level of expected pollutants in roof runoff, a dry well cannot be used to directly comply with the suspended solids and nutrient removal requirements contained in the NJDEP Stormwater Management Rules at N.J.A.C. 7:8. However, due to its storage capacity, a dry well may be used to reduce the total amount of stormwater runoff that a roof would ordinarily discharge to downstream stormwater management facilities. Care should be taken with the location and size of drywells due to potential adverse impacts on basements and

foundations.

- **Extended Detention Basins**

  An extended detention basin is a facility constructed through filling and/or excavation that provides temporary storage of stormwater runoff. It has an outlet structure that detains and attenuates runoff inflows and promotes the settlement of pollutants. An extended detention basin is normally designed as a multistage facility that provides runoff storage and attenuation for both stormwater quality and quantity management. The adopted TSS removal rate for extended detention basins is 40% to 60%, depending on the duration of detention time provided in the basin.

- **Infiltration Basins**

  An infiltration basin is a facility constructed within highly permeable soils that provides temporary storage of stormwater runoff. An infiltration basin does not normally have a structural outlet to discharge runoff from the stormwater quality design storm, but may require an emergency overflow for extraordinary storm events. Instead, outflow from an infiltration basin is through the surrounding soil. An infiltration basin may also be combined with an extended detention basin to provide additional runoff storage for both stormwater quality and quantity management. The adopted TSS removal rate for infiltration basins is 80%.

- **Manufactured Treatment Devices**

  A manufactured treatment device is a pre-fabricated stormwater treatment structure utilizing settling, filtration, absorptive/adsorptive materials, vortex separation, vegetative components, and/or other appropriate technology to remove pollutants from stormwater runoff. The TSS removal rate for manufactured treatment devices is based on the NJDEP certification of the pollutant removal rates on a case-by-case basis. Other pollutants, such as nutrients, metals, hydrocarbons, and bacteria can be included in the verification/certification process if the data supports their removal efficiencies.

- **Pervious Paving Systems**

  Pervious paving systems are paved areas that produce less stormwater runoff than areas paved with conventional paving. This reduction is achieved primarily through the infiltration of a greater portion of the rain falling on the area than would occur with conventional paving. This increased infiltration occurs either through the paving material itself or through void spaces between individual paving blocks known as pavers. Pervious paving systems are divided into three general types. Each type depends primarily upon the nature of the pervious paving surface course and the presence or absence of a runoff storage bed beneath the surface course. Porous paving and permeable pavers with storage bed systems treat the stormwater quality design storm runoff through storage and infiltration. Therefore, these systems have adopted TSS removal rates similar to infiltration structures. Care must be taken in the use of pervious systems to avoid subgrade instability and frost related deterioration. Pervious paving systems also require significant maintenance to maintain their designed porosity.

- **Sand Filters**

  A sand filter consists of a forebay and underdrained sand bed. It can be configured as either a surface or subsurface facility. Runoff entering the sand filter is conveyed first through the forebay, which removes trash, debris, and coarse sediment, and then through the sand bed to an outlet pipe. Sand filters use solids settling, filtering, and adsorption processes to reduce pollutant concentrations in stormwater. The adopted TSS removal rate for sand filters is 80%.

- **Vegetative Filters**

  Vegetated filter strips are engineered stormwater conveyance systems that treat small drainage areas. Vegetative filters remove pollutants, and promotes infiltration of the stormwater.

  A vegetative filter is an area designed to remove suspended solids and other pollutants from stormwater runoff flowing through a length of vegetation called a vegetated filter

strip. The vegetation in a filter strip can range from turf and native grasses to herbaceous and woody vegetation, all of which can either be planted or indigenous. It is important to note that all runoff to a vegetated filter strip must both enter and flow through the strip as sheet flow. Failure to do so can severely reduce and even eliminate the filter strip's pollutant removal capabilities. The total suspended solid (TSS) removal rate for vegetative filters will depend upon the vegetated cover in the filter strip.

- **Wet Ponds**

  A wet pond is a stormwater facility constructed through filling and/or excavation that provides both permanent and temporary storage of stormwater runoff. It has an outlet structure that creates a permanent pool and detains and attenuates runoff inflows and promotes the settlement of pollutants. A wet pond, known as a retention basin, can also be designed as a multi-stage facility that provides extended detention for enhanced stormwater quality design storm treatment and runoff storage and attenuation for stormwater quantity management. The adopted TSS removal rate for wet ponds is 50% to 90% depending on the permanent pool storage volume in the pond and the length of retention time provided by the pond.

Table 5, below, summarizes the approximate TSS removal rates for these structures. Final TSS removal rates should be calculated for each structure based on its final design parameters.

Table 5: TSS Removal Rates for BMPs

Best Management Practice (BMP)	Adopted TSS Removal Rate (%)
Bioretention System	90
Constructed Stormwater Wetland	90
Dry Well	Volume Reduction Only
Extended Detention Basin	40-60*
Infiltration Structure	80
Manufactured Treatment Device	See N.J.A.C 7:8-5.7(d)
Pervious Paving System	Volume Reduction Or 80 (with infiltration bed)
Sand Filter	80

Vegetative Filter	60-80
Wet Pond	50-90*

*based on volume and detention time
Source: NJDEP BMP Manual, Apr. 2004.

Each of these structures has advantages and disadvantages to manage stormwater, and should be evaluated carefully prior to design.

8.0 LAND USE/BUILD-OUT ANALYSIS

The Borough of Eatontown has less than one (1) square mile of undeveloped land within its borders, and even fewer acres of developable or vacant land, as described in the *Vacant Land Inventory and Analysis Report* of August 2002 (See Section 12.0 - Appendix). Therefore the Borough is exempt from the NJDEP regulations requiring the development of a full build-out analysis, which would indicate the potential for development within the Borough.

Refer to Figure 7 for a copy of the Borough's 1995/1997 Land Use Map and Figure 8 for the Zoning Map. Figure 9 illustrates the Hydrologic Units (HUC-14s) within the Borough and Figure 10 shows the constrained lands. As shown on these figures as well as in the *Vacant Land Inventory and Analysis Report* of August 2002, the Borough has 293.05 acres of private vacant land, less than half (140.85 acres) is unencumbered by environment restrictions. Since the Borough does not have a lot coverage ordinance, ultimate build-out could result a significant amount of additional coverage. The Borough should implement measures to minimize additional pollution into the surrounding water bodies.

Although the Borough is essentially developed, on May 13, 2005, the Department of Defense announced its plans to close Fort Monmouth. According to the Fort Monmouth website (http://www.monmouth.army.mil/C4ISR/brac.shtml) Fort Monmouth will close no later than September 15, 2011. On April 28, 2006 Governor Corzine signed a bill authorizing the formation of the Fort Monmouth Economic Revitalization Planning Authority (FMERPA) . Additionally, a Fort Monmouth Reuse Committee has been established to develop plans for redevelopment of Fort Monmouth. As Army operations are shut down, the base will be redeveloped for government, public or private use to be determined by FMERPA. Since the redevelopment studies have not been completed to date, future development plans for the Fort remain uncertain at this time.

The Fort has over 400 acres within the Borough limits, which is approximately 1/8th of the Borough's total land mass. Therefore, the Fort's redevelopment could have a significant impact

on stormwater management. As the redevelopment plans for the Fort are finalized, the MSWMP should be amended to address the impacts of the redevelopment or build-out of Fort Monmouth.

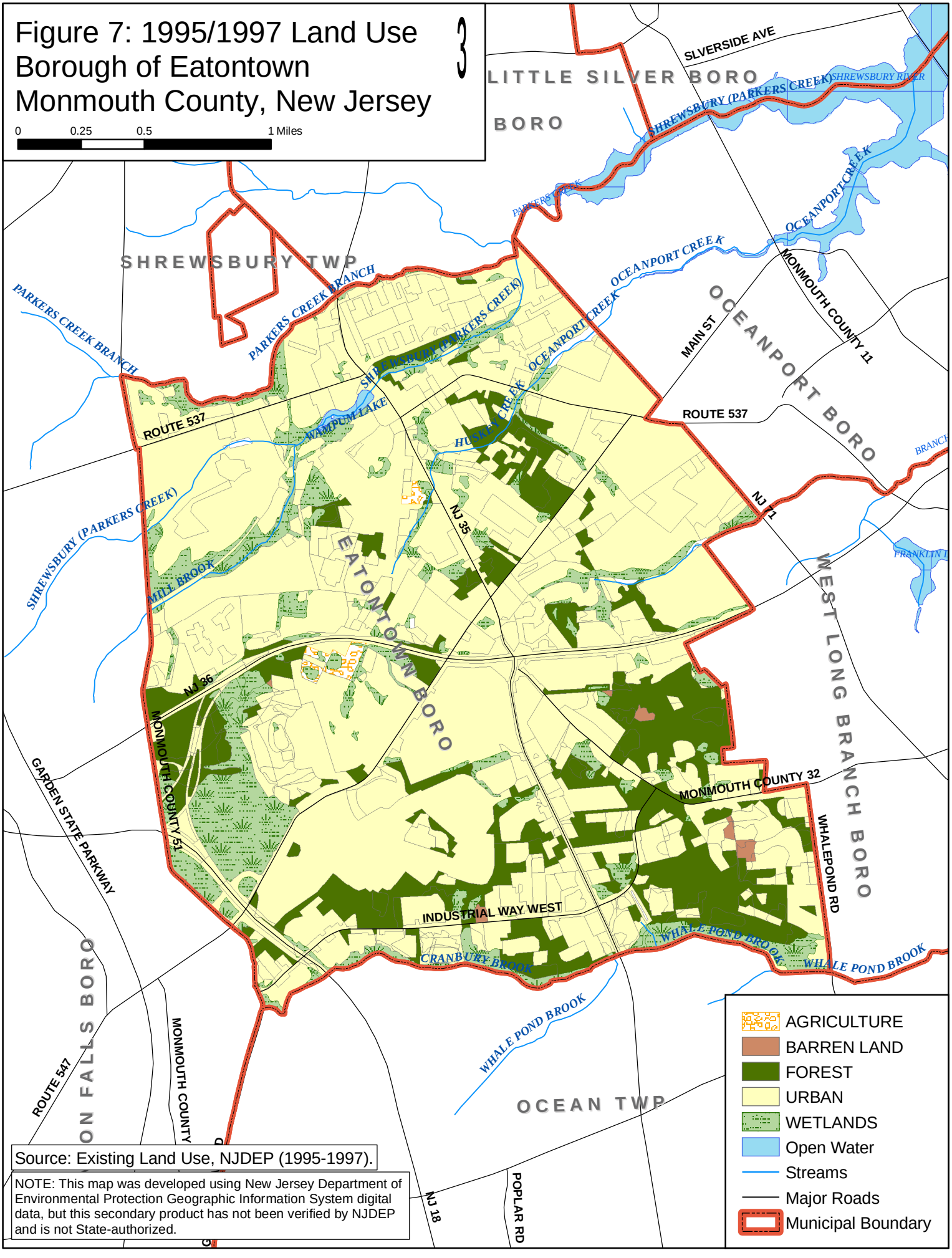
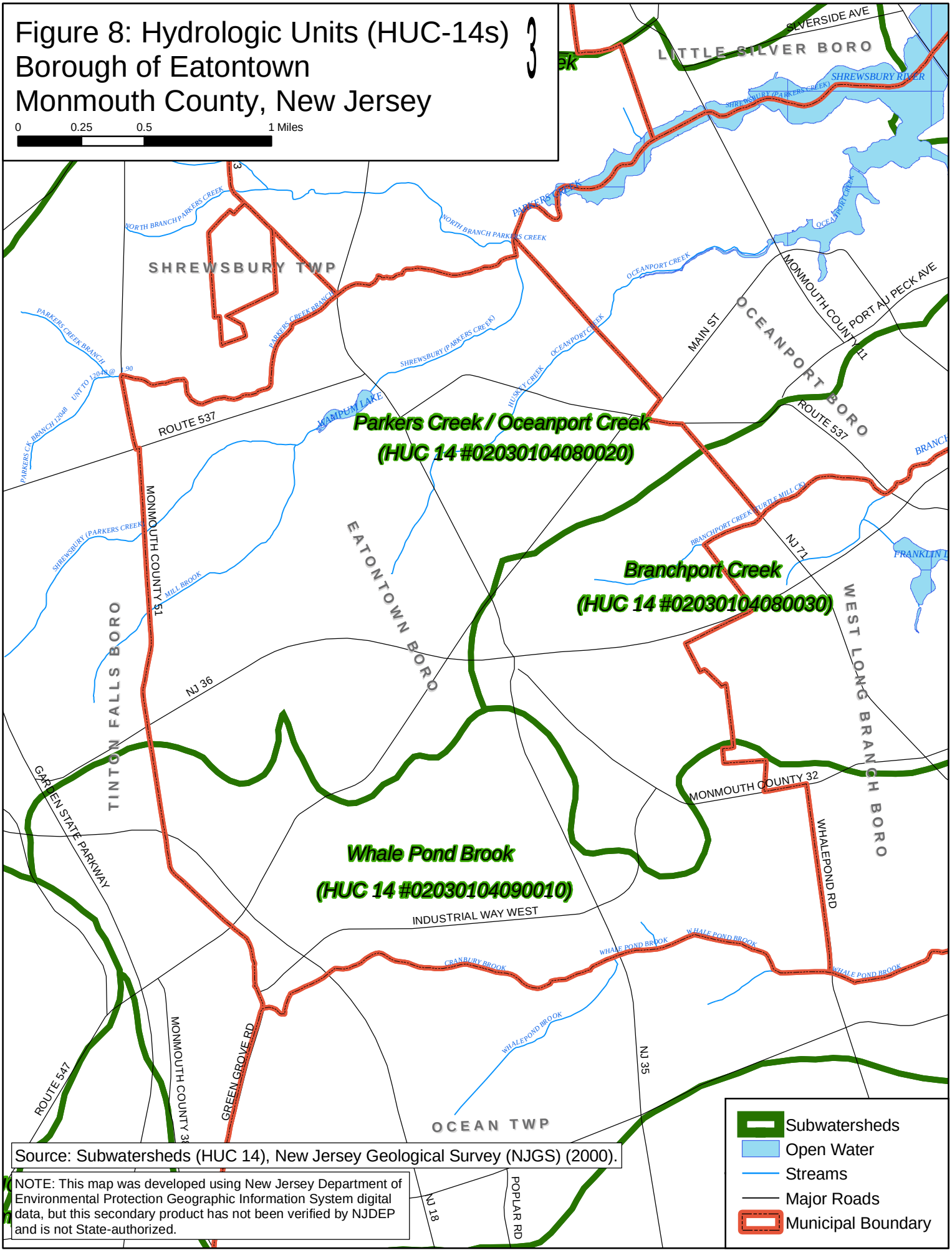


Figure 7: 1995/1997 Land Use
Borough of Eatontown
Monmouth County, New Jersey
3
0
0.25
0.5
1 Miles
LITTLE SILVER BORO
SLVERSIDE AVE
SHREWSBURY (PARKERS CREEK)
SHREWSBURY RIVER
OCEANPORT CREEK
PARKERS CREEK
SHREWSBURY TWP
PARKERS CREEK BRANCH
OCEANPORT BORO
MONMOUTH COUNTY 11
MAIN ST
ROUTE 537
WAMPUM LAKE
HUSKEN CREEK
NJ 35
NJ 71
EATONTOWN BORO
MILL BROOK
NJ 36
WEST LONG BRANCH BORO
MONMOUTH COUNTY 32
MONMOUTH COUNTY 51
GARDEN STATE PARKWAY
WHALEPOND RD
INDUSTRIAL WAY WEST
WHALE POND BROOK
CRANBURY BROOK
ROUTE 547
OCEAN TWP
POPLAR RD
NJ 18
AGRICULTURE
BARREN LAND
FOREST
URBAN
WETLANDS
Open Water
Streams
Major Roads
Municipal Boundary
Source: Existing Land Use, NJDEP (1995-1997).
NOTE: This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not State-authorized.



