

**Draft Water Supply Permit
November 8, 2010**

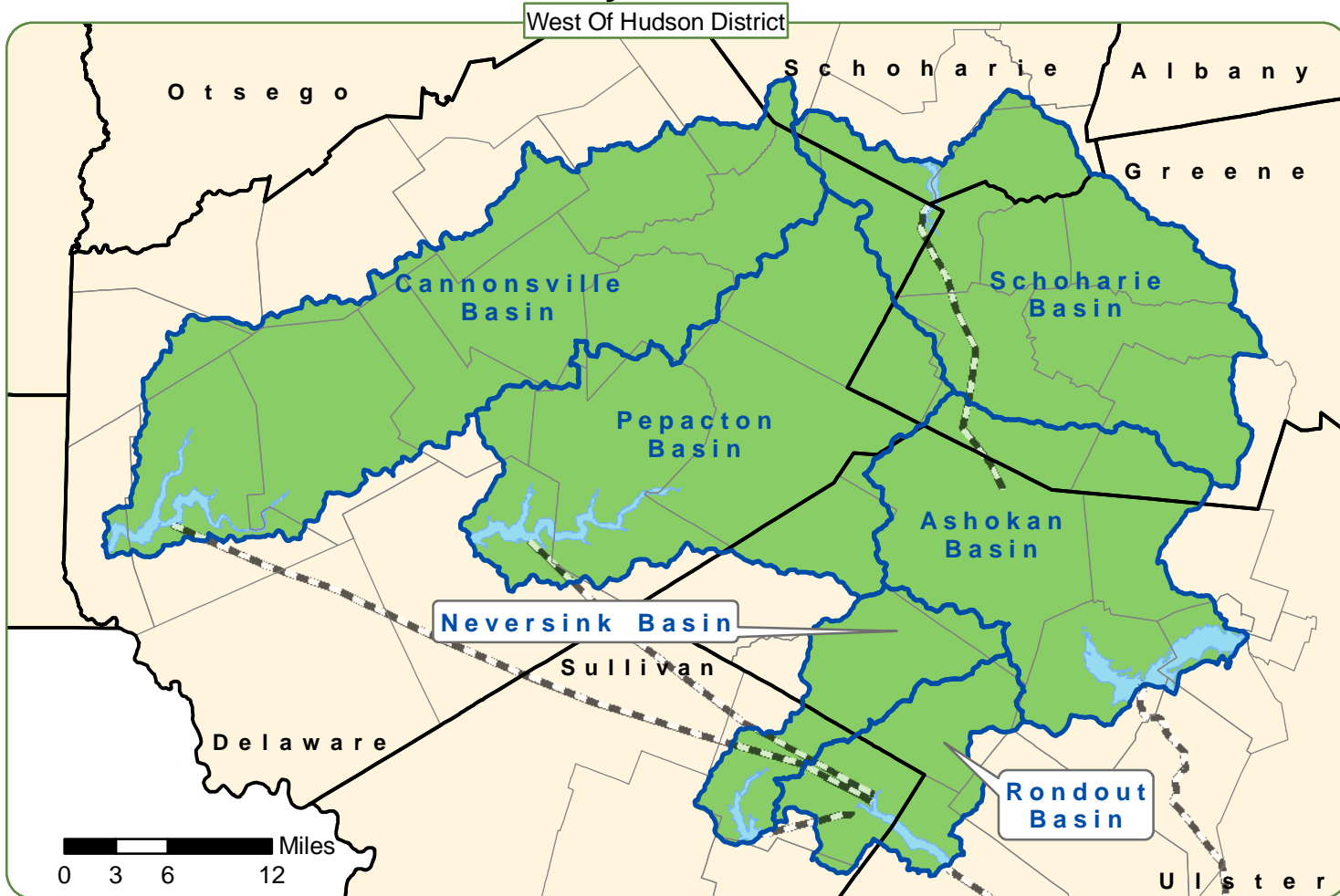
List of Exhibits

1. Map of Catskill and Delaware Water Supply and Watershed and Map of Croton Water Supply and Watershed
2. Catskill and Delaware Watershed Priority Areas West-of-Hudson
3. Catskill, Delaware and Croton Watershed Priority Areas East-of-Hudson
4. List of Tax Parcels in West of Hudson Designated Hamlets Areas
5. Maps of West of Hudson Designated Hamlet Areas
6. Defined West of Hudson Roads Eligible for Land Acquisition Exemption
7. 2007 Solicitation Schedule
8. 2008-2010 Solicitation Plan
9. Model Conservation Easement to be Held by NYSDEC on City Fee Lands
10. Model WAC Conservation Easement
11. Draft Legislation to Amend Article 5, Title 4-a of the RPTL for Taxation of Watershed Conservation Easements
12. City's Water Conservation Program
13. Cluster Development Resolutions
14. Watershed Memorandum of Agreement [incorporated by reference]
15. Notice Addresses

Exhibit 1

Draft Public Water Supply Permit for NYC Watershed Nov 8, 2010

Catskill - Delaware and Croton Systems Overview



- Catskill - Delaware System Reservoir Basins
- Croton System Reservoir Basins
- County Boundary
- Town Boundary
- Basin Boundary
- Reservoirs
- Aqueduct



Note: Mapped Features: NYC DEP GIS, 1999-2010

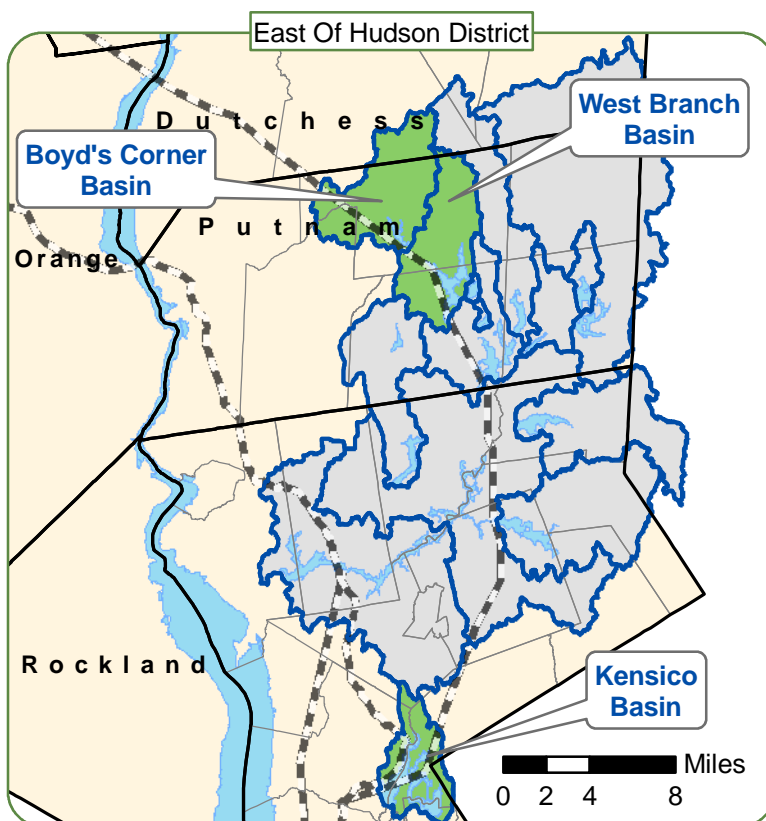


Exhibit 2

Draft Public Water Supply Permit for NYC Watershed Nov 8, 2010

West of Hudson Priority Area Map

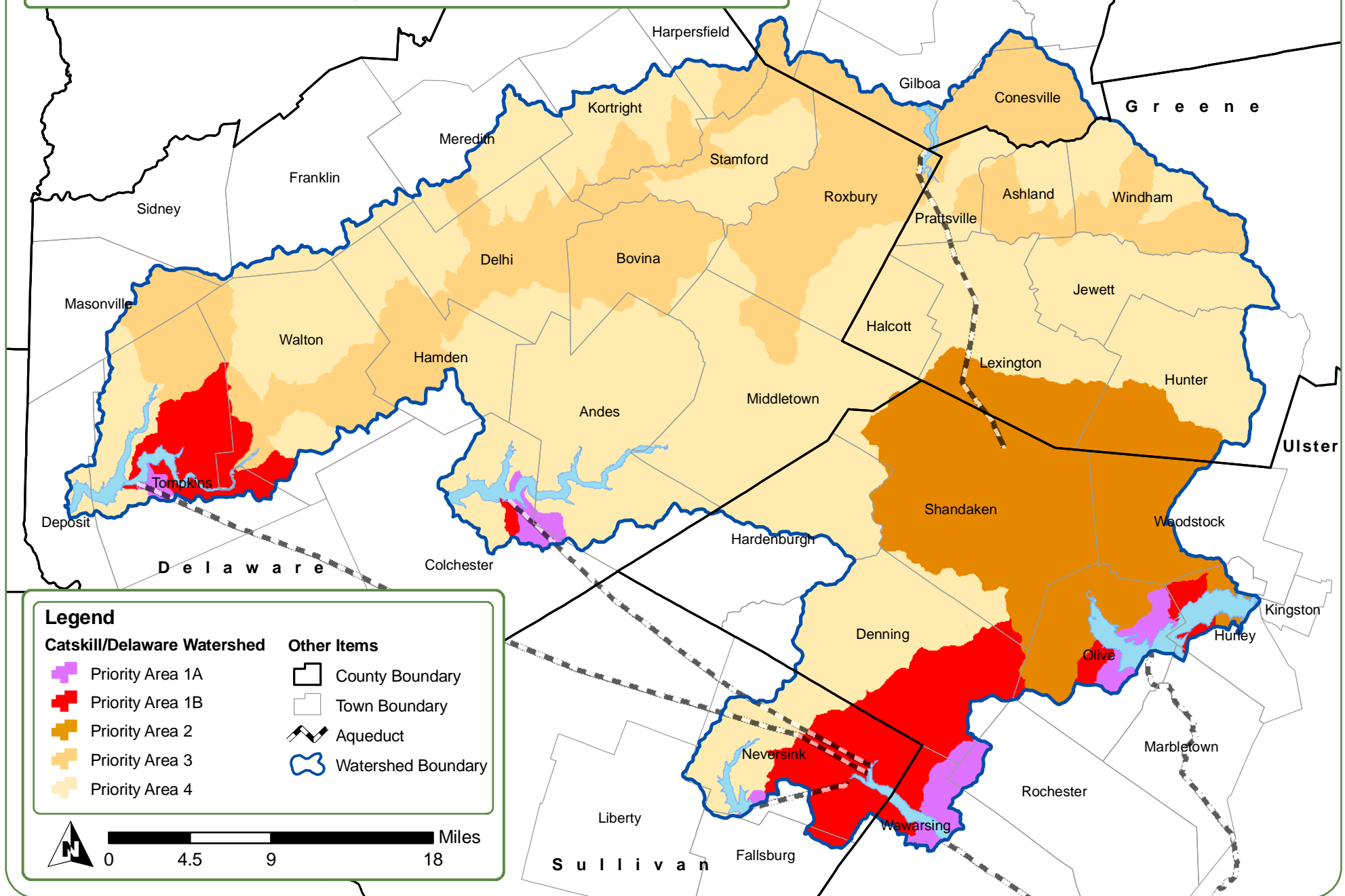


Exhibit 3

Draft Public Water Supply Permit for
NYC Watershed Nov 8, 2010

East of Hudson Priority Area Map

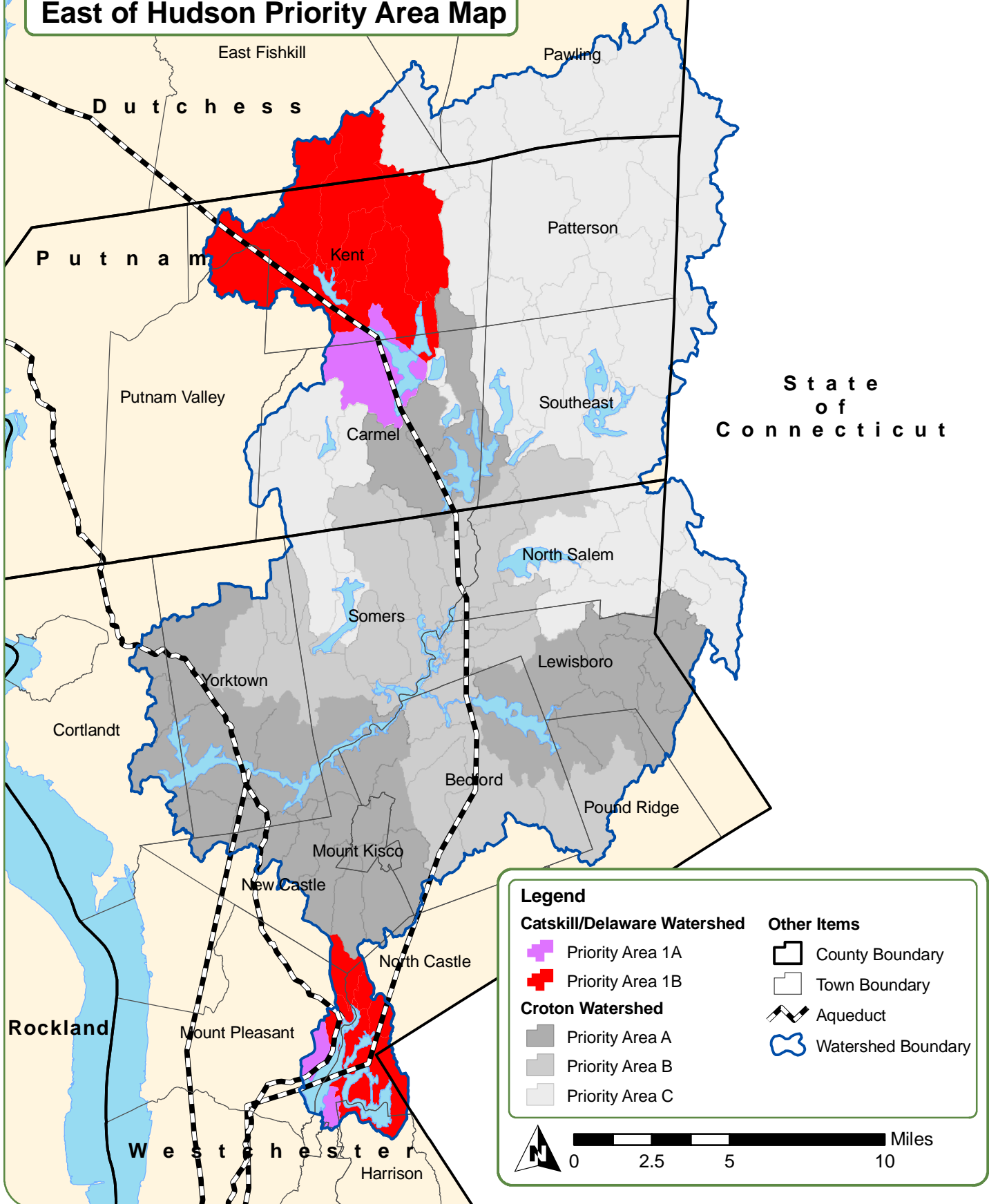


Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Delhi](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
126.-1-2		206.19	207.22	141 Emerson Rd
126.-1-3.21		8.96	7.86	14260 State Hwy 28
126.-1-3.22		94.69	93.71	14378 State Hwy 28
126.-1-4.11		9.80	8.35	14174 State Hwy 28
126.-1-4.12		1.70	1.59	State Hwy 28
126.-1-4.5		8.14	9.67	14122 State Hwy 28
126.-1-13		25.89	25.33	14445 State Hwy 28
126.-1-14		24.29	29.73	14767 State Hwy 28
126.-1-18		0.08	0.08	14895 State Hwy 28
126.-1-19		0.47	0.48	14917 State Hwy 28
126.-1-20		3.29	3.58	1051 State Hwy 28
126.-1-21		4.40	4.33	18 Emerson Rd
126.-1-22		1.70	1.71	33 Emerson Rd
126.-1-23		1.79	0.61	Meredith Rd
126.-1-32		1.39	1.44	41 Hollister Hill Rd
126.-1-34		0.61	0.62	State Hwy 28
126.-1-35		1.29	1.45	15520 State Hwy 28
126.-1-36		0.65	0.66	15545 State Hwy 28
126.-1-39		26.00	26.52	15517 State Hwy 28
126.-1-40		5.01	4.95	15451 State Hwy 28
126.-1-42		0.34	0.34	15185 State Hwy 28
126.-1-43.112		10.63	13.70	15326 State Hwy 28
126.-1-43.2		0.81	0.81	15167 State Hwy 28
126.-1-44		5.59	3.87	15468 State Hwy 28
126.-3-1		9.02	8.95	14133 State Hwy 28
126.-3-3		28.45	27.35	14043 State Hwy 28
126.-3-4		17.47	21.26	State Hwy 28
127.-1-17		0.72	0.72	48678 State Hwy 10
127.-1-21		97.40	94.19	State Hwy 10
<i>127.-1-22.1</i>	<i>Yes</i>	113.80	<i>7.16</i>	State Hwy 10
127.-1-22.2		1.60	2.25	48018 State Hwy 10
127.-1-23		1.29	1.35	47813 State Hwy 10
127.-1-24		0.42	0.42	State Hwy 10
127.-1-25		1.02	1.12	47787 State Hwy 10
127.-1-26.11		22.69	21.29	47900 State Hwy 10
127.-1-26.2		0.34	0.36	47818 State Hwy 10
127.-1-26.3		0.74	0.74	State Hwy 10
149.-1-9.2		23.39	23.39	State Hwy 28
149.-1-10		1.29	1.29	15780 State Hwy 28

- Sources:
- 1) The list of parcels is based on compilation of maps provided to NYC DEP by each town during the period from April, 2008 to October, 2010.
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 - 3) GIS Acres as per parcel 2009 polygon data provided by the respective County Real Property Tax Service Agency, 2009; for partial tax lots, as per editing by NYC DEP.

