

18. MANCHESTER TOWNSHIP

Component of the Ocean County Wastewater Management Plan
Replacing All Previously Adopted Wastewater Management Plans

Submitted By

The Ocean County Board of Chosen Freeholders | January 8, 2015

Approved By

The New Jersey Department of Environmental Protection | December 30, 2015

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I. Overview of Municipality

The Township of Manchester was incorporated in 1865, and is located in the northwestern section of Ocean County. It is bordered by Jackson and Plumsted Townships to the north, Burlington County to the west, Lacey and Berkeley Townships to the south, and Toms River Township to the east. Manchester also completely surrounds Lakehurst Borough, which is situated in the northeastern portion of the Township.

With a total land area of 82.50 square miles, Manchester is the third largest municipality in the County. 38,589.97 acres, or 73.15% of the Township, is within the Pinelands Comprehensive Management Plan Area. Beginning at Manchester's municipal boundary with Berkeley Township, the boundary of the Pinelands follows a westerly course along a utilities right-of-way. Near the intersection of Lacey Road and Manchester Boulevard, the Pinelands boundary turns northeast and runs along a disused railroad right-of-way, passes through Lakehurst Borough, and ultimately crosses the Township's municipal boundary with Toms River Township in Manchester's northeast corner. The section of Manchester east of this boundary lies within the CAFRA region.

Of all Ocean County municipalities, Manchester is the location of the most age-restricted communities and the most age restricted housing units. Many of these communities—and much of Manchester's developed land—is found in the northern and eastern portions of the Township, outside of the Pinelands boundary. Much of the Township's undeveloped land is protected; this includes the Manchester Wildlife Management Area and the Brendan T. Byrne State Forest. Also, two large tracts of the Joint Base McGuire-Dix-Lakehurst are located within Manchester, in the northwestern corner of the Township and in the area just north of Lakehurst Borough.

In 2010, the U.S. Census documented a total population of 43,070 in Manchester Township. This Census also recorded 25,886 housing units, of which 3,046 were vacant, and of these, 789 were seasonal vacancies. As such, summer/winter population fluctuations are negligible. At present, the NJTPA projects that Manchester's population will grow to 53,678 by the year 2035, representing an increase of 19.76%. The Township's current wastewater conveyance infrastructure is able to accommodate this forecasted growth.

II. Environmental and Other Land Features

Map 1 depicts the environmental features that are required for determining future sewer service areas. In accordance with NJDEP policy, only existing development and vacant land that is not affected by regulated environmental constraints may be included in the sewer service area.

Manchester Township is largely forested, and these forested areas are interspersed with streams and low lying freshwater wetlands. Natural Heritage Priority Sites are located about several of these stream corridors, most notably in the southwest portion of the municipality. Bald eagle foraging grounds are also present in Manchester—in the western corner of the Township and to the south and west of Lakehurst Borough. Additionally, small tracts of preserved farmland can be found along the Township's western boundary with Burlington County.

Table 1 provides a breakdown of the Township's land area where further growth is constrained by environmental features. In accordance with NJDEP policy, the Township maintains a number of Ordinances intended to protect these environmentally sensitive features. Table 2 provides a listing of the municipal plans and ordinances required for consideration in designating sewer service areas in accordance with NJDEP policy. A more detailed description of the NJDEP policies governing the designation of sewer service areas is included in the County Document of this WMP.

Table 1: Environmental Features		
Environmental Feature	Acreage	Percent of Municipality
Wetlands	9,884.33	18.74%
Public Open Space/Recreational Areas	24,960.49	47.31%
Habitat T&E	40,963.02	77.65%
Natural Heritage Priority Sites	3,807.04	7.22%
Riparian Zones	2,247.10	4.26%
Preserved Agriculture	56.88	0.11%
Surface Water	459.30	0.87%

**Table 2: Status of Municipal Ordinances**

Ordinance	Code	Date Adopted
Zoning	Chapter 245, Article IV	5/22/1997
Master Plan		2010
Stormwater [County - MSWMP]	Chapter 365	6/13/2011 [3/31/2008]
Riparian Zone	N/A	N/A
Septic System Maintenance	N/A	N/A
Dry Conveyance	N/A	N/A
Septic Connections	Chapter 430, Article II	1996
Source: http://ecode360.com/MA0531		

III. Existing Infrastructure and Areas Served By Wastewater Facilities

Most existing development in Manchester is connected to the existing sewer system. Those areas which are presently not served by sewers include developments in the south and western portions of the Township. In the sewered regions, wastewater is collected through the Township's lateral lines, which connect to one of two OCUA interceptors. The first of these lines enters Manchester from Lakehurst Borough near the intersection of Routes 37 and 70, then proceeds in a roughly eastward course north of Huntington Drive and toward Pine Lake. This interceptor then turns southeast and follows the course of the Toms River into Toms River Township. The second interceptor originates in the Pine Ridge at Crestwood age-restricted community, travels due east for a short distance and crosses into Berkeley Township just north of Kingfisher Way. Wastewater in both of these interceptors is conveyed to OCUA's CWPCF in Berkeley Township. There are no lift or pump stations in the Township.

Existing Areas Served By Wastewater Facilities

Map 2 presents the areas actively served by existing wastewater facilities. "Sewered Areas" denotes that collection lines exist in the indicated areas and that these properties are either connected, or have all regulatory approvals necessary to be connected. Sewer service areas may include industrial businesses that discharge process and/or sanitary wastewater to the collection system for treatment by a facility not owned by that business.

Areas to Be Served By Wastewater Facilities

Map 3 presents the adopted sewer service area. There are 11,200.42 acres of developable land, of which 8,906.58 acres are zoned as residential, 539.73 acres are zoned as commercial, and 38.88 acres are as industrial. The remaining 1,715.23 acres are zoned for other uses.

Of the County's thirty-three municipalities, Manchester has experienced the most extensive changes in its sewer service area. A vast expanse of vacant land—bounded by Route 70 to the south, Lakehurst Borough to the east, and the Joint Base to the north and west—is the largest contiguous area in the County which has been removed from sewer service. Much of this area falls within the Manchester Wildlife Management Area, while the balance is privately owned. The County's largest contiguous area added to the sewer service area is also located in Manchester Township, and covers much of the Roosevelt City residential subdivision.

All development within the Pinelands Comprehensive Management Plan Area is under the jurisdiction of the Pinelands Commission. Local zoning is presented in Map 4, while Map 5 displays the boundaries of both the Pinelands and CAFRA. The Delta Map displays the changes to Manchester's sewer service area.

Septic Systems (Individual Subsurface Sewage Disposal Systems)

Nearly all of the developed and developable land in the Township is included in the designated sewer service area. The largest exception is Pine Lake Park; this development is to remain on septic. Much of the remaining land excluded from the sewer service area is either environmentally sensitive, lies within the Pinelands region, or lies within the CAFRA region. Although uncommon, smaller scale large lot developments are usually served by septic systems. Because Manchester is a non-urban municipality according to NJDEP standards, a nitrate dilution model analysis has been conducted (See Section V).



Existing Areas Served By Public Water Supply Facilities

Manchester's drinking water is derived from ten wells, seven which draw from the Kirkwood-Cohansey Aquifer, and three which draw from the Potomac-Raritan-Magothy Aquifer. The system is operated by the Manchester Township Water Utility, and is capable of pumping 10.830 MGD. Map 6 shows the Township's current potable water conveyance system. The area covered by blue cross-hatching denotes that distribution lines exist, and that these properties are either connected to the corresponding public water purveyor or have all regulatory approvals necessary to be connected with no further review.