Source: Subwatersheds (HUC 14), New Jersey Geological Survey (NJGS) (2000).

NOTE: This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not State-authorized.

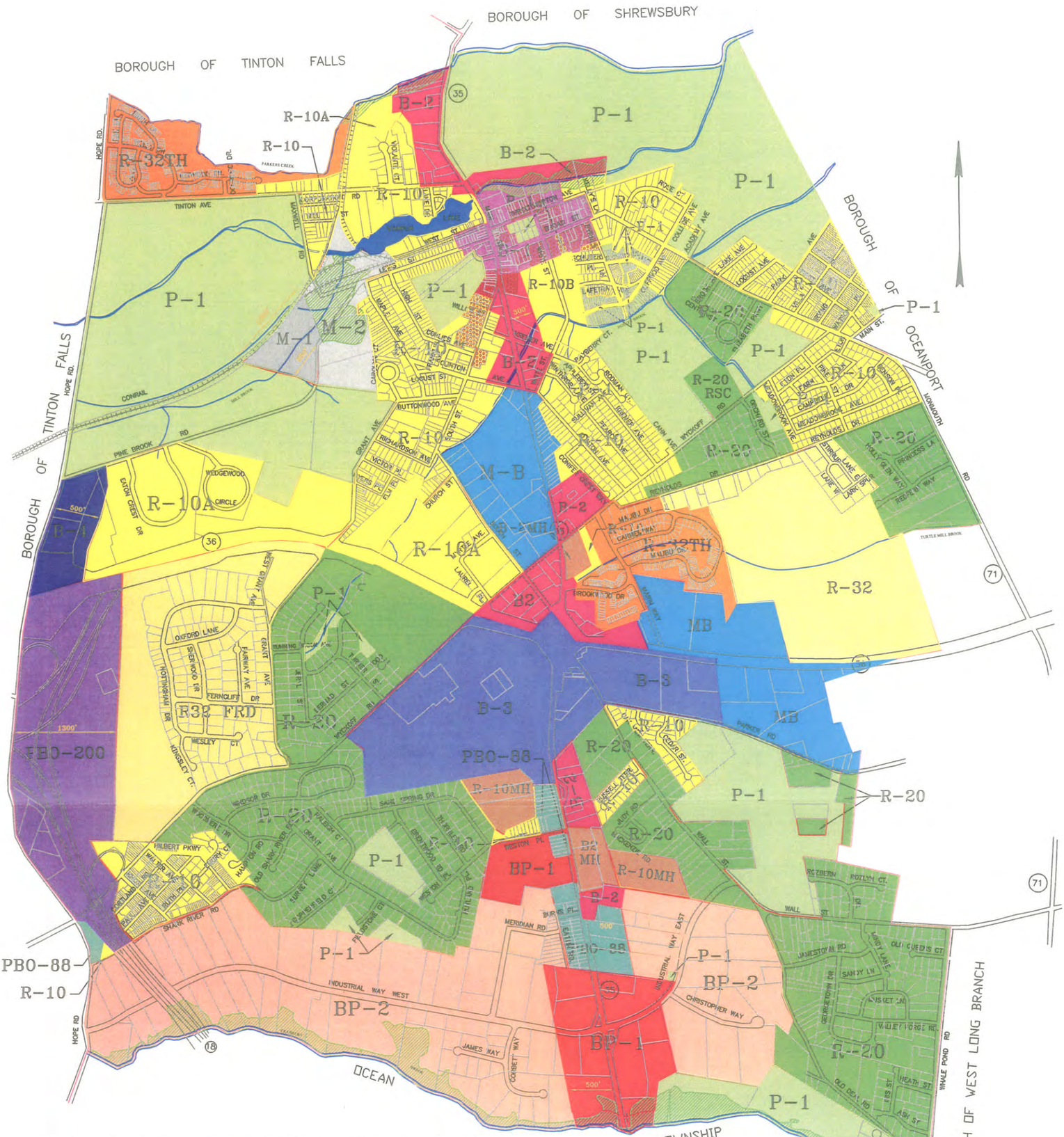


Figure 9: ZONING MAP

R-32	Residence Zone	
R-32 FRD	Residence Zone	
R-32 TH	Residence Zone	
R-20	Residence Zone	
R-20 RSC	Residence Zone	
R-10	Residence Zone	
R-10A	Residence Zone	
R-10B	Residence Zone	
R-10MH	Residence Zone	
B-1	Business Zone	
B-2	Business Zone	
B-2MH	Business Zone	
B-3	Business Zone	
B-4	Business Zone	
M-B	Manufacturing-Business Zone	
PBO-88	Professional, Business & Office Zone	
PBO-200	Professional, Business & Office Zone	
BP-1	Business Park Zone	
BP-2	Business Park Zone	
M-1	Manufacturing Zone	
M-2	Manufacturing Zone	
P-1	Public Land Zone	
	Historic District	
	Flood Prone Zone (100-Year Floodplain)	

Flood Prone Zone based on Flood Insurance Rate Maps (effective 9/16/81)
Zone boundary lines are approximate see FIRM maps for actual delineation.

BOROUGH OF EATONTOWN
Monmouth County, New Jersey

Scale In Feet
0 500 1000 1500 2000

AUGUST 12, 1997
FEBRUARY 10, 1997

T&M ASSOCIATES

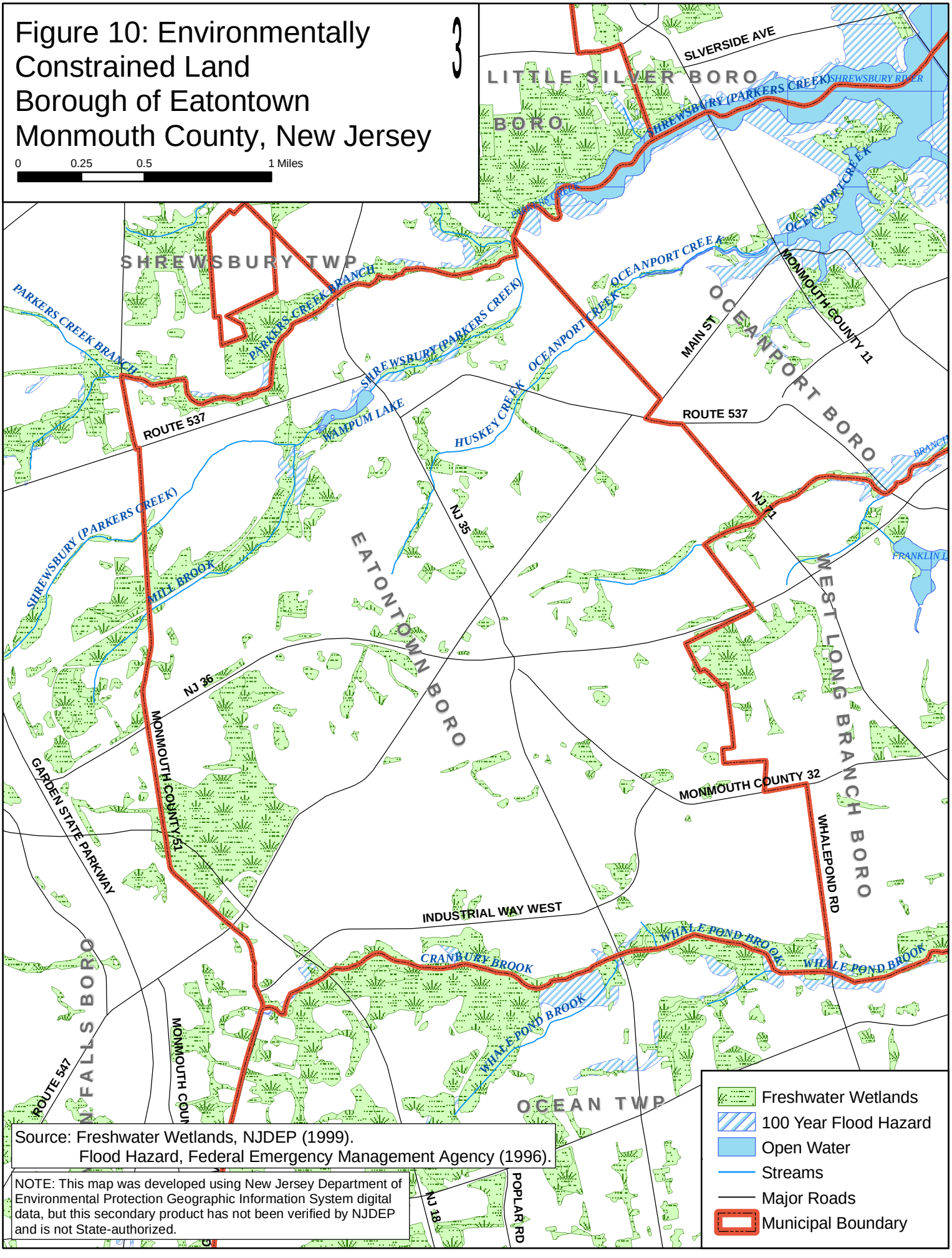


Figure 10: Environmentally Constrained Land
Borough of Eatontown
Monmouth County, New Jersey
3
0 0.25 0.5 1 Miles
LITTLE SILVER BORO
SLVERSIDE AVE
SHREWSBURY (PARKERS CREEK)
SHREWSBURY RIVER
OCEANPORT CREEK
SHREWSBURY TWP
PARKERS CREEK BRANCH
OCEANPORT BORO
MONMOUTH COUNTY 11
MAIN ST
ROUTE 537
WAMPUM LAKE
HUSKEY CREEK
NJ 35
NJ 71
EATONTOWN BORO
WEST LONG BRANCH BORO
MILL BROOK
NJ 36
MONMOUTH COUNTY 51
GARDEN STATE PARKWAY
MONMOUTH COUNTY 32
WHALEPOND RD
INDUSTRIAL WAY WEST
CRANBURY BROOK
WHALE POND BROOK
OCEAN TWP
ROUTE 547
NJ 18
POPLAR RD
Freshwater Wetlands
100 Year Flood Hazard
Open Water
Streams
Major Roads
Municipal Boundary
Source: Freshwater Wetlands, NJDEP (1999).
Flood Hazard, Federal Emergency Management Agency (1996).
NOTE: This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not State-authorized.

9.0 MITIGATION PLAN

This mitigation plan is provided for proposed development or redevelopment projects that seek a variance or exemption from the stormwater management design and performance standards set forth in this MSWMP and N.J.A.C. 7:8-5.

9.1 MITIGATION PROJECT CRITERIA

To grant a variance or exemption from the stormwater regulations, new development and redevelopment plan applications must propose a mitigation project located within the same drainage basin as the proposed development/redevelopment. Proposed mitigation projects must provide for additional groundwater recharge benefits, protection from stormwater runoff quantity or quality from previously developed property that does not currently meet the design and performance standards outlined in this MSWMP. Mitigation projects should also be as close in terms of hydrology and hydraulics to the proposed development/redevelopment as possible.

Projects must be proposed on an equivalent basis. Developers must propose a mitigation project similar in kind to the variance or exemption being requested. Proposed mitigation projects cannot adversely impact the existing environment.

9.2 DEVELOPER'S MITIGATION PLAN REQUIREMENTS

Proposed mitigation projects shall have Mitigation Plans submitted to the Borough for review and approval prior to granting final approval for site development. Developers should include the following in a Mitigation Plan:

- Mitigation Project Name, Owner name and address, Developer name and address, Mitigation Project Location, Drainage Area, Cost Estimate;
- Proposed mitigation strategy and impact to sensitive receptor. What is being impacted, mitigated, and how;

- Legal authorization required for construction and maintenance;
- Responsible Party including: required maintenance, who will perform the maintenance, proposed cost of maintenance, and how it will be funded;
- All other permits required for construction of the mitigation project;
- Cost estimate of construction inspection; and
- Reason a waiver or exemption is required and supporting evidence.

Due to the lack of vacant or developable land, it is anticipated that the majority of the mitigation projects proposed will result in retrofitting/rehabilitation of existing stormwater facilities and natural infrastructures. Therefore, the Applicant may select one of the following strategies to be developed into a potential mitigation project. More detailed information may be available from the Borough or the Borough Engineer's office. It is the developer's responsibility to provide a detailed study of any proposed mitigation project, and provide the Borough with a proposed mitigation plan for review and approval.

- Desilt/desnag ditches on Industrial Way.
- Desilt/desnag streams throughout the Borough.
- Rehabilitate existing detention facilities, remove scavenger vegetation and silt, address compaction, and restore grasses.
- Repair/restore conduit outlet protection in corridors.
- Address roadside re-vegetation and erosion.
- Desilt roadside culverts.
- Address BMP recommendations from the Shrewsbury River Watershed Study.
- Installation of BMP devices for outfall discharges.
- Installation of BMP devices such as rain water garden islands, infiltration systems and green roofs for the buildings, for existing commercial and industrial facilities which have a significant amount of imperviously converge, including, but not limited to, Monmouth Mall and the buildings in the industrial park.

10.0 RECOMMENDATIONS

The Conservation Plan Element and the Utility Service Plan Element of the *Eatontown Borough Master Plan*, dated January 2004, includes recommendations with respect to stormwater management and conservation of natural resources of Eatontown. The following are additional recommendations associated with this Stormwater Management Plan Element of the *Master Plan*:

- ***Recommendation A: Review and update the existing Development/Zoning Regulations to implement the principals of non-structural and structural stormwater management strategies to reduce stormwater quantity, improve stormwater quality and to maintain or increase groundwater recharge.***

  Portions of the existing Development/Zoning Regulations are inconsistent with recently adopted New Jersey Department of Environmental Protection (NJDEP) Stormwater Management Regulations and the NJDEP *Best Management Practices for the Control of Non-Point Source Pollution from Stormwater Manual*. Some of these inconsistencies are identified in Section 7.1 above. The Borough should update their existing regulations to be in conformance with these regulations and to minimize inconsistencies or conflicts.

- ***Recommendation B: To improve stormwater management, water quantity at and groundwater recharge, consider investigating reducing the permitted amount of building, parking lots and impervious coverage throughout the Borough.***

  Eatontown typically permits less coverage than adjacent municipalities. Also, the existing Development Regulations strive to protect environmentally sensitive areas. Recent development trends show an increasing number of larger homes that typically include large circular driveways and accessory structures such as tennis courts and sports courts. The Borough should revisit the current Development Regulations to determine if additional

safeguards can be implemented to improve stormwater management and water quality relating to these trends.

The Borough should also reevaluate its parking lot design standards. Parking lots generate large volumes of stormwater. The Borough should evaluate the existing parking requirement and design standards to prevent over-development of parking lots and to encourage the separation ("disconnection") of impervious areas with landscaping areas to collect stormwater and encourage groundwater recharge.

- ***Recommendation C: Work with residents, property owners and businesses to encourage the installation of vegetation along stream corridors and within existing stormwater detention facilities.***

Landscaping with native vegetation along stream corridors and within detention basins improves the quality of stormwater. As such, Eatontown should investigate requiring re-vegetation of stream corridor buffers and detention basins. Although this is not currently a requirement, many older developments have manicured lawns abutting the streams or detention basins, which provide less filtering and introduce fertilizers to adjacent surface water and stormwater facilities.

- ***Recommendation D: Seek to limit encroachments into existing conservation easements.***

A significant number of properties throughout the Borough have existing conservation easements. Eatontown's Conservation Easement Requirement prohibits the removal of trees and ground cover within a conservation easement. The Conservation Easement Requirement also prohibits the building of any structures, walls, or fences within the easement. Despite the existing regulations, a number of residents have encroached into the conservation easement. The Borough has implemented a procedure to identify new residents with properties having conservation easement restrictions. The Borough should also evaluate their

existing enforcement program, implement an education program on the use of easements, work with property owners to mark existing easements more conspicuously, and seek to ensure revegetation of disturbed easements.

