



March 23, 2015

Ms. Deborah Millikin  
Deputy Town Manager  
Town of Newton  
39 Trinity Street  
Newton, New Jersey 07860

**Re: Town of Newton  
Wastewater Flow Projections for Sussex County WMP Update**

Dear Ms. Millikin:

Based on your request, Hatch Mott MacDonald has prepared the attached Wastewater Flow Projections based on initial build-out information provided by Sussex County. As noted in the narrative description, these projections exceed the 1.4 MGD NJPDES capacity of the Treatment Plant. Recommendations are included for the Town's consideration to carry out to address the future need for additional wastewater treatment capacity.

Based on this analysis, we have also edited the Municipal Chapter for the County Wastewater Management Plan for submission to the County. The Town's input is required regarding areas subject to Federal 201 Grant Limitations, if applicable.

Please call if you have any questions regarding this or information. We would also be happy to meet with you to review this analysis.

Very truly yours,

Hatch Mott MacDonald

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JJS:koh  
Enclosures

cc: Jessica Caldwell, Town Planner  
David Simmons, Town Water Engineer

## **Flow Projections – Narrative Description**

As part of ongoing efforts to update the Sussex County Wastewater Management Plan, The Town of Newton has been asked to review an initial build-out analysis conducted by the Sussex County Planning Department using an NJDEP model. In particular input was requested on potential redevelopment areas, as the model is not able to account for these future flows.

The following is a summary of the Four Categories included in the Flow Projection Analysis conducted by HMM. Unconstrained acreage for properties was calculated by removing portions of the property identified as Critical Habitat (Landscape 3.1), Wetlands and Natural Heritage Priority Sites.

### **1. Vacant Properties**

Future flow for these properties was calculated using current zoning, unconstrained acreage and NJDEP Flow Criteria. Initially 47 lots were analyzed, but this number was reduced to 44 lots based on comments from the Town Planner.

### **2. Underdeveloped Lots**

This category identified properties which are not built-out to the full potential allowed under the zoning. Future flow for these properties was calculated using current zoning, unconstrained acreage and NJDEP Flow Criteria. Initially 73 lots were analyzed, but this number was reduced to 58 lots based on comments from the Town Planner. Properties with specific development concepts were moved to the Redevelopment Category.

Specific input on future development was requested from Sussex County Community College and the Newton Medical Center in August 2014 as these properties are the most significant portion of the future flow in this category. Based on current zoning and the use of the conservative commercial estimate of 0.1 gpd/sq. ft., these properties represent approximately 80% of the estimated 423,807 gpd of future flow that could be generated from this category. To date no input has been received from either institution.

### **3. Unsewered Lots (Water Accounts)**

A Future flow of 300 gpd per dwelling was applied to residential properties which only currently receive Town water.

### **4. Redevelopment Lots**

Future flow for these properties was calculated based NJDEP Flow Criteria and input from the Town Planner on potential development identified in Redevelopment Plan and the Draft Transfer of Development Rights Feasibility Study.

## Discussion

Based on an existing flow (2013) of 1.02 MGD and a NJPDES flow of 1.4 MGD, the Town of Newton Wastewater Treatment Plant has a remaining capacity of 380,000 gpd. However, using the 2011 flow of 1.33 MGD, the remaining capacity reduces to 70,000 gpd.