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Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Delhi](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
149.-1-11.1		0.51	0.47	15776 State Hwy 28
149.-1-11.2		0.40	0.49	State Hwy 28
149.-1-12.111		126.44	92.82	State Hwy 10
149.-1-12.112		9.56	8.66	105 Falls Mills Rd
149.-1-13		0.82	0.83	15725 State Hwy 28
149.-1-22		3.69	2.91	Meredith Rd
149.-3-1		5.09	4.88	State Hwy 28
150.-1-9.1		0.67	0.72	94 Hamilton Dr
150.-1-9.2		0.41	0.44	Elk Creek
150.-1-11		0.78	0.79	46 Hamilton Dr
150.-1-12.1		26.70	26.99	Elk Creek Rd
150.-1-12.2		5.26	5.34	Elk Creek Rd
150.-1-19		42.29	45.13	46551 State Hwy 10
150.-1-21		19.20	21.41	46631 State Hwy 10
150.-1-22		0.39	0.40	State Hwy 10
150.-1-23.1		4.30	3.91	State Hwy 10
150.-1-23.2		1.35	1.33	50 Barrett Rd
150.-1-24		1.10	1.08	46959 State Hwy 10
150.-1-25.1		0.59	0.60	46957 State Hwy 10
150.-1-25.2		0.70	0.71	State Hwy 10
150.-1-27		0.79	0.80	46999 State Hwy 10
150.-1-28		0.11	0.11	State Hwy 10
150.-1-29		3.70	3.58	State Hwy 10
150.-1-30.1		21.50	21.62	47041 State Hwy 10
150.-1-30.2		1.00	1.00	47017 State Hwy 10
150.-1-31		0.69	0.70	47147 State Hwy 10
150.-1-32		0.83	0.82	47177 State Hwy 10
150.-1-33		0.48	0.48	47164 State Hwy 10
150.-1-34		0.86	0.86	State Hwy 10
150.-1-35		0.65	0.66	47220 State Hwy 10
150.-1-36		0.24	0.25	State Hwy 10
150.-1-37		1.79	1.52	State Hwy 10
150.-1-38.1		61.40	62.02	47245 State Hwy 10
150.-1-38.2		1.02	1.12	47243 State Hwy 10
150.-1-39		55.50	40.40	State Hwy 10
150.-1-41		0.43	0.43	47716 State Hwy 10
150.-1-42		1.39	1.37	47946 State Hwy 10
150.-1-43		1.50	1.41	48224 State Hwy 10
150.-1-44		0.86	0.87	State Hwy 10

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List of Parcels within the Hamlet Expansion Area, Town of [Delhi](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
150.-1-45		1.60	1.45	2263 County Hwy 18
150.-1-92.1		209.75	199.52	739 County Hwy 18
150.-1-96		1.70	1.19	45793 State Hwy 10
150.-1-97		3.50	4.56	Falls Mills Rd
170.-1-40		174.30	174.33	State Hwy 10
171.-1-3.1		17.79	16.91	20279 State Hwy 28
171.-1-3.2		1.00	0.97	State Hwy 28
171.-1-4		3.50	3.46	State Hwy 28
171.-1-5		9.15	9.88	20215 State Hwy 28
171.-1-6.1		2.01	2.24	20031 State Hwy 28
171.-1-6.2		4.42	4.11	20033 State Hwy 28
171.-1-6.3		4.28	4.05	State Hwy 28
171.-1-6.4		6.30	6.34	20035 State Hwy 28
171.-1-7		11.19	10.62	19815 State Hwy 28
171.-1-8.1		19.21	18.69	State Hwy 28
171.-1-8.2		19.00	18.81	State Hwy 28
171.-1-9		1.00	0.98	19709 State Hwy 28
171.-1-10	Yes	47.29	7.66	State Hwy 28
171.-1-16		3.00	3.20	River Rd
171.-1-19		19.40	14.03	484 Sherwood Rd
171.18-1-1		0.54	0.54	42951 State Hwy 10
171.18-1-2		0.65	0.66	42931 State Hwy 10
171.18-1-3		0.41	0.42	42881 State Hwy 10
171.18-2-7		0.38	0.39	56 Sherwood Dr
171.18-2-8		0.35	0.36	45 Sherwood Dr
171.18-2-9		0.52	0.52	41 Sherwood Dr
172.-1-25		10.31	10.21	21781 State Hwy 28
192.-1-9.1		1.00	0.56	40645 State Hwy 10
192.-1-9.21	Yes	138.19	47.68	State Hwy 10
192.-1-10		42.79	40.06	Trans Rt 10
192.-1-11.1		14.64	14.48	41155 State Hwy 10
192.-1-14		3.50	3.16	41188 State Hwy 10
192.-1-15		1.51	1.88	41254 State Hwy 10
192.-1-16		5.00	4.68	31 Peakes Brook Rd
192.-1-20		17.50	17.40	41357 State Hwy 10
192.-1-22		5.71	6.45	41389 State Hwy 10
192.-1-23		91.90	82.09	41561 State Hwy 10
192.-1-24		0.95	0.95	41647 State Hwy 10
192.-1-31		1.79	1.74	42030 State Hwy 10

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<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
192.-1-51		24.00	23.29	State Hwy 10
192.-1-53		4.69	3.95	State Hwy 10
192.-1-54		0.82	0.82	40455 State Hwy 10
<i>192.-1-70.1</i>	<i>Yes</i>	205.50	<i>38.79</i>	State Hwy 10
<i>192.-1-70.2</i>	<i>Yes</i>	2.41	<i>0.67</i>	39832 State Hwy 10
<i>194.-1-2.1</i>	<i>Yes</i>	142.60	<i>2.05</i>	21031 State Hwy 28
194.-1-2.2		39.59	39.97	21101 State Hwy 28
194.-1-2.3		0.89	0.89	21201 State Hwy 28
<i>194.-1-3</i>	<i>Yes</i>	183.60	<i>28.74</i>	21287 State Hwy 28
<i>194.-1-5.1</i>	<i>Yes</i>	88.37	<i>68.48</i>	21529 State Hwy 28
194.-1-5.3		1.16	1.14	State Hwy 28
194.-1-7		6.26	6.19	21755 State Hwy 28
<i>194.-1-11.2</i>	<i>Yes</i>	137.19	<i>131.62</i>	State Hwy 28
<i>194.-1-12.1</i>	<i>Yes</i>	135.69	<i>31.72</i>	State Hwy 28
194.-1-16		19.93	19.71	22961 State Hwy 28
194.-1-32		3.29	3.22	State Hwy 28
<i>194.-1-33</i>	<i>Yes</i>	38.00	<i>20.54</i>	State Hwy 28
<i>194.-1-34.1</i>	<i>Yes</i>	62.00	<i>46.10</i>	20570 State Hwy 28
194.-1-41		2.19	2.28	20953 State Hwy 28
194.-3-1		5.09	5.11	State Hwy 28
194.-3-2		5.73	5.57	State Hwy 28
194.-3-3		5.09	5.23	219 Tara Ln
194.-3-4		3.85	4.12	22779 State Hwy 28
194.-3-5		6.57	5.88	100 Tara Ln
195.-2-3		23.79	24.74	State Hwy 28
195.-2-4		12.71	16.21	State Hwy 28
195.-2-5.1		1.47	1.51	23883 State Hwy 28
195.-2-5.2		4.92	6.15	23811 State Hwy 28
195.-2-9		5.00	4.93	23727 State Hwy 28
195.-2-10		15.51	15.08	23593 State Hwy 28
195.-2-11		4.50	4.17	23509 State Hwy 28
195.-2-12.12		5.38	5.99	23429 State Hwy 28
195.-2-12.13		5.09	5.49	State Hwy 28
195.-2-12.14		39.97	39.97	23307 State Hwy 28
195.-2-12.15		9.68	7.57	88 Tom Hoag Rd
195.-2-12.3		4.86	5.03	23091 State Hwy 28
213.-2-4.1		3.20	3.17	State Hwy 10
213.-2-4.2		0.27	0.27	State Hwy 10
213.-2-18		85.70	91.91	State Hwy 10

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List of Parcels within the Hamlet Expansion Area, Town of [Delhi](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
213.-2-19		33.40	34.33	State Hwy 10
213.-2-22		16.59	15.47	State Hwy 10
213.-2-23		5.30	5.51	State Hwy 10
213.-2-28		15.00	14.88	38718 State Hwy 10

Town of Delhi Summary:Parcel Count: **160**Total Area: **2,556.04 acres**

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Hamden](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
213.-1-6		11.60	11.89	3115 Back River Rd
<i>213.-1-22</i>	<i>Yes</i>	116.00	<i>89.21</i>	2465 County Hwy 2
213.-1-24		220.00	242.09	2179 Back River Rd
213.-1-26.1		84.40	84.37	2270 Back River Rd
213.-1-27		54.29	54.94	2482 Back River Rd
213.-1-29.1		136.00	156.24	38079 State Hwy 10
<i>233.-1-5.2</i>	<i>Yes</i>	55.65	<i>34.92</i>	416 Launt Hollow Rd
233.-1-7.1		30.00	32.70	Launt Hollow Rd
233.-1-7.2		12.00	11.56	Launt Hollow Rd
233.-1-8		1.00	0.51	25 Miller Ln
233.-1-9.1		90.00	88.85	1508 Launt Hollow Rd
<i>233.-1-9.2</i>	<i>Yes</i>	57.27	<i>2.02</i>	Launt Hollow Rd
233.-1-12.2		14.17	13.68	37445 State Hwy 10
233.-1-34		32.00	32.54	36987 State Hwy 10
233.-1-44.1		41.20	41.19	36231 State Hwy 10
233.-1-44.2		28.29	28.10	974 Launt Hollow Rd
233.-1-47		1.00	0.85	820 Launt Hollow Rd
233.-1-48		2.82	2.69	810 Launt Hollow Rd
233.-1-50.1		28.20	26.39	726 Launt Hollow Rd
233.-1-52		0.50	0.66	667 Launt Hollow Rd
<i>234.-1-5.111</i>	<i>Yes</i>	38.90	<i>39.93</i>	River Rd
<i>234.-1-9.1</i>	<i>Yes</i>	61.00	<i>48.41</i>	1528 Back River Rd
<i>234.-1-12.1</i>	<i>Yes</i>	14.19	<i>11.74</i>	1706 Back River Rd
<i>234.-1-12.2</i>	<i>Yes</i>	2.77	<i>1.51</i>	1710 Back River Rd
234.-1-13		0.25	0.56	1752 Back River Rd
234.-1-14.3		71.37	71.05	1943 County Hwy 2
<i>234.-1-43.1</i>	<i>Yes</i>	109.00	<i>93.27</i>	1220 Back River Rd
235.-1-2		1.00	1.01	Bagley Brook Rd
235.-1-3		8.97	9.35	Bagley Brook Rd
235.-1-9		21.60	20.52	3667 County Hwy 2
235.-1-11		44.09	45.39	Bagley Brook Rd
235.-1-34		0.20	0.18	Bagley Brook Rd
<i>235.-1-36</i>	<i>Yes</i>	249.25	<i>129.88</i>	2763 County Hwy 2
253.-1-7.1		31.90	31.88	State Hwy 10
253.-1-13		1.00	0.75	34075 State Hwy 10
253.-1-14.1		6.25	9.35	State Hwy 10
<i>253.-1-14.2</i>	<i>Yes</i>	33.06	<i>6.40</i>	33635 State Hwy 10
253.-1-14.51		3.02	3.44	State Hwy 10
253.-1-14.52		3.00	3.73	State Hwy 10

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List of Parcels within the Hamlet Expansion Area, Town of [Hamden](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
<i>253.-1-14.6</i>	<i>Yes</i>	78.58	<i>35.22</i>	33785 State Hwy 10
<i>253.-1-16</i>	<i>Yes</i>	40.00	<i>12.65</i>	State Hwy 10
254.-1-1.1		35.93	36.71	34451 State Hwy 10
254.-1-3		39.09	36.99	34605 State Hwy 10
254.-1-5		8.00	6.05	16 Chambers Hollow Rd
254.-1-11.31		134.39	132.87	State Hwy 10
254.-1-11.32		12.00	12.24	State Hwy 10
<i>254.-1-13.11</i>	<i>Yes</i>	230.61	<i>30.37</i>	35321 State Hwy 10
<i>254.-1-13.12</i>	<i>Yes</i>	66.38	<i>5.55</i>	35235 State Hwy 10
254.-1-36		1.70	1.73	34523 State Hwy 10
254.-1-37		2.29	2.20	187 Chambers Holw Rd
254.-1-38.11		93.43	91.43	34055 State Hwy 10
<i>254.-1-42</i>	<i>Yes</i>	19.05	<i>13.78</i>	State Hwy 10
<i>275.-1-1</i>	<i>Yes</i>	128.00	<i>32.68</i>	32775 State Hwy 10
<i>275.-1-2</i>	<i>Yes</i>	50.00	<i>18.83</i>	32861 State Hwy 10
<i>275.-1-6</i>	<i>Yes</i>	150.00	<i>56.11</i>	5371 East River Rd
275.-1-7.1		74.00	73.76	4956 East River Rd
275.-1-7.2		7.26	7.22	4919 East River Rd
275.-1-7.3		8.85	8.39	4921 East River Rd
276.-1-4		82.19	81.64	5709 East River Rd
276.-1-6.3		9.09	9.08	County Hwy 26
276.-1-12		69.50	61.51	Mallory Brk
276.-1-13.1		50.00	46.48	Mallory Brk
276.-1-14.1		136.30	137.03	Mallory Brook Rd

Town of Hamden Summary:Parcel Count: **63**Total Area: **2,434.27 acres**

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<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
40.-1-19		1.45	1.36	173 Terry Rd
40.-1-20		0.80	0.80	State Hwy 23
40.-1-22.1		3.04	2.78	236 Terry Rd
40.-1-22.2		1.30	0.58	Beech Rd
40.-1-22.3		1.55	1.17	205 Beech Rd
40.-1-23		13.10	12.80	345 Terry Rd
40.-1-24.1		1.97	2.15	Terry Rd
40.-1-24.2		1.79	2.04	499 Terry Rd
40.-1-24.3		2.91	2.59	549 Terry Rd
40.-1-25		2.29	2.05	579 Terry Rd
40.-1-26		157.80	119.50	Terry Rd
40.-1-27.1		4.36	4.26	Terry Rd
40.-1-27.2		4.07	4.14	Terry Rd
40.-1-27.3		2.03	1.81	Terry Rd
40.-1-27.4		15.11	14.97	Terry Rd
40.-1-28.11		4.13	3.79	28 Eagle Ln
40.-1-28.12		0.92	0.93	172 Eagle Ln
40.-1-28.2		6.13	5.39	122 Eagle Ln
40.-1-29		1.20	0.92	Terry Rd
40.-1-30		1.50	1.45	State Hwy 10
40.-1-31.11		4.07	3.92	State Hwy 10
40.-1-31.12		1.79	1.58	Terry Rd
40.-1-31.2		2.53	2.48	State Hwy 10
40.-1-32	Yes	12.30	6.51	State Hwy 10
40.-1-41		3.50	3.38	634 Terry Rd
40.-1-42		11.00	11.34	582 Terry Rd
40.-1-43		5.32	5.14	Terry Rd
40.-1-44.1		39.00	41.38	366 Terry Rd
40.-1-44.2		2.00	1.78	Terry Rd
40.-1-44.3		1.20	1.07	345 Terry Rd
40.-1-45		1.39	1.20	Terry Rd
40.-1-47.1	Yes	20.65	6.82	State Hwy 23
40.-1-47.2		2.25	2.03	34 Beech Rd
40.-1-77	Yes	11.00	4.06	Cornell Rd
40.-1-78.1	Yes	224.30	169.10	Bruce Hill Rd
41.-1-1		0.69	0.88	State Hwy 10
41.-1-2.1		1.00	0.77	65724 State Hwy 10
41.-1-2.2		2.20	2.10	65696 State Hwy 10
41.-1-3	Yes	13.80	9.64	State Hwy 10

- Sources:
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 - 3) GIS Acres as per parcel 2009 polygon data provided by the respective County Real Property Tax Service Agency, 2009; for partial tax lots, as per editing by NYC DEP.

Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Harpersfield](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
41.-1-4		24.29	25.05	River St
<i>53.-1-13</i>	<i>Yes</i>	58.70	<i>2.52</i>	State Hwy 10
53.-1-19		2.29	2.62	Railroad Ave
53.-1-20		5.40	5.30	Railroad Ave
53.-1-21		0.53	0.54	Railroad Ave
53.-1-22.1		2.29	2.18	54 Axtell Rd
53.-1-22.2		3.20	2.97	Railroad Ave
<i>53.-1-27</i>	<i>Yes</i>	126.40	<i>164.37</i>	State Hwy 10
53.-1-30		146.60	128.02	State Hwy 10
53.-1-38.31		11.19	11.63	State Hwy 10
53.-1-38.33		45.79	46.12	State Hwy 10
53.-1-38.34		7.88	6.99	State Hwy 10
53.-1-40.1		0.35	0.36	65 Creamery Rd
53.-1-44		3.79	4.14	62710 State Hwy 10
53.-1-45		276.75	283.89	62543 State Hwy 10
53.-1-46.1		58.84	73.12	State Hwy 10
53.-1-51		0.75	0.55	151 Railroad Ave
53.-1-52.1		2.50	1.91	Railroad Ave
53.-1-52.2		0.79	0.72	Railroad Ave
69.-1-1		45.58	47.54	State Hwy 10
69.-1-2		1.10	0.75	State Hwy 10
69.-1-3.1		1.24	1.31	61838 State Hwy 10
69.-1-3.2		0.19	0.19	State Hwy 10
69.-1-5		19.30	12.99	61999 State Hwy 10
69.-1-6		2.50	2.35	62668 State Hwy 10
69.-1-7		9.55	9.57	State Hwy 10

Town of Harpersfield Summary: Parcel Count: 65 Total Area: 1,298.36 acres
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- Sources:
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 - 3) GIS Acres as per parcel 2009 polygon data provided by the respective County Real Property Tax Service Agency, 2009; for partial tax lots, as per editing by NYC DEP.

Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of Kortright

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
38.-2-17		124.91	77.36	5579 Betty Brook Rd
38.-2-20		204.00	201.27	5500 Betty Brook Rd
38.-2-21.21		17.30	16.85	5063 Betty Brook Rd
38.-2-22		1.10	1.07	5360 Betty Brook Rd
38.-2-23		1.25	1.25	Betty Brook Rd
51.-1-5		0.62	0.45	Betty Brk
51.-1-6		3.70	3.61	4036 Betty Brook Rd
51.-1-7		1.27	1.52	4018 Betty Brook Rd
51.-1-8.1		17.06	18.09	Betty Brook Rd
51.-1-8.2		17.37	16.14	Betty Brook Rd
51.-1-8.31		24.97	23.16	Betty Brook Rd
51.-1-8.32		3.00	2.72	3853 Betty Brook Rd
51.-1-13.3		5.00	4.71	Betty Brook Rd
51.-1-13.5		32.16	32.11	3460 Betty Brook Rd
51.-1-14.211		46.29	47.50	3592 Betty Brook Rd
51.-1-15		6.38	5.18	18 Fancher Ln
51.-1-16		13.19	10.78	3800 Betty Brook Rd
65.-2-7.1		1.18	1.18	1770 Roberts Rd
65.-2-7.2		1.10	0.98	Roberts Rd
65.-2-7.3		0.92	0.93	1723 Roberts Rd
65.-2-7.4	Yes	560.00	470.25	Roberts Rd
66.-1-6		17.70	20.11	3164 County Hwy 33
66.-1-7		40.00	39.19	3474 Co Rt 33
66.-1-8.2		20.43	20.12	68 Brownell Rd
66.-1-13.1		44.74	43.94	2914 County Hwy 33
66.-1-13.2		1.57	1.48	3098 County Hwy 33
66.-1-15.1		134.66	132.09	1376 Roberts Rd
66.-1-15.2		0.66	1.12	1424 Roberts Rd
67.-1-8.11		26.89	25.45	3112 Betty Brook Rd
67.-1-8.2		11.69	11.03	3244 Betty Brook Rd
67.-1-9		1.70	1.48	3328 Betty Brook Rd
67.-1-12		40.00	43.79	Hobart Hill Rd
67.-1-13		110.00	109.71	Betty Brook Rd
67.-1-16	Yes	158.10	118.45	1875 Betty Brook Rd
67.-1-17.1		0.89	0.76	2188 Betty Brook Rd
67.-1-17.4		3.60	3.46	2188 Betty Brook Rd
67.-1-18		3.33	3.53	2150 Betty Brook Rd
68.-3-5.11	Yes	63.83	12.17	McMurdy Brook Rd
68.-3-5.12	Yes	93.26	17.92	59835 State Highway 10