- ***Recommendation E: Educate residents on the impacts of the overuse of fertilizers and good fertilizer maintenance practices.***

As stated in Section 6.2, the overuse of fertilizers has a significant detrimental impact on surface water bodies and groundwater. The Borough should work with the NJDEP to educate residents on these impacts and encourage residents to use techniques to create a "green lawn" without over- fertilizing and/or to convert lawn areas to other kinds of vegetation that do not require fertilization and other chemical treatments. Many lawn services also "overspray" fertilizer onto roadways and adjacent properties. The Borough should investigate methods to minimize the application of fertilizers beyond property lines.

- ***Recommendation F: Educate residents on techniques to deter geese and deer.***

Geese population can take over and contaminate local water bodies. The planting of tall grasses and shrubs (such as tall fescue or mix grasses with periwinkle, ivy, myrtle, or pachysandra) around the perimeter of a water body limits the visibility of any potential predators and provides an effective means of deterring geese. Another method of deterring geese is through the use of trained Border Collies. These dogs use a wolf-like stare to influence the geese into flight or movement. The geese perceive this stalking manner as a threatening predatory behavior although the geese are never touched.

The deer population in New Jersey is estimated to be increasing by about 40% annually. These deer consume native plant material, such as saplings, shrubs and ground cover, which are vital to a healthy forest and stream corridor buffer. Deer naturally favor certain plants over others. The reduced plant diversity allows for the proliferation of invasive plant species. The Monmouth County Parks System is the third largest landowner within the County. As

such they established a Deer Management Program in 2007. This program outlines both lethal and non-lethal techniques to control the deer population. Some of these include the installation of deer protection fencing at least 8 to 10 feet in height; treating plant material with commercially available repellents to discourage deer from eating them; and avoid cultivation of their favorite plant material, such as hosta.

- ***Recommendation G: Seek to ensure the inspection, monitoring, and maintenance of all stormwater management facilities and develop strategies for all existing and future maintenance and improvements.***

  Stormwater facilities require regular maintenance to ensure effective and reliable performance. Failure to perform the necessary maintenance can lead to diminished performance, deterioration and failure. In addition, a range of health and safety problems, including mosquito breeding and the potential for drowning, can result from improperly maintained facilities. To minimize these risks, the Borough should implement a procedure for regular inspection, monitoring, and maintenance of Borough owned stormwater facilities.

  Additionally, there are a number of privately maintained stormwater facilities within the Borough. The Borough should work with the various property owners, residents and business owners to identify maintenance and/or improvements needs and develop strategies for regular inspection and maintenance of these facilities.

  The Borough should also encourage the use of low impact design methods and non-structural strategies that require less maintenance.

- ***Recommendation H: Work with the Monmouth County Mosquito Extermination Commission to monitor existing and proposed BMP's.***

  Many of the recommended non-structural and structural strategies are designed to retain water for a period of time to promote groundwater recharge. These conditions could be

favorable to mosquito breeding habitats. To date there is no data relating mosquito breeding and best management practices. The Borough should coordinate new development and redevelopment project using non-structural and structural strategies with the Monmouth County Mosquito Extermination Commission so that these facilities can be periodically monitored, inspected and maintained. Developers and the Borough should also solicit input from the Monmouth County Mosquito Extermination Commission early in the design process for new facilities to obtain additional guidance and recommendations.

- ***Recommendation I: Encourage existing storm drains to be replaced with bicycle safe grates and Campbell Foundry Model #N-2-ECO inlet heads (or approved equal) to prevent floatable and solid debris from entering the storm water conveyance system.***

Typical roadway debris, such as bottles and cans, can easily enter stormwater conveyance systems through typical inlet openings. This debris is then transported downstream into the receiving water bodies. By replacing existing storm drain inlets with new inlet grates and inlet heads, which have a maximum opening size of 2-inches by 4-inches, the amount of debris entering the stream can be reduced, improving water quality.

- ***Recommendation J: Encourage regular street sweeping for public and private roads and parking lots.***

Salt and sand are applied to roadways and paved areas in the winter months. This salt and sand is then washed into the storm drain conveyance system and then is transported to the receiving water body. This material silts and pollutes the Borough streams. Frequent sweeping of streets and parking lots, particularly after winter storms, can minimize the impacts on water bodies.

✧ ***Recommendation K: Work with the State, County and local residents to improve stormwater management at Wampum Lake.***

Wampum Lake Park is a valued recreation area located in the northerly portion of the Borough. The Borough has rehabilitated the slide gates and the dam spillways at Wampum Lake. The Borough has obtained approval from the NJDEP to open the gate in advance of a predicted major storm event; lowering the level of the lake approximately 1 foot. This provides additional capacity within the lake for the treatment of stormwater discharge.

The Borough has also been working with adjacent property owner to obtain access easement along the perimeter of the lake. These easements will serve as a buffer to the lake and will allow the future construction of a greenway trail along the perimeter of the lake.

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12.0 APPENDIX

VACANT LAND INVENTORY & ANALYSIS REPORT

Vacant Land Inventory and Analysis Report

Prepared for

Borough of Eatontown
Monmouth County, New Jersey

Prepared August 16, 2002 by:

T&M ASSOCIATES
11 Tindall Road
Middletown, NJ 07748

Richard S. Cramer, P.P., A.I.C.P.
New Jersey Professional Planners
License #02207

The original of this document has been signed and sealed in accordance with New Jersey Law

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APPENDICES

INTRODUCTION

COAH regulations permit municipalities to request an adjustment from their housing need due to a lack of available vacant and developable land. Pursuant to N.J.A.C. 5:93-4.2, municipalities requesting an adjustment of their fair share obligation due to lack of available land must submit an inventory of vacant and undeveloped parcels by lot and block, with property ownership and acreage. All parcels identified as vacant in the Borough's tax assessment records are listed in the Accompanying Vacant Land Inventory Table. Where two or more contiguous vacant lots are in common ownership, the parcels have been combined into a single tract on the inventory. Vacant sites have also been mapped in the accompanying Vacant Land Inventory Map in Appendix B.

In addition, COAH requires that a municipality also consider sites that are developed with relatively "low-density" development as part of its vacant land analysis. These sites may include golf courses not owned by its members, farms in State Development and Redevelopment planning areas one, two and three; driving ranges, nurseries, and nonconforming uses. Consequently, the Township has included the Old Orchard Country Club golf course and several farm qualified properties in its inventory. Farm qualified properties are identified with site numbers beginning with an 'F' prefix.

The suitability of the property containing Mr. B's Golf Center Driving Range (a.k.a. the Weston site) is addressed in a separate site suitability report prepared by T&M Associates. Based on the planning analysis contained in that report, the Weston site has been determined to be unsuitable for inclusionary development. The purpose of a vacant land analysis is to determine if a site or portion of a site is suitable for affordable housing development. Since the Weston site is not suitable for the reasons set forth in the Weston site suitability report, the Weston site is not included in the calculation of Eatontown's Realistic Development Potential (RDP).

PERMITTED EXCLUSIONS

COAH regulations also establish the criteria by which sites or portions of sites in a municipal vacant land inventory may be excluded from the calculation of the municipality's RDP. Environmentally sensitive areas may be excluded from consideration, including flood hazard areas, wetlands, and areas characterized by steep slopes (defined in COAH's regulations as slopes with a grade of greater than fifteen percent) that render a site or portion of a site unsuitable for low and moderate income housing. In addition, small isolated lots having an insufficient acreage to generate an affordable housing setaside as part of an inclusionary development may be excluded. Vacant lots under development as part of an approved subdivision or that received site plan approval for development may also be excluded. Landlocked parcels or sites with limited or no access may also be excluded from the calculation of the RDP.

The Vacant Land Inventory Table in Appendix A provides a parcel by parcel description of the exclusions that have been made pursuant to COAH's guidelines. The general categories of exclusions are summarized as follows:

1. Small and Isolated Sites. The majority of sites listed in the vacant land inventory consist of small and isolated vacant lots that are too small to be realistically developed with an inclusionary development and have been eliminated pursuant to N.J.A.C. 5:93-4.2(c)2. Many of these sites are located in single-family residential neighborhoods. Several are located in commercial or industrial areas and, in addition to their size, also are excluded due to incompatible land use arrangements.

COAH's minimum presumptive density in calculating the RDP is six units per acre with a twenty percent setaside. At six units per acre, at least 0.8 acres must be present to yield one affordable unit at a 20 percent setaside. Consequently, properties with less than 0.8 acres have been excluded. A field investigation was undertaken to confirm that the larger of these small isolated lots (0.5 to 0.8 acres) are not in areas where the application of a higher presumptive density would be appropriate. As a result of this investigation, these lots also were eliminated.

2. Environmental Constraints. Environmentally constrained lands may be eliminated pursuant to N.J.A.C. 5:93-4.2(e)2. Environmental constraints fall into the following three categories:

a) Wetlands. A number of lots have been eliminated due to the presence of freshwater wetlands. Wetlands areas and their relationship to the vacant land inventory sites are mapped in the accompanying Wetlands map. Where available, site specific information has been utilized.

b) Flood Hazard Areas. COAH regulations permit flood hazard areas as defined in N.J.A.C. 7:13 and mapped by the NJDEP to be eliminated from the developable land acreage of properties included in the vacant land inventory. If there is no state study of the flood hazard area and the flood drainage is fully developed, then the municipality may use the most recent flood insurance maps to determine the flood hazard area. Consequently, Eatontown has used FEMA Flood Insurance Rate Map data to map the flood hazard areas within the Borough. These areas are shown in the accompanying Flood Hazard Area Map. Where on-site data is available (i.e. the Weston Site), this information is shown.

c) Steep Slopes. COAH regulations allow slopes of greater than 15 percent to be excluded from the calculation of the RDP. However, if a municipality has a steep slope ordinance that allows development within steep slopes, these areas can only be excluded to the extent that they are regulated in the steep slope ordinance. The Borough of Eatontown does not have a steep slope ordinance. The Borough has taken no exclusions for steep slopes.

3. Access. Several sites have been eliminated due to inadequate access. Typically, these are land-locked lots or lots where access is constrained due to limited lot frontage or other constraints, including environmental constraints. Site 153, which is constrained by its irregular shape and shallow depth, and site F1 are located on Old Deal Road which is a single family residential cul-de-sac street. The New Jersey statewide Residential Site Improvement Standards (RSIS) limit the Average Daily Traffic (ADT) on cul-de-sac streets to 250 vehicle trips a day.[1] The *Model Subdivision and Site Plan Ordinance* upon which RSIS is based recommends a maximum ADT of 250 to 500 vehicle trips a day on a cul-de-sac street. There are already twelve single family dwellings that generate traffic onto the Old Deal Road cul-de-sac. The site of

[1] N.J.A.C. 5:21-4.1.

[2]Sound planning indicates that development should avoid disturbance of steep slopes. The issue is of such great significance that even the New Jersey State Planning Act recognizes the need to protect steep slopes (N.J.S.A 52:18A-200.a.). Consequently, steep slopes may render a site unsuitable even if a municipality lacks a steep slope ordinance. However, in compiling the vacant land inventory for Eatontown, we have followed COAH practice and removed no land on the basis of steep slopes.

the American Properties settlement on Old Deal Road (Site 154) will result in 31 additional single family units and increase the total number of single family dwellings to 43 resulting in an ADT of 439. Based on RSIS and the *Model Subdivision and Site Plan Ordinance*, sound planning limits the total number of single-family dwellings on Old Deal Road to 24 to 49 single family units.[3]

4. Association Owned Properties and Dedicated Open Space. Parcels owned by property associations as common areas, dedicated open space, or used for drainage basins and similar drainage facilities have been eliminated.

5. Approved Site Plans and Development Applications. Consistent with COAH practice, properties that have an approved subdivision or site plan have been eliminated. In addition, a number of sites have been developed and are no longer vacant.

6. Incompatible Land Uses. Sites that are adjacent to or located in areas that contain incompatible land uses (e.g. highway commercial corridors and industrial uses) have been determined to be not suitable for low and moderate income housing in accordance with the provisions of N.J.A.C. 5:93-4.2(e)6 and the definition of suitable site as set forth in N.J.A.C. 5:93-1.3, and have been eliminated from the inventory.

7. Municipal Sites. Municipally owned sites are listed in the Municipal Sites Table in Appendix C and shown in the Municipal Sites Map in Appendix D. No municipally owned sites are included in the calculation of the township's RDP. Existing municipally owned parcels include municipal offices, public safety facilities, as well as public parks, playgrounds recreation and conservation areas listed in the Borough's Green Acres Recreation and Open Space Inventory (ROSI). Lands on the ROSI account for approximately 184 acres of parks and open space areas.

a) Future Recreation Sites. Municipalities may reserve up to three (3) percent of their total "developed and developable acreage" for active municipal recreation and exclude this acreage from consideration as potential sites for low and moderate income housing and the calculation of the RDP. However, all sites designated for active recreation must be designated for recreational purposes in the municipal master plan. Developable acreage is the total vacant and undeveloped lands in the municipality minus historic and architecturally important sites, agricultural lands and environmentally sensitive lands excluded from the vacant land inventory by COAH's rules.

[3] Based on an ADT of 10.2 vehicle trips per day.

Also excluded from the calculation of total vacant and undeveloped lands are those owned by nonprofit organizations, counties and the State or Federal government that are precluded from development. Existing active municipal recreation areas are then subtracted from the three percent calculation of total developed and developable acreage to determine additional land that may be reserved for active municipal recreation.

Eatontown has a total of 3,697 acres of developed and developable lands in the Borough. Based on the calculation of developed and developable acreage, the Borough may reserve up to 111 acres of active recreation lands. Currently, the Borough has approximately 108 acres of property used for active recreation. (See Public Lands Inventory Table in Appendix C). The Borough is not proposing to reserve any additional lands for active recreation.

b) Future Conservation/Passive Recreation/Open Space. If less than three percent of a municipality's total land area is designated for conservation, parklands or open space, a municipality may reserve up to three (3) percent of its total land area for such purposes. However, the acquisition of such sites must be initiated by the municipality within one year of substantive certification or the grant of a judgment of repose by the court. If such a site is not purchased and limited to conservation, parklands or open space within that time-frame, COAH may require that the site be zoned to permit inclusionary development.

Based on a total land area of 3,789 acres, Eatontown may reserve up to 114 acres for conservation, parklands or open space. Currently, the Borough has 76 acres of publicly-owned land reserved for "conservation, parklands and open space." (See Public Lands Inventory Table in Appendix C.) The Borough may reserve up to 38 additional acres for open space purposes.

Eatontown has begun the process of acquiring sites F-3 and F-4 (Block 94, Lot 2 and Block 99, Lot 2), commonly known as the Stella Rose farm for open space purposes. Together, these sites contain a total of 11.29 acres. Consequently, the Borough has eliminated these sites and acreage from the calculation of the Borough's RDP. A portion of these sites are also constrained by wetlands.

In addition, the Borough intends to reserve site P-34, a 2.64-acre triangular shaped parcel located at the end of Fieldstone Court as open space. Combined with the Stella Rose farm, the Borough intends to

reserve approximately 14 acres for open space purposes, and exclude this acreage from the calculation of the RDP. Based on COAH's formula, the Borough may reserve an additional 24 acres of open space.

RDP CALCULATION

The sites that have been included in the calculation of the Borough's RDP are listed in the Summary Table located at the end of Appendix A and identified on the Vacant Land Inventory Map in Appendix B. A description of each of these sites is in the following section of this report.