IV. On-Site, Non-Industrial Wastewater Facility Tables

There are five developments located in the Township that are served by NJPDES permitted facilities with discharge to ground water greater than 2,000 GPD. The Facility Tables for these systems are provided in Tables 3 through 7:

Table 3: NJPDES - Cedar Glen Homes			
1. Existing or Proposed facility:		Existing	
2. NJPDES Permit Number:		NJG0136492	
3. Discharge Type:		Discharge to groundwater	
4. Receiving Water or Aquifer:		Kirkwood Formation	
5. Classification of Receiving Water:		N/A	
6. Owner of Facility:		Cedar Glen Homes, Inc.	
7. Operator of Facility:		Linda Steele, Albert Atchison	
8. Co-Permittee of Facility:		N/A	
9. Location of Facility:			
a. Municipality & County:		Manchester Township, Ocean County	
b. Street Address:		1848 Ridgeway Road	
c. Block(s) and Lot(s):		Block 2, Lot 43	
10. Location of discharge:			
a. Longitude:		74 deg. 14 min. 9.94 sec. west	
b. Latitude:		40 deg. 0 min. 16.68 sec. north	
11. Present Permitted Flow:		0.054 MGD	
12. Summary of Population Served:		Present (2010) Population Served	Build Out (2035) Population Served
Total		Approximately 1,000*	Approximately 1,000
13. Summary of Wastewater Flows:		Present (2010) Wastewater Flow	Build Out (2035) Wastewater Flow
Manchester Township	Residential	0.054 MGD**	0.054 MGD
	Commercial		
	Industrial		
	Inflow/Infiltration		
Total		0.054 MGD	0.054 MGD
*There are 552 units, which vary in occupancy, as per Linda Steele.			
**Estimate assumes 98% occupancy, with each unit using 100 gpd			

**Table 4: NJPDES - Cedar Glen West**

1. Existing or Proposed facility:		Existing	
2. NJPDES Permit Number:		NJG0136387	
3. Discharge Type:		Discharge to groundwater	
4. Receiving Water or Aquifer:		Kirkwood Formation	
5. Classification of Receiving Water:		N/A	
6. Owner of Facility:		Cedar Glen West, Inc.	
7. Operator of Facility:		Earl Sutton	
8. Co-Permittee of Facility:		N/A	
9. Location of Facility:			
a. Municipality & County:		Manchester Township, Ocean County	
b. Street Address:		Routes 571 & 547	
c. Block(s) and Lot(s):		Block 62, Lot 4	
10. Location of discharge:			
a. Longitude:		74 deg. 17 min. 38.87 sec. west	
b. Latitude:		40 deg. 2 min. 9.35 sec. north	
11. Present Permitted Flow:		0.165 MGD	
12. Summary of Population Served:		Present (2010) Population Served	Build Out (2035) Population Served
Total		Approximately 1,600*	Approximately 1,600
13. Summary of Wastewater Flows:		Present (2010) Wastewater Flow	Build Out (2035) Wastewater Flow
Manchester Township	Residential	0.165 MGD**	0.165 MGD
	Commercial		
	Industrial		
	Inflow/Infiltration		
Total		0.165 MGD	0.165 MGD
*There are 826 units, which vary in occupancy, as per Cedar Glen West, Inc.			
**Estimate assumes maximum occupancy, with each unit using 200 gpd			

Table 5: NJPDES - Manchester Village

1. Existing or Proposed facility:		Existing	
2. NJPDES Permit Number:		NJG0141933	
3. Discharge Type:		Discharge to groundwater	
4. Receiving Water or Aquifer:		Kirkwood Formation	
5. Classification of Receiving Water:		N/A	
6. Owner of Facility:		Beckerville Urban Renewal	
7. Operator of Facility:		Liz Orbin	
8. Co-Permittee of Facility:		N/A	
9. Location of Facility:			
a. Municipality & County:		Manchester Township, Ocean County	
b. Street Address:		202 Manor Drive	
c. Block(s) and Lot(s):		Block 79, Lot 31	
10. Location of discharge:			
a. Longitude:		74 deg. 22 min. 31.32 sec. west	
b. Latitude:		40 deg. 0 min. 1.72 sec. north	
11. Present Permitted Flow:		0.007 MGD	
12. Summary of Population Served:		Present (2010) Population Served	Build Out (2035) Population Served
Total		200*	200
13. Summary of Wastewater Flows:		Present (2010) Wastewater Flow	Build Out (2035) Wastewater Flow
Manchester Township	Residential	0.007 MGD**	0.007 MGD
	Commercial		
	Industrial		
	Inflow/Infiltration		
Total		0.007 MGD	0.007 MGD
*Estimate provided by Liz Orbin			
**Estimate assumes maximum occupancy of 56 units, each using 125 gpd			

**Table 6: NJPDES - Ridgeway Industrial Park**

1. Existing or Proposed facility:		Existing	
2. NJPDES Permit Number:		NJG0168181	
3. Discharge Type:		Discharge to groundwater	
4. Receiving Water or Aquifer:		Kirkwood Formation	
5. Classification of Receiving Water:		N/A	
6. Owner of Facility:		Ridgeway Industrial Park, LLC	
7. Operator of Facility:		N/A	
8. Co-Permittee of Facility:		N/A	
9. Location of Facility:			
a. Municipality & County:		Manchester Township, Ocean County	
b. Street Address:		3200 Ridgeway Boulevard	
c. Block(s) and Lot(s):		Block 72.01, Lot 14.01	
10. Location of discharge:			
a. Longitude:		74 deg. 18 min. 28.92 sec. west	
b. Latitude:		40 deg. 1 min. 3.84 sec. north	
11. Present Permitted Flow:		0.008 MGD	
12. Summary of Population Served:		Present (2010) Population Served	Build Out (2035) Population Served
Total		various	various
13. Summary of Wastewater Flows:		Present (2010) Wastewater Flow	Build Out (2035) Wastewater Flow
Manchester Township	Residential		
	Commercial		
	Industrial	0.008 MGD*	0.008 MGD
	Inflow/Infiltration		
Total		0.008 MGD	0.008 MGD
*Estimate based on approximately 70,000 square feet multiplied by 0.125 gpd			

*Estimate based on approximately 70,000 square feet multiplied by 0.125 gpd

Table 7: NJPDES - Ridgeway Manufactured Housing Community

1. Existing or Proposed facility:		Existing	
2. NJPDES Permit Number:		NJG0085014	
3. Discharge Type:		Discharge to groundwater	
4. Receiving Water or Aquifer:		Kirkwood Formation	
5. Classification of Receiving Water:		N/A	
6. Owner of Facility:		Garden Homes Management	
7. Operator of Facility:		Eva & John Hurley	
8. Co-Permittee of Facility:		N/A	
9. Location of Facility:			
a. Municipality & County:		Manchester Township, Ocean County	
b. Street Address:		3614 Ridgeway Road	
c. Block(s) and Lot(s):		Block 62, Lots 11, 12	
10. Location of discharge:			
a. Longitude:		74 deg. 17 min. 30.34 sec. west	
b. Latitude:		40 deg. 2 min. 7.18 sec. north	
11. Present Permitted Flow:		0.013 MGD	
12. Summary of Population Served:		Present (2010) Population Served	Build Out (2035) Population Served
Total		Approximately 200*	Approximately 200
13. Summary of Wastewater Flows:		Present (2010) Wastewater Flow	Build Out (2035) Wastewater Flow
Manchester Township	Residential	0.0128 MGD**	0.0128 MGD
	Commercial		
	Industrial		
	Inflow/Infiltration		
Total		0.0128 MGD	0.0128 MGD

*There are 128 units, which vary in occupancy, as per Garden Homes Management.