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of Kortright

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
68.-3-9		9.80	9.55	59779 State Hwy 10
84.-1-12.1		6.50	5.48	1378 County Hwy 33
84.-1-12.2		1.00	1.02	1412 County Hwy 33
85.-1-3.1		3.33	3.97	2490 County Hwy 33
85.-1-3.2		6.19	5.38	Co Rt 33
85.-1-3.3		2.05	1.94	Co Rt 33
85.-1-4		28.38	28.78	26 McArthur Hill Rd
85.-1-20.1		154.77	155.27	1960 County Hwy33
85.-1-20.3		1.72	1.01	200 Roberts Rd
86.-1-12		16.00	15.59	Betty Brook Rd
86.-1-13.1		21.70	21.86	1376 Betty Brook Rd
86.-1-13.2		26.00	25.40	1490 Betty Brook Rd
86.-1-14		45.40	43.95	Betty Brook Rd
86.-1-15		147.30	135.66	Betty Brook Rd
87.-2-4.111	Yes	166.05	2.37	State Hwy 10
87.-2-4.112		1.20	1.10	37 McMurdy Brook Rd
87.-2-4.12		0.75	0.86	59475 State Hwy 10
87.-2-4.13		16.06	15.52	Nys Route 10
87.-2-5.1		6.32	5.67	58789 State Highway 10
87.-2-5.2		0.40	0.39	58841 State Highway 10
87.-2-5.3		65.93	65.30	Nys Route 10
87.-2-5.4		11.22	10.58	Nys Route 10
87.-2-6		0.87	0.96	58580 State Hwy 10
87.-2-7		1.00	0.83	58554 State Hwy 10
87.-2-9		1.00	1.91	58269 State Hwy 10
87.-2-10		198.00	189.48	58015 State Hwy 10
87.-2-11		15.80	15.48	58200 State Highway 10
87.-2-13		1.39	1.40	58084 State Hwy 10
87.-2-14		3.59	3.52	58054 State Highway 10
87.-2-16		11.39	11.51	57807 State Hwy 10
87.-2-17		8.53	8.54	57705 State Highway 10
87.-2-18		7.73	7.73	State Highway 10
87.-2-19		5.90	6.70	57645 State Hwy 10
87.-2-20		7.59	6.77	57587 State Hwy 10
87.-2-21		15.10	12.88	Rt 10
87.-2-22		2.20	2.25	57452 State Hwy 10
87.-2-23.12		0.61	0.38	57114 State Hwy 10
87.-2-23.2		1.39	1.37	57141 State Hwy 10
87.-3-1		0.40	0.40	110 Simmons Rd

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of Kortright

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
87.-3-2.1		2.20	1.81	59826 State Hwy 10
87.-3-2.2		0.68	0.54	130 Simmons Rd
87.-3-3		0.46	0.37	59684 State Hwy 10
87.-3-4		0.40	0.36	Nys Route 10
87.-3-5		26.90	26.67	Nys Route 10
87.-4-22.1		10.69	9.94	Nys Rt 10
105.-2-16.111	Yes	34.59	6.97	834 County Hwy 33
105.-2-16.12	Yes	153.69	124.63	180 Bloomville Hill Rd
105.-3-7		12.60	12.74	Stroker Hill Rd
105.-3-10		7.86	7.52	Stroker Hill Rd
105.-3-19	Yes	4.30	2.92	51727 State Hwy 10
106.-2-1.1		1.00	0.97	28 Crowe Rd
106.-2-8		27.70	27.35	54235 State Hwy 10
106.-2-10		34.70	35.54	53914 State Hwy 10
106.-2-11		1.20	1.44	53811 State Hwy 10
106.-2-12		0.50	0.93	53646 State Hwy 10
106.-2-13		5.34	5.29	53665 State Hwy 10
106.-2-16.12		7.90	7.91	State Hwy 10
106.-2-16.13		80.90	67.79	State Hwy 10
106.-2-16.2		2.00	1.84	53646 State Hwy 10
106.-2-17		0.43	0.51	53109 State Hwy 10
106.-2-18		0.17	0.70	53081 State Hwy 10
106.-2-19.111		21.03	18.71	52521 State Hwy 10
106.-2-19.112	Yes	193.74	78.20	53159 State Hwy 10
106.-2-25.21	Yes	13.93	10.47	51702 New York State Highway 10
106.-2-25.22	Yes	11.81	8.12	Nys Rt 10
106.-2-25.3	Yes	41.49	35.99	Off State Hwy 10
106.-2-27.1	Yes	115.70	112.80	State Hwy 10
106.-2-28		4.40	4.15	Agway Rd
106.-2-31		131.00	130.92	53159 State Hwy 10
106.-2-32	Yes	47.20	36.68	Gregory Hill Rd
107.-2-1		268.29	273.66	State Hwy 10
107.-2-2.31		7.00	7.05	55725 State Hwy 10
107.-2-2.32		5.13	5.09	55501 State Hwy 10
107.-2-2.33		5.34	5.06	55501 State Hwy 10
107.-2-2.811		2.29	2.21	State Hwy 10
107.-2-2.812		2.70	2.39	55291 State Hwy 10
107.-2-2.82		4.28	4.13	55443 State Hwy 10
107.-2-3		11.10	11.59	State Hwy 10

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of Kortright

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
107.-2-4		3.40	3.30	55825 State Hwy 10
107.-2-5		0.25	0.45	55857 State Hwy 10
107.-2-6.1		42.70	41.89	NYState Hwy 10
107.-2-6.2		24.29	22.28	Nys Rt 10
107.-2-7		2.09	2.18	55908 State Hwy 10
107.-2-8		1.05	1.05	56225 State Hwy 10
107.-2-9		0.50	0.53	56225 State Hwy 10
107.-2-10		1.00	0.85	119 Betty Brook Rd
107.-2-11		2.09	1.55	10 Betty Brook Rd
107.-2-12.111		2.00	1.59	56336 State Hwy 10
107.-2-12.112		5.55	5.86	State Hwy 10
107.-2-12.12		5.17	5.55	State Hwy 10
107.-2-12.13		2.15	1.96	56372 State Hwy 10
107.-2-12.21		1.70	1.81	Betty Brook Rd
107.-2-12.3		2.90	2.70	19 Betty Brook Rd
107.-2-12.4		1.20	1.18	56227 State Hwy 10
107.-2-12.5		0.46	0.59	56312 State Hwy 10
107.-2-13.1		2.02	2.17	56413 State Hwy 10
107.-2-14.2		2.20	2.40	State Hwy 10
107.-2-15		15.39	13.66	56508 State Hwy 10
107.-2-16		0.50	0.43	State Hwy 10
107.-2-17		147.30	133.52	56957 State Hwy 10
107.-2-18		3.00	2.80	56751 State Hwy 10
107.-2-19		1.00	0.83	56879 State Hwy 10
107.-2-20		0.50	0.47	56881 State Hwy 10
107.-2-21		0.50	0.41	56913 State Hwy 10
107.-2-22		5.50	8.75	57018 State Hwy 10
107.-2-27		4.63	4.48	122 Mountain Crest Rd

Town of Kortright Summary:Parcel Count: **145**Total Area: **3,728.90 acres**

-
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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Masonville](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
205.-1-9.1		152.80	149.96	State Hwy 206

Town of Masonville Summary:	Parcel Count:	1
	Total Area:	149.96 acres

-
- Sources:
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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Meredith](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
<i>82.-1-1</i>	<i>Yes</i>	1,008.00	<i>60.26</i>	Saw Mill Rd
82.-1-15.2		5.00	4.88	4566 Turnpike
<i>82.-1-15.3</i>	<i>Yes</i>	17.95	<i>6.01</i>	Turnpike

Town of Meredith Summary:Parcel Count: **3**Total Area: **71.15 acres**

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- Sources:
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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Middletown](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
240.-2-9		1.79	1.82	Thompson Hollow Rd
242.-1-39.11		188.85	187.43	State Hwy 30
242.-1-39.12		1.47	1.45	State Hwy 30
242.-1-41		2.00	1.94	107 Mill Rd
242.-1-42		5.09	5.01	191 Mill Rd
242.-1-43		9.50	9.41	46966 State Hwy 30
242.-1-44		1.37	1.54	State Hwy 30
263.-2-6.2		1.01	1.07	46530 State Hwy 30
263.-2-15		0.46	0.46	Batavia Hgts Cir
263.-2-16		1.19	0.88	196 Batavia Hgts Cir
263.-2-17		0.87	0.78	184 Batavia Hgts Cir
263.-2-18		1.00	0.87	144-146 Batavia Hgts Cir
263.-2-19		2.00	1.93	122 Batavia Hgts Cir
263.-2-20		13.21	13.62	235 County Hwy 36
263.-2-21		4.19	4.13	120 Batavia Hgts Cir
263.-2-22		1.09	0.67	129 Batavia Hgts Cir
263.-2-23		0.62	0.55	115 Batavia Hgts Cir
263.-2-24		0.68	0.62	Batavia Hgts Cir
263.-2-25		1.64	1.82	45580 State Hwy 30
263.-2-26		1.60	1.41	46 Batavia Hgts Cir
263.-2-27		4.59	4.71	State Hwy 30
263.-2-28		0.38	0.82	102 E Hubbell Hill Rd
263.-3-1		0.23	0.24	43 E Hubbell Hill Rd
263.-3-2		20.70	20.36	State Hwy 30
263.-3-3		3.00	3.01	48 Grant Rd
263.-3-4		0.75	0.54	72 Grant Rd
263.-3-5		1.20	1.12	66 County Hwy 36
263.-3-6		1.60	1.53	45490 State Hwy 30
263.-3-7		0.30	0.38	45502 State Hwy 30
263.-3-8		0.25	0.24	45524 State Hwy 30
263.-3-9		0.31	0.22	45536 State Hwy 30
263.-3-10		0.10	0.19	46 County Hwy 36
263.-3-11		0.21	0.24	58 County Hwy 36
263.-3-12		0.60	0.49	98 County Hwy 36
263.-3-13.2		1.86	1.29	106 County Hwy 36
263.-3-13.3		5.09	5.41	98 Zarcone Rd
263.-3-13.4		14.01	13.56	160 Murad Rd
263.-3-13.5		3.17	3.19	Grant Rd
263.-3-14		0.46	0.32	174 County Hwy 36

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Middletown](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
263.-3-15		0.29	0.30	196 County Hwy 36
263.-3-44		0.80	0.63	45278 State Hwy 30
263.-3-51		1.70	1.73	State Hwy 30

Town of Middletown Summary:Parcel Count: **42**Total Area: **297.94 acres**

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- Sources:
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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Roxbury](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
157.-1-25.1		50.41	49.22	State Hwy 30
157.-1-25.3		0.40	0.21	State Hwy 30
157.-1-25.4		24.81	25.36	54400 State Hwy 30
157.-1-34.1		0.80	0.80	36 Hubbells Corner Rd
157.-1-34.21		0.75	0.66	100 Hubbells Corner Rd
157.-1-34.22		0.61	0.59	100 Hubbells Corner Rd
157.-3-3		4.46	5.07	S Montgomery Hollow Rd
157.-3-8.41		1.01	0.91	Old Route 30
157.2-1-1		0.50	0.34	109 Maple Rd
157.2-1-3		0.30	0.26	39 Maple Rd
157.2-1-4		9.00	10.26	47 Maple Ln
157.2-1-5		0.25	0.30	129 Maple Ln
157.2-1-6		0.25	0.29	119 Maple Ln
157.2-1-7		0.50	0.45	95 Maple Ln
157.2-1-8		0.25	0.25	79 Maple Ln
157.2-1-9		0.25	0.21	69 Maple Ln
157.2-1-10		0.25	0.23	59 Maple Ln
157.2-1-11.1		0.35	0.36	Maple Ln
157.2-1-11.2		0.30	0.34	132 Maple Ln
157.2-1-12		1.25	1.07	90 Maple Ln
157.2-1-13		0.86	0.83	50 Maple Lane
157.2-1-14		0.75	0.84	103 Montgomery Hollow Rd
157.2-1-15.1		0.40	0.40	155 Montgomery Hollow Rd
157.2-1-15.2		0.37	0.38	141 Montgomery Hollow Rd
157.2-1-16		1.00	0.77	9 N Montgomery Hollow Rd
157.2-1-17		0.17	0.19	State Hwy 30
157.2-1-18		0.37	0.27	57 Hubbells Corner Rd
157.2-1-19		0.50	0.42	89 Hubbells Corner Rd
157.2-1-20.1		0.70	0.70	Hubbells Corner Rd
157.2-1-20.2		0.34	0.29	123 Hubbells Corner Rd
157.2-1-21		0.69	0.60	1-63 Roxbury Rental Rd
157.2-1-22		0.27	0.24	169 Hubbells Corner Rd
157.2-1-23		0.12	0.15	147 Hubbells Corner Rd
157.2-1-25.1		0.36	0.38	State Hwy 30
157.2-1-25.21		0.69	0.69	205 Hubbells Corner Rd
157.2-1-25.22		0.36	0.40	State Hwy 30
157.2-1-26.1		0.40	0.40	State Hwy 30
157.2-1-26.2		0.41	0.42	211 Hubbells Corner Rd
157.2-1-27		1.00	1.12	75 Maple Rd

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Roxbury](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
157.2-1-28		0.20	0.15	Maple Rd
<i>157.3-1-22.2</i>	<i>Yes</i>	14.47	<i>10.88</i>	Off Main St
179.-1-1.8		56.25	54.89	State Hwy 30
179.-1-4.1		0.23	0.28	52856 State Hwy 30
179.-1-4.2		0.73	0.74	52816 State Hwy 30
179.-1-5		0.50	0.26	52888 State Hwy 30
179.-1-6		22.60	22.12	52916 County Hwy 30
179.-1-7.11		0.50	0.43	53158 State Hwy 30
179.-1-7.12		2.94	2.90	Orchard St
179.-1-7.211		4.67	5.14	State Hwy 30
179.-1-7.217		7.71	7.77	56 Hillcrest Dr
179.-1-42.1		210.25	201.89	52234 State Hwy 30
179.-1-42.2		18.68	18.34	State Hwy 30
179.1-1-39		0.75	0.91	53047 State Hwy 30
179.1-1-40		0.75	0.85	2890 Bragg Hollow Rd
179.1-1-41		0.60	0.81	53171 State Hwy 30

Town of Roxbury Summary:Parcel Count: **55**Total Area: **435.07 acres**

-
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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Sidney](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
164.-1-29		48.59	2.93	County Hwy 23
186.-1-8.1		72.08	74.37	1050 Gallop Hill Rd
186.-1-10.2		8.30	6.61	6112 County Hwy 23
186.-1-10.3		12.39	3.20	County Hwy 23
186.-1-10.42		6.15	6.48	6115 County Hwy 23
186.-1-11		5.90	4.65	County Hwy 23
186.-1-12.1		39.90	34.16	Teed Rd
186.-1-12.2		1.89	1.41	Teed Rd
186.-1-12.3		1.60	0.38	Teed Rd
186.-5-1		5.01	0.38	Appaloosa Trl
186.-5-2		12.06	4.31	122 Appaloosa Trl
186.-5-3		8.09	8.55	Appaloosa Trl
186.-5-4		6.03	6.37	360 Appaloosa Trl
186.-5-5		7.05	6.53	Appaloosa Trl
186.-5-6		8.11	4.93	Appaloosa Trl
186.-5-7		7.03	4.33	636 Appaloosa Trl
186.-5-8		6.00	2.85	Appaloosa Trl
186.-5-9		10.00	7.91	Appaloosa Trl
186.-5-10		5.01	4.29	Appaloosa Trl
186.-5-11		5.01	5.51	Appaloosa Trl
186.-5-12		6.01	5.78	Arabian Way
186.-5-13		2.59	1.81	Arabian Way
186.-5-14		4.00	3.80	Appaloosa Trl
186.-5-15		1.00	1.04	Appaloosa Trl
186.-5-16		8.30	8.07	Appaloosa Trl
186.-5-17		7.00	7.44	85 Appaloosa Trl

Town of Sidney Summary:Parcel Count: **26**Total Area: **218.06 acres**

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- Sources:
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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Walton](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
210.-1-10.1		235.10	218.91	Mccall Hill Rd
211.-2-7		158.30	161.20	County Hwy 22
231.-1-12		199.80	201.00	2815 County Hwy 22
231.-1-14		0.25	0.23	County Hwy 22
231.-1-16	Yes	112.19	78.57	2637 County Hwy 22
231.-1-17.22		15.75	15.34	2393 County Hwy 22
231.-1-19.11		34.86	33.59	2253 County Hwy 22
232.-2-1		5.80	5.66	County Hwy 22
232.-2-2		4.59	4.72	3431 County Hwy 22
232.-2-3		10.80	9.34	3486 County Hwy 22
232.-2-4.1		11.80	11.45	3567 County Hwy 22
232.-2-4.2		5.61	4.73	County Hwy 22
232.-2-21		38.22	38.86	County Hwy 22
251.16-4-1		6.69	6.56	Mount Pleasant Rd
251.16-4-2		1.55	1.41	49 Upper East Brook Rd
251.16-4-5		0.25	0.25	Mount Pleasant Rd
251.20-4-1		0.50	0.64	Mount Pleasant Rd
251.20-4-2		0.50	0.56	18 Upper East Brook Rd
251.20-4-3		2.90	2.80	35 County Hwy 22
251.20-4-4.1		0.31	0.32	74 County Hwy 22
251.20-4-4.2		5.67	4.36	76 County Hwy 22
251.20-4-5		0.50	0.63	22 County Hwy 22
251.20-4-6		0.80	0.69	East Brook Dam Rd
251.20-4-7		0.00	0.02	
252.-1-7.1		15.88	13.50	1315 County Hwy 22
252.-1-7.2	Yes	172.69	169.79	88 Nichols Rd
252.-1-25.1		6.11	5.87	968 Upper East Brook Rd
252.-1-25.2		2.76	2.79	County Hwy 22
252.-1-25.31	Yes	112.33	87.58	County Hwy 22
252.-1-26.3		5.15	4.56	County Hwy 22
252.-1-27.1		1.12	2.40	58 East Brook Dam Rd
252.-1-27.2		1.00	0.84	34 East Brook Dam Rd
252.-1-27.3		1.60	0.32	East Brook Dam Rd
252.-1-28		7.40	7.24	840 Upper East Brook Rd
252.-1-29		9.39	9.26	746 Upper East Brook Rd
252.-1-30		0.25	0.17	Dunk Hill Rd
252.-1-31		0.79	0.79	Reservoir
252.-1-32		3.00	2.57	326 Upper East Brook Rd
252.-1-33.1		1.98	2.22	225 Upper East Brook Rd

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Walton](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
<i>252.-1-33.211</i>	<i>Yes</i>	88.54	<i>11.23</i>	East Brook Dam Rd
252.-1-33.212		6.92	6.10	295 Upper East Brook Rd
252.-1-33.23		2.91	2.55	East Brook Dam Rd
252.-1-33.25		3.52	3.25	266 Upper East Brook Rd
252.-1-34		17.89	17.25	112 County Hwy 22
252.-1-35.2		0.98	0.98	81 Park St
252.-1-38		6.30	6.32	71 County Hwy 22
252.-1-39		3.52	3.12	136 Upper East Brook Rd
252.-1-40		0.50	0.52	241 County Hwy 22
252.-1-41		0.50	0.44	202 Upper East Brook Rd
252.-1-42		3.50	3.17	Dunk Hill Rd
252.-1-46.2		0.50	0.39	167 Upper East Brook Rd
252.-1-49		5.78	5.48	357 Upper East Brook Rd
252.-1-50		1.00	0.64	Park St
252.-1-51		2.00	2.25	East Brook Dam Rd
272.-2-19.2		0.54	0.56	State Hwy 10
272.-2-20.1		16.50	16.46	24490 State Hwy 10
272.-2-20.2		1.39	1.11	State Hwy 10
272.-2-20.3		16.50	15.89	26 Country Meadow Spur
272.-2-21		0.25	0.27	24669 State Hwy 10
272.-2-22		0.75	1.10	24669 State Hwy 10
272.-2-23.1		1.45	1.47	24730 State Hwy 10
272.-2-24.12		0.34	0.35	State Hwy 10
272.-2-24.3		2.00	2.56	24640 Statw Hwy 10
272.-2-25		4.50	4.27	24606 State Hwy 10
272.-2-26		61.00	62.34	Bobs Brook Rd
272.-2-27		1.79	1.60	2461 Bobs Brook Rd
272.-2-33.1		1.79	1.66	State Hwy 10
272.-2-33.2		2.09	2.06	Walton Mtn Rd
272.-2-34		1.20	1.29	2890 Walton Mtn Rd
272.-2-35		0.75	0.92	24354 State Hwy 10
272.-2-36.1		3.78	4.40	24300 State Hwy 10
272.-2-36.2		1.44	2.51	24324 State Hwy 10
272.-2-36.3		4.69	4.14	80 Horse Country Ln
272.-2-36.4		1.00	1.11	24322 State Hwy 10
272.-2-37.1		2.09	1.19	State Hwy 10
272.-2-37.2		4.19	2.92	Horse Country Ln
272.-2-37.4		3.40	3.74	24138 State Hwy 10
272.-2-38		1.10	1.22	24101 State Hwy 10