A planning analysis was undertaken for each site to determine the appropriate density and setaside in accordance with COAH's vacant land adjustment procedures. This analysis included a review of the size and shape of the parcel; the type, intensity and location of surrounding land uses; the location and configuration of environmental constraints impacting the site; access; topography; and other relevant planning issues. Based on this analysis, a density of 6.0 units per acre and 20 percent setaside was applied to the net developable acreage of each of the sites in accordance with COAH's criteria. The one exception is Site #154 (a.k.a. American Properties site), which is the subject of a settlement agreement. In the case of this site, the density and setaside specified in the settlement agreement was utilized.

Applying the densities and setasides to the parcels in the Summary Table, the Borough of Eatontown's RDP is 161 units.

SITES CONTRIBUTING TO THE RDP

Site #64 (Block 82, Lot 10 and Block 92.13 Lot 19)

Site #64 consists of two lots owned by the Old Orchard Country Club. The larger of the two lots contains an existing 18-hole golf course. The site's primary frontage is along Route 36, although access to the site from Route 36 may be constrained due to the location of wetlands in this area of the site. The development potential of the site is further constrained by the Turtle Mill Brook, which runs through the central portion of the site. An area of wetlands is associated with this brook. While no flood hazard areas have been delineated along the Turtle Mill Brook, some flooding occurs in this area during periods of heavy rain. These are also identified by NJDEP as potential "floodprone" areas. (See accompanying aerial/GIS map) Consequently, further on-site investigation may be necessary to determine the actual location of any flood hazard area. If on-site data becomes available, additional portions of the site may be eliminated. The site is in the R-32 Residence Zone.

Land uses surrounding the site include single-family residential development to the north of the site. A multi-family residential development (Brookwood) is located to the west of the site. Brookwood is zoned for six (6) units per acre, but is actually developed at approximately five (5) units per acre. The New Jersey Division of Motor Vehicles inspection station and regional offices are located to the southwest on Route 36. To the east is a golf driving range and other retail commercial uses located along Route 36 in West Long Branch. Retail commercial uses are also located across Route 36 from the site in West Long Branch.

While technically the site is not vacant, it is included in the vacant land inventory pursuant to N.J.A.C. 5:93-4.2(d), which provides for the inclusion of sites with relatively low densities, such as golf courses not owned by their members, as part of the calculation of the RDP. Based on a review of the uses surrounding the site and the densities of adjacent residential development, a density of six (6) units per acre with a 20 percent setaside has been applied to the site, for an RDP of 120 units.

Site #85 (Block 92, Lot 20)

Site #85 is a 10-acre parcel owned by an adjacent automobile dealership. The site has frontage on both Route 36 and Marin Way. The lot is somewhat triangular-shaped, with primary frontage along Marin Way. The site contains several areas of mapped wetlands. (See Wetlands Map.) The site is in the M-B Manufacturing Business Zone.

Surrounding land uses include the Brookwood multi-family townhouse development to the north and west, the automobile dealership to the east, and retail commercial uses, including the Monmouth Mall to the east and south along Route 36. A substantial setback would be required to provide adequate buffering and screening of these uses. Given the location of the adjacent commercial uses along the Route 36 corridor, the triangular configuration of the lot, and the location of wetlands, any residential development would have to be located in the northern portion of the site.

Based on a review of the uses surrounding the site, the densities of adjacent residential development, wetland location, and site configuration, a density of six (6) units per acre with a 20 percent setaside has been applied to the site, for an RDP of 10 units.

Site #109 (Block 101, Lots 7 & 8)

Site #109 is a triangular parcel containing approximately nine (9) acres. The site maintains frontage on Route 36 and Wyckoff Road. The site contains approximately four (4) acres of wetlands in the western end of the site. The site is in the R-20 Residence Zone. The site is currently the subject of a use variance application for a self-storage facility.

Land uses surrounding the site include single-family detached residential to the south of the site. The Monmouth Mall is located to the east across Wyckoff Road. To the north, across Route 36 is the Laurel Gardens multi-family residential development.

Based on a review of the uses surrounding the site, its triangular configuration, wetlands constraints, and the densities of adjacent residential development, a density of six (6) units per acre with a 20 percent setaside has been applied to the net acreage of 4.8 acres on the site, for an RDP of six (6) units.

Site #113 (Block 104, Lot 11.02 and Block 105, Lot 10)

Site #113 consists of two parcels that create a tract that has frontage on both Parker Road and Route 36. Lot 10 in Block 105 contains 3.29 acres and fronts on Highway 36. Lot 11.02 in Block 104 contains 6.61 acres and fronts on Parker Road. Combined, the tract contains a total 9.9 acres, including approximately one acre of wetlands in the northern portion of the tract on Lot 10. Both parcels are in the M-B Manufacturing Business Zone.

Surrounding land uses include adjacent automobile dealerships and highway commercial uses along Route 36, single family residential uses located on the south side of Parker Road, and the New Jersey Division of Motor Vehicles offices across Route 36 to the north. Parker Village, a 61-unit “active adult” multi-family residential development is located to the east of the site on Parker Road.

Given its location and frontage along the Route 36 corridor, Lot 10 in Block 105 is significantly impacted by the adjacent automobile dealerships along Route 36. It is also significantly constrained by mapped wetlands. Consequently, this portion of Site #113 has been eliminated from the calculation of the RDP due to incompatible land uses.

Based on a review of the uses surrounding the site and the densities of adjacent residential development, a density of six (6) units per acre with a 20 percent setaside has been applied to the 6.61 acres on Lot 11.02 in Block 104, for an RDP of eight (8) units.

Site #116 (Block 107, Lot 4)

Site #116 is located on the south side of Parker Road in the eastern portion of the Borough near its border with West Long Branch. The site contains 4.77 acres and has an irregular shape. It is located in the R-20 Residence Zone. The site is currently the subject of an application for an eight lot single-family residential subdivision.

The site is surrounded on three sides by the municipally owned 80-acre park. Single-family detached residential development is located to the east in West Long Branch and , farther to the west of the site along the south side of Parker Road. The municipal recycling facility is also located on the south side of Parker Road to the west of the site. To the north of the site across Parker Road is the Parker Village active adult residential development and highway commercial uses fronting on Route 36.

Based on a review of the uses surrounding the site and the densities of adjacent residential development, a density of six (6) units per acre with a 20 percent setaside has been applied to the 4.77 acres on the site, for an RDP of six (6) units.

Site #126 (Block 113, Lots 27.01 & 28)

Site #126 is located at the corner of Wall Street and Industrial Road East. The site contains 4.42 acres and has an irregular shape. The site has recently been rezoned to permit senior citizen residential development. An application has been submitted for a 21-unit age restricted residential development.

Surrounding land uses include light industrial uses and office uses along Industrial Way East, single family detached residential across Wall Street, and a municipal park.

Based on a review of the uses surrounding the site and the densities of adjacent residential development, a density of six (6) units per acre with a 20 percent setaside has been applied to the 4.42 acres on the site, for an RDP of five (5) units.

Site #154 (Block 135, Lot 3 and Block 136.01, Lot 1)

Site #154 (a.k.a. the American Properties site) is located on Old Deal Road in the southeastern portion of the Township. The site contains 9.77 acres and has an irregular shape. Pursuant to the court-approved settlement agreement, the site will be developed with 31 single-family detached dwellings at approximately 3.2 units per acre. The developer is providing the Borough with a contribution equivalent to a 20 percent affordable setaside. In calculating the RDP, the Borough incorporates the settlement agreement. Consequently, an RDP of six (6) units has been applied to this site.

REHABILITATION COMPONENT

The Borough's vacant land adjustment does not impact its current rehabilitation component of 27 units (29-unit indigenous need minus two (2) units of spontaneous rehabilitation). The Borough's rehabilitation component is being addressed through the Monmouth County Housing Improvement Program. This is discussed in the section of the Housing Element and Fair Share Plan that addresses credits and reductions.

UNMET NEED

Pursuant to N.J.A.C. 3:93-4.2(h), a municipality receiving a vacant land adjustment must capture opportunities for the provision of affordable housing as new development or redevelopment occurs in the community, or what COAH commonly categorizes as the "unmet need." Methods suggested in COAH's regulations to meet this need include the use of accessory apartment ordinance, overlay zoning districts, or a mandatory development fee ordinance. A municipality may use one or a combination of these approaches to capture opportunities for affordable housing in accordance with COAH's requirements. The Borough has chosen the following approach:

1. Excess Credits. The Borough will meet a portion of its unmet need through excess credits generated as part of its overall fair share plan and prior eligible housing activities. The documentation in support of these credits is provided in a separate report.

2. Mandatory Development Fee Ordinance. Eatontown adopted a mandatory development fee ordinance in 2000. This ordinance was approved by the Court.

3. Overlay District. The Borough will place an overlay district on Howard Commons at Fort Monmouth. Fort Monmouth has announced that a total of 486 units of fully rehabilitated military housing in Howard Commons on Pine Brook Road are excess and will be transferred out of the Fort Monmouth housing inventory. The dwelling contain two, three, and four bedrooms. The 270 units north of Pine Brook Road were declared excess in 2000. The 216 units south of Pine Brook Road are expected to be available by 2005. Of the 486 units, 370 units have been vacant for the last 24 months. Eatontown, with funding from the New Jersey Department of Community Affairs, has retained a consultant to prepare a plan for the future use and development of the excess Fort Monmouth properties. As part of the plan for Howard Commons, the Borough will place an overlay district on the tract and require a 20% affordable housing setaside on all residential units that become available. In accordance with COAH regulations at N.J.A.C. 5:93-5.10(b), the Howard Commons units could be considered as new units that provide credits against the Borough's RDP. However, the credits from other affordable developments in the Borough that are subject to affordability controls and that have been constructed and occupied already exceed the RDP. Consequently, it is appropriate to view Howard Commons as a residential redevelopment site that will capture unmet need.

4. Senior Citizen Housing. The Borough will increase the permitted density of the RSCS zone to permit the Eatontown Senior Citizen Housing Corporation to construct additional affordable age-restricted units at the Meadowbrook senior citizen complex. The Borough will be able to obtain credit for these units up to its senior citizen cap. Based on the RDP of 161 units, the maximum number of age-restricted units that the Borough can include in its plan is 32 units. As per NJAC 5:93-5.14(a)2, Eatontown's cap on age restricted units is .25(RDP - the rehab component - rehab credits) - any senior units credited from the first round. For Eatontown, this is .25(161 - 27 -5) = 32.25 or 32 units.

SUMMARY AND CONCLUSION

The vacant land analysis reveals that the Borough of Eatontown does not have sufficient acreage to accommodate its 503-unit new construction obligation. After following the procedures for undertaking a vacant land adjustment analysis described in COAH's regulations, it has been determined that approximately 139 acres of net developable land exist in the Borough. This includes 38.5 acres of vacant and developable land, and 100.4 acres of land associated with the Old Orchard Country Club golf course, which has been determined to be underutilized but potentially suitable for development in accordance with COAH's standards.

With the exception of the American Properties settlement site, a density of six units per acre and a 20 percent setaside has been used to calculate the township's RDP from these sites. The density and setaside contained in the settlement agreement have been used to calculate the RDP for the American Properties site. Based on these densities and setasides, the Borough of Eatontown has an RDP of 161 units. In addition, the Borough has a 27-unit rehabilitation obligation.

APPENDIX A

Vacant Land Inventory Table

APPENDIX B

Vacant Land Inventory Maps

VACANT LAND INVENTORY 2002

BOROUGH OF EATONTOWN, NEW JERSEY

Site Identification							Area Exclusions as per N.J.A.C. 5:93-4.2(e)						
							Environmentally Sensitive						
Site ID No.	Tax Map Sheet #	Block	Lot	Location	Owner	Site Area (acres)	Wet Areas *Sec. 4.2(e)2*	Floodplain *Sec. 4.2(e)2*	Steep Slopes *Sec. 4.2(e)2*	Conserv. & Open Space *Sec.4.2(e)5*	Remaining Area	Exclusion Codes & Remarks	Net Developable Acres
1	4.01	1	10	233 Tinton Ave.	Zaorski, Agnes	0.54	0.00	0.00	0.00	0.00	0.54	Less than 0.8 acre	0.00
2	4.01	1	12	Dogwood Drive	Tinton Woods Homeowners Assoc. Inc.	8.22	4.57	0.59	0.00	0.00	3.07	Homeowners Assoc./OS	0.00
3	4.01	1.01	1	Redwood Drive	Tinton Woods Homeowners Assoc. Inc.	10.76	7.08	2.98	0.00	0.00	0.70	Homeowners Assoc./OS	0.00
4	4.01	1.02	1	Oak Lane	Tinton Woods Homeowners Assoc. Inc.	1.10	0.41	0.18	0.00	0.00	0.51	Homeowners Assoc./OS	0.00
5	4.01	1.03	1	Oak Lane	Tinton Woods Homeowners Assoc. Inc.	2.70	0.00	0.00	0.00	0.00	2.70	Homeowners Assoc./OS	0.00
6	4.01	1.04	1	Oak Lane	Tinton Woods Homeowners Assoc. Inc.	1.00	0.00	0.00	0.00	0.00	1.00	Homeowners Assoc./OS	0.00
7	4.01	1.06	1	Redwood Drive	Tinton Woods Homeowners Assoc. Inc.	1.97	0.00	0.00	0.00	0.00	1.97	Homeowners Assoc./OS	0.00
8	5	4	14	Taylor Place	Newton, Randall && Dickie	0.10	0.00	0.00	0.00	0.00	0.10	Less than 0.8 acre	0.00
9	5	4	15	Taylor Place	Sondhi, Kiran & Ratan	0.10	0.00	0.00	0.00	0.00	0.10	Less than 0.8 acre	0.00
10	5	4	16	Taylor Place	Tucker, Charles Jr.	0.10	0.00	0.00	0.00	0.00	0.10	Less than 0.8 acre	0.00
11	5	4	17	Taylor Place	Albert, Harold & Gloria	0.10	0.00	0.00	0.00	0.00	0.10	Less than 0.8 acre	0.00
12	5	4	18	Taylor Place	Arnold, Gary & Reilly, Genevieve	0.10	0.00	0.00	0.00	0.00	0.10	Less than 0.8 acre	0.00
13	5	4	19	Taylor Place	Reed, Ronald & Betty	0.10	0.00	0.00	0.00	0.00	0.10	Less than 0.8 acre	0.00
14	5	4	20	Taylor Place	Clark, Sherman L. Jr. & Shirley	0.10	0.00	0.00	0.00	0.00	0.10	Less than 0.8 acre	0.00
15	5	5	1	Taylor Place	Taylor, Geraldine & Edward	0.08	0.00	0.00	0.00	0.00	0.08	Less than 0.8 acre	0.00
16	5	5	12	Mill Street	Jenks, Timothy & Gina Marie	0.11	0.11	0.00	0.00	0.00	0.00	Less than 0.8 acre	0.00
17	5	5	14	Mill Street	Johnson, William	0.11	0.02	0.00	0.00	0.00	0.09	Less than 0.8 acre	0.00
18	5	6	4	Mill Street	Jarvis, George & Sheryl Lynn	0.23	0.23	0.00	0.00	0.00	0.00	Less than 0.8 acre	0.00
19	5	6	7	Maxwell Road	Johnson, William C.	0.17	0.16	0.00	0.00	0.00	0.01	Less than 0.8 acre	0.00
20	5	11	2	Maxwell Road	JCP&L Co. Real Estate Dept.	0.76	0.76	0.00	0.00	0.00	0.00	Less than 0.8 acre	0.00
21	8	11.02	2	Maxwell Road	UNKNOWN	0.45	0.00	0.00	0.00	0.00	0.45	Less than 0.8 acre	0.00
22	5	12	21	Lewis Street	Boral, James & Chasey, Arthur	0.15	0.00	0.00	0.00	0.00	0.15	Less than 0.8 acre	0.00
23	5	12	22	Lewis Street	Corcione Construction Co.	0.15	0.00	0.00	0.00	0.00	0.15	Less than 0.8 acre	0.00
24	5	12	23, 24	Lewis Street	Smock, Edward	0.26	0.02	0.00	0.00	0.00	0.24	Less than 0.8 acre	0.00
25	5	13	10	23 Throckmorth Ave.	Huntting, William E. & Nancy	0.18	0.00	0.00	0.00	0.00	0.18	Less than 0.8 acre	0.00
26	5	13	17	Throckmorth Ave.	Husselman, John	0.35	0.03	0.00	0.00	0.00	0.32	Less than 0.8 acre	0.00
27	5	14	10	Throckmorth Ave.	Nappen Family Trust	0.10	0.00	0.00	0.00	0.00	0.10	Less than 0.8 acre	0.00
28	6	16	15	Throckmorth Ave.	JCP&L Co. Real Estate Dept.	1.17	0.11	0.17	0.00	0.00	0.89	Less than 0.8 acre	0.00
29	7	23	9-13	61 Villa Place	Christensen, Carl & Patricia	0.27	0.00	0.00	0.00	0.00	0.27	Less than 0.8 acre	0.00
30	7	23	14	61 Villa Place	Christensen, Carl & Patricia	0.86	0.00	0.00	0.00	0.00	0.86	Less than 0.8 acre	0.00
31	7	27	14	37 Park Avenue	Royh, Ray D. & Seena F.	0.14	0.00	0.00	0.00	0.00	0.14	Less than 0.8 acre	0.00
32	7	31	8	Park Avenue	Forgach, Peter & Patricia	0.21	0.00	0.00	0.00	0.00	0.21	Less than 0.8 acre	0.00
33	7	33	22	Watson Place	Schlitsey, Paul & Laurette	0.07	0.00	0.00	0.00	0.00	0.07	Less than 0.8 acre	0.00
34	6	35	1.03	Highway 35	Lenhow Estates, Inc.	1.70	1.65	0.00	0.00	0.00	0.05	Approved site plan	0.00
35	5	35	4, 5	14-16 Broad Street	RMJ Real Estate, LLC	0.29	0.00	0.00	0.00	0.00	0.29	Less than 0.8 acre	0.00
36	6	35	9	Rear Broad Street	Daley, Angela	0.49	0.37	0.00	0.00	0.00	0.12	Approved site plan	0.00
37	6	35	11	Broad Street	Squillare Family Trust	0.18	0.13	0.00	0.00	0.00	0.05	Less than 0.8 acre	0.00
38	8	54	3	Lewis Street	Nannini, James	2.23	0.24	0.00	0.00	0.00	1.99	Construction Yard	0.00
39	9	54	5, 6, 7	Pinebrook Road	Nannini, Mary	1.35	0.12	0.00	0.00	0.00	1.23	Construction Yard	0.00
40	12	54	8.02	Pinebrook Road	J & A Properties of NJ, LLC	18.10	14.69	0.00	0.00	0.00	3.41	Wetlands, Railroad Yard	0.00
41	9	55	11	Maple Ave. & Lewis	JRF Associates, LLC	1.25	0.99	0.00	0.00	0.00	0.26	Less than 0.8 acre	0.00
42	9	55	18	Maple Avenue	Ceballos, Thomas J.	0.04	0.00	0.00	0.00	0.00	0.04	Less than 0.8 acre	0.00
43	9	55	18.01	120 Maple Avenue	Dowen, Charles & Charlotte	0.02	0.00	0.00	0.00	0.00	0.02	Less than 0.8 acre	0.00
44	9	56	11.01	High Street	Fields, Gregory & Daphne	0.17	0.00	0.00	0.00	0.00	0.17	Less than 0.8 acre	0.00
45	9	56	12.03	High Street	Corcione Construction Co.	0.17	0.00	0.00	0.00	0.00	0.17	Less than 0.8 acre	0.00