**Estimate assumes maximum occupancy, with each unit using 100 gpd



V. Future Wastewater and Water Demand

Municipal Zoning

Table 8: Summary of Zones

Zone Name	Zone Description	Municipal Area (ac)	Available Land (ac)
B-1	Business	20.51	6.16
BVR-40	Beckerville Village Single-Family Residential	170.53	75.52
FA-RAF	Forest Area - Receiving Area	283.16	253.54
FA-S	Forest Area - Sending Area	4818.75	1,769.03
HD-10	Highway Development - 10 acres	95.57	2.12
HD-3	Highway Development - 3 acres	273.22	189.82
HD-3A	Highway Development - 3 acres	39.40	22.17
LI	Light Industrial	463.11	0.00
MF	Multifamily	41.61	5.41
MP	Mobile Home Park	47.68	4.22
O-P	Office Professional	110.29	38.99
OR-LI	Office, Research, and Light Industrial	110.65	0.00
PB-1	Pinelands Business	90.38	61.16
PED-1	Pinelands Environmental Development	230.85	223.42
PED-9	Pinelands Environmental Development	142.19	135.70
PFA-R	Pinelands Forest Area - Receiving	1179.97	854.23
PFA-S	Pinelands Forest Area - Sending	7748.47	3,366.60
POR-LI	Pinelands Office, Research, and Light Industrial	87.40	38.88
PPA	Pinelands Preservation Area	17059.27	1,031.08
PR-15	Pinelands Residential - 15,000 square feet	116.22	28.41
PR-40	Pinelands Single-Family Residential	487.12	254.05
PRA	Pinelands Rural Agriculture	354.74	77.52
PRC-1	Pinelands Retirement Community	225.93	195.91
R-10	Residential - 10,000 square feet	1094.49	182.04
R-10A	Residential - 10,000 square feet	208.82	2.06
R-14	Residential - 14,000 square feet	29.25	3.12
R-14AF	Residential - 14,000 square feet	40.20	6.93
R-15	Residential - 15,000 square feet	215.87	50.63
R-15AF	Residential - 15,000 square feet	42.15	30.25
R-40	Residential - 40,000 square feet	575.02	226.65
R-A	Rural Agriculture	160.49	57.50
RC	Retirement Community	2971.60	112.03
RC-2	Retirement Community - 2	1012.95	748.51
RC-AF	Retirement Community	158.09	59.15
TC	Town Center	202.86	86.29
WTR-40	Whiting Town Residential - 40,000 square feet	1223.92	339.36
WTB-1	Whiting Town Business - 1 acre	73.04	18.93
WTHD	Whiting Town - Highway Development	83.10	39.76
WTO-P	Whiting Town - Office Professional	124.65	74.31
WTR-A	Whiting Town - Rural Agricultural	447.31	190.02
WTRC	Whiting Town - Retirement Community	1600.34	338.93

“Municipal Area” includes both developed and undeveloped parcels. “Available Land” parcels are those where no development exists and the land has not been restricted by regulation or dedicated open space or agricultural preservation programs.

Calculating Future Wastewater and Water Supply Needs and Capacity

Using the information provided above regarding existing wastewater and water supply facilities, sewer service area delineation, environmentally sensitive areas, and municipal zoning to formulate growth projections, an analysis of wastewater and water supply demands was performed to determine whether existing infrastructure capacity or zoning is the constraining factor. Where zoning is more restrictive than wastewater and water supply capacity and does not conflict with the environmentally sensitive areas, no



further action is needed. Where the demand projections exceed available wastewater treatment or water supply capacity, either the projections must be reduced (such as through a reduced sewer service area or reduction in zoning density) or capacity increased.

Table 9: Wastewater Flow Directed to OCUA Facilities	
CWPCF	
Source	(MGD)
Existing Flow	1.948
Projected Residential	1.123
Projected Commercial	0.328
Total Future Planning Flow	3.399

Municipal Demand Projections (Non-Urban)

Following NJDEP protocol for determining urbanized areas, Manchester Township was found to be non-urban. In non-urban municipalities, it is anticipated that development of vacant land will be the predominant factor in determining future wastewater treatment needs. Further, because external market and economic forces, such as interest rates, are a dominant factor in determining the rate of construction, this analysis assesses the ability to provide wastewater treatment while protecting surface and ground water quality for the entire projected build-out allowable by zoning.

Future Wastewater from Sewer Service Areas

In designated sewer service areas, the following features have been removed prior to the application of zoning to the undeveloped land area because they are unlikely to generate wastewater in the future: wetlands, riparian zones, permanently preserved farmland, permanently preserved open space, and cemeteries. The existing zoning is then applied to the remaining developable land area within the sewer service areas to project a build-out condition for use in estimating the future wastewater management needs of each sewer service area. The build-out data is then converted to a projected future wastewater flow by applying the planning flow criteria from N.J.A.C. 7:14A based on the type of development projected.

Table 10 provides a breakdown of the acreage of land available for development (i.e., either undeveloped or underdeveloped, and not constrained due to environmentally sensitive areas) by Planning Area, based on the build-out analysis.

Table 10: Additional Development at Build Out (Sewer)				
Planning Area	Developable Area (Acres)	Residential Area (Acres)	# of Units Residential	Commercial Area (Square Feet)
Central	2,629.39	2,183.91	3,743.28	17,396,919.11

Septic System Development within the Sewer Service Areas

Individual subsurface sewage disposal systems (ISSDS) for individual residences can only be constructed in depicted sewer service areas if legally enforceable guarantees are provided, before such construction, that use of such systems will be discontinued when the depicted sewer service becomes available. This applies to ISSDS that require certification from the Department under the Realty Improvement Sewerage and Facilities Act (N.J.S.A. 58:11-23) or individual Treatment Works Approval or New Jersey Pollutant Discharge Elimination System Permits (under N.J.A.C. 7:14A). It also applies to ISSDS which require only local approvals. Manchester Township has adopted municipal ordinance 89-388, which is applicable to septic connection (See Table 2).