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Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Walton](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
272.-2-39.1		0.81	0.79	State Hwy 10
272.-2-39.2		1.40	1.16	24051 State Hwy 10
272.-2-42.3		43.38	39.61	23973 State Hwy 10
272.-2-42.4		2.20	2.11	24171 State Hwy 10
272.-2-42.6		7.90	8.25	23971 State Hwy 10
273.-1-3		89.00	90.23	Murphy Hill Rd
273.-1-4		2.20	1.90	Murphy Hill Rd
273.-1-5		32.56	27.35	Village Line
273.-1-14		5.40	4.74	3507 South River Rd
273.-1-16		3.90	4.08	25756 State Hwy 10
273.-1-18.111	Yes	147.94	66.79	25321 State Hwy 10
273.-1-18.112		4.65	3.91	25269 State Hwy 10
273.-1-18.12		5.30	5.33	25411 State Hwy 10
273.-1-18.2		0.14	0.14	State Hwy 10
273.-1-19		0.61	0.73	25599 State Hwy 10
273.-1-21.12		12.60	12.12	W Beers Rd
273.-1-21.2		1.50	1.45	26026 State Hwy 10
273.-1-21.4		28.60	22.62	State Hwy 10
273.-1-22		1.00	0.68	South River Rd
273.-1-23		1.50	0.71	25252 State Hwy 10
273.-1-24.11		13.80	14.47	State Hwy 10
273.-1-24.12		21.25	22.54	State Hwy 10
273.-1-24.2		5.00	4.85	County Hwy 10
273.-1-24.3		4.50	4.69	State Hwy 10
273.-1-25		1.79	1.72	Pines Brook Rd
273.-1-26		0.11	0.09	State Hwy 10
273.-1-27.11		0.40	0.41	54 Ewain Dr
273.-1-27.12		0.41	0.41	55 Ewain Dr
273.-1-27.2		0.50	0.78	State Hwy 10
273.-1-27.3		0.77	0.78	21 Ewain Dr
273.-1-28		15.50	15.47	81 Pines Brook Rd
273.6-8-2		0.12	0.07	Delaware St
273.6-8-3		0.16	0.17	Murphy Hill Rd
273.6-8-4		0.16	0.17	Murphy Hill Rd
273.6-8-5		0.93	0.93	Murphy Hill Rd
273.6-8-6		1.00	0.90	Upper Delaware
273.6-8-7		1.20	1.24	Delaware St
273.8-4-1		0.00	0.14	
273.8-6-1		0.92	0.93	Park St

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List of Parcels within the Hamlet Expansion Area, Town of [Walton](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
273.8-6-3		0.02	0.02	Park St
273.10-1-1		0.09	0.10	Prospect Ave
273.10-1-2		0.65	0.66	Prospect Ave
273.10-1-3		0.12	0.13	Prospect Ave
273.10-1-5		0.46	0.46	Prospect Ave
273.10-1-6		1.20	1.19	Prospect Ave
273.16-1-7		0.25	0.23	Stockton Ave
273.16-3-1		0.01	0.01	Stockton Ave
273.16-3-2		0.10	0.11	Stockton Ave
273.16-3-3		0.23	0.23	Stockton Ave
273.16-4-2		0.11	0.20	Ss River Rd
273.16-4-3		0.50	0.32	19252 State Hwy 206
274.-1-2.1		2.29	2.86	28430 State Hwy 10
274.-1-3		1.76	2.08	28460 State Hwy 10
274.-1-4.1		80.50	80.70	28487 State Hwy 10
274.-1-4.2		0.58	0.58	76 Marvin Hollow Rd
274.-1-5		2.71	2.43	28383 State Hwy 10
274.-1-6		1.00	0.98	28341 State Hwy 10
274.-1-7.2		0.25	0.90	State Hwy 10
274.-1-8		1.00	0.64	28099 State Hwy 10
274.-1-10.2		1.30	1.24	Marvin Hollow Rd
274.-1-10.3		2.00	1.80	27 Marvin Hollow Rd
274.-1-12		0.50	0.36	211 Marvin Hollow Rd
274.-2-1		5.09	4.97	Walton Woods Rd
274.-2-2		6.59	6.45	Walton Woods Rd
274.-2-7		3.28	3.22	859 Walton Woods Rd
274.-2-10		1.21	1.18	Walton Woods Rd
274.-2-11		1.59	1.50	77 Walton Woods Spur
274.-2-12		1.70	1.61	87 Walton Woods Spur
274.-2-13		1.60	1.52	Walton Woods Rd
274.-2-14		3.00	3.10	125 Walton Woods Spur
274.-2-16		2.55	2.65	Walton Woods Dr
274.-2-18		2.50	2.48	225 Walton Woods Spur
274.-2-20		1.10	1.13	Walton Woods Dr
274.-2-21		1.89	1.85	275 Walton Woods Spur
274.-2-24.1		62.50	70.55	30441 State Hwy 10
274.-2-24.5		10.00	7.03	30485 State Hwy 10
274.-2-24.6		1.00	0.76	State Hwy 10
274.-2-25.1		3.25	3.19	30523 State Hwy 10

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Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Walton](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
274.-2-25.2		0.60	0.60	State Hwy 10
274.-2-26		4.50	4.17	30694 State Hwy 10
274.-2-27		2.97	3.34	Weedsbridge Rd
274.-2-28		4.00	4.70	30538 State Hwy 10
274.-2-29		0.54	0.55	30530 State Hwy 10
274.-2-30.11		5.94	4.74	30340 State Hwy 10
274.-2-30.12		2.99	2.79	30372 State Hwy 10
274.-2-30.13		2.35	3.12	State Hwy 10
274.-2-30.2		3.00	2.29	30274 State Hwy 10
274.-2-30.3		26.20	35.24	30081 State Hwy 10
274.-2-31		0.15	0.15	State Hwy 10
274.-2-32.1		2.20	1.61	30205 State Hwy 10
274.-2-32.2		4.00	3.59	30299 State Hwy 10
274.-2-33.2		0.77	0.78	30070 State Hwy 10
274.-2-34		1.87	1.83	30027 State Hwy 10
274.-2-35		0.75	0.49	29961 State Hwy 10
274.-2-36		0.75	1.73	State Hwy 10
274.-2-37		0.50	0.44	29921 State Hwy 10
274.-2-38		0.25	0.36	29909 State Hwy 10
274.-2-39		0.50	0.57	29885 State Hwy 10
274.-2-40		0.50	0.47	State Hwy 10
274.-2-41		0.75	0.63	29776 State Hwy 10
274.-2-43.11		8.00	7.85	29785 State Hwy 10
274.-2-43.12		1.22	1.06	29735 State Hwy 10
274.-2-43.2		62.13	62.79	29593 State Hwy 10
274.-2-44		1.00	0.63	29679 State Hwy 10
274.-2-45		0.95	1.17	29665 State Hwy 10
274.-2-48.1		1.60	1.50	29495 State Hwy 10
274.-2-48.2		1.00	0.97	29521 State Hwy 10
274.-2-49		43.59	44.11	29333 State Hwy 10
274.-2-50		1.29	1.18	Walton Woods Rd
274.-2-51		1.20	1.17	Walton Woods Rd
274.-2-52		1.39	1.29	Walton Woods Rd
274.-2-53		1.39	1.35	Walton Woods Rd
274.-2-54		1.50	1.42	Walton Woods Rd
274.-2-55		1.57	1.48	194 Walton Woods Spur
274.-2-56		1.97	1.99	166 Walton Woods Spur
274.-2-57		3.93	3.83	87 Walton Woods Spur
274.-2-59		2.00	2.05	728 Walton Woods Rd

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Walton](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
274.-2-60		1.85	1.95	Walton Woods Rd
274.-2-61		1.77	1.68	620 Walton Woods Rd
274.-2-62		2.29	2.34	494 Walton Woods Rd
274.-2-63		2.68	2.80	490 Walton Woods Rd
274.-2-64		2.60	2.48	Walton Woods Rd
274.-2-65.1		5.50	5.08	Walton Woods Rd
274.-2-65.2		2.55	2.38	206 Walton Woods Rd
274.-2-66.1		12.18	12.86	State Hwy 10
274.-2-66.21		1.32	1.38	29119 State Hwy 10
274.-2-66.22		0.73	0.54	Walton Woods Rd
274.-2-67		1.47	1.62	29165 State Hwy 10
274.-2-72		0.50	0.37	29037 State Hwy 10
274.-2-73		0.50	0.31	29011 State Hwy 10
274.-2-74		0.50	0.32	28975 State Hwy 10
274.-2-75		0.50	0.36	28953 State Hwy 10
274.-2-76		0.50	0.41	28935 State Hwy 10
274.-2-77		0.50	0.43	28913 State Hwy 10
274.-2-78		0.50	0.50	28881 State Hwy 10
274.-2-79		3.50	3.44	28841 State Hwy 10
274.-2-80		42.40	41.89	Walton Woods Dr
274.-2-81		1.73	1.43	459 Walton Woods Rd
274.-2-82		1.97	2.03	551 Walton Woods Dr
274.-2-84		59.59	59.35	30117 State Hwy 10
274.-2-85		10.00	7.12	30129 State Hwy 10
275.-2-1		1.35	1.03	30720B State Hwy 10
275.-2-2		1.10	1.24	30750 State Hwy 10
275.-2-3.1		0.93	1.35	State Hwy 10
275.-2-3.2		0.83	0.84	30816 State Hwy 10
275.-2-4.1		24.39	21.98	31116 State Hwy 10
275.-2-4.2		0.12	0.41	31118 State Hwy 10
275.-2-31.1	Yes	212.19	29.97	2825 East River Rd
275.-2-39.11		29.23	29.72	2617 East River Rd
275.-2-39.13		13.80	14.89	East River Rd
275.-2-39.3		1.00	1.07	East River Rd
275.-2-42		3.70	3.34	2739 East River Rd
275.-2-43		41.90	41.93	East River Rd
294.-2-4.2		4.69	4.41	23783 State Hwy 10
294.-2-5		1.00	0.90	23851 State Hwy 10
294.-3-1		2.09	1.68	1949 South River Rd

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Walton](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
294.-3-2		2.20	2.12	2006 South River Rd
294.-3-3.11		8.93	8.02	South River Rd
294.-3-3.12		1.47	1.19	1845 South River Rd
294.-3-3.2		1.00	0.85	2060 South River Rd
294.-3-4		0.50	0.82	1884 South River Rd
294.-3-5.12		20.31	20.25	South River Rd
294.-3-5.13		13.00	11.83	South River Rd
294.-3-5.2		9.43	9.06	2163 South River Rd
294.-3-5.3		1.29	1.19	South River Rd
294.-3-6		3.09	2.93	South River Rd
294.-3-8		1.75	1.55	South River Rd
295.-1-1		5.90	6.48	2204 South River Rd
295.-1-2		2.09	2.01	2242 South River Rd
295.-1-3.12		1.97	2.57	2295 South River Rd
295.-1-3.2		3.59	3.30	2223 South River Rd
295.-1-3.3		0.75	1.15	2237 South River Rd
295.-1-18.2		5.00	4.52	South River Rd
295.-1-31		0.86	0.88	1588 South River Rd
295.-1-32		0.60	0.72	1612 South River Rd
295.-1-33		0.75	0.56	1599 South River Rd
295.-1-34		2.09	1.96	1624 South River Rd
295.-1-35		0.86	0.90	South River Rd
295.-1-36		2.70	2.72	South River Rd
295.-1-37		1.79	1.99	1774 South River Rd
295.-1-38		0.75	0.77	South River Rd
296.-1-1		2.50	3.07	15 East River Rd
296.-1-2		0.25	0.52	27 East River Rd
296.-1-3		0.50	0.48	84 East River Rd
296.-1-4		0.40	0.60	70 East River Rd
296.-1-5		0.25	0.42	East River Rd
296.-1-6		0.25	0.43	East River Rd
296.-1-7		0.25	0.40	East River Rd
296.-1-8		0.25	0.41	95 East River Rd
296.-1-9		3.00	0.94	155 East River Rd
296.-1-10		2.90	2.95	118 East River Rd
296.-1-11		0.25	0.23	426 East River Rd
296.-1-12		19.79	19.49	East River Rd
296.-1-13		15.00	11.23	444 East River Rd
296.-1-14		0.50	0.30	East River Rd

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Walton](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
296.-1-15		1.29	1.28	East River Rd
296.-1-16.1		1.79	1.62	East River Rd
296.-1-16.2		4.00	3.14	East River Rd
296.-1-17		39.29	38.94	860 East River Rd
296.-1-18		1.29	1.23	East River Rd
296.-1-19		3.79	3.59	891 East River Rd
296.-1-20		0.25	0.17	East River Rd
296.-1-21		7.69	7.42	958 East River Rd
296.-1-22		77.50	74.93	1078 East River Rd
296.-1-23.1		2.80	2.84	1152 East River Rd
296.-1-23.2		2.52	2.52	East River Rd
296.-1-23.3		2.04	2.02	East River Rd
296.-1-24		2.09	2.15	1177 East River Rd
296.-1-25		4.00	4.47	1227 East River Rd
296.-1-26		4.57	4.04	1337 East River Rd
296.-1-27		20.89	20.81	1312 East River Rd
296.-1-29		1.20	1.05	1368 East River Rd
296.-1-30		0.25	0.35	1359 East River Rd
296.-1-31		6.00	4.88	1415 East River Rd
296.-1-32		1.10	0.95	1408 East River Rd
296.-1-33		3.98	3.81	1428 East River Rd
296.-1-35		5.32	5.03	1511 East River Rd
296.-1-36		3.29	3.21	1480 East River Rd
296.-1-37		2.50	2.32	1528 East River Rd
296.-1-38		0.46	0.44	1525 East River Rd
296.-1-39		0.50	0.60	1545 East River Rd
296.-1-40.2		19.09	18.57	South River Rd
296.-1-40.31		8.60	7.93	1711 East River Rd
296.-1-40.32		11.18	11.73	East River Rd
296.-1-40.4		3.53	3.17	1752 East River Rd
296.-1-40.5		1.46	1.24	1724 East River Rd
296.-1-40.6		10.00	8.08	East River Rd
296.-1-41		1.89	1.99	1566 East River Rd
296.-1-42		1.35	1.06	1628 East River Rd
296.-1-43		3.90	4.37	1825 East River Rd
296.-1-44.1		4.82	5.08	2131 East River Rd
296.-1-44.2		2.08	2.02	River Rd
296.-1-61.2		42.09	33.86	218 East River Rd
296.-1-61.3		2.03	2.17	402 East River Rd

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Walton](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
297.-1-4		100.69	99.65	John Lockwood Rd
297.-1-4		100.69	99.65	John Lockwood Rd

Town of Walton Summary:Parcel Count: **314**Total Area: **3,031.59 acres**

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- Sources:
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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Ashland](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
59.00-1-8.12		12.21	11.37	
59.00-1-8.112		27.67	25.82	
<i>59.00-1-9</i>	<i>Yes</i>	73.03	<i>49.08</i>	731 Sutton Hollow Rd
59.00-2-7.2		5.50	5.61	2908 Route 10
59.00-2-9		2.90	2.93	2868 Route 10
<i>59.00-2-10</i>	<i>Yes</i>	15.70	<i>3.82</i>	2810 Route 10
59.00-2-12		17.00	15.64	2780&2784 Route 10
59.00-2-14.2		1.02	0.84	2633 Route 10
59.00-2-14.11		21.13	20.89	2637 Route 10
59.00-2-14.12		34.55	35.65	
59.00-2-15		1.00	1.09	2703 Route 10
59.00-2-16		4.50	4.71	2677 Route 10
59.00-2-17.1		10.20	10.50	2817 Route 10
59.00-2-17.2		4.23	4.08	2831 Route 10
59.00-2-20		4.10	4.05	
59.00-2-21		4.10	4.13	
59.00-2-22		4.10	4.35	2817 Route 10
59.00-2-23		3.60	3.41	
59.00-2-25		4.00	3.75	2692 Route 10
59.00-2-26		3.40	3.15	
59.00-2-27		5.09	4.93	2908 Route 10
59.00-2-29		22.10	19.85	2906 Route 10
59.00-2-30		7.94	7.76	2732 Route 10
60.00-1-4.1		207.00	206.10	2502 Route 10
60.00-1-4.2		5.09	4.75	2334 Route 10
60.00-1-7		3.50	3.94	2422 Route 10
60.00-1-8		1.50	1.32	2398 Route 10
60.00-1-11.2		5.66	5.25	
60.00-1-11.12		2.09	1.76	2542 Route 10
60.00-1-11.112		1.00	0.94	2531 Route 10
60.00-1-15		1.73	1.65	2465 Route 10
60.00-1-16		2.53	2.27	2485 Route 10
60.00-1-23		3.00	2.75	2395 Route 10
60.00-1-24		5.60	5.58	2365 Route 10
60.00-1-26.2		10.00	9.89	2517 Route 10
60.00-1-28		2.00	2.12	2635 Route 10
60.00-1-35		1.70	1.64	2347 Route 10
60.00-1-39		87.00	88.31	2636 Route 10
60.00-1-41		4.50	4.38	11 Mountain View Estates

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Ashland](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
60.00-2-3		11.00	11.16	4 Route 32C
60.00-2-4		13.10	13.24	2169 Route 10
60.00-2-5		1.00	0.61	2184 Route 10
60.00-2-7.111		35.82	35.95	
60.00-2-7.112		6.60	5.96	2080 Route 10
60.00-2-8		2.88	2.71	2096 Route 10
60.00-2-9		1.43	1.40	2062 Route 10
60.00-2-11		0.80	0.90	2050 Route 10
60.00-2-12		1.40	1.34	
60.00-2-14		17.00	16.96	
60.00-2-15		0.00	0.82	
60.00-2-16		19.10	19.13	
60.00-2-17		20.90	20.91	
60.00-2-18		2.00	1.99	805 North Settlement Rd
60.00-2-20.11		1.70	1.65	795 North Settlement Rd
60.00-2-21.1		0.50	0.58	783 North Settlement Rd
60.00-2-21.2		3.20	3.18	775 North Settlement Rd
60.00-2-24		81.97	80.36	138 Steinmetz Rd
60.00-2-26		11.33	11.12	223 Steinmetz Rd
60.00-2-27		20.20	19.85	
60.00-2-28.2		27.30	26.33	
60.00-2-28.11		69.90	69.58	337 Steinmetz Rd
60.00-2-28.12		21.94	20.77	2272 Route 10
60.00-2-43		6.78	6.66	
60.00-2-44		6.70	6.10	
60.00-2-49		2.10	1.88	148 Steinmetz Rd
60.00-2-50		5.00	5.04	
60.00-2-51		7.80	7.79	
60.00-2-53		2.70	2.77	2154 Route 10
60.00-2-54		1.34	1.78	652 North Settlement Rd
76.00-2-1		3.00	2.76	
76.00-2-2		1.90	1.81	703 Sutton Hollow Rd
76.00-2-4.2		0.70	0.64	651 Sutton Hollow Rd
76.00-2-5		0.60	0.50	617 Sutton Hollow Rd
76.00-2-7		1.19	1.06	580 Sutton Hollow Rd
76.00-2-8.2		2.20	2.21	
76.00-2-8.112		5.00	4.66	508 Sutton Hollow Rd
76.00-2-9		3.50	3.32	403 Sutton Hollow Rd
76.00-2-12		1.70	1.90	296 Sutton Hollow Rd