VACANT LAND INVENTORY 2002

BOROUGH OF EATONTOWN, NEW JERSEY

Site Identification							Area Exclusions as per N.J.A.C. 5:93-4.2(e)						Net Developable Acres
							Environmentally Sensitive						
Site ID No.	Tax Map Sheet #	Block	Lot	Location	Owner	Site Area (acres)	Wet Areas *Sec. 4.2(e)2*	Floodplain *Sec. 4.2(e)2*	Steep Slopes *Sec. 4.2(e)2*	Conserv. & Open Space *Sec.4.2(e)5*	Remaining Area	Exclusion Codes & Remarks	
46	9	57	34	South Street	Thetford, Norman D & Meda	0.16	0.00	0.00	0.00	0.00	0.16	Less than 0.8 acre	0.00
47	9	60	15 & 16	29 Buttonwood Ave.	Londo, Dorothy M.	0.54	0.00	0.00	0.00	0.00	0.54	Less than 0.8 acre	0.00
48	9	61	3	Grant Avenue	Wood, Alma	0.49	0.00	0.00	0.00	0.00	0.49	Residential Subdivision	0.00
49	9	61	4	Alexandria Court	MMC Development, LLC	2.09	0.00	0.00	0.00	0.00	2.09	Residential Subdivision	0.00
50	9	61	9	42 Buttonwood Ave.	McMillian, Michael & Catherine	0.25	0.00	0.00	0.00	0.00	0.25	Less than 0.8 acre	0.00
51	14	64	3	136 Highway 35	136 Eaton Associates	4.00	0.42	0.00	0.00	0.00	3.58	Incompatible land uses	0.00
52	9	64	7	Highway 35	Outdoor Systems, Inc.	0.32	0.00	0.00	0.00	0.00	0.32	Less than 0.8 acre	0.00
53	9	64	8	Highway 35	R.K. and K.S. Realty, LLC	0.23	0.00	0.00	0.00	0.00	0.23	Less than 0.8 acre	0.00
54	9	64	26	South Street	The Bendix Corporation	0.22	0.11	0.00	0.00	0.00	0.11	Less than 0.8 acre	0.00
55	9	64	26.02, 26.03, 26.04	South Street	Chasey, Arthur Jr.	2.94	0.49	0.00	0.00	0.00	2.45	Constrained (flood plain)	0.00
56	13	64	32	375 South St.	Goose Properties, LLC	2.04	1.54	0.00	0.00	0.00	0.50	Approved site plan	0.00
57	10	66	21.01	23 Kramer Avenue	Hoffman, Lisa N.	0.68	0.00	0.00	0.00	0.00	0.68	No Access	0.00
58	9	66.01	23	Hwy. 35 Rear	Muzetska, Joseph & Barbara	0.24	0.23	0.00	0.00	0.00	0.01	Less than 0.8 acre	0.00
59	10	69	22.02	Hwy. 35 Rear	UNKNOWN	0.12	0.00	0.00	0.00	0.00	0.12	No Access	0.00
60	10	69	33, 33.01	Conifer Crest/ Beverly Ave.	R.J. Grasso Jr., Inc.	1.97	1.59	0.00	0.00	0.00	0.38	Approved subdivision	0.00
61	14	69	34	125 Highway 35	Monmouth Plaza Enterprises, LLC	1.02	0.05	0.00	0.00	0.00	0.97	Part of Shopping Center	0.00
62	10	72	3	90 Wyckoff Road	Gifford, Frank & Marilyn	0.34	0.00	0.00	0.00	0.00	0.34	No Access	0.00
63	11	82	3.01	Monmouth Road	Long Branch County Club	0.34	0.00	0.00	0.00	0.00	0.34	No Access	0.00
64	15	82/92.13	10/19	Route 36	Old Orchard Country Club Associates	106.56	4.60	1.59	0.00	0.00	100.37	none	100.37
65	13	83	8	Ryers Place	Hamilton, Elijah & Viola	0.14	0.00	0.00	0.00	0.00	0.14	Developed (single family home)	0.00
66	13	83	10	Grant Avenue	Jones, Dana & Mary Margaret	0.07	0.00	0.00	0.00	0.00	0.07	Less than 0.8 acre	0.00
67	13	84	2	Grant Avenue	Nash, Mary & Bhola, Durwantie	0.04	0.00	0.00	0.00	0.00	0.04	Less than 0.8 acre	0.00
68	13	84	4	Grant Avenue	Eatontown Associates	0.07	0.00	0.00	0.00	0.00	0.07	Less than 0.8 acre	0.00
69	13	84	5	Grant Avenue	Eatontown Associates	0.11	0.00	0.00	0.00	0.00	0.11	Less than 0.8 acre	0.00
70	13	84	6	Grant Avenue	Eatontown Associates	0.03	0.00	0.00	0.00	0.00	0.03	Less than 0.8 acre	0.00
71	13	84	8	Grant Avenue	Taylor, Sherman	0.20	0.00	0.00	0.00	0.00	0.20	Less than 0.8 acre	0.00
72	13	84	11	Grant Avenue	UNKNOWN, c/o H. Morris	0.17	0.13	0.00	0.00	0.00	0.04	Less than 0.8 acre	0.00
73	13	84	12	Grant Avenue	Shewmake, James	0.17	0.02	0.00	0.00	0.00	0.16	Less than 0.8 acre	0.00
74	13	84	13	Grant Avenue	Taylor, Ella c/o Wm. Morris	0.17	0.10	0.00	0.00	0.00	0.07	Less than 0.8 acre	0.00
75	13	84	14 -17	Grant Avenue	Shewmake, James	0.22	0.12	0.00	0.00	0.00	0.10	Less than 0.8 acre	0.00
76	13	84	18	Grant Avenue	Taylor, Elwood & Lottie E.	0.10	0.04	0.00	0.00	0.00	0.06	Less than 0.8 acre	0.00
77	13	84	33, 34	Victor Place	UNKNOWN, c/o Edward Smock	0.28	0.00	0.00	0.00	0.00	0.28	Less than 0.8 acre	0.00
78	13	84	39	Victor Place	Honeycutt, Donald & Joann	0.15	0.00	0.00	0.00	0.00	0.15	Less than 0.8 acre	0.00
79	13	84	50.02	Richardson Avenue	UNKNOWN	0.05	0.00	0.00	0.00	0.00	0.05	Less than 0.8 acre	0.00
80	13	84	62	Church Street	Grompone, Marie	0.09	0.00	0.00	0.00	0.00	0.09	Less than 0.8 acre	0.00
81	13	84	66	Church Street	Sharma, Kanwal & Samriti	0.18	0.00	0.00	0.00	0.00	0.18	Less than 0.8 acre	0.00
82	13	87	3	Laurel Place	Commerce Bank/Shore N.A.	0.13	0.04	0.00	0.00	0.00	0.09	Developed (Bank)	0.00
83	13	87	4	Wyckoff Road	Commerce Bank/Shore N.A.	0.87	0.21	0.00	0.00	0.00	0.66	Developed (Bank)	0.00
84	13	87.01	1.41	Ginger Court	Whalepond Development, L.P.	7.97	4.81	0.00	0.00	0.00	3.16	Parking lot for condominiums	0.00
85	14	92	20	Highway 36	John Schmelz Properties	10.00	1.91	0.00	0.00	0.00	8.09	Vehicle storage (car dealership)	10.00
86	14	92.01	12.01, 12.02	Brookwood Drive	Ziv Associates, LLC	0.42	0.00	0.10	0.00	0.00	0.32	Shape/Less than 0.8 acre	0.00
87	14	92.04	53	Malibu Drive	Brookwood Homeowners Assoc.	3.61	2.68	0.40	0.00	0.00	0.53	Homeowners Assoc./OS	0.00
88	14	92.05	39	Malibu Drive	Brookwood Homeowners Assoc.	2.98	2.89	0.02	0.00	0.00	0.07	Homeowners Assoc./OS	0.00
89	14	92.06	13	Brookwood Drive	Brookwood Homeowners Assoc.	0.50	0.00	0.19	0.00	0.00	0.31	Homeowners Assoc.	0.00

VACANT LAND INVENTORY 2002

BOROUGH OF EATONTOWN, NEW JERSEY

Site Identification							Area Exclusions as per N.J.A.C. 5:93-4.2(e)						
							Environmentally Sensitive						
Site ID No.	Tax Map Sheet #	Block	Lot	Location	Owner	Site Area (acres)	Wet Areas *Sec. 4.2(e)2*	Floodplain *Sec. 4.2(e)2*	Steep Slopes *Sec. 4.2(e)2*	Conserv. & Open Space *Sec.4.2(e)5*	Remaining Area	Exclusion Codes & Remarks	Net Developable Acres
90	14	92.07	23 & 24	Brookwood Drive	Brookwood Homeowners Assoc.	1.20	0.00	0.00	0.00	0.00	1.20	Homeowners Assoc.	0.00
91	14	92.08	23	Brookwood Drive	Brookwood Homeowners Assoc.	1.04	0.00	0.00	0.00	0.00	1.04	Homeowners Assoc.	0.00
92	14	92.08	34	Brookwood Drive	Brookwood Homeowners Assoc.	1.60	0.00	0.00	0.00	0.00	1.60	Homeowners Assoc.	0.00
93	14	92.09	33	Route 36	Brookwood Homeowners Assoc.	1.00	0.00	0.00	0.00	0.00	1.00	Homeowners Assoc.	0.00
94	14	92.11	33	Malibu Drive	Brookwood Homeowners Assoc.	0.08	0.00	0.00	0.00	0.00	0.08	Homeowners Assoc.	0.00
95	14	92.12	33	Malibu Drive	Brookwood Homeowners Assoc.	2.78	0.57	0.49	0.00	0.00	1.72	Homeowners Assoc.	0.00
96	10	92.13	18	Reynolds Drive	Scavone, Michael & Marjorie	1.59	0.00	0.00	0.00	0.00	1.59	Developed (single family home)	0.00
97	25	93	9 & 10	Wyckoff Road	Ruiz, Antonia c/o Morris, W. H.	0.18	0.07	0.04	0.00	0.00	0.07	Less than 0.8 acre	0.00
98	25	93	11-19	Wyckoff Road	Brazee, Cheryl a.	0.18	0.09	0.02	0.00	0.00	0.08	Less than 0.8 acre	0.00
99	16	93	30.12	Hope Road	Philipbosian, George Et Als	8.10	0.00	0.00	0.00	0.00	8.10	No Access	0.00
100 (NF)	16	93	31	Hope Road Rear	UNKNOWN	0.11	0.00	0.00	0.00	0.00	0.11	Less than 0.8 acre	0.00
101	20	93	30.08	Hope Road	95 Hope Road, LLC	1.55	1.55	0.00	0.00	0.00	0.00	Wetlands	0.00
102	20	93	30.17	Hope Road	95 Hope Road, LLC	0.97	0.97	0.00	0.00	0.00	0.00	Wetlands	0.00
103	20	93.05	1	Kingsley Court	Deepwood Estates Assoc. Inc.	0.92	0.69	0.00	0.00	0.00	0.23	Developed (single family home)	0.00
104	16	93.06	21	Notingham Drive	Deepwood Estates Assoc. Inc.	3.70	3.69	0.00	0.00	0.00	0.01	Drainage Basin	0.00
105	16	93.06	29.01	Highway 36	Deepwood Estates Assoc. Inc.	1.50	0.96	0.07	0.00	0.00	0.47	Less than 0.8 acre	0.00
106	13	94	1	147 Grant Ave.	Howard, Delores C.	0.10	0.00	0.00	0.00	0.00	0.10	Less than 0.8 acre	0.00
107	17	94	4	Grant Avenue	Sodowick, George & Elizabeth	0.10	0.00	0.00	0.00	0.00	0.10	Less than 0.8 acre	0.00
108	17	98	12	Emma & Turner	Hayter, William & Olga	1.50	0.98	0.00	0.00	0.00	0.52	No Access	0.00
109	17	101	7 & 8	Wyckoff Road	Ocean Ventures	8.99	4.08	0.11	0.00	0.00	4.80	none	4.91
110	22	102	4	Highway 35 rear	35 Land Associates, LLC	3.60	3.28	0.00	0.00	0.00	0.32	Wetlands, No Access	0.00
111	21	102.01	4	Windsor Drive	JBL Enterprises	1.27	0.00	0.00	0.00	0.00	1.27	Drainage Basin	0.00
112	18	103	10	Highway 35	LGR Associates. Toys R Us	0.59	0.00	0.00	0.00	0.00	0.59	Parking lot	0.00
113	19	104/ 105	11.02/ 10	Parker Road	DCH Investments, Inc.	9.91	1.00	0.00	0.00	0.00	8.91	Lot 10 not suitable (incompatible land uses & wetlands)	6.81
114	15	105	8.01	Highway 36	RB-3 Associates Et Als	0.32	0.32	0.00	0.00	0.00	0.00	Home Depot driveway	0.00
115	19	107	3	Parker Road	Marangi, Dorothy	0.01	0.00	0.00	0.00	0.00	0.01	Less than 0.8 acre	0.00
116	19	107	4	Parker Road	Kahn, Walter & Susan	4.77	0.00	0.00	0.00	0.00	4.77	none	4.77
117	22	110	14-17	246 Highway 35	Etel Associates	0.80	0.00	0.00	0.00	0.00	0.80	Incompatible Land Use	0.00
118	22	110	18-19	230 Highway 35	Scialfa, Joseph	0.92	0.00	0.00	0.00	0.00	0.92	Incompatible Land Use	0.00
119	22	110	22-24	230 Highway 35	Scialfa, Joseph	1.05	0.00	0.00	0.00	0.00	1.05	Parking lot	0.00
120	22	111	37, 38	14 Eaton Road	Eaton Holdings, LLC	3.01	0.00	0.00	0.00	0.00	3.01	Developed (office building)	0.00
121	27	111	45.01	Meridian Way	550 Realty Corp.	4.00	0.00	0.00	0.00	0.00	4.00	Subdivision, Incomp. Land Uses	0.00
122	26	111	52.02	Industrial Way West	Townsend Property Trust LP	7.99	0.00	0.00	0.00	0.00	7.99	Developed (office building)	0.00
123	22	112	8-10	Eaton Road	Wobito, Rudy & Constance Et Al	0.17	0.00	0.00	0.00	0.00	0.17	Less than 0.8 acre	0.00
124	22	112	11, 12 & 13	Highway 35	Eatontown Management Corp.	0.17	0.00	0.00	0.00	0.00	0.17	Less than 0.8 acre	0.00
125	22	113	16-20	Highway 35	Eatontown Management Corp.	0.71	0.00	0.00	0.00	0.00	0.71	Less than 0.8 acre	0.00
126	23	113	27.01, 28	Wall Street	Tormee Company	4.42	0.00	0.00	0.00	0.00	4.42	none	4.42
127	22	114	2, 3, 5, & 6	Highway 35	ACS Assoc. 11 c/o Francis Bonello	9.61	0.00	0.00	0.00	0.00	9.61	Industrial Park - Incompatible land uses. A portion of site to be used for new road.	0.00
128	23	114	15.02	Industrial Way East	UNKNOWN	0.00	0.00	0.00	0.00	0.00	0.00	Industrial Park	0.00
129	23	116.04	1	Wall Street	Rozbern Estates Assoc. Inc., L. Wilf	1.14	0.00	0.00	0.00	0.00	1.14	Drainage Basin	0.00
130	23	117	9	Wall Street	Antonelli, Angelina	0.24	0.00	0.00	0.00	0.00	0.24	Less than 1 acre/SF Dev. NC	0.00
131	23	117	10	Wall Street	Vuocolo, Tosca F.	0.12	0.00	0.00	0.00	0.00	0.12	Less than 1 acre/SF Dev. NC	0.00

