

## VIII. Municipal Wastewater Management Chapters

### Vernon Township

2010 Population = 23,943

Land Area = 68.2 square miles

2010 Population Density = 351 persons/sq. mile

This municipal chapter is an element of the Sussex County Wastewater Management Plan prepared by Sussex County Planning Division in accordance with N.J.A.C. 7:15.

#### Existing and Proposed Wastewater Infrastructure

Vernon Township has a wastewater collection system that serves a portion of the municipality and conveys wastewater flow to the Upper Wallkill SCMUA facility. The Vernon Township Municipal Utility Authority was established in 2011 to implement sewer service. There is also an “Effluent Recharge Force Main” back to the SCMUA facility with Discharge to Ground Water of 265,000 gallons per day located in Vernon. This provides ground water back to the Black Creek watershed, as approved by DEP.

The wastewater facilities that discharge to surface water and facilities that discharge to ground water (with discharge greater than 2,000 gallons per day) are regulated by NJ Dept. of Environmental Protection with individual New Jersey Pollutant Discharge Elimination System (NJPDES) Permits or T-1 Permits. Facilities Tables for each NJPDES Permit are listed at the end of this chapter.

The following table lists facilities governed by a State T-1 Permit, which is a “General Permit for Sanitary Subsurface Disposal” for discharges greater than 2,000 gallons per day.

**Table A - Existing NJPDES T-1 Facilities:**

<b>NJPDES</b>	<b>Facility Name</b>	<b>Project Summary</b>	<b>Block</b>	<b>Lot</b>	<b>Street Address</b>	<b>X Coord.</b>	<b>Y Coord.</b>
NJG0087491	Baldwin Apartments	2-building apartment complex with 24 units (total of 28 bedrooms)	141	10.01	Omega Drive	495850	862849
NJG0107212	D&R Group Vernon	20,032 sq. ft. medical arts building, with physician's offices	190.02	2	212 Route 94	491841	858928
NJG0140091	Great Gorge Terrace Condominium Assoc.	11 buildings with 44 condominium units	232.01	1-44	Old Rudetown Road		
NJG0168076	North Winter Activity Center (former Hidden Valley ski area)	Non-profit private ski area with a max. capacity of 600 people	192.02	2.5	44 Breakneck Road	498069	857029
NJG0136875	Tall Timbers Camp Ground	Campground with 977 campsites served by seepage pits, septic tanks, disposal fields and holding tanks	Various		100 Tall Timbers Road	481183	869208
NJG0062677	Vernon Colonial Plaza	32,507 sq. ft. shopping center, retail/professional	270	6.03	40 Rt. 94	479007	852517
NJG0131415	Vernon Valley Plaza	Shopping center	145	1.05	530 Rt. 515	496718	860213
NJG0073415	Wawayanda State Park	State park with lake, restroom facilities			Off Warwick Dr		
NJG0219410	Glen Meadow School	School			7 Sammis Road	489873	868256
NJG0219428	Walnut Ridge Middle School	Middle school			625 Rt. 517	488662	866437

### **Build-out in Septic Areas and DEP Nitrate Dilution Model**

In running the DEP Build-out Model, all undeveloped land was included as available for nitrate dilution for future septic density. The results are provided by HUC-11 watershed, and it does not exceed the Total New Allowed Units. The regional HUC-11 watershed tables are provided on pages 36 – 39 of the County WMP. For the three HUC-11 watersheds, Total Zoned Septics is below the DEP Model for Total Allowed New Septics so the nitrate dilution is projected to be within acceptable range for the watersheds.

Based on existing zoning, the projected number of new septic units in each HUC-11 watershed will not exceed the DEP maximum units allowable based on nitrate dilution and maintaining 2 mg/L ground water quality. The NJDEP Build-out Model should be viewed as a rough indicator. The Model includes variables with a range of values (such as household size) and assumes that existing zoning would not change. It is a regional planning tool with just one focus: to identify possible areas of future stresses on ground water quality. The number of maximum allowable units is a theoretical number, and local municipal plans could provide for much less growth. There are many other considerations for municipalities, and it is not meant to replace or override the local perspective. Given the rural character of Sussex County, its roads and infrastructure, its quality of life, these are some other factors important to planning for future growth. **Appendix J** further describes the NJDEP Build-out Model and some of its limitations as well.

### **Build-out and Sewer Capacity Analysis**

A build-out projection was done for Vernon Center as part of their Center Designation process in 2003. A build-out study analyzes land available for development (i.e. undeveloped and not constrained due to environmentally sensitive areas) within each general zone of the Vernon Center. It showed over 500 residential units projected and over 300,000 square feet of commercial/nonresidential development.