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Ashland](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
76.00-2-13		1.90	2.49	285 Sutton Hollow Rd
76.00-2-14		1.70	1.87	268 Sutton Hollow Rd
76.00-2-15		0.60	0.67	280 Sutton Hollow Rd
76.00-2-17	Yes	102.90	33.90	211 Sutton Hollow Rd
76.00-2-19		30.23	29.77	340 Sutton Hollow Rd
76.00-2-20		34.90	34.20	380 Sutton Hollow Rd
76.00-2-38		28.40	28.40	556 Sutton Hollow Rd
76.00-2-39		2.90	2.75	573 Sutton Hollow Rd
76.00-2-41		33.71	32.36	
76.00-2-43.1		31.35	31.45	661 Sutton Hollow Rd
76.00-2-43.2		2.36	2.48	695 Sutton Hollow Rd
76.00-2-44.1		37.40	37.87	611 Sutton Hollow Rd
76.00-2-44.2		1.40	1.43	637 Sutton Hollow Rd
76.04-1-7		2.30	2.44	149 Sutton Hollow Rd
76.04-1-8		6.99	6.85	121 Sutton Hollow Rd
76.04-1-18	Yes	1.22	0.65	101 Sutton Hollow Rd
76.04-2-1		12.90	12.95	202 Sutton Hollow Rd
76.04-2-4	Yes	5.40	3.53	102 Sutton Hollow Rd
76.04-2-5		2.09	2.01	136 Sutton Hollow Rd
76.04-2-6		0.92	0.82	150 Sutton Hollow Rd
77.00-1-4.1		11.10	10.29	690 Campbell Rd
77.00-1-4.2		27.30	26.22	500 Case Rd
77.00-1-5.2		4.90	4.62	
77.00-1-7		1.25	1.45	280 Case Rd
77.00-1-9		60.00	60.97	283 Case Rd
77.00-2-6		2.30	2.13	543 North Settlement Rd
77.00-2-7		0.57	0.60	519 North Settlement Rd
77.00-2-14	Yes	31.70	20.45	447 North Settlement Rd
77.00-2-16		5.00	5.02	124 Case Rd
77.00-2-17		30.40	30.70	39 Case Rd
77.00-2-18		18.87	19.14	209 Case Rd
77.00-2-19		54.00	53.30	
77.00-2-21	Yes	113.48	58.56	351 North Settlement Rd
77.00-2-22		41.70	43.26	
77.00-2-23		0.80	0.86	358 North Settlement Rd
77.00-2-24		1.00	1.01	330 North Settlement Rd
77.00-2-25		5.20	5.99	290 North Settlement Rd
77.00-2-26		3.80	3.65	
77.00-2-27		1.90	2.07	

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Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Ashland](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
77.00-2-38		11.40	10.04	64 Steinmetz Rd
77.00-2-41		4.10	3.83	
77.00-2-46		4.34	4.11	
77.00-2-47		4.34	4.43	24 Case Rd
77.04-1-3		2.60	2.72	227 North Settlement Rd
77.04-1-4		4.80	4.88	
77.04-1-5		2.40	2.47	167 North Settlement Rd
77.04-1-6		1.91	1.78	126 North Settlement Rd
77.04-1-7		1.20	1.13	110 North Settlement Rd
77.04-1-8		3.00	2.94	45 North Settlement Rd
77.04-1-9		1.00	0.99	
77.04-1-10		1.00	0.89	115 North Settlement Rd
77.04-1-11		1.35	1.30	
94.02-1-12		1.00	1.09	81 North Settlement Rd
94.02-1-13.1		1.30	1.26	63 North Settlement Rd
94.02-1-14		1.45	1.30	
94.02-1-23		3.13	3.13	88 Loretta Ln
94.02-2-1		0.68	0.56	3 Steele Rd
94.02-2-5		0.70	0.68	66 Steele Rd

Town of Ashland Summary:Parcel Count: **136**Total Area: **1,676.14 acres**

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Hunter](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
<i>163.00-3-19</i>	<i>Yes</i>	320.70	<i>107.53</i>	
<i>164.00-2-11.11</i>	<i>Yes</i>	4.70	<i>3.88</i>	130 Lustig Rd
<i>164.00-2-11.12</i>	<i>Yes</i>	7.90	<i>2.58</i>	
<i>164.00-2-19</i>	<i>Yes</i>	127.10	<i>64.99</i>	
<i>164.00-2-21</i>	<i>Yes</i>	22.80	<i>16.40</i>	
164.00-2-31		4.30	4.58	
<i>164.00-2-41</i>	<i>Yes</i>	44.20	<i>30.13</i>	
164.00-3-22.2		6.00	6.41	
164.00-3-23.1		1.40	1.22	7267 Route 23A
164.00-3-23.2		4.40	3.83	7275 Route 23A
164.00-3-24.2		1.00	0.92	
164.00-3-24.11		7.10	7.00	
164.00-3-24.12		0.82	0.81	7261 Route 23A
164.00-3-25.2		14.37	14.85	
164.00-3-25.112		0.87	0.75	
164.00-3-26		0.68	0.81	7173 Route 23A
164.00-3-42		4.00	4.34	7189 Route 23A
<i>164.00-5-1</i>	<i>Yes</i>	13.00	<i>10.38</i>	
164.00-5-2.12		5.20	5.67	82 Dolan's Ln
164.00-5-2.22		7.05	7.16	
164.00-5-2.112		0.00	0.46	
164.00-5-3		1.30	1.33	136 Dolan's Ln
164.00-5-4		3.40	3.13	99 Dolan's Ln
<i>164.00-5-5.1</i>	<i>Yes</i>	23.90	<i>15.37</i>	
164.00-5-5.2		2.60	2.63	7778 Main St
164.00-5-6		2.90	3.00	
<i>165.00-1-9</i>	<i>Yes</i>	4.00	<i>1.89</i>	36 Hylan Rd
165.00-1-10		3.00	3.16	78 Lustig Rd
165.00-1-11		0.13	0.62	
165.00-1-13		1.55	1.64	12 Arnold Dr
<i>165.00-1-14</i>	<i>Yes</i>	47.30	<i>12.15</i>	
<i>165.00-1-15</i>	<i>Yes</i>	38.90	<i>9.15</i>	7006 Route 23A
<i>165.00-1-16</i>	<i>Yes</i>	48.00	<i>12.30</i>	# Route 23A
<i>165.00-1-17</i>	<i>Yes</i>	35.60	<i>5.96</i>	32 Arnold Dr
165.00-2-6		3.50	3.48	93 Cranberry Rd
165.00-2-8.2		5.50	5.35	121 Cranberry Rd
165.00-2-8.11		32.10	31.25	73 Cranberry Rd
165.00-2-8.12		2.00	2.09	81 Cranberry Rd
165.00-2-10.12		11.20	10.29	93 Leach Ln

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Hunter](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
165.00-2-13		14.00	13.58	6424 Main St
165.00-2-14		6.88	6.99	104 Mitchell Rd
165.00-2-15		1.57	1.60	
165.00-2-16		6.60	6.40	
165.00-2-17.1		2.84	2.67	216 Mitchell Rd
165.00-2-17.2		2.84	3.01	198 Mitchell Rd
165.00-2-18		5.37	5.55	236 Mitchell Rd
165.00-2-19		5.16	4.80	227 Mitchell Rd
165.00-2-20.1		2.57	2.51	203 Mitchell Rd
165.00-2-20.2		2.57	2.57	187 Mitchell Rd
165.00-2-21		5.15	5.05	163 Mitchell Rd
165.00-2-22		5.62	5.64	
165.00-2-23		5.20	5.28	107 Mitchell Rd
165.00-2-34		1.65	1.64	
165.00-2-35		1.67	1.75	130 Mitchell Rd
165.00-2-36		1.64	1.63	
165.00-2-48.1		65.00	64.23	
165.00-2-48.2		5.20	5.16	141 Leach Ln
165.00-2-51		35.70	33.39	
166.00-2-2		5.00	4.73	
166.00-2-3		33.70	34.34	394 Route 23C
166.00-2-8.12		5.40	5.33	244 Spring Street Ext
166.00-2-10		47.50	49.33	
166.00-2-11		30.20	30.02	420 Route 23C
166.00-2-20		5.00	4.47	167 Mountain Brooke Rd
166.00-2-31		46.40	46.52	
166.01-2-3		5.03	4.91	504 Route 23C
166.01-2-5		1.21	1.22	
180.00-2-4.2		9.70	9.58	100 Ski Bowl Rd
180.00-2-8.2		1.70	1.22	
180.00-2-8.11		0.17	0.69	78 Ski Bowl Rd
180.00-2-8.12		0.74	0.60	
180.00-2-9.2		6.55	6.67	
180.00-2-9.11		32.07	31.89	4221 Route 214
180.00-2-9.12		6.55	6.08	4165 Route 214
180.00-2-10		0.95	1.05	
180.00-2-11		2.00	1.92	4173 Route 214
180.00-2-36		0.00	1.75	
180.00-2-39		2.54	2.40	110 Ski Bowl Rd

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Hunter](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
180.00-3-10.2		15.00	14.51	4120 Route 214
180.00-3-11.2		6.20	6.46	76 Jaymos Ln
180.00-3-11.11		5.40	7.19	
180.00-3-11.12		5.90	4.64	
180.00-3-12		5.10	5.02	
180.00-3-13		5.80	5.78	4192 Route 214
180.00-3-16		5.50	5.41	19 Jaymos Ln
180.00-3-17		2.90	2.91	34 Jaymos Ln
180.00-3-30		2.27	2.00	39 Forest Hill Rd
180.00-3-31		2.40	2.46	4260 Route 214
180.00-3-32		2.40	2.44	
180.00-3-33		2.40	2.11	
181.00-1-1		2.24	1.95	7008 Route 23A
181.00-2-1		78.30	79.29	4393 Route 214
181.00-2-5.2		1.78	1.69	42,48,50 Clove Rd
181.00-2-6		3.24	2.43	4311 Route 214
181.00-2-8.12		27.10	27.92	
181.00-2-9		2.15	2.10	
181.00-2-10		2.01	2.02	
181.00-2-11		2.00	1.83	
181.00-2-13		8.70	8.26	
181.00-2-14		5.40	5.90	
181.00-2-15		2.50	2.70	
181.00-2-16		2.50	2.25	4346 Route 214
181.00-2-17		2.00	1.60	4360 Route 214
181.00-3-1		0.91	0.92	
181.00-3-2		0.50	0.50	
181.00-3-3		0.50	0.52	
181.00-3-4		5.60	5.19	
181.00-3-6		4.60	4.42	6878 Route 23A
181.00-3-8		1.00	1.00	6824 Route 23A
181.00-3-9		7.00	6.66	6927 Route 23A
181.00-3-10		1.56	1.54	6899 Route 23A
181.00-3-12		2.00	2.12	6845 Route 23A
181.00-3-15		40.00	40.30	6852 Route 23A
181.00-4-1		21.80	24.34	
181.00-4-2		1.03	1.07	6716 Route 23A
181.00-4-3		1.00	1.01	6702 Route 23A
181.00-4-4		0.66	0.65	

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Hunter](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
181.00-4-5		0.34	0.33	
181.00-4-6		1.60	1.38	
181.00-4-7		9.68	10.40	
181.00-4-8		16.50	15.83	
181.00-4-9		2.00	2.10	6715 Route 23A
181.00-4-10		0.95	0.84	51 Bloomer Rd
181.00-4-11		5.10	4.79	6671 Route 23A
181.00-4-12		6.70	6.24	6629 Route 23A
181.00-4-13		2.12	1.70	127 Bloomer Rd
181.00-4-14		2.11	2.02	
181.00-4-15		2.09	1.74	85 Bloomer Rd
181.00-6-1		1.28	1.23	6769 Route 23A
181.00-6-2		2.50	2.14	
181.00-6-3		8.40	8.14	34 Bloomer Rd
181.00-6-4		5.60	5.45	78 Bloomer Rd
181.00-6-5		12.00	12.73	114 Bloomer Rd
181.00-6-8		2.60	2.46	172 Bloomer Rd
181.00-6-9.1		31.40	30.97	
181.00-6-9.2		4.60	4.30	
181.00-6-10.1		7.20	7.40	
181.00-6-10.21		70.50	70.24	
181.00-6-10.22		35.30	35.29	
181.00-6-11.1		2.00	2.00	
181.00-6-11.2		120.00	116.34	
181.00-6-12		298.50	295.66	
181.00-6-14		87.50	70.08	
181.00-6-16		1.25	1.23	
181.00-6-17		1.25	1.24	
181.00-6-18		2.50	2.25	
181.00-6-19		1.49	1.45	
181.00-6-20		4.40	4.38	142 Bloomer Rd
181.00-6-21		3.10	2.73	
181.00-7-4	Yes	54.00	41.56	
181.00-7-7		51.40	50.79	
181.00-7-8		19.30	17.80	321 Bloomer Rd
181.00-7-9		1.70	1.89	
181.00-7-10		31.33	32.01	
181.00-8-1		1.10	0.93	264 Bloomer Rd
181.00-8-3		2.01	2.03	314 Bloomer Rd

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Hunter](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
181.00-8-4		2.02	1.98	326 Bloomer Rd
181.00-8-6		3.90	3.69	
181.00-8-7		1.40	1.29	
181.00-8-8		15.40	16.10	
181.00-8-10.2		0.99	0.92	
181.00-8-10.11		39.37	38.52	36 Elka Park Rd
181.00-8-10.12		0.99	0.83	14,16 Elka Park Rd
181.00-8-11		6.80	6.82	
181.00-8-12		3.50	3.29	
181.00-8-13		2.60	2.56	48 Elka Park Rd
181.00-8-14		1.10	1.06	
181.00-8-15		1.00	0.73	78 Elka Park Rd
181.00-8-16		1.60	1.66	96 Elka Park Rd
181.00-8-18		0.48	0.31	584 Platte Clove Rd
181.00-8-19		70.50	72.38	
181.00-8-20		81.50	81.85	
181.00-8-22		4.10	4.91	48 Kissley Rd
181.00-8-23		6.20	5.75	
181.00-8-25		2.20	2.02	
181.00-8-27		12.20	11.52	81 Kissley Rd
181.00-8-28		8.80	8.47	300 Bloomer Rd
181.00-8-29		12.50	11.69	19 Elka Park Rd
181.07-2-1		3.37	3.18	6606 Route 23A
181.07-2-2		2.00	2.00	6590 Route 23A
181.07-2-3		0.13	0.16	6586 Route 23A
181.07-2-4		0.56	0.54	
181.07-2-5		1.20	1.27	
181.07-2-6		0.78	0.73	6570 Route 23A
181.07-2-7		2.70	2.37	6550 Route 23A
181.07-3-1		0.73	0.70	6605 Route 23A
181.07-3-2		3.00	2.79	6589 Route 23A
181.07-3-3.1		3.20	2.78	6569 Route 23A
181.07-3-3.2		2.00	2.01	81 Baker Ct
181.07-3-4		0.65	0.54	
181.07-3-5		18.00	17.60	6547 Route 23A
181.11-1-1		4.91	4.75	145 Bloomer Rd
181.11-1-3		0.38	0.36	165 Bloomer Rd
181.11-1-4		0.44	0.42	17 Baker Ct
181.11-1-5		0.48	0.45	25 Baker Ct

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Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Hunter](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
181.11-1-6		0.51	0.48	
181.11-1-7		0.54	0.51	45 Baker Ct
181.11-1-8		0.59	0.55	53 Baker Ct
181.11-1-10		0.70	0.66	
181.11-1-11		0.46	0.45	46 Baker Ct
181.11-1-12		0.46	0.46	40 Baker Ct
181.11-1-13		0.46	0.45	34 Baker Ct
181.11-1-14		0.46	0.46	26 Baker Ct
181.11-1-15		0.46	0.46	18 Baker Ct
181.11-1-16		0.50	0.46	2 Baker Ct
181.11-1-17		0.63	0.51	
181.11-1-18		0.39	0.39	7 June Lodge Dr
181.11-1-19		0.46	0.46	
181.11-1-20		0.46	0.46	
181.11-1-21		0.46	0.46	
181.11-1-22		0.46	0.46	37 June Lodge Dr
181.11-1-23		0.46	0.45	47 June Lodge Dr
181.11-1-24		0.46	0.46	
181.11-1-25		0.46	0.45	61 June Lodge Dr
181.11-1-26		0.69	0.66	69 June Lodge Dr
181.11-1-29		0.54	0.53	
181.11-1-30		0.53	0.52	62 June Lodge Dr
181.11-1-31		0.52	0.53	54 June Lodge Dr
181.11-1-32		0.52	0.51	
181.11-1-33		0.51	0.52	38 June Lodge Dr
181.11-1-34		0.50	0.50	30 June Lodge Dr
181.11-1-37		0.33	0.33	
181.11-1-38		0.48	0.50	223 Bloomer Rd
181.11-1-39		1.00	1.02	70 June Lodge Dr
181.11-1-40		0.85	0.86	16 June Lodge Dr
181.12-2-1		0.23	0.23	310 Platte Clove Rd
181.12-2-11		1.73	1.67	316 Platte Clove Rd
181.12-3-1		0.51	0.46	301 Platte Clove Rd
181.16-1-1.1		6.36	6.05	
181.16-1-1.21		1.70	1.68	338 Platte Clove Rd
181.16-1-1.22		1.30	1.18	332 Platte Clove Rd
181.16-1-2		0.84	0.78	354 Platte Clove Rd
181.16-2-1		1.40	1.27	426 Bloomer Rd
181.16-2-2		2.00	1.92	390,394 Platte Clove Rd

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List of Parcels within the Hamlet Expansion Area, Town of [Hunter](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
181.16-2-3		1.00	0.78	400,404 Platte Clove Rd
181.16-2-4		0.25	0.46	410 Platte Clove Rd
181.16-2-5		0.33	0.29	416 Platte Clove Rd
181.16-2-6		0.50	0.26	
181.16-2-7		3.13	3.10	422 Platte Clove Rd
181.16-2-8		0.66	0.56	420 Platte Clove Rd
181.16-2-9		1.39	1.44	430 Platte Clove Rd
181.16-2-10		0.51	0.42	458 Platte Clove Rd
181.16-2-11		0.59	0.43	468 Platte Clove Rd
181.16-3-2		3.30	2.97	84 Philadelphia Hill Rd
181.16-3-3		1.00	1.24	9 Brown Woods Rd
181.16-3-9		1.10	0.93	17 Philadelphia Hill Rd
181.16-3-10		2.40	2.80	
181.16-3-17		7.50	7.10	954 Clum Hill Rd
181.16-3-18		0.44	0.36	491 Platte Clove Rd
181.16-3-21		8.50	8.01	52 Philadelphia Hill Rd
181.16-3-22	Yes	8.10	0.89	33 Philadelphia Hill Rd
181.20-1-2		0.60	0.68	499 Platte Clove Rd
181.20-1-3		0.31	0.31	506 Platte Clove Rd
181.20-1-4		0.47	0.47	514 Platte Clove Rd
181.20-1-5		0.52	0.51	526 Platte Clove Rd
181.20-1-6		0.50	0.40	538 Platte Clove Rd
181.20-1-7		2.00	1.95	2 Elka Park Rd
181.20-1-8		2.30	2.30	509 Platte Clove Rd
181.20-1-9		2.30	2.33	496 Platte Clove Rd
181.20-2-1.1		2.10	2.16	978,988 Clum Hill Rd
181.20-2-1.2		1.00	0.90	1004 Clum Hill Rd
181.20-2-2		1.43	1.54	970 Clum Hill Rd
181.20-2-7		0.15	0.12	
182.00-3-2		32.40	32.48	
182.00-3-4		21.40	21.21	669 Clum Hill Rd
182.00-3-5		21.10	20.31	
182.00-3-6		22.40	21.89	
182.00-3-26	Yes	83.41	56.94	665 Platte Clove Rd
164.00-2-42		3.80	3.77	
196.00-1-3		122.70	121.48	
196.00-4-10		7.00	6.45	95 Elka Park Rd
196.00-4-11		12.50	11.79	51 Elka Park Rd
197.00-2-2		113.08	110.32	901 Platte Clove Rd