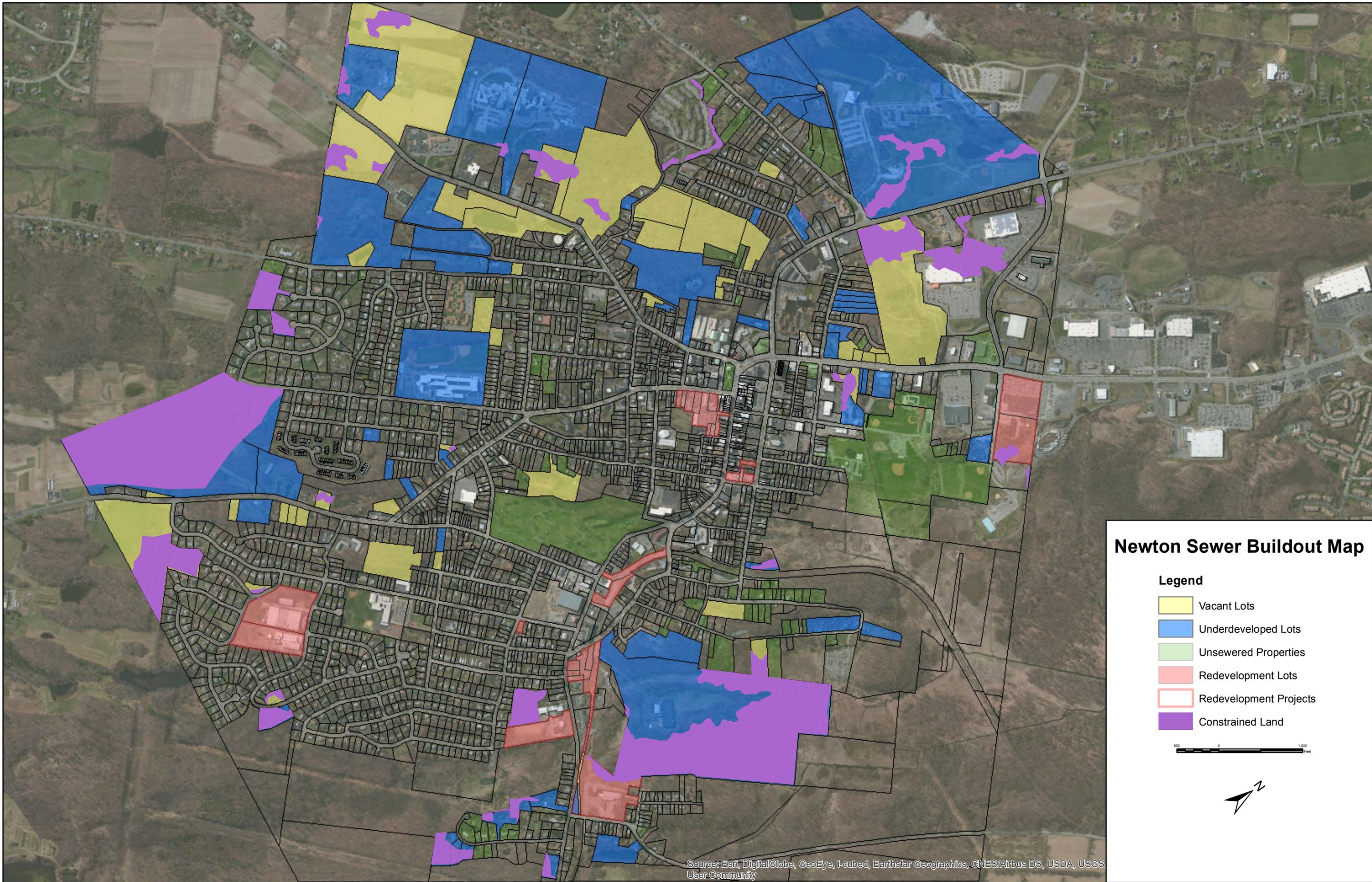
As seen on the following summary table, the build-out analysis has calculated potential additional flow of 814,629 gpd for the Town's sewer service area. As noted above, the future flow from the College and Medical Center account for approximately 42% of the total estimated future flow. The estimates for these two large institutional users could be further refined and adjusted based on specific development plans (e.g. number of future hospital beds or number of additional students) or by analyzing current water usage for the facilities. Removing these properties reduces the potential additional flow to 473,471 gpd, which still slightly exceeds the current NJPDES capacity for the Town of Newton Wastewater Treatment Plant.

Summary of Flow Projections			
Projection Category	Overall Projection	Hospital/College Portion	Remaining Projection
Existing Flow	1,020,000		1,020,000
Vacant	216,785		216,785
UnderDeveloped	423,807	339,811	83,996
ISSDS	16,200		16,200
ReDevelopment	157,836		157,836
	<b>1,834,629</b>		<b>1,494,818</b>

## Conclusion

Although the build-out indicates a potential future need for additional wastewater treatment capacity, the actual realization of the projected development flow may not occur for some time, particularly given that the Town population has remained fairly steady. It should also be noted that the NJDEP Flow criteria used in this analysis are fairly conservative and often overestimate potential future flows. It is therefore recommended that the Town carry out the following actions to be ready to address the need for additional wastewater capacity in the future:

1. Actively monitor plant flow
2. Continue the annual sewer collection system inspection and inflow/infiltration correction program
3. Actively track Town population
4. Monitor the development status of the properties outlined in this analysis
5. Track new development proposals or modifications to existing proposals



### Newton Sewer Buildout Map

#### Legend

- Vacant Lots
- Underdeveloped Lots
- Unsewered Properties
- Redevelopment Lots
- Redevelopment Projects
- Constrained Land



Source: Esri, DigitalGlobe, GeoEye, i-cubed, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, User Community