**Vernon Township is currently working on a build-out analysis of their Center area. [ provide build-out information ]**

Table B - Future Wastewater Planning Flows By Facility										
Domestic Wastewater Treatment Facility and NJPDES Permit Number	SCMUA Allocation (MGD)	Existing Flows (MGD) 2014	Approved TWA Permits/ Committed Flow (MGD)	Projected Residential Dwelling Units	Projected Residential Flow (MGD)	Projected Nonresidential Space (sq ft)	Projected Nonresidential Flow (MGD)		Total Future Planning Flows (MGD)	Excess (Deficit) Facility Capacity (MGD)
SCMUA Upper Wallkill NJ0053350	0.380	1.45								
SCMUA Vernon Discharge NJ0146676	0.265	0.008								

It is useful to compare the SCMUA allocation amount, existing flow and build-out flow to evaluate whether additional wastewater capacity would be needed in the future.

Vernon has 0.380 Million Gallons per Day allocation from SCMUA Discharge to Surface Water permit to Wallkill River, and 0.265 MGD allocation for Discharge to Ground Water, for a total SCMUA allocation of 0.645 MGD.

## **Municipal Chapter – Vernon Township Wastewater Facilities Tables**

The wastewater facility tables for all sanitary and/or process wastewater discharge to surface water facilities and those sanitary/ and/or process wastewater discharge to groundwater facilities discharging greater than 2000 gallons per day (i.e., requiring NJPDES permits) are listed below, based on whether they are domestic or industrial wastewater treatment facilities, and whether they have service areas that affect more than one municipality.

**On-Site Domestic Treatment Facilities**– These facilities are listed in following Tables.

**Industrial Wastewater Facilities** – These facilities are listed in Tables.

**ON-SITE DOMESTIC TREATMENT FACILITIES  
FACILITY NAME: SCMUA UPPER WALLKILL/  
DISCHARGE TO GROUND WATER**

1. Existing or proposed facility:	Existing	
2. New Jersey Pollutant Discharge Elimination System Permit Number:	NJ0145688	
3. Discharge to ground water (DGW) or surface water (DSW):	DGW	
4. Receiving water or aquifer:	Glacial Drift	
5. Classification of receiving water or aquifer:	II-A	
6. Owner of facility:	Sussex County MUA	
7. Operator of facility:	Sussex County MUA	
8. Co-Permittee of facility ( <i>where applicable</i> ):		
9. Location of facility:		
a. Municipality & County	Vernon Township, Sussex County	
b. Street address	Route 94	
c. Block(s) and Lot(s)	Block 232 Lot 12	
10. Location of discharge (i.e. degrees, minutes, seconds):	a. Longitude _____	
	b. Latitude _____ or	
	c. State Plane Coordinates _____ X – 466762 Y - 842786	
11. Present permitted flow or permit condition (DSW) or daily maximum (DGW):	0.265 MGD	
*13. Summary of population served/to be served including major seasonal fluctuations:	Current (Year 2013) Population	Build-out Population
<b>Total</b>		
*14. Summary of wastewater flow received/to be received as a 3-day average flow for DSW or a daily maximum flow for DGW:	Current (Year 2013) Flow (in MGD)	Build-out Flow (in MGD)
Residential flow		
Commercial flow		
Industrial flow		
Infiltration/Inflow		
<b>Facility Total</b>	<b>0.008 MGD</b>	<b>0.265 MGD</b>

\* Infiltration/Inflow (I/I): Existing I/I should be identified. However, additional future I/I may not be projected. (The NJPDES Treatment Works Approval regulations make numerical allowances for I/I.) The existing I/I can be carried-over and accounted for in the total future wastewater flow.