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List of Parcels within the Hamlet Expansion Area, Town of [Hunter](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
197.00-2-3.2		1.30	1.44	116 Farrell Rd
197.00-2-3.11		81.30	82.06	
197.00-2-3.12		2.15	2.24	117 Farrell Rd

Town of Hunter Summary:Parcel Count: **276**Total Area: **2,890.60 acres**

-
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List of Parcels within the Hamlet Expansion Area, Town of Jewett

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
110.00-6-6		8.40	8.38	651 Merwin St
110.00-6-10.2		21.30	21.24	
110.00-6-16		1.00	0.95	5248 Route 23C
110.00-6-17		1.00	0.98	5242 Route 23C
110.00-6-18		3.70	3.42	5228 Route 23C
110.00-6-19		4.00	4.30	
110.00-6-20		1.00	0.92	
110.00-6-21		1.50	1.39	5252 Route 23C
110.00-6-22		4.33	4.09	5270 Route 23C
110.00-6-23		2.50	2.34	5300 Route 23C
110.00-6-96		3.00	2.76	
110.00-6-97		4.00	3.95	
110.00-6-98		14.00	14.39	
110.00-7-1		2.60	2.36	
110.00-7-2.1		36.50	39.77	877 Merwin St
110.00-7-2.2		2.50	2.43	
110.00-7-3		13.65	13.90	923 Merwin St
111.00-1-10		4.20	4.02	373 Merwin St
111.00-1-11		4.20	4.03	407 Merwin St
111.00-1-12		21.71	21.36	465 Merwin St
111.00-1-13.1		7.50	7.29	511 Merwin St
111.00-1-13.2		7.40	7.16	537 Merwin St
<i>111.00-1-27</i>	<i>Yes</i>	113.50	<i>102.10</i>	979 Route 17
<i>111.00-1-32.1</i>	<i>Yes</i>	52.20	<i>43.82</i>	
111.00-1-33		6.00	5.79	5192 Route 23C
111.00-1-37		3.61	3.54	611 Merwin St
111.00-1-38		4.40	4.56	579 Merwin St
111.00-1-39		5.90	5.87	557 Merwin St
<i>111.00-1-50</i>	<i>Yes</i>	144.00	<i>134.34</i>	877 Route 17
111.00-1-51		4.36	4.20	701 Merwin St
111.00-1-52		4.71	4.54	701 Merwin St
111.00-1-54		4.57	4.45	701 Merwin St
129.00-1-1		2.00	2.05	5188 Route 23C
129.00-1-2		4.40	4.21	5144 Route 23C
129.00-1-3.11		29.70	28.66	5116 Route 23C
129.00-1-3.121		3.00	2.76	4932 Route 23C
129.00-1-44		7.20	6.99	4968 Route 23C
129.00-1-45		5.22	5.15	5028 Route 23C
130.00-3-5.1		64.20	64.44	249 Lawrence Rd

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of Jewett

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
130.00-3-5.2		96.60	94.36	240 Lawrence Rd
130.00-3-6		0.98	0.97	
130.00-3-7.1		4.70	4.40	3450 Route 23C
130.00-3-7.22		2.80	2.43	3493 Route 23C
130.00-3-7.211		3.10	2.98	95 Lawrence Rd
130.00-3-7.212		6.40	5.60	3455 Lawrence Rd
130.00-3-8		4.50	4.51	170 Lawrence Rd
130.00-3-9		21.10	20.31	191 Lawrence Rd
130.00-3-10		4.20	4.38	3430 Route 23C
130.00-3-11		5.00	4.79	3494 Route 23C
130.00-3-12		8.00	7.88	3510 Route 23C
130.00-3-13		10.00	9.96	1245 Route 296
130.00-3-14.1		5.30	4.77	1279 Route 296
130.00-3-14.2		5.10	5.08	1271 Route 296
130.00-3-15		8.00	7.82	1305 Route 296
130.00-3-16		10.20	10.05	1341 Route 296
130.00-3-52		1.50	1.27	1441 Route 296
130.00-3-53		1.50	1.26	1415 Route 296
130.00-3-54		2.40	2.30	1393 Route 296
130.00-3-55		2.10	2.16	1385 Route 296
130.00-3-56		2.40	2.36	
130.00-3-57		2.20	2.21	1423 Route 296
130.00-3-58		1.70	1.66	3534 Route 23C
130.00-3-59		2.20	2.03	3522 Route 23C
130.00-3-61		2.19	2.14	1371 Route 296
130.00-4-3		2.80	1.46	3547 Route 23C
130.00-4-4.1		1.60	1.43	3531 Route 23C
130.00-4-4.2		1.70	1.51	3515 Route 23C
130.00-4-5.1		3.42	3.44	278 Beaches Corner Rd
130.00-4-5.2		3.30	3.33	272 Beaches Corner Rd
130.00-4-6		2.50	2.29	268 Beaches Corner Rd
130.00-4-9		2.50	2.52	35 Lawrence Rd
130.00-4-10		1.00	0.77	190 Beaches Corner Rd
130.00-4-11.1		3.30	3.12	83 Lawrence Rd
130.00-4-11.2		3.66	3.19	71 Lawrence Rd
130.00-4-44		6.30	5.75	302 Beaches Corner Rd
130.00-4-61		2.53	2.34	238 Beaches Corner Rd
130.00-4-62		2.52	2.39	218 Beaches Corner Rd
132.00-4-10		0.00	0.11	

-
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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of Jewett

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
132.00-4-11		1.00	0.99	29 Woodland Trl
132.00-4-12		1.00	1.02	139 Juniper Hill Rd
132.00-4-13		0.92	0.88	123 Juniper Hill Rd
132.00-4-15		2.30	2.08	51 Juniper Hill Rd
132.00-4-16		2.10	2.04	27 Juniper Hill Rd
132.00-4-17		1.00	1.18	27 Boy Scout Rd
132.00-4-18		1.20	1.15	7 Boy Scout Rd
132.00-4-19		0.75	0.80	1542 Route 23C
132.00-4-20		53.90	54.13	1560 Route 23C
132.00-4-21		2.60	2.57	129 Chisolm Trl
132.00-4-25		2.90	2.19	125 Chisolm Trl
132.00-4-26		6.40	6.55	
132.00-4-28		5.00	5.13	26 Woodland Trl
132.00-5-4		0.60	0.55	205 Boy Scout Rd
132.00-5-5		0.50	0.40	197 Boy Scout Rd
132.00-5-6		0.52	0.47	185 Boy Scout Rd
132.00-5-7		0.52	0.46	177 Boy Scout Rd
132.00-5-8		0.52	0.46	167 Boy Scout Rd
132.00-5-9		0.52	0.45	161 Boy Scout Rd
132.00-5-10		0.52	0.46	153 Boy Scout Rd
132.00-5-11		10.00	9.76	178 Boy Scout Rd
132.00-5-12		10.00	9.92	138 Boy Scout Rd
132.00-5-13	Yes	125.80	114.61	82/96 Alfred O'Bryan Rd
132.00-5-14		2.50	2.58	35 Trails End Dr
132.00-5-15		2.50	2.58	38 Trails End Dr
132.00-5-16		2.50	2.28	16 Trails End Dr
132.00-5-17		2.50	2.28	15 Trails End Dr
132.00-5-23.2		1.10	1.02	75 Chisolm Trl
132.00-5-23.11		21.30	19.64	80 Juniper Hill Rd
132.00-5-23.12		5.20	5.25	
132.00-5-27.2		1.90	1.71	12 Woodland Trl
132.00-5-28		0.92	0.93	38 Woodland Trl
132.00-5-29		1.80	1.83	60 Woodland Trl
132.00-5-38		4.50	4.55	31 Chisolm Trl
132.00-5-39		0.92	0.85	112 Juniper Hill Rd
132.00-5-40		2.60	2.25	26 Chisolm Trl
133.00-1-1.21		21.98	21.64	250 Griffin Rd
133.00-1-1.22		10.52	10.73	254 Griffin Rd
133.00-1-2		10.90	9.85	300 Griffin Rd

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of Jewett

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
133.00-1-3		5.00	4.61	234 Griffin Rd
133.00-1-4		3.30	3.03	209 Griffin Rd
133.00-1-5		7.30	7.26	231 Griffin Rd
133.00-1-6		5.10	5.20	261 Griffin Rd
133.00-1-7		10.20	10.78	279 Griffin Rd
133.00-1-8		6.00	5.90	291 Griffin Rd
133.00-1-9		6.00	6.18	299 Griffin Rd
133.00-1-10		2.80	2.88	298 Griffin Rd
147.00-2-3.11		93.50	93.33	2067 Route 296
147.00-2-4		4.70	4.23	2124 Route 296
147.00-2-9		1.80	1.79	
147.00-2-10		0.80	0.82	8673 Route 23A
147.00-2-11		3.10	2.35	261 Deming Rd
147.00-2-12		8.70	9.02	244 Deming Rd
147.00-3-3		31.40	31.15	2339 Route 296
147.00-3-9		0.89	0.74	93 Wright Rd
147.00-3-10		0.79	0.65	99 Wright Rd
147.00-3-11		1.40	1.56	8583 Route 23A
147.00-3-12		4.60	4.73	198 & 202 Deming Rd
147.00-3-14		3.56	3.47	
147.00-3-15.1		57.95	57.93	187 Wright Rd
147.00-3-15.2		1.20	1.09	181 Wright Rd
147.00-3-16		30.00	30.51	144 Wright Rd
147.00-3-17		32.00	31.57	
147.00-3-19		1.40	1.33	2365 Route 296
147.00-3-20		1.00	0.91	2272 Route 296
147.00-3-21		0.92	0.93	2243 Route 296
147.00-3-22		0.92	0.91	2227 Route 296
147.00-3-27		3.06	2.68	2385 Route 296
147.00-3-28		3.03	2.71	2385 Route 296
147.00-3-29		2.51	2.31	2385 Route 296
147.00-3-30		29.80	30.73	2385 Route 296
147.00-4-28		0.25	0.19	8741 Route 23A
147.00-4-29		0.90	0.68	8733 Route 23A
149.00-1-9		24.00	24.71	1481 Route 23C
149.00-2-6		16.80	17.09	1293 Route 23C
149.00-2-7		5.00	5.25	1297 Route 23C
<i>149.00-2-14</i>	<i>Yes</i>	21.00	<i>14.13</i>	1205 Route 23C
<i>149.00-2-18.1</i>	<i>Yes</i>	30.10	<i>15.60</i>	79 Hyer Rd

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Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of Jewett

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
149.00-2-18.2		5.00	4.99	53 Hyer Rd
149.00-2-19		19.30	19.15	1081 Route 23C
149.00-2-22.2		7.00	7.03	117 Hyer Rd
149.00-2-24		74.00	74.85	126 Hyer Rd
149.00-3-12		13.62	12.79	1094 Route 23C
149.00-3-13		4.20	4.13	1142 Route 23C
150.00-1-1		29.60	29.90	55 Griffin Rd
150.00-1-2		5.00	5.19	85 Griffin Rd
150.00-1-6		37.80	37.33	307 Colgate Rd
150.00-1-7.2		4.30	4.45	255 Colgate Rd
150.00-1-7.12		0.76	0.52	266 Colgate Rd
150.00-1-7.111		2.60	2.66	273 Colgate Rd
150.00-1-7.112		1.00	0.90	269 Colgate Rd
150.00-1-16		7.06	6.86	218 Colgate Rd
150.00-1-17		8.20	9.00	248 Colgate Rd
150.00-1-18		10.20	9.16	288 Colgate Rd
150.00-1-19.1		7.20	6.83	966 Route 23C
150.00-1-19.2		1.00	1.01	954 Route 23C
150.00-1-20		21.60	22.12	1002 Route 23C
150.00-1-21		16.80	16.92	1046 Route 23C
150.00-1-30		10.00	9.62	140 Colgate Rd
<i>150.00-1-36.1</i>	<i>Yes</i>	23.90	<i>22.75</i>	143 Colgate Rd
150.00-2-1		0.37	0.38	525 Colgate Rd
150.00-2-4		1.60	1.58	878 Route 23C
150.00-2-5		7.70	7.87	910 Route 23C
150.00-2-6		7.80	8.58	904 Route 23C
150.00-2-7		9.40	8.99	914 Route 23C
150.00-2-8		21.30	20.98	938 Route 23C
150.00-2-9		6.20	6.82	300 Colgate Rd
150.00-2-10		1.00	1.05	304 Colgate Rd
150.00-2-11		2.00	1.99	302 Colgate Rd
150.00-2-12		6.80	6.71	312 Colgate Rd
150.00-2-13		3.92	3.79	318 Colgate Rd
150.00-2-15		1.00	1.01	384 Colgate Rd
150.00-2-16.1		3.10	3.19	364 Colgate Rd
150.00-2-16.2		3.00	2.88	374 Colgate Rd
150.00-2-17		0.83	0.70	352 Colgate Rd
150.00-2-18		0.29	0.22	342 Colgate Rd
150.00-2-19		7.80	7.42	330 Colgate Rd

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List of Parcels within the Hamlet Expansion Area, Town of Jewett

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
150.00-2-20		0.45	0.53	298 Colgate Rd
150.00-2-23		0.80	0.75	351 Colgate Rd
150.00-2-24		2.00	2.03	365 Colgate Rd
150.00-2-25.2		1.40	1.46	375 Colgate Rd
150.00-2-25.11		5.45	5.44	403 Colgate Rd
150.00-2-25.12		1.50	1.39	383 Colgate Rd
150.00-2-26		2.31	2.31	431 Colgate Rd
150.00-2-27		6.60	6.43	455 Colgate Rd
150.00-2-28		0.08	0.07	466 Colgate Rd
150.00-2-29		4.00	3.96	333 Colgate Rd
163.00-2-6		5.00	4.83	156 Deming Rd
163.00-2-7		1.20	1.22	8465 Route 23A
163.00-2-8		0.76	0.73	8549 Route 23A
163.00-2-17		0.70	0.70	87 Deming Rd
163.00-2-18.2		1.10	0.82	53 Deming Rd

Town of Jewett Summary:Parcel Count: **210**Total Area: **2,014.39 acres**

-
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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Lexington](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
127.00-5-15		50.10	50.09	
128.00-1-31.1		116.50	119.02	
128.00-2-42		206.12	205.64	11020 Rt 23A

Town of Lexington Summary:Parcel Count: **3**Total Area: **374.74 acres**

-
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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Windham](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
60.00-5-9.12		6.10	6.12	
60.00-5-25		99.30	98.28	
61.00-2-3		1.10	1.20	526 County Rt 21
61.00-2-4		0.51	0.50	514 County Rt 21
<i>61.00-2-5</i>	<i>Yes</i>	59.90	<i>52.98</i>	515&516 County Rt 21
61.00-2-6		9.10	9.05	
61.00-2-7		1.00	1.03	506 County Rt 21
61.00-2-8		1.80	1.77	
61.00-2-9		1.50	1.40	496 County Rt 21
61.00-2-10		1.40	1.57	490 County Rt 21
61.00-2-11.1		2.70	2.67	484 County Rt 21
61.00-2-11.2		2.30	2.27	
61.00-2-12		1.40	1.47	
61.00-2-13		11.60	10.92	470 County Rt 21
61.00-2-14		5.50	5.85	
61.00-2-15		5.10	5.22	476 County Rt 21
61.00-2-16		6.50	6.24	
61.00-2-17		4.50	4.57	
61.00-2-18		5.80	3.48	
61.00-2-19.2		6.10	5.86	
61.00-2-20.2		2.00	2.07	33 Larsen Dr
61.00-2-20.11		1.80	1.67	
61.00-2-20.12		2.00	2.06	21 Larsen Dr
61.00-2-21		3.20	3.24	
61.00-2-22		3.50	3.52	20 Larsen Dr
61.00-2-23.1		1.70	1.61	16 Larsen Dr
61.00-2-23.2		1.50	1.29	442 County Rt 21
61.00-2-24		2.00	1.70	426 County Rt 21
61.00-2-25		0.50	0.65	422 County Rt 21
61.00-2-26.22		1.30	1.27	396 County Rt 21
61.00-2-26.111		2.10	2.17	362-1 County Rt 21
61.00-2-26.112		10.90	10.84	362-2 County Rt 21
61.00-2-26.211		6.50	6.43	29 Via Quattrini
61.00-2-26.212		1.00	0.97	7 Via Quattrini
61.00-2-27.12		5.00	7.95	
61.00-2-27.22		8.80	8.25	
61.00-2-27.111		37.50	37.80	59 Bell Hill Rd
61.00-2-27.112		7.40	7.36	75 Bell Hill Rd
61.00-2-28		6.20	5.62	60 Bell Hill Rd

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List of Parcels within the Hamlet Expansion Area, Town of [Windham](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
61.00-2-29		5.60	5.55	
61.00-2-30		3.50	3.52	305 Begley Rd
61.00-2-31		0.65	0.56	315 Begley Rd
61.00-2-32		0.91	0.69	321 Begley Rd
61.00-2-33		1.50	1.38	333 Begley Rd
61.00-2-35		20.90	19.02	340 Begley Rd
61.00-2-36.1		10.80	10.22	300 Begley Rd
61.00-2-36.2		10.80	9.78	314 Begley Rd
61.00-2-37.1		8.10	7.85	
61.00-2-37.2		8.10	8.36	292 Begley Rd
61.00-2-38		7.30	7.52	284 Begley Rd
61.00-2-40		22.50	21.99	289 Begley Rd
61.00-2-41		6.40	6.40	
61.00-2-42		4.40	4.43	24 Bell Hill Rd
61.00-2-43		2.40	2.43	6 Bell Hill Rd
61.00-2-44		1.00	1.00	326 County Rt 21
61.00-2-45		1.00	0.97	
61.00-2-47		1.10	0.97	296 County Rt 21
61.00-2-49		0.25	0.22	313 County Rt 21
61.00-2-56		5.10	5.27	15 Spring Ln
61.00-2-57		5.10	5.41	
61.00-2-58		5.20	5.17	490 Begley Rd
61.00-2-59		5.20	5.20	
61.00-2-60		5.20	5.16	458 Begley Rd
61.00-2-61		5.20	5.26	400 Begley Rd
61.00-2-62		5.30	5.32	
61.00-2-63		5.00	5.05	
61.00-2-64		5.20	4.99	370 Begley Rd
61.00-2-65		5.00	5.22	352 Begley Rd
61.00-2-66		5.00	5.23	
61.00-2-67		12.80	12.96	
61.00-2-68		5.00	5.00	405 Begley Rd
61.00-2-69		5.20	5.12	
61.00-2-70		7.20	7.24	
61.00-2-74		6.50	6.36	
61.00-2-75		5.20	5.33	
61.00-2-76		5.00	5.04	
61.00-2-77		6.00	6.31	
61.00-2-78		6.10	6.20	