Vacant Lots

From Town						a (GIS)	County	b (Town)	c (GIS)	d = a-c	e = d*0.8	f = e/b (residential) OR f = e/0.000023 (commercial)	g	h = f*g
ID	Zone	Zone Description	Block	Lot	Address	Total Acres	Total Developable Land (County, Acres)	Minimum Lot Size	Constrained	Un-Constrained Acres	Total Developable Land (HMM, Acres)	# of Units (Dwellings or Sq. Ft.)	NJDEP Flow Criteria (GPD/unit)	Projected Flow, HMM (GPD)
1-1	SD-9	PLANNED NEIGHBORHOOD DEVELOPMENT	1.01	2	HIGH ST	33.90	29.7	8000	2.23	31.67	25.33	138	300	41305
1-2	SD-1	HOSPITAL DISTRICT	1.01	9	131 HIGH ST	23.01	20.89	1	1.04	21.96	17.57	763986	0.1	76399
1-3	SD-1	HOSPITAL DISTRICT	1.01	11	151-155 HIGH ST	4.76	2.35	1	2.19	2.57	2.06	89425	0.1	8942
1-4	SD-9	PLANNED NEIGHBORHOOD DEVELOPMENT	1.02	1	HIGH ST	11.13	8.73	8000	2.12	9.01	7.20	39	300	11746
1-5	SD-1	HOSPITAL DISTRICT	1.02	4	HIGH ST	4.83	4.51	1		4.83	3.86	167939	0.1	16794
1-6	T-2	RURAL RESERVED AREAS	1.02	12	WEST END AVE-SLATE QUARRY	1.33	0.12	50000		1.33	1.06	1	300	277
1-7	T-3	NEIGHBORHOOD RESIDENTIAL	2.01	44	SHADY LN	0.33	0.33	10000		0.33	0.27	1	300	347
1-8	T-3	NEIGHBORHOOD RESIDENTIAL	2.02	1	PARK AVE	0.83	0.35	10000		0.83	0.67	3	300	868
1-9	SD-3	RETAIL- MANUFACTURING DISTRICT	3.04	1	127 MILL ST TO WATER	26.12	13.7	80000	6.10	20.02	16.02	9	300	2612
1-10	T-2	RURAL RESERVED AREAS	4.02	1	SHADY LN	5.26	4.75	50000		5.26	4.21	4	300	1097
1-11	T-2	RURAL RESERVED AREAS	4.02	30	SHADY LN	3.72	3.31	50000		3.72	2.98	3	300	777
1-12	T-3	NEIGHBORHOOD RESIDENTIAL	4.03	19	18 ACADEMY ST	0.55	0.03	10000		0.55	0.44	2	300	572
1-13	T-3	NEIGHBORHOOD RESIDENTIAL	4.04	2	43 WEST END AVE	0.44	0.29	10000		0.44	0.35	2	300	459
1-14	T-1	NATURAL AREAS	4.05	3	150 HIGH ST	6.79	2.15	1		6.79	5.43	236211	0.1	23621
1-15	T-4	NEIGHBORHOOD SERVICES	5.02	6	14 CENTER ST	0.42	0.15	5700		0.42	0.34	3	300	772
1-16	T-4	NEIGHBORHOOD SERVICES	5.02	8	PROSPECT AVE	0.35	0.35	5700		0.35	0.28	2	300	636
1-17	T-2	RURAL RESERVED AREAS	5.03	3	7 HARRISON ST	8.21	8.01	50000		8.21	6.57	6	300	1713
1-18	T-2	RURAL RESERVED AREAS	5.03	5	3 HARRISON ST	2.65	2.48	50000		2.65	2.12	2	300	554
1-19	T-3	NEIGHBORHOOD RESIDENTIAL	5.07	6	EMMONS AVE	0.28	0.27	10000		0.28	0.22	1	300	292
1-20	T-4	NEIGHBORHOOD SERVICES	5.07	7	94 WATER ST	0.41	0.26	5700		0.41	0.33	3	300	751
1-21	T-4	NEIGHBORHOOD SERVICES	5.07	8	WATER ST	0.43	0.31	5700		0.43	0.34	3	300	784