Future Wastewater Outside of Sewer Service Areas

All lands not mapped within the sewer service area are designated as septic areas, and must demonstrate that the zoning meets the nitrate planning standard of 2 mg/L on a HUC11 basis. The total acreage available for future septic development was determined through GIS analysis by subtracting the sewer service area, developed parcels, NJPDES permitted sites, and all environmentally sensitive lands including critical habitat, wetlands, and riparian zones. The total new septic units allowable under current zoning regulations were then determined by applying each zoning district's density standards to the developable septic area



parcels. Commercial acreage was converted to units by first expressing acreage as square feet, then applying the following formula:

Formula: Calculating New Septic Non-Residential Units

$$\text{New Septic Non-Residential Units} = \frac{((\text{Square Feet}) \times (\text{Building Lot Coverage})) \times (0.125 \text{ Gallons/Day})}{500}$$

The results of this analysis, which are further broken out by HUC11, are as follows:

HUC 11	Residential Area (Acres)	# of Units Residential	Commercial Area (Acres)	# of Units Commercial	Total Acres	Total New Units
02040202020	73.42	22.94	0.00	0.00	73.42	22.94
02040202030	838.77	59.00	0.00	0.00	838.77	59.00
02040301060	87.82	9.76	0.00	0.00	87.82	9.76
02040301070	950.36	332.53	31.92	57.14	982.28	389.67
02040301080	422.52	294.37	73.44	143.96	495.96	438.33
02040301090	169.74	40.93	0.00	0.00	169.74	40.93
Totals	2,542.63	759.53	105.36	201.10	2,647.99	960.63

Nitrate Dilution Analysis

To determine the number of additional septic units each HUC11 can accommodate, the County utilized a nitrate dilution model developed by the NJDEP, which like the septic build out calculations, also involved GIS analysis. The nitrate dilution analysis was performed in similar fashion except that preserved land and publicly owned open space were included in the build-out analysis. This is due to the fact that while these areas will not be developed, they still contribute to the dilution of nitrate in groundwater. Factors such as marginal soils or topography for all lands were taken into consideration when calculating the maximum average density allowable.

This analysis used NJDEP's nitrate-nitrogen target of 2 mg/L, with the assumption that all ammonium and other nitrogen compounds are converted to nitrate within the property, and that the nitrate concentrations dilute evenly across the HUC11. These assumptions are implicit in the nitrate dilution model developed by the NJDEP. The results of the nitrate dilution analysis are shown in the following table:

HUC 11	Septic Density	Acres	New Units Nitrate Dilution	New Units Zoning
02040202020	5.2	174.35	33.53	22.94
02040202030	4.4	10,739.62	2,440.82	59.00
02040301060	4.6	149.86	32.58	9.76
02040301070	4.6	5,662.06	1,230.88	389.67
02040301080	4.9	4,399.95	897.95	438.33
02040301090	4.5	983.41	218.54	40.93

Public Water Supply Availability

Public water purveyance infrastructure is presently capable of providing potable water to the Township's residents in excess of daily, monthly, and yearly demands. Current infrastructure capacity will continue to prove sufficient in the foreseeable future.

**Table 13: Public Water Purveyor Capacity****Manchester Township Water Utility**

Daily (MGD)			Monthly (MGM)			Yearly (MGY)		
Capacity	Peak	Surplus	Capacity	Peak	Surplus	Capacity	Peak	Surplus
4.974	4.173	0.801	145.000	125.880	19.120	1,145.000	908.347	236.653

Manchester Township Water Utility – Lacey Road

Daily (MGD)			Monthly (MGM)			Yearly (MGY)		
Capacity	Peak	Surplus	Capacity	Peak	Surplus	Capacity	Peak	Surplus
N/A	0.070	N/A	10.474	2.176	8.298	82.762	20.724	62.038

Manchester Township Water Utility - Western

Daily (MGD)			Monthly (MGM)			Yearly (MGY)		
Capacity	Peak	Surplus	Capacity	Peak	Surplus	Capacity	Peak	Surplus
5.184	2.416	2.768	100.000	65.689	34.311	810.000	534.964	275.036

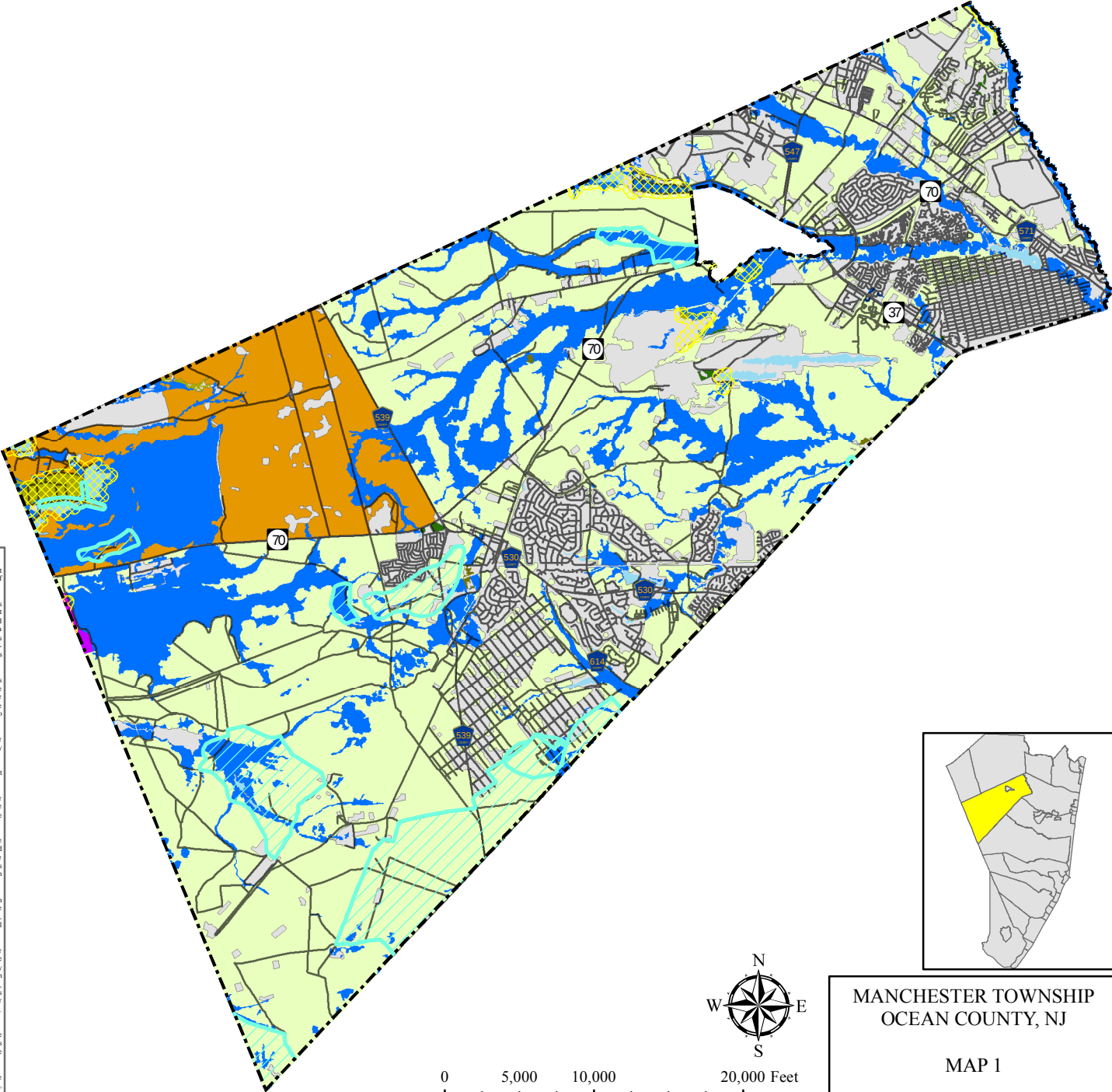
Source: NJDEP Division of Water Supply & Geoscience

VI. Mapping Requirements

Please see the following pages for all municipal mapping requirements.