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Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Windham](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
61.00-2-79		4.70	4.35	
61.00-2-80		3.60	3.52	
61.00-2-86		1.20	1.16	
61.00-2-87		1.20	1.11	
61.00-2-88		2.50	2.64	
61.00-2-90		3.70	3.60	
61.00-2-91		26.10	26.62	412 County Rt 21
61.00-2-93		5.10	5.07	65 Larsen Dr
77.00-3-1		0.70	0.70	
77.00-3-2.1		232.10	227.14	
77.00-3-2.21		62.80	61.80	59 Oliver Rd
77.00-3-2.22		5.40	5.07	
77.00-3-3.1		9.60	9.12	
77.00-3-3.22		4.00	3.61	30 Oliver Rd
77.00-3-3.211		1.00	1.01	22 Mc Govern Rd
77.00-3-3.212		1.00	0.97	28 Mc Govern Rd
77.00-3-4		130.80	133.21	
77.00-3-5		2.30	2.22	7 Karlstadt Rd
77.00-3-8		2.20	2.31	
77.00-3-9		1.80	1.82	19 Mc Govern Rd
77.00-3-10		2.10	2.02	33 Mc Govern Rd
77.00-3-11		1.00	0.96	
77.00-3-12		50.20	49.26	5708 State Rt 23
78.00-1-1		10.70	10.78	
78.00-1-16		0.52	0.56	165 Mill St
78.00-1-17.1		2.80	2.58	195 Mill St
78.00-1-17.2		2.00	1.71	177 Mill St
78.00-1-20.1		10.20	9.84	225 Mill St
78.00-2-3		0.50	0.17	287 County Rt 21
78.00-2-4.2		0.76	0.80	
78.00-2-4.12		0.66	0.71	
78.00-2-4.111		0.77	0.63	278 County Rt 21
78.00-2-4.112		0.63	0.56	
78.00-2-5		1.50	1.22	268 County Rt 21
78.00-2-6.2		18.70	18.40	252 County Rt 21
78.00-2-6.111		2.80	2.42	238 County Rt 21
78.00-2-6.112		0.50	0.48	44/2 Holiday Ct
78.00-2-6.121		0.75	0.80	248/2 County Rt 21
78.00-2-6.122		0.35	0.26	248/1 County Rt 21

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Windham](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
78.00-2-8		1.50	1.54	214 Begley Rd
78.00-2-11		0.91	0.88	232-#2 Begley Rd
78.00-2-12.2		7.10	6.76	
78.00-2-12.12		6.00	6.05	262-1 Begley Rd
78.00-2-12.111		7.70	8.01	
78.00-2-12.112		6.50	6.28	
78.00-2-13		1.30	1.24	262-2 Begley Rd
78.00-2-14		13.00	12.86	33 Holcomb Rd
78.00-2-15		1.70	1.70	
78.00-2-16		2.50	2.60	13 Holcomb Rd
78.00-2-17		2.60	2.63	29 Holcomb Rd
78.00-2-25		3.90	3.71	12 Dianne Dr
78.00-2-26		3.20	2.93	26 Dianne Dr
78.00-2-27		3.30	3.15	27 Dianne Dr
78.00-2-28		4.20	3.44	15 Dianne Dr
78.00-2-29.1	Yes	15.30	13.22	152&155 Begley Rd
78.00-2-29.2		1.40	1.39	161 Begley Rd
78.00-2-30		9.00	9.24	
78.00-2-37		2.74	2.70	55 Cardinal Dr
78.00-2-38		2.00	2.17	
78.00-2-39		1.50	1.33	209 Begley Rd
78.00-2-40.2		1.70	1.77	
78.00-2-40.11		1.70	1.81	16 Chalet Dr
78.00-2-40.121		1.00	0.99	
78.00-2-40.122		1.00	0.88	6 Chalet Dr
78.00-2-41.11		1.80	2.07	26 Chalet Dr
78.00-2-43		1.70	1.50	
78.00-2-45.2		1.70	1.68	
78.00-2-45.11		1.70	1.59	
78.00-2-45.12		1.70	1.69	
78.00-2-46		5.20	5.31	
78.00-2-47		5.20	4.84	
78.00-2-48.1		2.00	1.90	210 County Rt 21
78.00-2-48.2		3.30	3.40	
78.00-2-49.1		2.60	2.46	
78.00-2-49.2		2.60	2.56	
78.00-2-50		5.20	5.07	
78.00-2-51.2		0.84	0.68	
78.00-2-51.111		1.60	1.52	25 High Point Rd

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<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
78.00-2-51.112		0.94	1.04	
78.00-2-51.121		1.00	0.91	
78.00-2-51.122		1.00	1.03	35 High Point Rd
78.00-2-52.1		1.20	1.29	42 Mountain View Rd
78.00-2-52.2		1.00	0.81	
78.00-2-53.2		1.50	1.49	
78.00-2-53.111		1.40	1.26	7 Windham View Rd
78.00-2-54.12		1.20	1.26	24 Windham View Rd
78.00-2-54.21		0.80	0.83	14 Windham View Ln
78.00-2-54.22		0.80	0.80	22 Windham View Rd
78.00-2-54.111		1.50	1.40	
78.00-2-54.112		2.60	2.65	26 Windham View Rd
78.00-2-55.2		1.50	1.47	
78.00-2-55.11		1.50	1.34	
78.00-2-55.121		1.60	1.50	
78.00-2-55.122		1.60	1.50	33 Trail View La
78.00-2-56.2		2.00	1.99	24 Trail View La
78.00-2-56.12		3.20	3.13	
78.00-2-56.111		2.00	1.80	
78.00-2-56.112		3.20	2.93	
78.00-2-57		2.10	2.21	43 Cardinal Dr
78.00-2-59.1		3.00	3.18	
78.00-2-59.2		3.30	3.40	46 Cardinal Dr
78.00-2-60		2.20	2.27	
78.00-2-61		2.10	2.05	
78.00-2-62		5.60	5.47	
78.00-2-63		1.70	1.64	12 Mountain View Rd
78.00-2-64.1		0.85	0.93	22 Mountain View Rd
78.00-2-64.2		0.63	0.64	24 Mountain View Rd
78.00-2-65		1.30	1.44	32 Mountain View Rd
78.00-2-66		1.60	1.49	
78.00-2-67		1.30	1.34	
78.00-2-68		1.30	1.33	15 Mountain View Rd
78.00-2-69.2		1.00	1.06	31/2 Holiday Ct
78.00-2-69.11		0.50	0.49	36-#1 Holiday Ct
78.00-2-69.12		0.53	0.55	31/1 Holiday Ct
78.00-2-70.1		0.77	0.62	41/1 Holiday Ct
78.00-2-70.2		0.77	0.88	41/2 Holiday Ct
78.00-2-71		1.70	1.78	

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78.00-2-72		1.70	1.76	
78.00-2-73		0.82	0.84	13 Mountain View Dr
78.00-2-74		0.80	0.61	
78.00-2-75		0.48	0.51	44-#1 Holiday Ct
78.00-2-76		0.50	0.54	36/2 Holiday Ct
78.00-2-77		1.00	1.06	
78.00-2-78		1.24	1.24	
78.00-2-79		1.00	1.03	
78.00-2-87		1.60	1.54	190 County Rt 21
78.00-2-88		3.20	3.08	232-#1 Begley Rd
78.00-2-89		5.20	5.35	233 Begley Rd
78.00-2-90		1.23	1.22	31 Windham View Rd
78.00-2-91		2.43	2.46	29 Windham View Rd
78.00-2-92		2.00	2.02	
78.00-2-93		2.00	2.14	
78.00-2-94.1		2.09	2.06	21 Chalet Dr
78.00-2-94.2		2.46	2.41	
78.00-3-33		70.10	70.49	
78.00-4-1		0.71	0.72	39 Garraghan La
78.00-4-2.1		0.31	0.61	
78.00-4-2.2		2.10	2.02	35 Garraghan La
78.00-4-3		0.90	1.03	34 Garraghan La
78.00-4-21		112.60	110.10	36 County Route 12
78.00-5-4.1		1.00	0.83	132 County Rt 21
78.00-5-4.2		0.60	0.62	
78.00-5-5.1		0.63	0.65	128/2 County Rt 21
78.00-5-5.2		0.33	0.33	128/1 Cty Rt 21
78.00-5-6		2.00	1.79	120&124 County Rt 21
78.00-5-7		0.50	0.46	
78.00-5-8		0.95	0.83	110 County Rt 21
78.00-5-9		0.80	0.71	102 County Rt 21
78.00-5-10		8.07	8.32	
78.00-5-11		10.22	9.88	94 County Rt 21
78.00-5-12		0.80	0.93	
78.00-5-13		1.20	1.21	
78.00-5-14		4.30	4.33	30 Evans Dr
78.00-5-15		2.20	2.22	8 Evans Dr
78.00-5-16		2.50	2.49	
78.00-5-19.2		1.20	1.16	31 Koonan Rd Ext

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78.00-5-19.11		1.30	1.08	3 Koonan Rd Ext
78.00-5-19.12		1.20	1.16	12 Koonan Rd Ext
78.00-5-21.2		0.86	0.84	
78.00-5-23		1.10	1.07	14 Koonan Rd
78.00-5-24		0.89	0.91	
78.00-5-25		1.00	0.95	16 Circle Rd
78.00-5-26		0.82	0.83	
78.00-5-27		1.00	0.99	
78.00-5-28		0.96	0.95	
78.00-5-32.2		1.50	1.56	
78.00-5-32.11		2.00	1.90	84 County Rt 21
78.00-5-32.12		1.50	1.56	
78.00-5-42		0.87	0.91	
78.00-5-43		0.78	0.60	
78.00-6-4		4.60	5.01	
78.00-6-5.12		1.30	1.22	22 Indian Hgts Rd
78.00-6-5.21		2.00	1.97	
78.00-6-5.22		1.40	1.31	
78.00-6-5.111		43.30	44.53	
78.00-6-5.112		2.00	2.03	60 Indian Hgts Rd
78.00-6-6		7.20	7.16	
78.00-6-7		1.10	1.11	26 Indian Hgts Rd
78.00-6-8		2.20	2.52	45 Indian Hgts Rd
78.00-6-10		6.90	6.97	75 Indian Hgts Rd
78.00-6-11		1.60	1.40	
78.00-6-12		1.80	1.71	53 Thunderbird Ter
78.00-6-13		2.00	1.82	51 Thunderbird Ter
78.00-6-14		1.20	1.27	45 Thunderbird Terr
78.00-6-15		1.80	1.77	
78.00-6-16		5.50	5.46	21 Thunberbird La
78.00-6-17		1.10	1.00	13 Thunderbird La
78.00-6-18		0.70	0.59	37 Thunderbird Terr
78.00-6-22.1		3.00	2.75	53 Hickory Hill Rd
78.00-6-22.2		3.60	3.10	45 Hickory Hl
78.00-6-34		1.80	1.80	
78.00-6-35		1.70	1.71	
78.00-6-36		1.90	1.85	
78.00-6-38		2.00	2.03	
78.00-6-40.1		2.00	1.93	

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78.00-6-40.2		2.00	1.89	
78.00-6-43		1.80	1.76	36 Indian Hgts Rd
78.00-6-44		1.10	1.03	17 Indian Hgts Rd
78.00-6-45		1.30	1.47	
78.00-6-46.1		1.10	0.92	
78.00-6-46.2		1.30	1.25	
78.00-6-50		1.10	0.99	
78.00-6-52.1		1.20	1.19	42 Indian Hgts Rd
78.00-6-52.2		1.40	1.33	
78.18-1-4		0.90	0.89	117 Thunderbird Terr
78.18-1-5		0.63	0.74	121 Thunderbird Terr
78.19-3-2		3.30	3.29	
79.00-1-3		2.30	2.35	224 Nauvoo Rd
79.00-1-5.2		7.50	7.26	169 Galway Rd
79.00-1-5.12		10.90	10.43	
79.00-1-5.111		15.50	16.28	
79.00-1-5.112		5.00	4.91	
79.00-1-8.2		1.90	1.92	
79.00-1-8.12		2.10	1.81	298 Old Rd
79.00-1-8.111		96.50	95.20	
79.00-1-8.112		15.00	15.18	
79.00-1-9		2.00	2.02	297 Old Rd
79.00-1-10		2.00	1.88	291 Old Rd
79.00-1-11		2.00	2.14	281 Old Rd
79.00-1-12		3.00	2.97	170 Hayden Rd
79.00-1-13		1.00	0.96	
79.00-1-14		43.70	43.44	132-162 Hayden Rd
79.00-1-20		1.00	0.94	
79.00-1-21		1.00	0.68	217 Old Rd
79.00-1-22		2.30	2.24	37 Old Farm La
79.00-1-23.2		20.30	20.44	
79.00-1-23.11		4.90	4.49	227 Old Rd
79.00-1-23.12		55.20	55.70	22 Old Farm La
79.00-1-24		32.40	32.28	69 Old Farm La
79.00-1-30		7.20	6.91	165 Galway Rd
79.00-1-31		5.00	4.88	
79.00-1-36		3.70	3.67	247 Old Rd
79.00-1-37		5.00	4.76	195 Galway Rd
79.00-1-42		148.70	148.91	133 Nauvoo Rd

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79.00-2-25		1.50	1.45	21 Galway Rd
79.00-2-26.1		2.00	2.08	
79.00-2-26.2		2.00	1.98	415 Old Rd
79.00-2-27		2.00	1.95	391 Old Rd
79.00-2-28		0.67	0.68	383 Old Rd
79.00-2-29		1.00	0.80	379 Old Rd
79.00-2-30		1.30	1.27	
79.00-2-31		1.70	1.49	339 Old Rd
79.00-2-32		5.70	6.00	
79.00-2-33		37.20	36.40	41 Galway Rd
79.00-2-34		2.00	1.09	371 Old Rd
79.00-2-35		1.30	1.24	
79.00-4-1.1		16.90	17.32	
79.00-4-1.21		5.00	4.80	61 Old Rd
79.00-4-2		3.00	2.69	94 Cambridge Hgts Rd
79.00-4-3		1.40	1.28	90 Cambridge Hgts Rd
79.00-4-4		1.10	1.06	78 Cambridge Hgts Rd
79.00-4-5		1.50	1.48	74 Cambridge Hgts Rd
79.00-4-6		1.60	1.53	68 Cambridge Hgts Rd
79.00-4-19		1.40	1.29	10 North Ridge Ext
79.00-4-20		1.80	1.80	44 Cambridge Hgts Rd
79.00-4-21		1.50	1.64	52 Cambridge Hgts Rd
79.00-4-22		1.00	0.97	25 North Ridge Ext
79.00-4-23		1.30	1.04	
79.00-4-26		1.00	1.04	
79.00-4-27		1.00	1.05	
79.00-4-28		1.10	1.09	60 Cambridge Hgts Rd
79.00-4-29		0.89	0.82	61 Cambridge Hgts Rd
79.00-4-30		1.00	1.04	
79.00-4-31		1.30	1.34	37 Cambridge Hgts Rd
79.00-4-32		1.10	1.06	85 Cambridge Hgts Rd
79.00-4-33		1.70	1.65	
79.00-4-34		1.30	1.25	104 Cambridge Hgts Rd
79.00-4-35		1.10	0.70	135 Old Rd
79.00-4-36		1.30	1.19	22 Cambridge Hgts Rd
79.00-4-37		1.20	1.32	15 Cambridge Hgts Rd
79.00-4-38		1.40	1.26	28 Cambridge Hgts Rd
79.00-4-39		1.10	1.04	38 Cambridge Hgts Rd
79.00-4-40.1		1.30	1.11	

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79.00-4-40.2		1.30	1.40	
79.00-4-41		6.00	6.06	151 Old Rd
79.00-4-42		5.60	5.88	41 Shirley Rd
79.00-4-43.1		2.10	1.90	159 Old Rd
79.00-4-43.2		1.70	1.74	
79.00-4-44		5.20	5.19	16 Shirley Rd
79.00-4-45		2.50	2.51	183 Old Rd
79.00-4-46		2.50	2.48	199 Old Rd
79.00-4-47		2.00	0.76	
79.00-4-49		0.75	0.73	4982 State Rt 23
79.00-4-50		0.66	0.66	4988 State Rt 23
79.00-4-51.1		15.00	14.68	
79.00-4-51.2		2.00	1.80	122 Old Rd
79.00-4-52		2.30	2.00	5022 State Rt 23
79.00-4-53		0.90	0.82	5040 State Rt 23
79.00-4-54.1		0.48	0.42	5044 State Rt 23
79.00-4-54.2		0.62	0.57	5048 State Rt 23
79.00-4-57		2.40	2.43	5060 State Rt 23
79.00-4-58		14.50	14.39	5054 State Rt 23
79.00-4-59.1		0.49	0.50	143 Old Rd
79.00-4-59.2		0.42	0.50	139 Old Rd
79.00-4-60		1.70	1.61	150 Old Rd
79.00-4-61		1.50	1.44	4992 State Rt 23
79.00-4-62.1		2.90	2.81	8 Andys Way
79.00-4-62.2		2.20	2.35	22 Andy Way
79.00-4-63.1		2.70	2.52	
79.00-4-63.2		2.70	2.51	
79.00-4-64		1.50	1.41	
79.00-4-65		5.30	5.38	20 St Clair Rd
79.00-4-67		5.70	5.82	
79.00-4-68		5.60	5.77	Lot 7 St Clair Rd
79.00-4-69		5.70	5.64	
79.00-4-70.1		6.10	6.45	27 St Clair Rd
79.00-4-70.2		3.40	3.38	
79.00-4-71		0.55	0.61	5 Scandinavian Dr
79.00-4-72		0.66	0.71	15 Scandinavian Dr
79.00-4-73		1.60	1.56	31 Scandinavian Dr
79.00-4-74		1.30	1.34	
79.00-4-75.1		0.75	0.79	

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Windham](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
79.00-4-75.2		0.75	0.77	
79.00-4-81		2.00	1.94	
79.00-4-82		2.30	2.36	92 North Ridge Ext
79.00-4-83		2.40	2.73	94 North Ridge Ext
79.00-4-86		2.20	2.22	
79.00-4-87		2.30	2.08	
79.00-4-88		20.02	19.83	81 Sun Dance Rd
79.00-4-89		15.36	14.96	65 Sun Dance Dr
79.00-4-90		12.79	12.88	41 Sun Dance Dr
79.00-4-95		77.84	78.52	4944 State Rt 23
79.00-4-96		14.50	13.81	21 Sun Dance Dr
79.00-4-97		7.40	7.55	11 Sun Dance Dr
79.00-4-98		2.30	2.34	98 North Ridge Extension Rd
79.00-4-99		2.10	2.32	98 North Ridge Extension Rd
79.00-5-1		4.90	4.94	
94.02-3-1		1.70	1.64	5724 State Rt 23
94.02-3-2		0.75	0.74	5706 State Rt 23
94.02-3-3		0.18	0.18	5702 State Rt 23
94.02-3-4		0.25	0.22	5696 State Rt 23
94.02-3-5		0.35	0.34	5692 State Rt 23
94.02-3-6.1		2.34	2.23	5678 State Rt 23
94.02-3-6.2		8.84	8.63	
94.02-3-8		0.75	0.52	7 Karlstadt Rd
94.02-3-13		0.02	0.02	
94.02-3-14		1.07	1.09	5712 State Route 23
95.00-1-11.2		2.50	2.18	198 County Route 12
95.00-1-12.1		0.89	0.79	189 County Route 12
95.00-1-12.2		0.83	0.80	
95.00-1-16.11		6.60	6.67	
95.00-1-16.12		6.00	5.66	
95.00-1-16.22		1.40	1.46	25 Two Trees La
95.00-1-16.211		2.10	1.87	199 County Route 12
95.00-1-16.222		1.40	1.52	35 Two Trees La
95.00-1-17.2		1.31	1.40	20 Panarama La
95.00-1-18		4.20	4.57	137-149 County Route 12
95.00-1-19		1.00	0.53	134 County Route 12
95.00-1-20		0.75	0.34	128 County Route 12
95.00-1-21		1.60	1.77	124 South St
95.00-1-22		1.41	1.41	