1-22	T-4	NEIGHBORHOOD SERVICES	5.07	9	78 WATER ST	0.36	0.24	5700		0.36	0.29	2	300	654
1-23	T-4	NEIGHBORHOOD SERVICES	5.07	10	72 WATER ST	0.95	0.59	5700		0.95	0.76	6	300	1732
1-24	T-3	NEIGHBORHOOD RESIDENTIAL	6.05	11	58 WEST END AVE	2.30	0.47	10000		2.30	1.84	8	300	2398
1-25	T-3	NEIGHBORHOOD RESIDENTIAL	7.12	15	32 ASHFORD ST	0.72	0.46	10000		0.72	0.58	3	300	756
1-26	T-4	NEIGHBORHOOD SERVICES	9.03	5	WATER ST	1.59	0.64	5700	0.93	0.65	0.52	4	300	1198
1-27	SD-7	SENIOR COMMUNITY DISTRICT	11.01	11	204 WOODSIDE AVE	0.34	0.25	8000		0.34	0.27	1	300	446
1-28	T-3	NEIGHBORHOOD RESIDENTIAL	13.04	18	W NELSON ST	0.30	0.17	10000	0.08	0.22	0.18	1	300	230
1-29	T-4	NEIGHBORHOOD SERVICES	13.07	17	226 MAIN ST	1.02	0.43	5700		1.02	0.81	6	300	1858
1-30	T-3	NEIGHBORHOOD RESIDENTIAL	13.07	20	120 WOODSIDE AVE	0.81	0.15	10000	0.33	0.48	0.38	2	300	499
1-31	T-2	RURAL RESERVED AREAS	14.04	27	77 MADISON ST REAR	4.52	0.03	50000		4.52	3.62	3	300	944
1-32	T-2	RURAL RESERVED AREAS	16.01	1	221 WOODSIDE AVE	16.32	0	50000	6.58	9.74	7.80	7	300	2034
1-33	T-3	NEIGHBORHOOD RESIDENTIAL	16.01	16	JERSEY PL	0.57	0.26	10000	0.16	0.41	0.33	1	300	426
1-34	T-2	RURAL RESERVED AREAS	16.01	23	MERRIAM AVE - REAR	2.66	1.52	50000	2.49	0.17	0.14	0	300	36
1-35	T-3	NEIGHBORHOOD RESIDENTIAL	16.02	3	207 WOODSIDE AVE	0.63	0.35	10000		0.63	0.51	2	300	661
1-36	T-3	NEIGHBORHOOD RESIDENTIAL	16.02	6	139 WOODSIDE AVE	0.54	0.53	10000		0.54	0.43	2	300	566
1-37	T-3	NEIGHBORHOOD RESIDENTIAL	16.02	7	135 WOODSIDE AVE	0.53	0.52	10000		0.53	0.42	2	300	548
1-38	T-3	NEIGHBORHOOD RESIDENTIAL	16.02	8	133 WOODSIDE AVE	0.69	0.5	10000		0.69	0.56	2	300	725
1-39	T-3	NEIGHBORHOOD RESIDENTIAL	17.01	34	44 MASON AVE	0.48	0.24	10000		0.48	0.39	2	300	504
1-40	T-3	NEIGHBORHOOD RESIDENTIAL	17.01	37		5.52	5.02	10000		5.52	4.42	19	300	5763
1-41	T-3	NEIGHBORHOOD RESIDENTIAL	19.04	1	15 MOUNT VIEW ST	2.05	1.3	10000		2.05	1.64	7	300	2140
1-42	T-2	RURAL RESERVED AREAS	19.05	29	102 MOUNT VIEW ST	1.95	0	50000	1.05	0.90	0.72	1	300	187
1-43	T-3	NEIGHBORHOOD RESIDENTIAL	21.04	26	40 KORY RD	0.69	0.35	10000	0.35	0.34	0.27	1	300	356
1-44	T-4	NEIGHBORHOOD SERVICES	24.02	2	5 HICKS AVE	0.44	0.19	5700		0.44	0.35	3	300	804
		<b>Total</b>				<b>178.66</b>	<b>116.71</b>	<b>719604</b>	<b>24.26</b>	<b>154.40</b>	<b>123.52</b>			<b>216785</b>