VACANT LAND INVENTORY 2002

BOROUGH OF EATONTOWN, NEW JERSEY

Site Identification							Area Exclusions as per N.J.A.C. 5:93-4.2(e)						Net Developable Acres
							Environmentally Sensitive						
Site ID No.	Tax Map Sheet #	Block	Lot	Location	Owner	Site Area (acres)	Wet Areas Sec. 4.2(e)2	Floodplain Sec. 4.2(e)2	Steep Slopes Sec. 4.2(e)2	Conserv. & Open Space Sec.4.2(e)5	Remaining Area	Exclusion Codes & Remarks	
132	23	117	11	412 Wall Street	Smith, Robert & Sally	0.20	0.00	0.00	0.00	0.00	0.20	Less than 0.8 acre	0.00
133	28	117	19.04	Old Deal Road	Canonico, Carmine & Elizabeth	0.66	0.00	0.00	0.00	0.00	0.66	Less than 1 acre/SF Dev. NC	0.00
134	24	118.03	13	Georgetown Drive	MBS Partners	0.40	0.00	0.00	0.00	0.00	0.40	Less than 0.8 acre	0.00
135	24	118.04	7.01	Wall Street Rear	MBS Partners	3.43	0.00	0.00	0.00	0.00	3.43	No Access	0.00
136	25	121	7, 8, 9	Paul Avenue	DiDonato, Anthony & Carolyn	0.43	0.00	0.00	0.00	0.00	0.43	Less than 0.8 acre	0.00
137	25	123	1	Cortland & Knox	Ciok, Robert & Peggy	0.11	0.00	0.00	0.00	0.00	0.11	Less than 0.8 acre	0.00
138	25	123	39	Paul Avenue	Barone, Dolores M c/o Fontana	0.11	0.00	0.00	0.00	0.00	0.11	Less than 0.8 acre	0.00
139	25	125.01	2	Wyckoff Road	Simon, Betty (Trustee)	1.97	0.39	0.00	0.00	0.00	1.58	Incompatible Land Use	0.00
140	25	125.01	8.01	Shark River Road	Romanowski, J & Lubcke, M.	0.10	0.00	0.00	0.00	0.00	0.10	Less than 0.8 acre	0.00
141	25	126	21 & 22	Paul Avenue	Mearizo, Susan	0.11	0.00	0.00	0.00	0.00	0.11	Less than 0.8 acre	0.00
142	25	127	22, 23 & 24	Shark River Road	Wills, Marianne	0.25	0.00	0.00	0.00	0.00	0.25	Less than 0.8 acre	0.00
143	25	127	36, 37 & 38	Shark River Road	Casteel, Franklin & Lorraine	0.17	0.00	0.00	0.00	0.00	0.17	Less than 0.8 acre	0.00
144	26	131	14 & 15	96 Hilbert Parkway	Lister, Michael & Dieu	0.17	0.00	0.00	0.00	0.00	0.17	Less than 0.8 acre	0.00
145	30	133	2	Shark River Road	Wolf, William	0.34	0.00	0.00	0.00	0.00	0.34	Less than 0.8 acre	0.00
146	30	133	5	Industrial Way West	UNKNOWN	0.71	0.00	0.00	0.00	0.00	0.71	Less than 0.8 acre	0.00
147	27.01	134	1	Industrial Way West	Donato, John Jr.	1.78	0.96	0.16	0.00	0.00	0.66	Drainage Basin	0.00
148	27.01	134	6.10	Corbett Way	Corbett Holdings, LLC	1.42	0.64	0.32	0.00	0.00	0.45	Less than 0.8 acre	0.00
149	27.01	134	6.12	Corbett Way	80 Corbett Way, LLC	5.49	0.73	0.00	0.00	0.00	4.76	Developed	0.00
150	27.01	134	6.13	James Way	Benchmark Associates, LLC	1.50	0.00	0.00	0.00	0.00	1.50	Incompatible Land Use	0.00
151	27.01	134	6.15, 6.16, 6.17	James Way	John Donato, Jr., c/o Midlantic	4.22	0.59	0.31	0.00	0.00	3.33	Approved application	0.00
152	27.01	134	6.22, 6.23, 6.24	Corbett Way/ James Way	John Donato, Jr., c/o Midlantic	3.74	0.00	0.00	0.00	0.00	3.74	Incompatible Land Use	0.00
153	28	135	2	Old Deal Road	Lubrano, Robert	2.32	0.00	0.00	0.00	0.00	2.32	Irregular lot shape/ Shallow lot depth/ Inadequate Access/ Cul-de-sac	0.00
154	28	135/136.01	3/1	Old Deal Road	Hain Family Limited Partnership	9.77	0.00	0.00	0.00	0.00	9.77	Court Approved Settlement	9.77
155	28	135	6.05	Industrial Way West	550 Realty Corp	7.05	3.41	1.58	0.00	0.00	2.06	Approved site plan	0.00
156	28	135	6.11	Christopher Way	Donato Hi-Tech Holdings LLC	6.60	0.00	0.00	0.00	0.00	6.60	Developed (office building)	0.00
157	28	135.01	6.021	Highway 35 & Ind. Way E.	Laurel Assoc. c/o Genesis Health	3.81	1.74	0.00	0.00	0.00	2.07	Incompatible Land Use. Wetlands constraints.	0
158	28	136.02	2	Old Deal Road	Wartmann, Neil & Traversa	1.00	0.00	0.00	0.00	0.00	1.00	Developed (single family home)	0.00
159	26	146	27	Rear Grant Avenue	Westwood Oaks, Inc.	3.43	0.00	0.00	0.00	0.00	3.43	Drainage Basin	0.00
160	22	147	29	Grant Avenue	Muzetska, Joseph & Barbara	0.17	0.00	0.00	0.00	0.00	0.17	Less than 0.8 acre	0.00
161	21	147	48	Rear Weston Place	Westwood Oaks, Inc.	5.78	0.00	0.00	0.00	0.00	5.78	No Access	0.00
162	22	111	2.01	Highway 35	Lackland Holding Co. LLC	19.70	0.84	6.99	0.44	0.00	11.43	Incompatible Land Uses & on-site flooding conditions (see Suitability Report)	0.00
						391.01	81.21	16.31	0.44	0.00	293.05		140.85

EXCLUSIONS:

A) Wet - NJ Freshwater Wetlands	C) Other:	1. Inadequate / No Access	3. Incompatible Land Use	5. Lot Size (lots 0.8 acre or less)
B) Floodplain/ Flood Hazard Area		2. Public Utilities/ Easements	4. Shape of Lot	6. OS - Dedicated open space

Prepared by: T & M Associates

July 25, 2002

VACANT LAND INVENTORY 2002: FARM QUALIFIED PROPERTIES

BOROUGH OF EATONTOWN, NEW JERSEY

Site Identification							Area Exclusions as per N.J.A.C. 5:93-4.2(e)						
							Environmentally Sensitive						
Site ID No.	Tax Map Sheet #	Block	Lot	Location	Owner	Site Area (acres)	Wet Areas *Sec. 4.2(e)2*	Floodplain *Sec. 4.2(e)2*	Steep Slopes *Sec. 4.2(e)2*	Conserv. & Open Space *Sec.4.2(e)5*	Total Not Suitable	Exclusion Codes & Remarks	Net Developable Acres
F-1	9	63	5	Highway 35	Frangella, M. c/o Eatontown TV	4.85	1.51	2.02	0.00	0.00	3.53	Incompatible Land Uses & Flooding	0.00
F-2	11	82	6.01	101 Monmouth Road	Schmitt, J	3.53	1.02	0.10	0.00	0.00	1.12	No Access	0.00
F-3	17	94	2	144 Grant Ave.	Rose, Stella	5.70	1.83	0.00	0.00	0.00	1.83	To be Acquired for Open Space	0.00
F-4	17	99	2	144 Grant Ave.	Rose, Stella	5.59	1.94	0.00	0.00	0.00	1.94	To be Acquired for Open Space	0.00
F-5	28, 29	136	1, 2.01, 3.01	325 Old Deal Road	Regan, John & Ruth	8.52	0.00	0.00	0.00	0.00	0.00	Inadequate Access/ Cul-de-sac	0.00
						28.19	6.30	2.12	0.00	0.00	8.42		0.00

EXCLUSIONS:

A) Wet - NJ Freshwater Wetlands
B) Floodplain/ Flood Hazard Area
C) Other:
1. Inadequate / No Access
2. Public Utilities/ Easements
3. Incompatible Land Use
4. Shape of Lot
5. Lot Size (lots 0.8 acre or less)
6. OS - Dedicated open space

Prepared by: T & M Associates
July 25, 2002

VACANT LAND INVENTORY 2002: SUMMARY TABLE

BOROUGH OF EATONTOWN, NEW JERSEY

Site Identification					Area Exclusions as per N.J.A.C. 5:93-4.2(e)					Net Developable Acres	Density (Units per Acre)	Total Units	Set Aside	RDP
					Environmentally Sensitive			Conserv. & Open Space	Total Constraints					
Site ID No.	Block	Lot	Location	Site Area (acres)	Wet Areas *Sec. 4.2(e)2*	Floodplain *Sec. 4.2(e)2*	Steep Slopes *Sec. 4.2(e)2*	*Sec.4.2(e)5*	(acres)					
64	82/92.13	10/19	Route 36	106.56	4.60	1.59	0.00	0.00	6.19	100.37	6.0	602	20%	120
85	92	20	Highway 36	10.00	1.91	0.00	0.00	0.00	1.91	8.09	6.0	49	20%	10
109	101	7 & 8	Wyckoff Road	8.99	4.08	0.11	0.00	0.00	4.19	4.80	6.0	29	20%	6
113	104	11.02/ 10	Parker Road	6.61	0.00	0.00	0.00	0.00	0.00	6.61	6.0	40	20%	8
116	107	4	Parker Road	4.77	0.00	0.00	0.00	0.00	0.00	4.77	6.0	29	20%	6
126	113	27.01, 28	Wall Street	4.42	0.00	0.00	0.00	0.00	0.00	4.42	6.0	27	20%	5
154*	135/136.01	3/1	Old Deal Road	9.77	0.00	0.00	0.00	0.00	0.00	9.77	3.2	31	20%	6
				151.12	10.59	1.70	0.00	0.00	12.29	138.83		806		161

* = As per court approved settlement

EXCLUSIONS:

A) Wet - NJ Freshwater Wetlands
B) Floodplain/ Flood Hazard Area
C) Other:
1. Inadequate / No Access
2. Public Utilities/ Easements
3. Incompatible Land Use
4. Shape of Lot
5. Lot Size (lots 0.8 acre or less)
6. OS - Dedicated open space

Prepared by: T & M Associates

July 25, 2002

APPENDIX C

Public Lands Table

VACANT LAND INVENTORY: PUBLIC LANDS
BOROUGH OF EATONTOWN, NEW JERSEY

Site Identification								
Site ID No.	Tax Map Sheet #	Block	Lot	Location	Area Name (if known)	Site Area (acres)	ROSI Status	Comments
P-1	5	4	1, 2, 21, 22	Tinton Avenue	Maxwell Street Playground	0.42	Unfunded	Active Recreation
P-2	5	4	10-13	Tinton Avenue	Borough of Eatontown	0.41		Vacant (isolated small lot)
P-3	5	6	10, 11	Maxwell Road	Borough of Eatontown	1.00		Pumping Station (Sewerage Authority)
P-4	8	6	13	Maxwell Road	Borough of Eatontown	0.25		Floodplain, Wetlands
P-5	5	8	6, 7	Highway 35	Wampum Lake Park	18.18	Funded	Passive Recreation
	5	10	1-19	Highway 35				
	5	10.01	1	Highway 35				
	5	11	5.04, 5.05	West Street				
	5	12	26	Lewis Street				
P-6	5	11	3	Highway 35	Borough of Eatontown	0.05		Part of Wampum Lake Park (Not on ROSI)
	5	11	4	Highway 35	Borough of Eatontown	0.07		
	5	11	5.01	West Street	Borough of Eatontown	0.39		
P-7	5	12	8	Lewis Street	Borough of Eatontown	0.15		Wampum Lake Park (Parking & Driveway)
P-8	9	12	32	Lewis Street	Borough of Eatontown	0.60		Parking Lot for Public Works
P-9	5	13	2.01, 11	Throckmorton Avenue	Borough of Eatontown	2.03		Municipal Parking Lot & Cell Tower Site
P-10	5	14	3.01, 12-16	Throckmorton Avenue	Borough of Eatontown	1.59		Parking Lot
	6	14	17, 18	Broad Street	Borough of Eatontown	0.56		Borough Hall
	5	14	19	Broad Street	Borough of Eatontown	0.31		Fire House
	5	14	20, 21	Broad Street	Borough of Eatontown	0.43		Library
P-11	6	15	19	Broad Street	Borough of Eatontown	0.31		Museum
P-12	7	27	1, 2	Park Avenue	Borough of Eatontown	0.14		Vacant (isolated small lot)
P-13	7	30	15, 16, 17, 18.01	Main Street	Bullwinkle Park	0.20	Unfunded	Active Recreation
P-14	6	36	2, 3	Broad Street	Borough of Eatontown	0.74		Community Center Annex
P-15	6	37	1, 20-31, 34-44	Byrnes Lane	Bliss Price Arboretum	57.82	Unfunded	Passive Recreation
	6	39	9-20, 27-30	Cloverdale Avenue				
	6	40	1-3, 18-33	La Fetra Avenue				
	6	41	1, 2, 5-11	Cliftwood Avenue				
	6	42	1-17	Cliftwood Avenue				
	6	43	1-14	Cliftwood Avenue				
	6	71	1	Wyckoff Road				
P-16	6	43	46 (incl. 47)	Broad Street	Borough of Eatontown	0.11		Floodplain
P-17	9	54	2	Lewis Street	Borough of Eatontown	0.60		Floodplain, Wetlands