Legend

- Natural Heritage Priority Sites
- Bald Eagle Foraging
- Roads
- Preserved Agriculture
- Emergent Wetlands (Rank 3)
- Emergent Wetlands (Rank 4)
- Wetlands
- Forest (Rank 3)
- Forest (Rank 4)
- Forest (Rank 5)
- Surface Water



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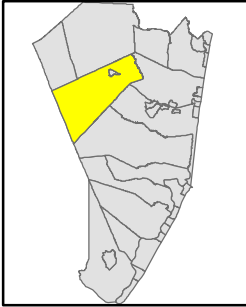
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0 5,000 10,000 20,000 Feet

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MANCHESTER TOWNSHIP
OCEAN COUNTY, NJ

MAP 1

ENVIRONMENTAL FEATURES

Prepared by: Ocean County Department of Planning, December 2012
Sources: New Jersey Department of Environmental Protection

Legend

- Interceptor
- Roads
- DGW/Sanitary Subsurface Disposal
- Public Open Space & Recreation Areas
- Surface Water
- Sewered Areas
- OCUA Central DSW (NJ0029408)

CEDAR GLEN HOMES	NJG0136492
CEDAR GLEN WEST	NJG0136387
MANCHESTER VILLAGE APARTMENTS	NJG0141933
RIDGEWAY INDUSTRIAL PARK	NJG0168181
RIDGEWAY MANUFACTURED HOUSING COMMUNITY	NJG0085014

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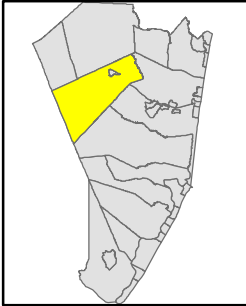
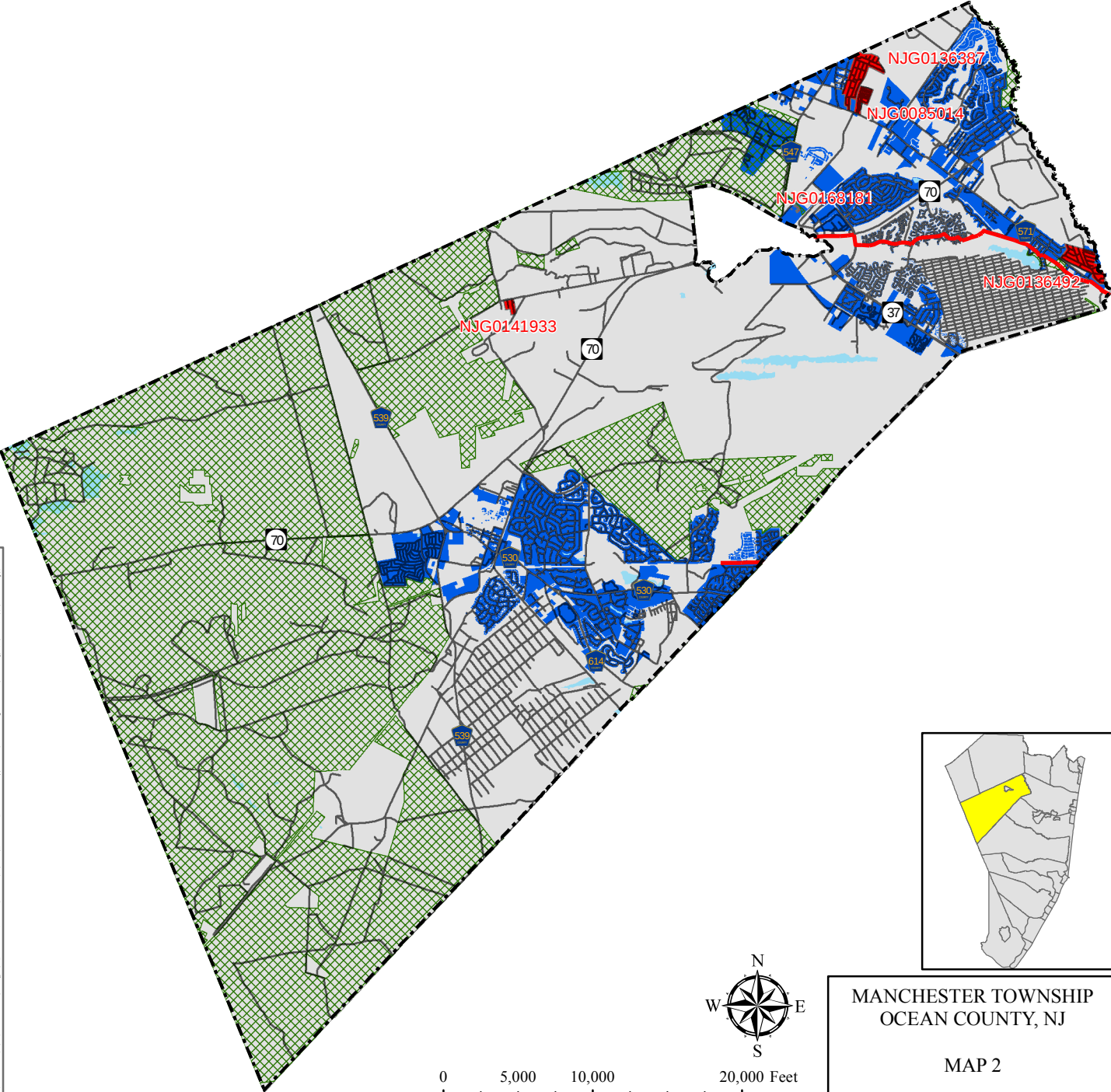
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0 5,000 10,000 20,000 Feet

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Prepared by: Ocean County Department of Planning, December 2012
Sources: New Jersey Department of Environmental Protection

MANCHESTER TOWNSHIP
OCEAN COUNTY, NJ
MAP 2
EXISTING SEWERED AREA

Legend

- HUC 11
- Interceptor
- Roads
- OCUA Central DSW (NJ0029408)
- DGW/Sanitary Subsurface Disposal
- Non Discharge Areas
- Undeveloped Parcels
- Public Open Space & Recreation Areas
- Surface Water