**Underdeveloped Lots**

From Town						a (GIS)	(County)	b (Town)	c (GIS)	d (GIS)	e = a-c-d	f = e*0.8	g = f/b (residential) OR g = f/0.00023 (commercial)	h	i = g*h
ID	Zone	Zone Description	Block	Lot	Address	Total Acres	Total Developable Land (Town, Acres)	Minimum Lot Size	Existing Development (Acres)	Constrained	Un-Constrained Acres	Total Developable Land (HMM, Acres)	# of Units (Dwellings or Sq. Ft.)	NIDEP Flow Criteria (GPD/unit)	Projected Flow, HMM (GPD)
2-1	SD-9	PLANNED NEIGHBORHOOD DEVELOPMENT	1.01	1		9.13	2.08	8000		0.81	8.33	6.66	36	300	10861
2-2	SD-1	HOSPITAL DISTRICT	1.01	3		19.03	5.97	1		0.07	18.96	15.17	659627	0.1	65963
2-3	SD-1	HOSPITAL DISTRICT	1.01	4	175 HIGH ST	24.96	6.03	1		0.67	24.30	19.44	845137	0.1	84514
2-4	SD-1	HOSPITAL DISTRICT	1.02	3	200 HIGH ST	4.86	2.32	1			4.86	3.88	168896	0.1	16890
2-5	T-2	RURAL RESERVED AREAS	1.02	7	1 OVERLOOK RD	5.24	0.1	50000			5.24	4.19	4	300	1093
2-6	T-2	RURAL RESERVED AREAS	1.02	8	39 HILLSIDE AVE	4.07	0.05	50000			4.07	3.26	3	300	850
2-7	T-2	RURAL RESERVED AREAS	1.02	11	11 OVERLOOK RD	20.07	16.03	50000		0.15	19.92	15.94	14	300	4158
2-8	T-3	NEIGHBORHOOD RESIDENTIAL	2.01	58	21 HILLSIDE TERR	0.46	0.06	10000			0.46	0.37	2	300	481
2-9	T-3	NEIGHBORHOOD RESIDENTIAL	2.02	18	10-16 HILLSIDE TERR	1.33	0.01	10000		0.06	1.27	1.02	4	300	1324
2-10	T-2	RURAL RESERVED AREAS	3.01	3	15 SLATE HILL RD	2.19	0	50000			2.19	1.76	2	300	458
2-11	T-2	RURAL RESERVED AREAS	3.01	11	17 SLATE HILL RD	2.13	0.01	50000			2.13	1.70	1	300	445
2-12	T-2	RURAL RESERVED AREAS	3.01	17	19 SLATE HILL RD	3.83	0.01	50000			3.83	3.06	3	300	799
2-13	T-2	RURAL RESERVED AREAS	3.01	18	23 SLATE HILL RD	6.51	0.54	50000			6.51	5.21	5	300	1359
2-14	SD-2	COLLEGE DISTRICT	3.01	19	1 SLATE HILL RD	89.58	1.64	1	33.75	6.25	49.58	39.66	1724448	0.1	172445
2-15	T-3	NEIGHBORHOOD RESIDENTIAL	4.01	7	28 SHADY LN	0.53	0.03	10000			0.53	0.42	2	300	552
2-16	T-2	RURAL RESERVED AREAS	4.02	13		12.60	11.15	50000			12.60	10.08	9	300	2630
2-17	T-5	TOWN CORE SUPPORT AREA/NEIGHBORHOOD CORES	4.03	18	14 ACADEMY ST	0.36	0	5700			0.36	0.28	2	300	651
2-18	T-3	NEIGHBORHOOD RESIDENTIAL	4.04	1	35 HILLSIDE AVE	1.05	0.74	10000			1.05	0.84	4	300	1098
2-19	T-5	TOWN CORE SUPPORT AREA/NEIGHBORHOOD CORES	5.01	10	16-18 MILL ST	0.95	0.01	5700			0.95	0.76	6	300	1735
2-20	T-5	TOWN CORE SUPPORT AREA/NEIGHBORHOOD CORES	5.01	25	63 HIGH ST	1.22	0	5700			1.22	0.98	1	300	300
2-21	T-3	NEIGHBORHOOD RESIDENTIAL	5.06	9	31 CLINTON ST	0.63	0.3	10000			0.63	0.50	2	300	653
2-22	T-3	NEIGHBORHOOD RESIDENTIAL	5.06	10	29 CLINTON ST	0.80	0.49	10000			0.80	0.64	3	300	830
2-23	T-3	NEIGHBORHOOD RESIDENTIAL	5.06	11	25 CLINTON ST	0.77	0.45	10000			0.77	0.61	3	300	802
2-24	T-3	NEIGHBORHOOD RESIDENTIAL	5.06	12	23 CLINTON ST	0.83	0.58	10000			0.83	0.66	3	300	863
2-25	T-3	NEIGHBORHOOD RESIDENTIAL	5.07	1	15 CLINTON ST	0.87	0.01	10000			0.87	0.69	3	300	905
2-26	T-4	NEIGHBORHOOD SERVICES	5.07	11	66 WATER ST	1.14	0.26	5700			1.14	0.91	7	300	2082
2-27	T-3	NEIGHBORHOOD RESIDENTIAL	6.01	6	8-10 DOUMA CT	3.04	0.67	10000		3.04	0.00	0.00	0	300	0
2-28	T-3	NEIGHBORHOOD RESIDENTIAL	6.01	17	5 VALLEY VIEW CT	1.16	0.65	10000		1.16	0.00	0.00	0	300	0
