

VIII. Municipal Wastewater Management Chapters: **Hardyston Township**

2010 Population = 8,213
Land Area = 32.09 square miles

2010 Population Density = 256 persons/sq. mile

Hardyston Township contains both Highlands Preservation Area (eastern portion of Township) and Highlands Planning Area.

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

The larger wastewater facilities (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. The facilities discharge to surface water or ground water, and are listed in the tables at the end of this chapter.

The regional wastewater treatment facility owned and operated by the Sussex County Municipal Utilities Authority is located in Hardyston Twp. The Upper Walkkill Water Pollution Control Facility has a surface water discharge to the Walkkill River. Hardyston Twp. has a Municipal Utilities Authority, and a wastewater collection system that conveys wastewater flow to the Upper Walkkill SCMUA facility. The Existing Sewer Service Area map shows there are 8 existing pump stations in Hardyston Township.

The following table lists facilities typically constructed in years prior to State regulations, and are governed by a 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:

NJPDES	Facility Name	Project Summary	Block	Lot	Street Address	X Coord.	Y Coord.
NJG0084778	Beaver Hill Campground	139 campsites, bath houses, laundry, RV hookups	71	10.02	57-79 Big Spring Road	483019	838275
NJG0156566	Hardyston Plaza North	Strip mall with 51,000 sq.ft. retail, 6 apts.	64	8.05	127 Route 23	469289	848537
NJG0171239	Lake Gerard	Lake community with 87 homes, common land owner	60	17	Route 23, Stockholm area	480434	827822

Build-out and Sewer Capacity Analysis

Table B provides a breakdown of the acreage of land available for development in the Highlands Planning Area within each general zone of the municipality, based on the DEP Model for build-out analysis. There is no DEP formula for projecting industrial flows, so they can be forecast in the future when there is a basis for projecting industrial flows. The DEP Model is a regional model, and build-out projections can be further refined with local input.

Table B- Additional Development at Build-out, Sewer Service Area in Hardyston Twp.				
Zone	Developable Area (Acres)	Square Feet (commercial)	Res. Density (Units per Acre)	Total Res. Units
Commercial Recreation (CR)	230			1,056 (based on Twp. approval)
Commercial Recreation (Village Center)	34.4	391,920 sq.ft (based on Twp. approval)		
Medium Density Residential (R-4)	51.6		4.5	232
Minimum Impact Development 3 (MIDD-3)	39.5		0.3	12
Min. Impact Development 5 (MIDD-5)	0		0.2	0
Neighborhood Commercial (B-1)	13.7	FAR = 0.2 119,355 sq. ft		
Residential Commercial (RC)	2.4			
Town Center Shopping District (TC-SCD)	39.9	FAR = 0.25 434,510 sq.ft.		
Limited Industrial (I-1)	0.7	FAR = 0.25 7,623 sq.ft.		
Medium Industrial (I-2)	139.6	FAR = 0.25 1,520,000 sq.ft.		

Total residential units at build-out = 1,300 x 300 GPD/unit = 390,000 GPD additional flow
 Total commercial space = 553,865 sq.ft. x 0.1 GPD/sq.ft. = 55,386 GPD additional flow
 Total industrial space = wastewater flow to be determined

The build-out analysis is based on existing zoning, but has no timeframe attached to it. Since the County Wastewater Management Plan is meant to be a 20-year plan, using that time period is valuable to realistically assess the possible need for additional sewer capacity and infrastructure for future development. Comparing the SCMUA allocation amount, existing flow and build-out flow (all listed in Gallons Per Day), that is useful to evaluate whether additional wastewater capacity would be needed in the future.

Build-out in Septic Areas and DEP Nitrate Dilution Model

For the build-out analysis of septic systems, all undeveloped land was included as available dilution for future septic density. Parcel -based mapping was used to further refine the build out projections. The results are shown by HUC-11 watershed and municipality in the County Wastewater Plan. Based on existing zoning, the projected number of new septic units will not exceed the DEP maximum units allowable based on nitrate dilution and maintaining 2 mg/L ground water quality.

DEP recognizes that their Build-out Model is approximate, so the results can be adjusted by a range of 10% when comparing Total New Septics Allowed with Total New Zoned Septics. The DEP Nitrate Dilution Model is a regional model. For the purposes of this analysis it is inconsequential if one municipality’s zoning exceeds the DEP Model Total Allowed, provided that the regional HUC-11 watershed does not exceed the Total New Allowed Units (see pages 36 – 39 of the County WMP). For the HUC-11 watersheds in their entirety, Total Zoned is below the DEP Model for Total Allowed so the nitrate dilution is projected to be within acceptable range if the town were built-out based on existing zoning.

Table C- Additional Development at Build-out, Septic Area				
Watershed (HUC-11)	Total Undeveloped Land Available for Dilution (Acres)	DEP Nitrate Dilution Model: Acres/New Septic	DEP Model: Total New Septics Allowed	Total New Septics Based on Zoning
Paulins Kill (above Stillwater Village)	24	4.8	5	4
Walkkill River (above road to Martins)	2,583	4.8	538	601
Pochuck Creek	52	4.8	11	15

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 K** further describes the NJDEP Build-out Model and some of its limitations as well.

3) Identify any areas subject to federal 201 grant limitations – NONE

4) The following table lists ordinances adopted and/or pending to complete the municipal chapter. In the Highlands Preservation Area, there are ordinances required as part of Plan Conformance under the jurisdiction of the Highlands Council.

Table D- Summary of Municipal Ordinance Adoption In Highlands Planning Area			
Ordinance	Date Adopted	Complies with NJAC 7:15	Comments and More Protective Standards
Stormwater Management (Ground Water Recharge Maintenance)	4/25/2006	County Planning Board Certification On 5/1/2006	
Riparian Zone Protection (optional)			
Steep Slope Protection (optional)			
Dry Conveyances in Sewer Service Area			
Septic Connection in Sewer Service Area			