**ON-SITE DOMESTIC TREATMENT FACILITIES  
FACILITY NAME: LEGENDS RESORT**

1. Existing or proposed facility:	Existing	
2. New Jersey Pollutant Discharge Elimination System Permit Number:	NJ0023949	
3. Discharge to ground water (DGW) or surface water (DSW):	DSW	
4. Receiving water or aquifer:	Black Creek	
5. Classification of receiving water or aquifer:	FW2-NT	
6. Owner of facility:	Metairie Corp.	
7. Operator of facility:	R. Grenille	
8. Co-Permittee of facility ( <i>where applicable</i> ):		
9. Location of facility:		
a. Municipality & County	Vernon Township, Sussex County	
b. Street address	Route 517	
c. Block(s) and Lot(s)	Block 231 Lot 1; Block 231.01 Lot 1	
10. Location of discharge (i.e. degrees, minutes, seconds):	a. Longitude _____	
	b. Latitude _____ or	
	c. State Plane Coordinates ____ X – 483287 Y - 858473	
11. Present permitted flow or permit condition (DSW) or daily maximum (DGW):	0.350 MGD	
*13. Summary of population served/to be served including major seasonal fluctuations:	Current (Year 2013) Population	Build-out Population
<b>Total</b>		
*14. Summary of wastewater flow received/to be received as a 3-day average flow for DSW or a daily maximum flow for DGW:	Current (Year 2013) Flow (in MGD)	Build-out Flow (in MGD)
Residential flow		
Commercial flow		
Industrial flow		
Infiltration/Inflow		
<b>Facility Total</b>	<b>0.21</b>	<b>0.350</b>

**ON-SITE DOMESTIC TREATMENT FACILITIES**  
**FACILITY NAME: LOUNSBERRY HOLLOW MIDDLE SCHOOL**

1. Existing or proposed facility:	Existing	
2. New Jersey Pollutant Discharge Elimination System Permit Number:	NJ0023841	
3. Discharge to ground water (DGW) or surface water (DSW):	DSW	
4. Receiving water or aquifer:	Lounsberry Hollow Brook	
5. Classification of receiving water or aquifer:	FW2-TM	
6. Owner of facility:	Vernon Twp. Board of Education	
7. Operator of facility:	Vernon Twp. Board of Education	
8. Co-Permittee of facility ( <i>where applicable</i> ):		
9. Location of facility:		
a. Municipality & County	Vernon Township, Sussex County	
b. Street address	Sammis Road	
c. Block(s) and Lot(s)		
10. Location of discharge (i.e. degrees, minutes, seconds):	a. Longitude _____	
	b. Latitude _____ or	
	c. State Plane Coordinates _____ X – 492871 Y - 870468	
11. Present permitted flow or permit condition (DSW) or daily maximum (DGW):	0.032 MGD	
*13. Summary of population served/to be served including major seasonal fluctuations:	Current (Year 2013) Population	Build-out Population
<b>Total</b>		
*14. Summary of wastewater flow received/to be received as a 3-day average flow for DSW or a daily maximum flow for DGW:	Current (Year 2013) Flow (in MGD)	Build-out Flow (in MGD)
Residential flow		
Commercial flow		
Industrial flow		
Infiltration/Inflow		
<b>Facility Total</b>	<b>0.02</b>	<b>0.032 MGD</b>

**ON-SITE DOMESTIC TREATMENT FACILITIES**  
**FACILITY NAME: VERNON TWP. HIGH SCHOOL**

1. Existing or proposed facility:	Existing	
2. New Jersey Pollutant Discharge Elimination System Permit Number:	NJ0091260	
3. Discharge to ground water (DGW) or surface water (DSW):	DGW	
4. Receiving water or aquifer:	Gneiss	
5. Classification of receiving water or aquifer:	GW-2	
6. Owner of facility:	Vernon Twp. Board of Education	
7. Operator of facility:	Vernon Twp. Board of Education	
8. Co-Permittee of facility ( <i>where applicable</i> ):		
9. Location of facility:		
a. Municipality & County	Vernon Twp., Sussex County	
b. Street address	Route 565	
c. Block(s) and Lot(s)		
10. Location of discharge (i.e. degrees, minutes, seconds):	a. Longitude _____	
	b. Latitude _____ or	
	c. State Plane Coordinates _____ X – 494939 Y - 879324	
11. Present permitted flow or permit condition (DSW) or daily maximum (DGW):	0.035 MGD	
*13. Summary of population served/to be served including major seasonal fluctuations:	Current (Year 2013) Population	Build-out Population
	<b>Total</b>	
*14. Summary of wastewater flow received/to be received as a 3-day average flow for DSW or a daily maximum flow for DGW:	Current (Year 2013) Flow (in MGD)	Build-out Flow (in MGD)
	Residential flow	
Commercial flow		
Industrial flow		
Infiltration/Inflow		
<b>Facility Total</b>	<b>0.022</b>	<b>0.035 MGD</b>

\* Infiltration/Inflow (I/I): Existing I/I should be identified. However, additional future I/I may not be projected. (The NJPDES Treatment Works Approval regulations make numerical allowances for I/I.) The existing I/I can be carried-over and accounted for in the total future wastewater flow.