2-29	SD-6	SCHOOLS DISTRICT	6.05	12	54-56 RYERSON AVE	20.47	3.13	1	16.58		3.89	3.11	50000	0.1	5000
2-30	T-4	NEIGHBORHOOD SERVICES	9.03	6	83 WATER ST	0.24	0.24	5700			0.24	0.19	1	300	441
2-31	T-4	NEIGHBORHOOD SERVICES	9.03	7	85 WATER ST	0.38	0.18	5700			0.38	0.30	2	300	696
2-32	T-4	NEIGHBORHOOD SERVICES	9.03	9	89 WATER ST	1.56	0.35	5700			1.56	1.25	10	300	2865
2-33	T-5	TOWN CORE SUPPORT AREA/NEIGHBORHOOD CORES	9.03	25	MORAN ST	1.81	0	5700		0.33	1.47	1.18	9	300	2696
2-34	SD-3	RETAIL- MANUFACTURING DISTRICT	10.01	3	10 SOUTH PARK DR	1.85	1.77	80000			1.85	1.48	1	300	242
2-35	SD-7	SENIOR COMMUNITY DISTRICT	11.01	4	200 BRISTOL GLEN DR	52.21	3.77	8000		44.24	7.97	6.37	35	300	10389
2-36	T-2	RURAL RESERVED AREAS	11.01	5	111 RYERSON AVE	6.53	0.26	50000		3.83	2.70	2.16	2	300	563
2-37	T-2	RURAL RESERVED AREAS	11.01	10	150 WOODSIDE AVE	5.60	1.87	50000			5.60	4.48	4	300	1169
2-38	T-3	NEIGHBORHOOD RESIDENTIAL	13.04	17	194 MAIN ST	0.48	0	10000			0.48	0.38	2	300	499
2-39	T-3	NEIGHBORHOOD RESIDENTIAL	13.07	1	23 RIDGEWOOD AVE	0.54	0.01	10000			0.54	0.43	2	300	567
2-40	T-4	NEIGHBORHOOD SERVICES	13.07	14	214 MAIN ST	0.70	0.33	5700			0.70	0.56	4	300	1287
2-41	T-3	NEIGHBORHOOD RESIDENTIAL	13.1	5	47 PLAINFIELD AVE	0.70	0.02	10000			0.70	0.56	2	300	727
2-42	T-5	TOWN CORE SUPPORT AREA/NEIGHBORHOOD CORES	15.01	19	95 TRINITY ST	0.84	0	5700		0.52	0.33	0.26	2	300	598
2-43	T-3	NEIGHBORHOOD RESIDENTIAL	16.02	4	153 WOODSIDE AVE	2.51	1.85	10000			2.51	2.01	9	300	2622
2-44	T-3	NEIGHBORHOOD RESIDENTIAL	17.01	15	75 WOODSIDE AVE	0.67	0.23	10000			0.67	0.54	2	300	698
2-45	T-3	NEIGHBORHOOD RESIDENTIAL	19.04	9	77 MOUNT VIEW ST	2.47	0.02	10000			2.47	1.97	9	300	2575
2-46	T-3	NEIGHBORHOOD RESIDENTIAL	19.05	1	2 OAK ST	5.86	0	10000			5.86	4.69	20	300	6114
2-47	SD-4	INDUSTRIAL- MANUFACTURING DISTRICT	20.01	1	1 BROOKS PLZ	70.82	0.14	120000	3.96	44.40	22.46	17.97	7	300	1953
2-48	T-3	NEIGHBORHOOD RESIDENTIAL	20.01	7	70 MOUNT VIEW ST	1.39	0.04	10000		0.00	1.38	1.11	5	300	1444
2-49	T-3	NEIGHBORHOOD RESIDENTIAL	21.08	1	41 KORY RD	1.91	0.2	10000		1.73	0.18	0.15	1	300	192
2-50	T-3	NEIGHBORHOOD RESIDENTIAL	24.01	10	154 SPARTA AVE	1.53	0.1	10000		0.10	1.43	1.14	5	300	1489
2-51	T-3	NEIGHBORHOOD RESIDENTIAL	24.01	12	18 LINCOLN PL	0.77	0.14	10000		0.44	0.33	0.26	1	300	344
2-52	T-3	NEIGHBORHOOD RESIDENTIAL	24.01	23	30 LINCOLN PL	1.61	0.05	10000		0.64	0.97	0.78	3	300	1017
2-53	T-4	NEIGHBORHOOD SERVICES	24.02	1	155 SPARTA AVE	0.42	0.22	5700			0.42	0.33	3	300	761
2-54	T-2	RURAL RESERVED AREAS	24.04	21	24 HICKS AVE	3.29	0.01	50000		0.01	3.29	2.63	2	300	686
2-55	T-3	NEIGHBORHOOD RESIDENTIAL	24.05	1	53 LINCOLN PL	2.00	0	10000		1.64	0.36	0.29	1	300	377
2-56	T-3	NEIGHBORHOOD RESIDENTIAL	24.05	2	51 LINCOLN PL	0.67	0.24	10000		0.43	0.24	0.19	1	300	249
2-57	T-3	NEIGHBORHOOD RESIDENTIAL	24.05	3	49 LINCOLN PL	0.73	0.29	10000		0.46	0.27	0.22	1	300	285
2-58	T-3	NEIGHBORHOOD RESIDENTIAL	24.05	13	180 SPARTA AVE	1.06	0.07	10000		0.56	0.50	0.40	2	300	524
		<b>Total</b>				<b>410.96</b>	<b>65.72</b>	<b>1098705</b>		<b>111.53</b>	<b>245.14</b>	<b>196.11</b>			<b>423807</b>