CEDAR GLEN HOMES	NJG0136492
CEDAR GLEN WEST	NJG0136387
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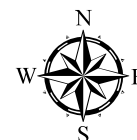
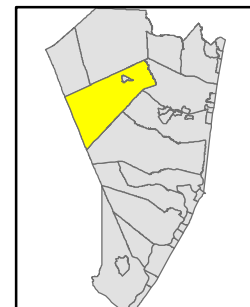
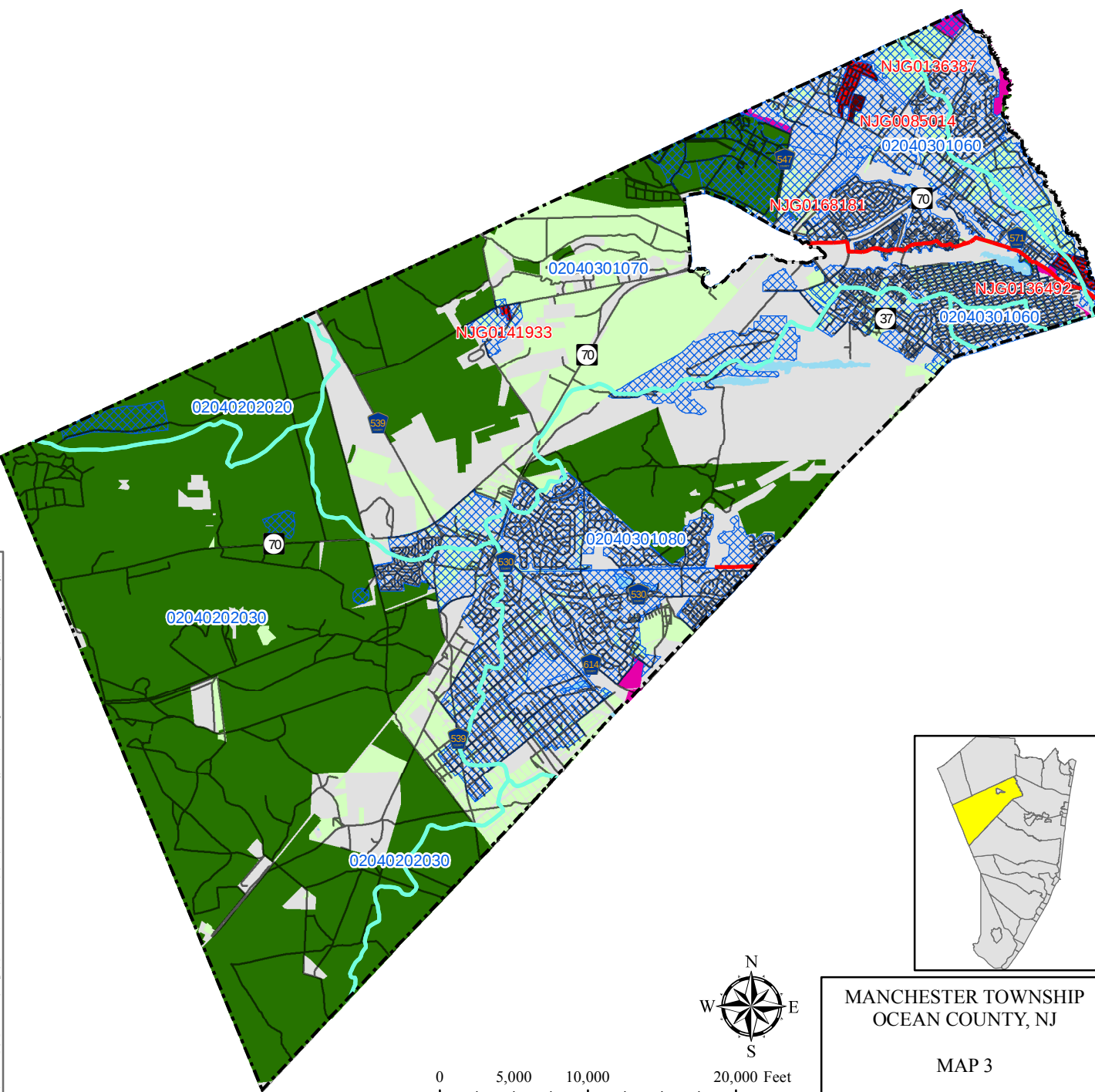
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Prepared by: Ocean County Department of Planning, December 2012
Sources: New Jersey Department of Environmental Protection

MANCHESTER TOWNSHIP
OCEAN COUNTY, NJ

MAP 3

ADOPTED SEWER SERVICE AREA

Legend

Federal Government	PR-40 (Pinelands Single-Family Residential)
B-1 (Business)	PRA (Pinelands Rural Agriculture)
BVR-40 (Beckerville Village Single-Family Residential)	PRC-1 (Pinelands Retirement Community)
FA-RAF (Forest Area - Receiving Area)	R-10 (Residential - 10,000 square feet)
FA-S (Forest Area - Sending Area)	R-10A (Residential - 10,000 square feet)
HD-10 (Highway Development - 10 acres)	R-14 (Residential - 14,000 square feet)
HD-3 (Highway Development - 3 acres)	R-14A (Residential - 14,000 square feet)
HD-3A (Highway Development - 3 acres)	R-15 (Residential - 15,000 square feet)
LI (Light Industrial)	R-15A (Residential - 15,000 square feet)
MF (Multifamily)	R-40 (Residential - 40,000 square feet)
MP (Mobile Home Park)	R-A (Rural Agriculture)
O-P (Office Professional)	RC (Retirement Community)
OR-LI (Office, Research, and Light Industrial)	RC-2 (Retirement Community - 2)
PB-1 (Pinelands Business)	RC-AF (Retirement Community)
PED-1 (Pinelands Environmental Development)	TC (Town Center)
PED-9 (Pinelands Environmental Development)	WTR-40 (Whiting Town Residential - 40,000 square feet)
PFA-R (Pinelands Forest Area - Receiving)	WTB-1 (Whiting Town Business - 1 acre)
PFA-S (Pinelands Forest Area - Sending)	WTHD (Whiting Town - Highway Development)
POR-LI (Pinelands Office, Research, and Light Industrial)	WTO-P (Whiting Town - Office Professional)
PPA (Pinelands Preservation Area)	WTR-A (Whiting Town - Rural Agricultural)
PR-15 (Pinelands Residential - 15,000 square feet)	WTRC (Whiting Town - Retirement Community)