VACANT LAND INVENTORY: PUBLIC LANDS
BOROUGH OF EATONTOWN, NEW JERSEY

Site Identification								
Site ID No.	Tax Map Sheet #	Block	Lot	Location	Area Name (if known)	Site Area (acres)	ROSI Status	Comments
P-18	9	55	8.01	Pinebrook Road	Borough of Eatontown	0.15		Access to Public Works & Bus Garage
P-19	9	57	22, 23, 36, 53, 54, 72, 74	Lewis Street	Wolcott Park	16.67	Funded	Active Recreation
P-20	5	57.01	3	Hwy. 35 cutoff	Borough of Eatontown	0.57		Parking Lot
P-21	9	59	1	Maple/Clinton/Locust	Borough of Eatontown	0.18		Municipal Open Space (not on ROSI)
P-22	9	65	6	Highway 35	Borough of Eatontown	0.03		Floodplain
P-23	10	67.01	14	Appleby Street	Borough of Eatontown	0.58		Detention Basin
P-24	10	73	38	Wyckoff Road	Meadowbrook Park	1.97	Unfunded	Active Recreation
P-25	13	83	2	Victor Place	Borough of Eatontown	0.15		Home for Senior Citizen with Life Rights
P-26	13	84	20.01	Grant Avenue	Borough of Eatontown	0.02		Vacant (isolated small lot)
P-27	13	84	57	South Street	Borough of Eatontown	0.15		Floodplain
P-28	14	91	2	South Street	Borough of Eatontown	1.09		Cemetery
P-29	25	93	32	Route 18	Borough of Eatontown	3.17		Vacant (wet, lack of access)
P-30	16	93.06	21	Nottingham Drive	Deepwood Park	3.07	Unfunded	Tot Lot (detention basin, pumping station)
P-31	17	99.01	13	Jeryl & Emma	Borough of Eatontown	1.50		Stream & Detention Basins
P-32	18	103	3.11	Russell Terrace	Borough of Eatontown	0.52		Detention Basin
P-33	19 19	106 106.01	1 1-3	Parker Road	80 Acre Park	85.58	Funded	Active Recreation
P-34	26	111	51	Fieldstone Court	Borough of Eatontown	2.62		Vacant - To be dedicated for open space
P-35	22	113	40.10	Judy Road	Borough of Eatontown	0.28		Detention Basin
P-36	23	114	22	Highway 35	Borough of Eatontown	0.50		Vacant (cell tower application)
P-37	20 25	119 120	1-5 1	Hilbert Parkway Walter Avenue	Borough of Eatontown Borough of Eatontown	0.33 0.10		Vacant (isolated small lot)

TOTAL ACREAGE	205.56
ACTIVE RECREATION	107.91
CONSERVATION, PARKLANDS & OPEN SPACE	76.00
TOTAL ROSI SITES (ACRES)	183.91

APPENDIX D

Public Lands Maps

P-3 Public Land Parcel (as per tax assessment records)

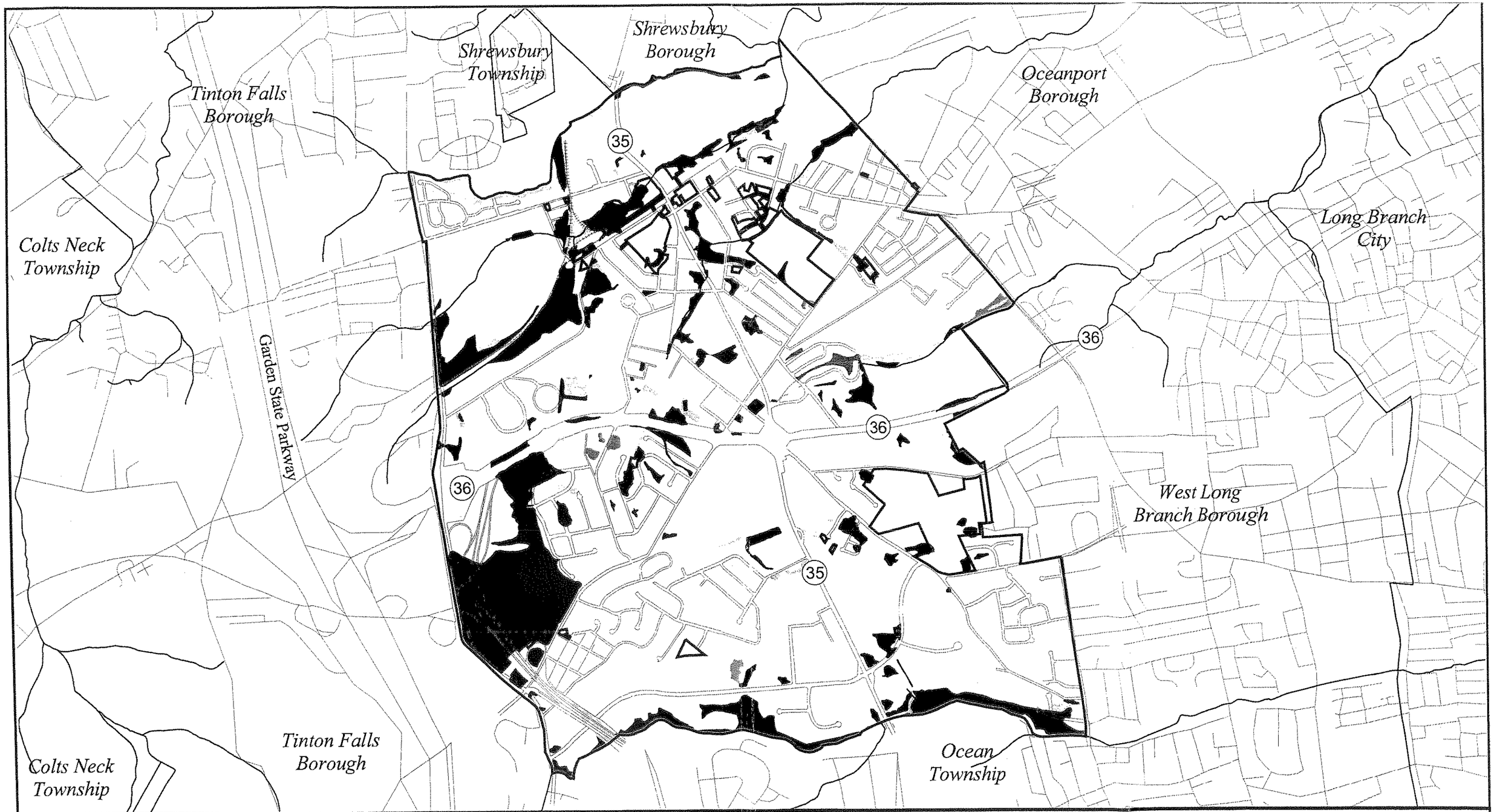
PUBLIC LAND INVENTORY
BOROUGH OF EATONTOWN

Monmouth County, New Jersey

Scale in Feet
0 500 1000 1500 2000

Prepared by: T & M Associates June 17, 2002.

T&M ASSOCIATES



T&M ASSOCIATES

1000 0 1000 2000 Feet

This map was developed using NJDEP GIS digital data, but this secondary product has not been verified by NJDEP and is not State-authorized.

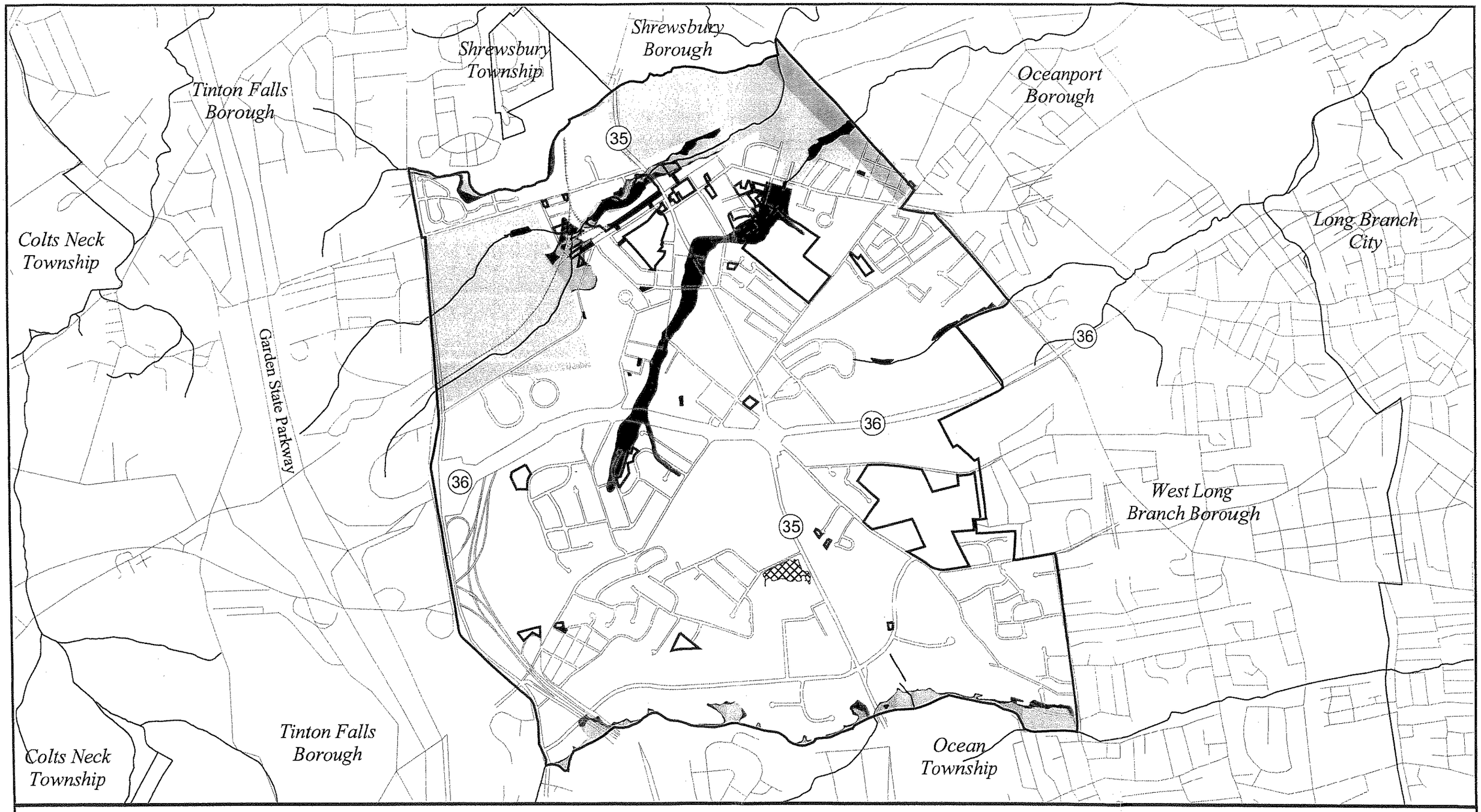
- Agricultural Wetlands
- Deciduous Wooded Wetlands
- Deciduous Shrub-Scrub Wetlands
- Herbaceous Wetlands
- Disturbed Wetlands (Modified)
- Managed Wetlands (Modified)
- Wetland Rights-of-Way (Modified)
- Open Water
- Streams
- Municipal Parcels
- Roadways
- Municipal Boundaries

N

Municipal Properties: Wetlands
Borough of Eatontown
Monmouth County, NJ

Prepared by: T & M Associates, June 25, 2002.

Source: NJDEP Freshwater Wetlands, 1995.



TM ASSOCIATES

1000 0 1000 2000 Feet

This map was developed using NJDEP GIS digital data, but this secondary product has not been verified by NJDEP and is not State-authorized.

N

- Floodprone Areas (100-year flood)
- Floodprone Areas (500-year flood)
- Non- Floodprone Areas
- Undetermined
- Not Mapped
- Lakes
- Streams
- Municipal Parcels
- Roadways
- Municipal Boundaries
- On Site Flood Hazard Delineation

Municipal Properties: Floodprone Areas
Borough of Eatontown
Monmouth County, NJ

Prepared by: T & M Associates, June 25, 2002.
Source: FEMA Flood Insurance Rate Map Data, 1996.

APPENDIX E

Aerial Photos of Sites Contributing to the RDP

Sites 64 & 85
Vacant Land Inventory

N

TM ASSOCIATES

200 0 200 400 Feet

Undocumented Floodprone Areas

Freshwater Wetlands

2' Contours

FEMA Boundary

Site Boundary

Municipal Boundary

This map was developed using NJDEP Projection GIS digital data, but this secondary product has not been verified by the NJDEP and is not state-authorized.
This map was developed, in part, using Monmouth County Geographic System Program digital data, but this secondary product has not been verified by MCGIS and is not warranted by the County.