Water Accounts

ID	Land Use	Block	Lot	Address	Total Acres	Projected Flow, (GPD)
B-1	Residential	2.01	2	90 SWARTSWOOD ROAD	1.13	300
B-2	Residential	2.01	7	70 SWARTSWOOD ROAD	1.33	300
B-3	Residential	3.01	2	5 SLATE HILL ROAD	2.60	300
B-4	Residential	3.01	4	3 SLATE HILL ROAD	1.29	300
B-5	Residential	3.01	5	41 SWARTSWOOD ROAD	0.65	300
B-6	Residential	3.01	16	93 SWARTSWOOD ROAD	0.28	300
B-7	Commercial	3.04	16	128 WATER ST.-DUNKIN	2.49	
B-8	Residential	5.01	1	1 CENTER STREET	0.24	300
B-9	Commercial	5.01	12	1-B MILL STREET	0.71	
B-10	Residential	5.03	2	8C [OLD 22] CENTER STREET	1.11	300
B-11	Residential	5.03	4	11 CHERRY STREET	0.53	300
B-12	Residential	5.07	4	19 EMMONS AVENUE	0.34	300
B-13	Residential	6.01	1	120 WEST END AVENUE	1.03	300
B-14	Residential	6.02	5	106 WEST END AVENUE	0.28	300
B-15	Residential	7.1	1	40 LINWOOD AVENUE	0.74	300
B-16	Residential	7.1	12	5 CLARKSON STREET	0.55	300
B-17	Residential	7.1	14	36 LINWOOD AVENUE	0.63	300
B-18	Other	8.02	1	4 HIGH STREET	0.87	
B-19	Commercial	9.02	1	63 WATER STREET	0.62	
B-20	Residential	9.03	18	119 WATER STREET	0.24	300
B-21	Residential	9.03	20	119 WATER STREET	0.54	300
B-22	Other	9.03	22	TOWN - POOL	1.81	
B-23	Other	10.01	1	TOWN GARAGE - MORAN ST	35.51	
B-24	Other	10.01	14	TOWN GARAGE - MORAN STREE	5.38	
B-25	Residential	14.04	4	9 CASSIDY PLACE	0.71	300
B-26	Residential	14.04	26	79 MADISON STREET	0.43	300
B-27	Residential	14.04	29	71 MADISON STREET	0.74	300
B-28	Other	18.01	1	SPARTA AVENUE	25.14	
B-29	Residential	19.01	13	9 STUART STREET	0.52	300
B-30	Residential	19.02	4	12 MT VIEW STREET	0.41	300
B-31	Residential	19.03	4	9 EAST STUART	0.23	300
B-32	Discount	19.03	5	15 EAST STUART STREET	0.24	
B-33	Residential	19.03	6	20 MT VIEW	0.28	300
B-34	Residential	19.03	7	26 MT VIEW	0.57	300
B-35	Residential	19.03	8	32 MOUNT VIEW STREET	0.32	300
B-36	Residential	19.03	9	34 MT VIEW	0.13	300
B-37	Residential	19.03	10	36 MT VIEW STREET	0.17	300
B-38	Residential	19.03	11	38 MT VIEW	0.13	300
B-39	Residential	19.03	12	40 MT VIEW	0.37	300
B-40	Residential	19.03	13	44 MT VIEW STREET	0.34	300
B-41	Residential	19.03	14	48 MT VIEW STREET	0.33	300
B-42	Discount	19.03	15	52 MT VIEW	0.66	
B-43	Discount	19.04	2	19 MT VIEW STREET	0.44	
B-44	Residential	19.04	3	25 MT VIEW STREET	0.35	300
B-45	Residential	19.04	4	29 MT VIEW STREET	0.37	300
B-46	Residential	19.04	5	33 MT VIEW STREET	0.42	300
B-47	Residential	19.04	10	83 MT VIEW STREET	0.20	300
B-48	Discount	19.04	11	87 MT VIEW STREET	0.40	
B-49	Residential	19.04	12	91 MT VIEW STREET	0.41	300
B-50	Residential	19.04	15	1 PALMER STREET	0.30	300
B-51	Residential	19.05	18	9 OAK STREET	0.41	300
B-52	Residential	19.05	26	42 NEW HAMPSHIRE STREET	0.42	300
B-53	Residential	19.05	27	44 NEW HAMPSHIRE STREET	2.48	300
B-54	Residential	19.05	30	96 MOUNT VIEW STREET	1.74	300
B-55	Residential	19.05	33	82 MT VIEW STREET	0.39	300
B-56	Residential	19.06	16	10 PALMER STREET	0.69	300
B-57	Residential	24.01	21	24 LINCOLN PLACE	0.32	300
B-58	Residential	24.01	22	28 LINCOLN PLACE	0.63	300
B-59	Residential	24.01	24	36 LINCOLN PLACE	0.51	300
B-60	Residential	24.01	25	38 LINCOLN PLACE	0.46	300
B-61	Residential	24.01	26	40 LINCOLN PLACE	0.20	300
B-62	Residential	24.01	27	46 LINCOLN PLACE	0.80	300
B-63	Residential	24.01	28	52 LINCOLN PLACE	0.74	300
B-64	Residential	24.03	1	2 SMITH STREET	0.27	300
B-65	Residential	24.05	4	43 LINCOLN PLACE	0.45	300
B-66	Residential	24.05	5	37 LINCOLN PLACE	0.37	300
<b>Total</b>					106.39	16200.00



## **VIII. Municipal Wastewater Management Chapters**

### **Town of Newton:**

<p><b>2010 Population = 7,997</b> <b>Land Area = 3.1 square miles</b></p>
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<p><b>2010 Population Density = 2,580 persons/sq. mile</b></p>
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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 Town of Newton owns and operates a wastewater treatment facility that serves most of the town, and discharges to surface water. Newton has a wastewater collection system and five (5) pump stations that conveys wastewater flow to the facility. The 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 Table is shown on the following page.