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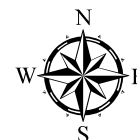
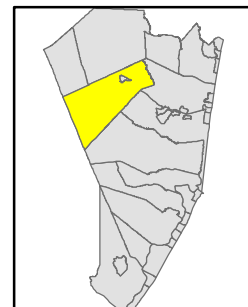
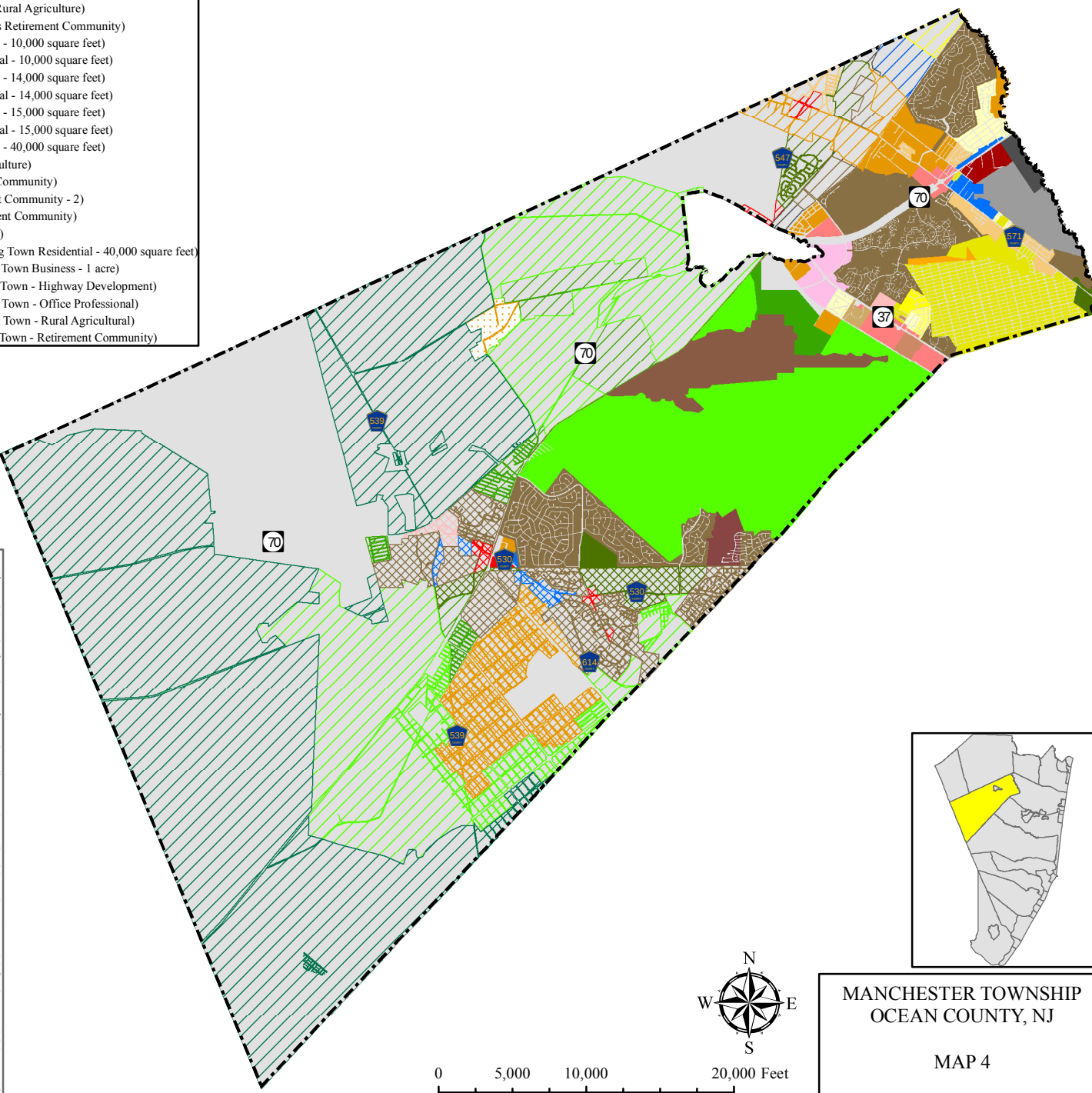
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Prepared by: Ocean County Department of Planning, December 2012
Sources: Township of Manchester; Ocean County Tax Board

MANCHESTER TOWNSHIP
OCEAN COUNTY, NJ

MAP 4

MUNICIPAL ZONING

Legend

-  Roads
-  CAFRA
-  Pinelands
-  Surface Water
-  OCUA Central Planning Area

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"Pre-existing grant conditions and requirements (from Federal and State grants or loans for sewerage facilities) which provide for restriction of sewer service to environmentally sensitive areas, are unaffected by adoption of this WMP and compliance is required. Please see municipal WMP Chapter for the existence of any applicable environmentally sensitive areas in which Federal 201 grant limitations prohibit the extension of sewer service."

"Individual subsurface sewage disposal systems (ISSDS) for individual residences can only be constructed in depicted sewer service areas if legally enforceable guarantees are provided, before such construction, that use of such systems will be discontinued when the depicted sewer service becomes available. This applies to ISSDS that require certification from the Department under the Realty Improvement Sewerage and Facilities Act (N.J.S.A. 58:11-23) or individual Treatment Works Approval or New Jersey Pollutant Discharge Elimination System Permit (under N.J.A.C. 7:14A). It also applies to ISSDS which require only local approvals. Compliance with the connection requirement has been demonstrated through the adoption of Township of Manchester municipal code Chapter 430, Article II."

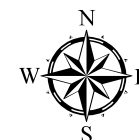
"Development in areas mapped as wetlands, flood prone areas, suitable habitat for endangered and threatened species as identified on the Department's Landscape Maps of Habitat for Endangered, Threatened and Other Priority Wildlife as Rank 3.4, and 5, Natural Heritage Priority Sites, riparian areas, steep slopes, or designated river areas may be subject to special regulations under Federal or State statutes or rules, and interested persons should check with the Department for the latest information. Depiction of environmental features shall be for general information purposes only, and shall not be construed to define the legal geographic jurisdiction of such statutes or rules."

"Areas located within the watershed of a Freshwater One (FW1) stream, as classified in the Surface Water Quality Standards, and/or that have Class I-A ground water (Ground Water of Special Ecological Significance), as classified in the Ground Water Quality Standards, are identified as "Non-degradation water area based on the Surface Water Quality Standards at N.J.A.C. 7:1B, and/or the Ground Water Quality Standards at N.J.A.C. 7:9-6". Where this requirement has been studied and reviewed as part of the WMP process this classification appears on Map #3. Non-degradation water areas shall be maintained in their natural state (set aside for posterity) and are subject to restrictions including, but not limited to, the following: 1) DEP will not approve any pollutant discharge to ground water nor approve any human activity which results in a degradation of natural quality except for the upgrade or continued operation of existing facilities serving existing development. For additional information please see the Surface Water Quality Standards at N.J.A.C. 7:9B, and/or the Ground Water Quality Standards at N.J.A.C. 7:9-6."

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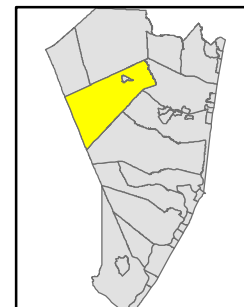
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Prepared by: Ocean County Department of Planning, December 2012
Sources: New Jersey Department of Environmental Protection