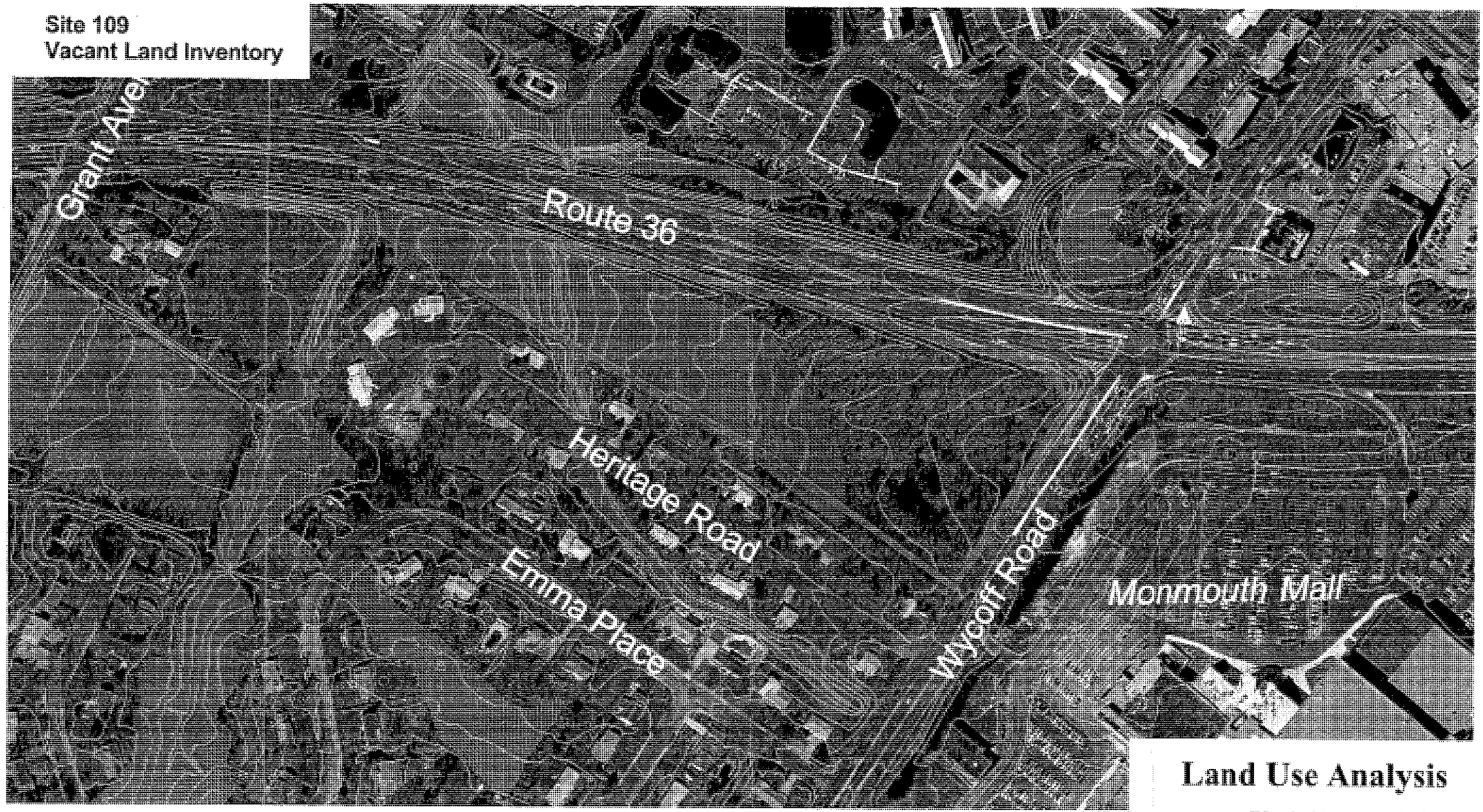
Land Use Analysis

Block 82, Lot 10 and Block 92.13, Lot 19;
Block 92, Lot 20

Old Orchard Country Club Associates &
John Schmeltz Properties

Borough of Eatontown
Monmouth County, NJ

Site 109
Vacant Land Inventory



N

TM ASSOCIATES

100 0 100 200 Feet

Undocumented Floodprone Areas

Freshwater Wetlands

2' Contours

Water Bodies

Streams

FEMA Boundary

Site Boundary

Municipal Boundary

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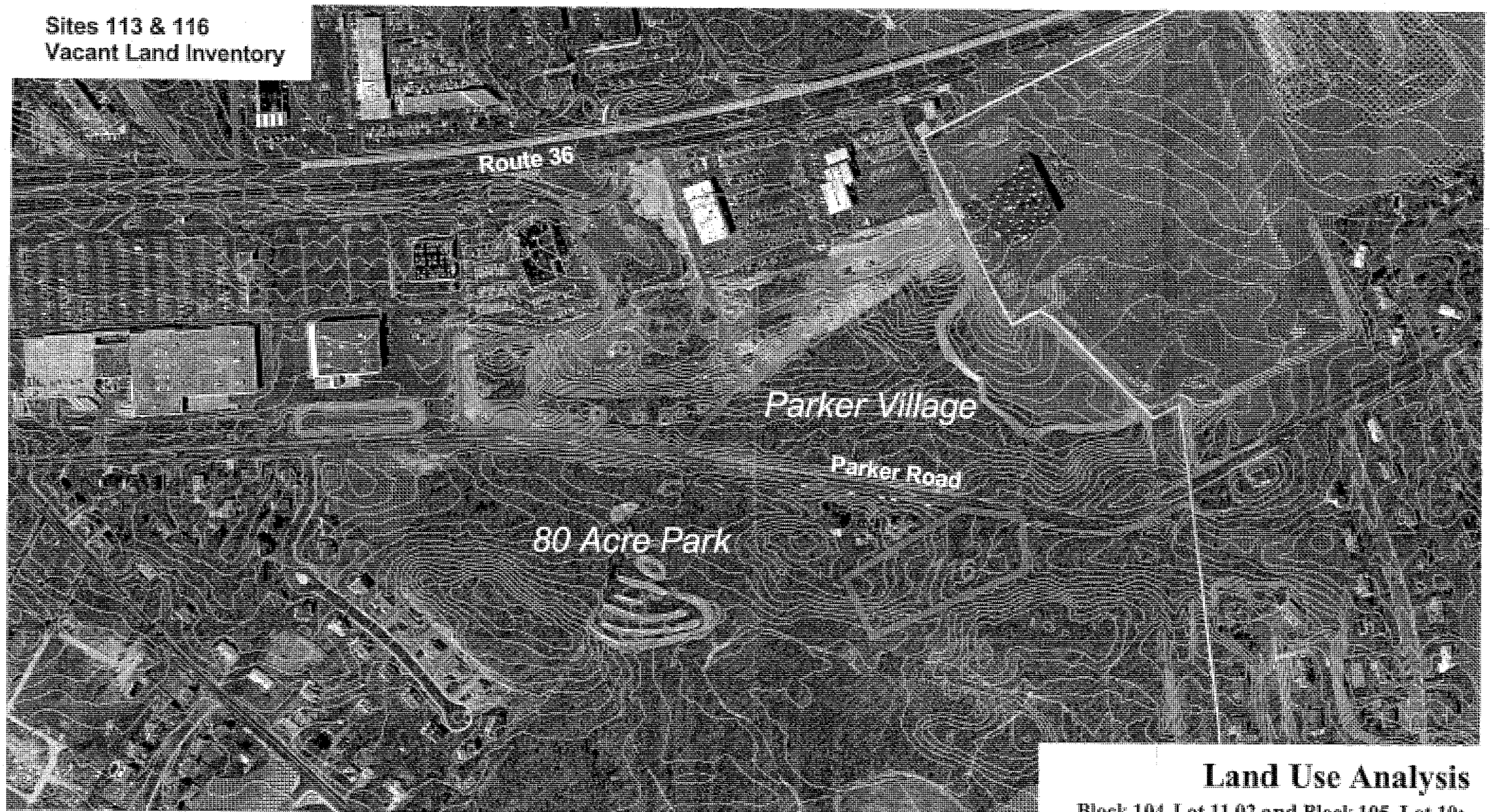
Land Use Analysis

Block 101, Lots 7 & 8

Ocean Ventures Property

Borough of Eatontown
Monmouth County, NJ

Sites 113 & 116
Vacant Land Inventory



N

TM ASSOCIATES

100 0 100 200 Feet

Undocumented Floodprone Areas

Freshwater Wetlands

2' Contours

Water Bodies

Streams

FEMA Boundary

Site Boundary

Municipal Boundary

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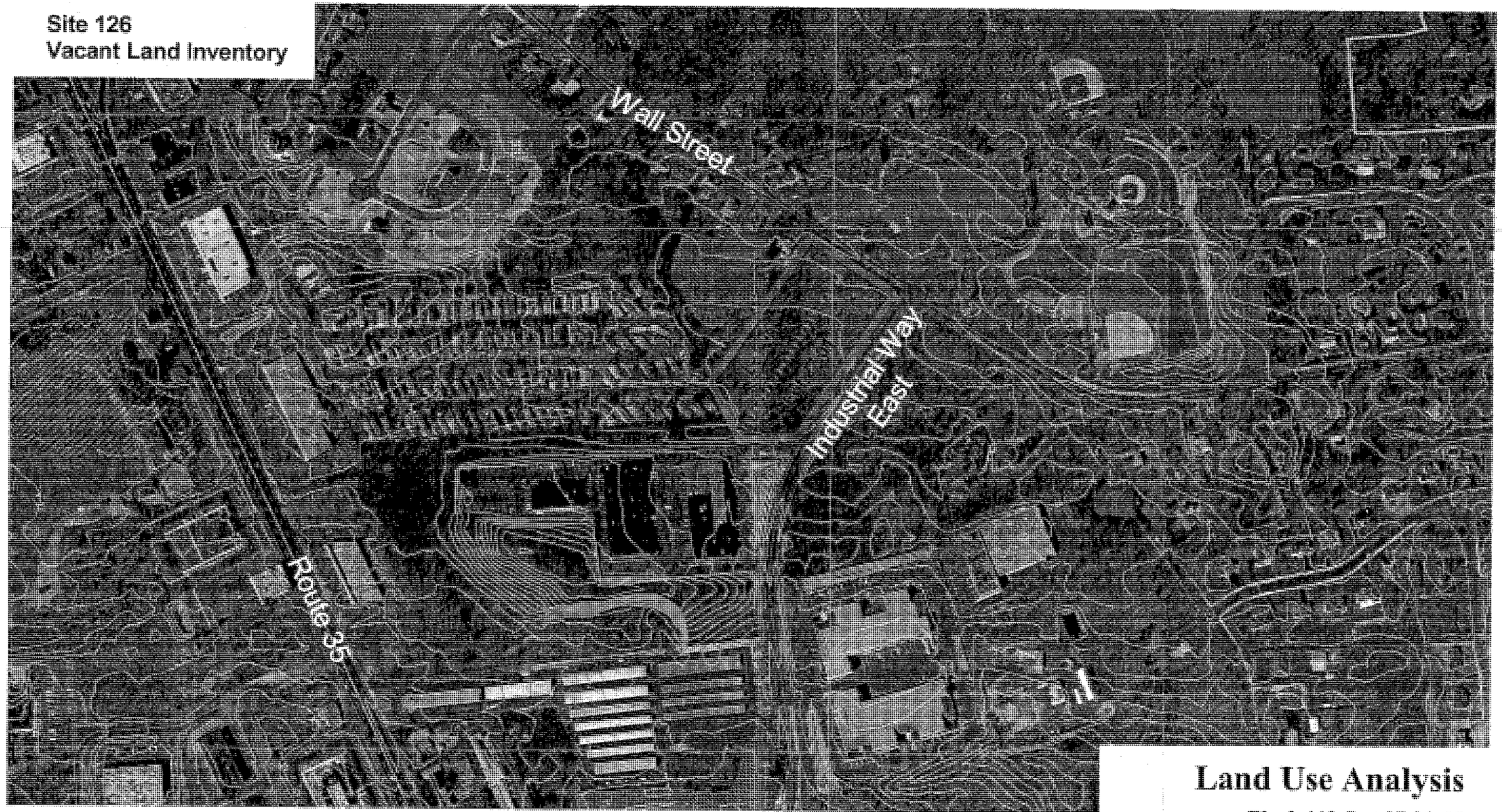
Land Use Analysis

Block 104, Lot 11.02 and Block 105, Lot 10;
Block 107, Lot 4

DCH Investments Inc. &
Kahn, Walter and Susan

Borough of Eatontown
Monmouth County, NJ

Site 126
Vacant Land Inventory



N

TM ASSOCIATES

200 0 200 400 Feet

Undocumented Floodprone Areas
Freshwater Wetlands
2' Contours
Water Bodies
Streams
Other Flood Prone Areas
FEMA Boundary
Property Boundary
Municipal Boundary

Land Use Analysis

Block 113, Lot 27.01, 28

Tormee Company

Borough of Eatontown
Monmouth County, NJ

This map was developed using NJDEP Projection GIS digital data, but this secondary product has not been verified by the NJDEP and is not state-authorized.
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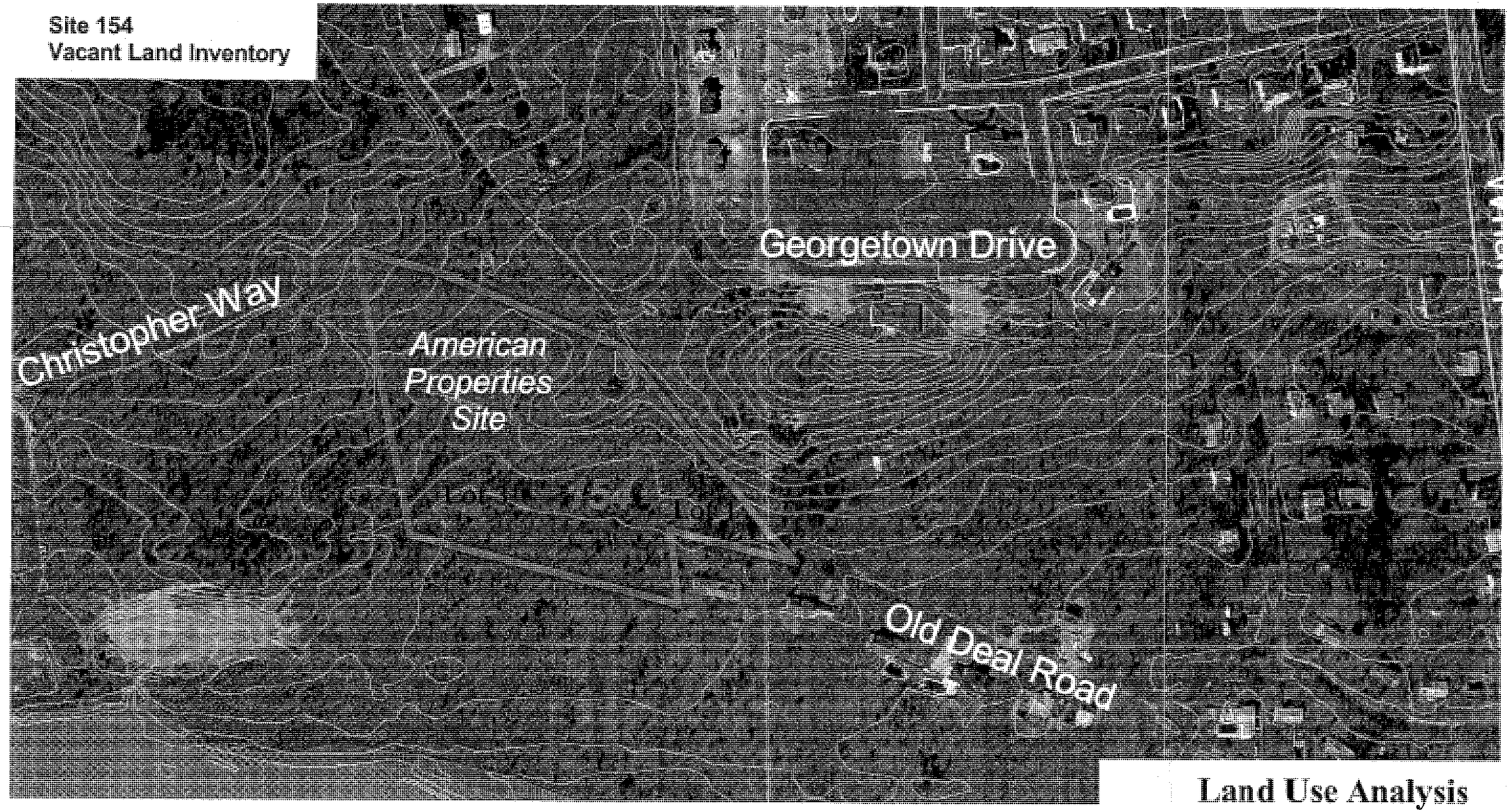
Site 154
Vacant Land Inventory



N

TM ASSOCIATES

200 0 200 400 Feet

Undocumented Floodprone Areas

Freshwater Wetlands

2' Contours

Water Bodies

Streams

FEMA Boundary

Site Boundary

Municipal Boundary

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Land Use Analysis

Block 135, Lot 3 and
Block 136.01, Lot 1

Regan, John & Ruth

Borough of Eatontown
Monmouth County, NJ