<b>Table A DOMESTIC TREATMENT FACILITIES SERVING ONE MUNICIPALITY</b>		
1. Existing or proposed facility:	Existing	
2. New Jersey Pollutant Discharge Elimination System Permit Number:	NJ0020184	
3. Discharge to ground water (DGW) or surface water (DSW):	DSW	
4. Receiving water or aquifer:	Moore's Brook/ Paulins Kill	
5. Classification of receiving water or aquifer:	FW2-NT	
6. Owner of facility:	Town of Newton	
7. Operator of facility:	Joseph Carr	
8. Co-Permittee of facility ( <i>where applicable</i> ):		
9. Location of facility:		
a. Municipality & County	Newton, Sussex County	
b. Street address	Townsend Street	
c. Block(s) and Lot(s)		
10. Location of discharge (i.e. degrees, minutes, seconds):	a. Longitude __ 74-44-47 _____	
	b. Latitude ____ 41-3-36 _____ or	
	c. State Plane Coordinates _____	
11. Present permitted flow or permit condition (DSW) or daily maximum (DGW):	1.4 Million Gallons per Day (MGD)	
*12. Summary of population served/to be served including major seasonal fluctuations:	Current (Year 2013) Population	Build-out Population
<b>Total</b>		
*13. Summary of wastewater flow received/to be received as a 30-day average flow for DSW or a daily maximum flow for DGW:	Current (Year 2013) Flow (in MGD)	Build-out Flow
Residential flow	0.68	0.96
Commercial flow	0.24	0.77
Industrial flow		
Infiltration/Inflow	0.10	0.1
<b>Facility Total</b>	<b>1.02 MGD</b>	<b>1.83 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.

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

**Table A** 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) within each general zone of the municipality, based on the build-out analysis. Parcel based mapping was used to further refine the build out projections. Table A summarizes the Flow Projections carried out by Hatch Mott MacDonald which also considers potential redevelopment of developed lots. The only industrial facility in the Town (Thor Labs) is not regulated as a Significant Industrial User (SIU) so it is part of the existing commercial flow.

<b>Table A - Additional Development at Build-out, Sewer Service Area in Newton</b>				
<b>Zone</b>	<b>Developable Area (Acres)</b>	<b>Zoning Density (Min. Lot Size)</b>	<b># of Units (Residential)</b>	<b>Commercial (Sq.Ft.)</b>
Neighborhood Residential (T-3)*	52.8	10,000 sq.ft.	151	459,848 sq. ft.
Planned Neighborhood Development (SD-9)	40.8	8,000 sq.ft.	213	n/a
Rural Reserved Area (T-2)	97.3	50,000 sq.ft.	73	n/a
Natural Areas (T-1)	5.4			236,211 sq. ft.
Senior Community District (SD-7)	8.2		36	
School District (SD-6)	3.9			50,000 sq. ft.
Industrial-Manufacturing District (SD-4) **	22.5		51	
Retail – Manufacturing District (SD-3)*	22.8		10	90,000 sq.ft.
College District (SD-2)	49.6			1,724,448 sq. ft.
Hospital District (SD-1)	71.6			2,695,011 sq. ft.
Neighborhood Services (T-4)*	8.5		162	31,564 sq. ft.
Town Core Support (T-5)*	4.3		52	10,000 sq. ft.
(T-6)*			134	40,000 sq. ft.

**Total residential units at build-out = 882 units x 300 GPD/unit = 264, 600 GPD additional flow**

**Total commercial space at build-out = 5,337,081 sq. ft.**

\*Includes Proposed Redevelopment

\*\*Includes approved TWA

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. The following chart compares the permitted flow, existing flow and build-out flow to evaluate whether additional wastewater capacity would be needed in the future.

**Table B – Municipal Build-out and Future Wastewater Capacity**

Permitted Flow (MGD)	Existing Flow	TWA Permit Approved, Not Connected	Residential Build-out Flow	Non-res. Build-out Flow	Existing Septics Flow	Total Projected Build-out Flow	Remaining Capacity
1.4	1.02	0.0135	0.251	0.534	0.0162	1.8347	(0.4347)

**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. The analysis evaluates whether the projected number of new septic units will 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.

Any new development in Town is required to be connected to sewer, so no new septic systems are anticipated.

<b>Table C- Additional Development at Build-out, Septic Area</b>				
<b>Watershed (HUC-11), portion in Newton</b>	<b>Total Undeveloped Land Available for Dilution (Acres)</b>	<b>DEP Nitrate Dilution Model: Acres/New Septic</b>	<b>DEP Model: Total New Septics Allowed</b>	<b>Total New Septics Based on Zoning</b>
Paulins Kill (above Stillwater Village)	158	4.8	33	47
Pequest River (above Bear Swamp)	28	4.5	6	0

**3) Identify any areas subject to federal 201 grant limitations**

4) Provide a checklist of ordinances adopted and pending to complete the municipal chapter.>

<b>Table C - Summary of Ordinance Adoption</b>			
<b>Ordinance</b>	<b>Date Adopted</b>	<b>Complies with NJAC 7:15</b>	<b>Comments and More Protective Standards</b>
Stormwater Management (Ground Water Recharge Maintenance)	6/8/70	County Planning Board Certification on 5/1/2006	
Riparian Zone Protection	4/9/12		Chapter 240-12

(optional)			
Steep Slope Protection (optional)	4/9/12		Chapter 240-11
Dry Conveyances in Sewer Service Area	N/A		
Septic Connection in Sewer Service Area	6/8/70		Chapter 133-17