0 5,000 10,000 20,000 Feet

1 inch = 10,000 feet



MANCHESTER TOWNSHIP
OCEAN COUNTY, NJ

MAP 5

REGIONAL PLANNING AREA

Legend

- HUC 11
- Public Water Purveyors
- Roads
- Surface Water

PWSID	PURVEYOR NAME
1518005	MANCHESTER TOWNSHIP WATER UTILITY

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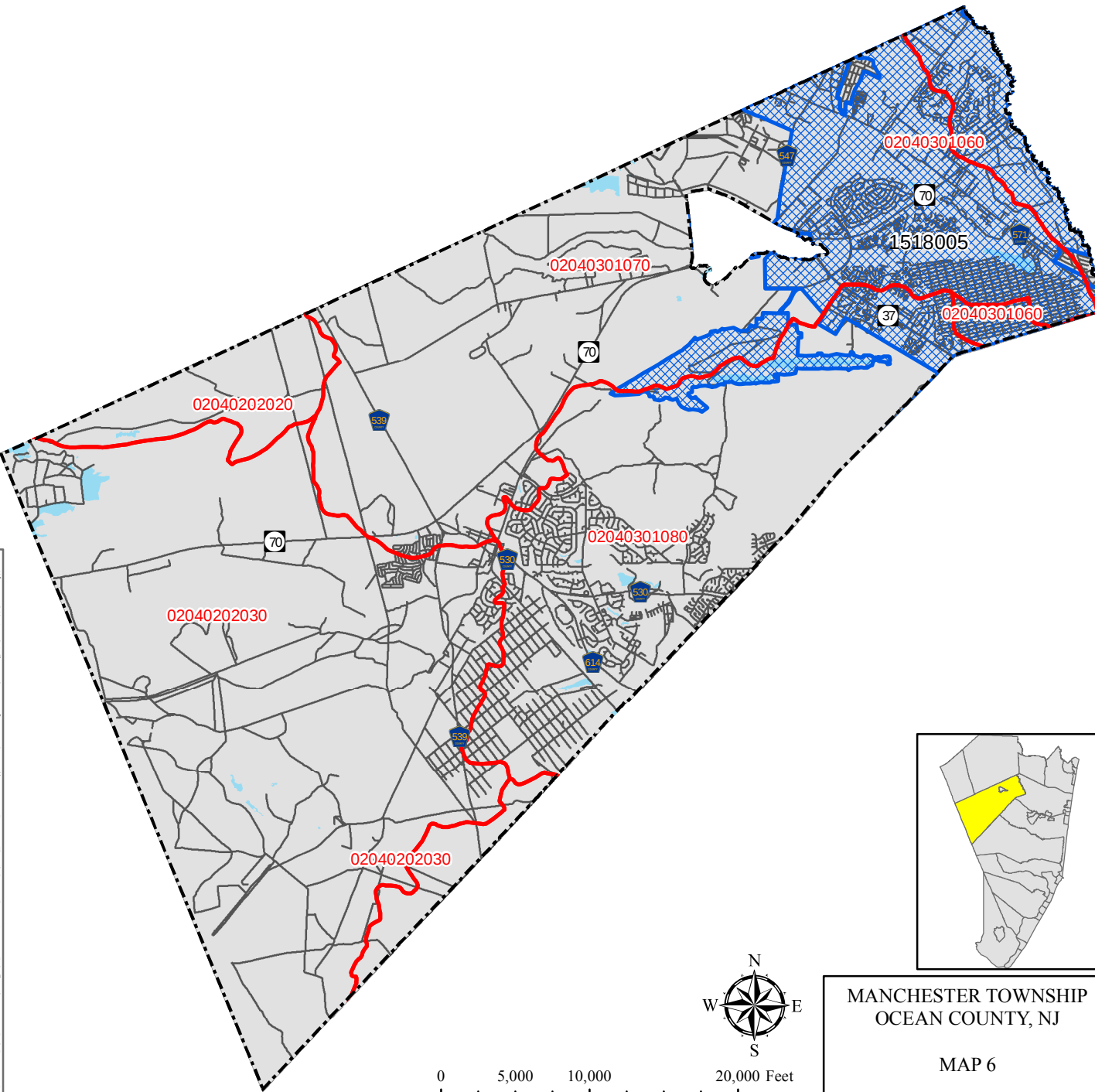
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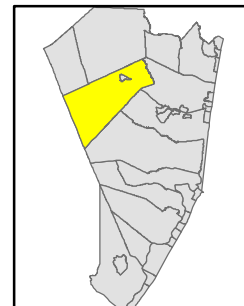
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Prepared by: Ocean County Department of Planning, December 2012
Sources: New Jersey Department of Environmental Protection



MANCHESTER TOWNSHIP
OCEAN COUNTY, NJ

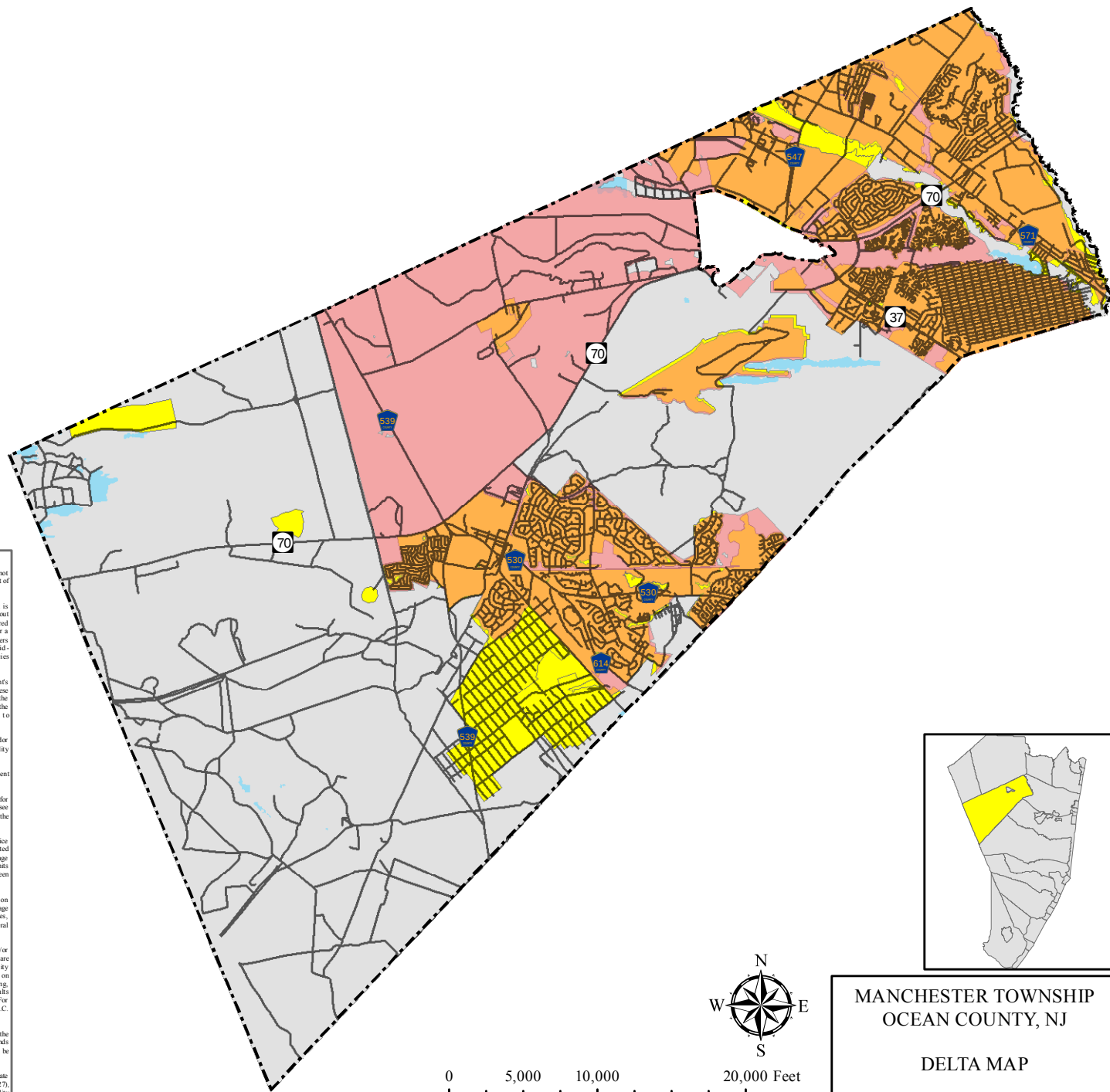
MAP 6

WATER SUPPLY

1 inch = 10,000 feet

Legend

-  Roads
-  Previously Approved Sewer Service Area
-  Adopted Sewer Service Area
-  Area of Overlap



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Prepared by: Ocean County Department of Planning, December 2012
Sources: New Jersey Department of Environmental Protection



0 5,000 10,000 20,000 Feet

1 inch = 10,000 feet

MANCHESTER TOWNSHIP
OCEAN COUNTY, NJ

DELTA MAP

SIGNIFICANT CHANGES