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Windham](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
95.00-1-23		0.75	0.68	
95.00-1-25.2		5.00	4.89	
95.00-1-25.112		5.20	5.85	
95.00-1-32		1.00	0.89	21 Panarama La
95.00-1-33		1.00	1.00	
95.00-1-35		0.50	0.55	
95.00-1-71		1.40	1.35	183 County Route 12
95.00-1-78		13.20	13.58	
95.00-1-87		3.20	3.26	
95.00-1-88		9.89	9.96	
95.00-1-90		9.78	9.73	
95.01-1-1		0.40	0.39	15 Karlstadt Rd
95.01-1-2		0.29	0.26	
95.01-1-3		1.50	1.35	
95.01-1-7		0.30	0.26	28 Karlstadt Rd
95.08-1-1		0.55	0.66	114 South St
95.08-1-2		1.00	0.86	108 South St
95.08-1-3		0.50	0.62	100 South St
95.08-1-4		2.20	2.05	92 South St
95.08-1-5		0.71	0.66	89 South St
95.08-1-6		0.71	0.72	
95.08-1-7		0.71	0.73	
95.08-1-8		0.72	0.73	
95.08-1-9		1.20	1.24	
95.08-2-1		0.66	0.66	75 South St
95.08-2-2		0.75	0.45	69 South St
95.08-2-3		1.30	1.12	61 South St
95.08-2-5		0.59	0.60	
95.08-2-6		0.97	0.79	51 South St
95.08-2-7		1.10	1.07	
95.08-2-8		0.70	0.68	
95.08-2-11		1.00	1.00	
95.08-2-12		1.00	1.00	
95.08-2-13		1.00	0.94	
113.00-2-8		27.70	25.29	
113.00-2-49		5.10	4.85	
113.00-2-50		5.10	4.62	
113.00-2-51		5.10	4.94	

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Windham](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
Town of Windham Summary:		Parcel Count:	467	
		Total Area:	2,796.85 acres	

-
- Sources:
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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Conesville](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
202.-2-16		19.20	19.15	285 Wood Rd
202.-2-17		25.00	25.15	261 Wood Rd
202.-2-18		28.29	28.43	229 Wood Rd
202.-4-17	Yes	33.59	10.19	197 Wood Rd
202.-4-19		9.60	9.72	188 Wood Rd
202.-4-20		0.50	0.52	194 Wood Rd
202.-4-21		7.67	6.81	Wood Rd
202.-4-22.1		146.50	147.52	198 Brand Rd
202.-4-22.2		5.19	5.11	294 Wood Rd
202.-4-24	Yes	129.60	130.30	269 Bear Kill Rd
209.-4-3.1		97.40	97.03	Champlin Rd
209.-4-3.3		43.70	43.14	Bear Kill Rd
209.-4-4		0.62	0.75	195 Potter Mountain Rd
209.-4-5.11		33.50	33.90	243 Potter Mountain Rd
209.-4-5.12		25.48	24.86	Potter Mountain Rd
209.-4-6		0.89	0.96	198 Potter Mountain Rd
209.-4-7		1.50	1.59	226 Potter Mountain Rd
209.-4-8		4.00	4.09	106 South Mountain Rd
209.-4-10		2.52	2.58	118 South Mountain Rd
209.-4-11		28.38	29.53	130 South Mountain Rd
209.-4-12		2.25	2.02	140 South Mountain Rd
209.-4-13		8.39	8.58	South Mountain Rd
209.-4-14		5.69	5.72	South Mountain Rd Off
209.-4-15		6.19	6.37	South Mountain Rd Off
209.-4-16		57.59	56.87	South Mountain Rd Off
210.-1-4.2		63.79	63.88	417 South Mountain Rd
210.-1-4.3		6.25	6.12	429 South Mountain Rd
210.-1-4.12		3.38	3.37	South Mountain Rd Off
210.-1-4.112		1.32	1.27	South Mountain Rd Off
210.-1-4.113		5.01	5.03	397 South Mountain Rd
210.-1-4.115		0.75	0.78	South Mountain Rd Off
210.-1-4.116		2.00	2.01	South Mountain Rd Off
210.-1-4.117		9.39	9.18	451 South Mountain Rd
210.-1-4.119		1.82	1.90	South Mountain Rd Off
210.-1-5		8.00	7.45	485 South Mountain Rd
210.-1-6		6.19	6.29	South Mountain Rd
210.-1-8		9.67	9.71	381 South Mountain Rd
210.-1-10		9.28	9.23	351 South Mountain Rd
210.-1-13.1		50.00	49.72	295 South Mountain Rd

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Conesville](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
210.-1-14		16.39	17.07	343 South Mountain Rd
210.-1-15		15.89	16.03	325 South Mountain Rd
210.-1-16		7.50	7.35	265 South Mountain Rd
210.-1-17		7.67	7.31	South Mountain Rd
210.-1-19		35.27	34.10	South Mountain Rd
210.-1-22.11		23.00	22.83	184 South Mountain Rd
210.-1-23		4.69	4.21	South Mountain Rd
210.-1-24		2.00	2.12	South Mountain Rd
210.-1-25		10.50	10.25	119 South Mountain Rd
210.-1-26		0.56	0.59	Potter Mountain Rd
210.-4-1.1		43.88	43.96	Beaver Hill Rd
210.-4-2		23.29	23.03	213 Beaver Hill Rd
210.-4-3		25.60	25.31	187 Beaver Hill Rd
210.-4-4		111.30	110.26	161 Beaver Hill Rd
210.-4-5		19.71	19.31	204 Beaver Hill Rd
210.-4-6		2.09	2.14	232 Beaver Hill Rd
211.-1-12.1		56.00	55.46	Durham Rd
211.-1-12.2		6.25	6.25	Durham Rd
211.-1-13		6.84	6.58	Durham Rd
211.-1-14.2		3.40	3.43	311 Durham Rd
211.-2-1		8.00	8.93	Durham Rd
211.-2-2		6.01	5.87	369 Durham Rd
211.-2-3	Yes	240.60	216.18	393 Durham Rd
216.-2-5.11		20.79	20.77	551 South Mountain Rd
216.-2-5.12		10.00	10.98	597 South Mountain Rd
216.-2-8	Yes	161.39	7.30	526 South Mountain Rd
216.-2-13		5.07	5.15	134 Beaver Hill Rd

Town of Conesville Summary:Parcel Count: **66**Total Area: **1,569.59 acres**

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Olive](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
36.1-2-9		5.00	4.95	5063 RT 28A
36.1-2-10		5.59	5.58	5065 RT 28A
36.1-2-14		5.40	5.47	5061 RT 28A
36.1-2-17		2.40	2.35	RT 28A
36.1-3-2		16.79	16.39	1069 COLDBROOK RD
36.1-3-3		0.08	0.08	COLDBROOK RD
36.1-3-4		0.40	0.39	1075 COLDBROOK RD
36.1-3-5		0.20	0.19	1073 COLDBROOK RD
36.1-3-7		0.25	0.26	4 DEERHAVEN PARK RD
36.1-3-8		0.37	0.39	8 DEERHAVEN PARK RD
36.1-3-9		0.64	0.64	12 DEERHAVEN PARK RD
36.1-3-10		1.39	1.39	14 DEERHAVEN PARK RD
36.1-3-12.120			1.39	
36.1-3-12.3		12.69	12.88	22 DEERHAVEN PARK RD
36.1-3-13		1.10	0.98	21 DEERHAVEN PARK RD
36.1-3-14.100		5.40	5.58	4 NISSEN LN
36.1-3-15		1.10	0.94	11 DEERHAVEN PARK RD
36.1-3-16		0.75	0.76	7 DEERHAVEN PARK RD
36.1-3-17.100		0.60	0.58	DEERHAVEN PARK RD
36.1-3-17.200		0.30	0.26	4 DEERHAVEN PARK RD
36.1-3-19		0.34	0.34	1061 COLDBROOK RD
36.1-3-20		0.43	0.43	1059 COLDBROOK RD
36.1-3-21		0.25	0.25	1057 COLDBROOK RD
36.1-3-23		0.25	0.28	7 NISSEN LN
36.1-3-24		3.59	3.83	COLDBROOK RD
36.1-3-25		1.50	1.37	1047 COLDBROOK RD
36.1-3-26		0.47	0.48	1043 COLDBROOK RD
36.1-3-31		3.79	3.76	COLDBROOK RD
36.1-3-32		2.09	2.08	8 CABIN HILL RD
36.1-3-33		2.59	2.60	1021 COLDBROOK RD
36.1-3-34		1.60	1.46	2 CABIN HILL RD
36.1-3-35		10.69	11.13	11 CABIN HILL RD
36.1-3-36		6.00	5.92	21 CABIN HILL RD
36.1-3-37		24.89	25.11	COLDBROOK RD
36.1-3-38.11		5.69	6.21	11 WILDEWOOD LN
36.1-3-38.12		7.40	7.43	13 WILDEWOOD LN
36.1-3-38.2		12.00	12.27	21 WILDEWOOD LN
36.1-3-39		1.20	1.26	1051 COLDBROOK RD
36.1-3-40			12.77	

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Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Olive](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
36.1-3-41		1.39	1.33	DEERHAVEN PARK RD
36.2-1-1.2		5.50	5.32	95 PINEY POINT RD
36.2-1-2		2.79	2.44	111 PINEY POINT RD
36.2-1-3		10.00	10.14	117 PINEY POINT RD
36.2-1-4		10.30	10.32	133 PINEY POINT RD
36.2-1-17.2		10.00	9.90	96 PINEY POINT RD
36.3-3-30.111		5.80	5.80	BURGHEN RD
36.3-3-30.12		1.20	1.13	88 BURGHEN RD
36.3-3-30.2		7.30	7.21	99 BURGHEN RD
36.3-3-33		3.29	3.23	117 BURGHEN RD
36.4-2-1.1		5.09	5.00	115 UPPER BOICEVILLE RD
36.4-2-45		6.50	6.08	307 UPPER BOICEVILLE RD
36.4-2-46		1.79	1.89	293 UPPER BOICEVILLE RD
36.4-2-47		1.39	1.33	283 UPPER BOICEVILLE RD
36.4-2-48.100		5.19	5.05	277 UPPER BOICEVILLE RD
36.4-2-49.100		1.29	1.27	UPPER BOICEVILLE RD
36.4-2-50	Yes	4.50	2.46	254 UPPER BOICEVILLE RD
36.4-2-51		5.59	5.88	UPPER BOICEVILLE RD
36.4-2-63		2.20	2.27	159-165 UPPER BOICEVILLE RD
36.4-2-64		16.50	17.60	155 UPPER BOICEVILLE RD
36.4-2-65		2.70	2.75	131 UPPER BOICEVILLE RD
36.4-2-66		6.30	6.49	REMONTATO RD / UP B
36.4-2-67		5.50	5.72	88 REMONTATO RD
36.4-2-68		5.30	5.25	REMONTATO RD / UP B
36.4-2-69		5.09	5.34	REMONTATO RD / UP B
36.4-2-70		7.09	7.54	190 REMONTATO RD
36.4-2-71		17.60	17.47	REMONTATO RD / UP B
36.4-2-72.1		11.13	10.97	234 REMONTATO RD / UP B
36.4-2-73		7.50	6.77	175 REMONTATO / UP BOICEVIL
36.4-2-74		27.50	27.44	75 REMONTATO RD / UP B
36.4-2-75		6.19	5.82	155 REMONTATO RD
36.4-2-76		12.10	11.05	135 REMONTATO RD / UP B
36.4-3-43		4.76	3.56	158 BOSTOCK MT RD
36.4-3-44		2.00	2.07	143 BOSTOCK MT RD
36.4-3-45		17.10	15.76	11 BLACK RD
36.4-4-1		3.00	2.87	3542 RT 28 SHOKAN
36.4-4-6		11.89	11.42	DANCING ROCK RD
36.4-4-7		6.00	5.69	106 DANCING ROCK RD
36.4-4-8		6.19	6.25	54 DANCING ROCK RD

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Olive](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
36.4-4-9		8.50	8.67	DANCING ROCK RD
36.4-4-10		5.00	5.19	DANCING ROCK RD
36.4-4-11		4.00	4.03	Lot 25 DANCING ROCK RD
36.4-4-12		5.00	4.96	151 DANCING ROCK RD
36.4-4-13		3.70	4.55	DANCING ROCK RD
36.4-4-18		3.09	2.98	200 DANCING ROCK RD
36.4-4-19		9.00	8.70	9 TORRENS HOOK RD/DANCING
36.4-4-25			4.92	
36.4-5-6		2.20	2.15	327 UPPER BOICEVILLE RD
36.4-5-7		3.70	3.87	UPPER BOICEVILLE RD
36.4-5-8		3.09	3.08	329 UPPER BOICEVILLE RD
36.4-5-9.1		19.89	20.64	349 UPPER BOICEVILLE RD
36.4-5-9.2		1.29	1.31	335 UPPER BOICEVILLE RD
36.4-5-10		1.20	1.52	359 UPPER BOICEVILLE RD
36.4-5-11.1		1.20	1.10	UPPER BOICEVILLE RD
36.4-5-11.2		1.50	1.20	7 JOHN V BACHOR RD
36.4-5-11.3		3.20	3.04	15 JOHN V BACHOR RD
36.4-5-13		2.50	2.37	40 JOHN V BACHOR RD
36.4-5-14		4.30	4.24	UPPER BOICEVILLE RD
36.4-5-15.1		3.59	3.57	PATRICK DR / REMONTATO RD
36.7-1-3		1.20	1.25	4248 RT 28
36.7-1-4.1		5.30	5.56	4238 RT 28
36.7-1-5		0.47	0.48	BEECHFORD DR
36.7-1-6		1.12	1.08	36 BEECHFORD DR
36.7-1-7		0.81	0.90	BEECHFORD DR
36.7-1-8		0.62	0.60	25 BEECHFORD DR
36.7-1-9		0.63	0.62	35 BEECHFORD DR
36.7-1-10		0.57	0.60	BEECHFORD DR
36.7-1-11		0.86	0.86	3 BAILEY DR
36.7-1-12		0.62	0.64	7 BAILEY DR
36.7-1-13		0.57	0.60	13 BAILEY DR
36.7-1-14		0.69	0.66	30 BEECHFORD DR
36.7-1-15		0.68	0.66	28 BEECHFORD DR
36.7-1-16		0.57	0.58	10 BAILEY DR
36.7-1-17		0.55	0.58	3 BEECHFORD DR
36.7-1-18		0.58	0.58	BEECHFORD DR
36.7-1-19		0.69	0.72	4 BEECHFORD DR
36.7-1-20		0.57	0.59	5 BEECHFORD DR
36.7-1-21		0.58	0.61	19 BEECHFORD DR

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Olive](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
36.7-1-22		0.58	0.58	20 BEECHFORD DR
36.7-1-23		0.67	0.67	18 BEECHFORD DR
36.7-1-24		0.75	0.72	16 BEECHFORD DR
36.7-1-25		0.64	0.66	15 BEECHFORD DR
36.7-1-26		0.49	0.50	9 BEECHFORD DR
36.7-1-27		0.89	0.91	BEECHFORD DR
36.7-1-28.1		2.50	2.56	8 BEECHFORD DR
36.7-1-28.2		2.50	2.51	10 BEECHFORD DR
36.7-1-29		1.15	1.00	14 BEECHFORD DR
36.7-1-30		1.10	1.12	MT VALLEY RD
36.7-1-31		0.23	0.16	PINEY POINT RD
36.7-1-32		0.50	0.52	4 PINEY POINT RD
36.7-1-34.1		0.61	0.61	10 PINEY POINT RD
36.7-1-35		0.50	0.52	12 PINEY POINT RD
36.7-1-36		0.50	0.50	14 PINEY POINT RD
36.7-1-37		0.50	0.48	16 PINEY POINT RD
36.7-1-38		0.50	0.47	18 PINEY POINT RD
36.7-1-39		0.33	0.39	76 MT VIEW DR
36.7-1-40		1.20	1.22	26 PINEY POINT RD
36.7-1-41		0.50	0.59	28 PINEY POINT RD
36.7-1-42		1.39	1.37	32 PINEY POINT RD
36.7-1-43		1.04	1.01	14 CENTER LN
36.7-1-44		0.50	0.50	12 CENTER LN
36.7-1-45		0.50	0.52	10 CENTER LN
36.7-1-46		0.51	0.53	8 CENTER LN
36.7-1-47		0.23	0.26	6 CENTER LN
36.7-1-48.1		1.10	1.08	4 CENTER LN
36.7-1-50		0.60	0.66	4192 RT 28 BOICEVILLE
36.7-2-1.1		2.70	2.75	42 BEECHFORD DR
36.7-2-1.2		1.70	1.89	BEECHFORD DR
36.7-2-2		3.09	3.15	PINEY POINT RD
36.7-2-3		2.84	3.00	43 MT VALLEY RD
36.7-2-4		2.69	2.72	47 MT VALLEY RD
36.7-2-5		3.00	3.23	51 MT VALLEY RD
36.7-2-6		0.62	0.61	MT VALLEY RD
36.7-2-7		3.40	3.57	57 MT VALLEY RD
36.7-2-8		8.19	8.82	75 PINEY POINT RD
36.7-2-9		4.40	4.35	32 MT VALLEY RD
36.7-2-10		1.00	1.00	MT VALLEY RD

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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Olive](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
36.7-2-11		1.44	1.47	28 MT VALLEY RD
36.7-2-12		1.79	1.83	24 MT VALLEY RD
36.7-2-13		2.00	2.03	20 MT VALLEY RD
36.7-2-14		2.06	2.00	16 MT VALLEY RD
36.7-2-15		2.09	2.04	14 MT VALLEY RD
36.7-2-16		2.09	1.92	12 MT VALLEY RD
36.7-2-17		1.79	1.85	71 PINEY POINT RD
36.7-2-18		1.20	1.18	65 PINEY POINT RD
36.7-2-19		1.12	1.11	PINEY POINT RD
36.7-2-20		1.09	1.07	57 PINEY POINT RD
36.7-2-21		0.34	0.33	MT VALLEY RD
36.7-2-22		7.09	6.90	38 PINEY POINT RD
36.7-2-23		1.00	1.02	51 PINEY POINT RD
36.7-2-24		1.00	1.04	2 MT VALLEY RD
36.7-2-25		1.03	0.95	MT VALLEY RD
36.7-2-26		1.11	1.11	MT VALLEY RD
36.7-2-27		1.00	0.98	9 MT VALLEY RD
36.7-2-28		1.10	1.05	5 MT VALLEY RD
36.7-2-29		1.10	1.08	3 MT VALLEY RD
36.7-2-30		1.02	1.00	PINEY POINT RD
36.7-2-31		1.00	1.01	27 PINEY POINT RD
36.7-2-32.1		1.02	1.02	17 PINEY POINT RD
36.7-2-32.2		1.07	1.10	PINEY POINT RD
36.7-2-33		2.79	2.82	11 MT VALLEY RD
36.7-2-34		4.80	4.79	13 MT VALLEY RD
36.7-2-35.1		4.00	4.01	26 BEECHFORD DR
36.7-2-37		1.49	1.49	MT VALLEY RD
36.7-2-38		1.52	1.48	MT VALLEY RD
36.11-1-1		1.79	1.77	4175 RT 28
36.11-1-2		1.10	1.14	4171 RT 28
36.11-1-3		1.29	1.31	4163 RT 28 BOICEVILLE
36.11-1-6		0.64	0.66	4141 RT 28
36.11-1-7		0.49	0.51	RT 28 BOICEVILLE
36.11-1-8		0.56	0.56	4135/4137 RTE. 28
36.11-1-10		0.68	0.56	4131 RT 28 BOICEVILLE
36.11-1-11		1.98	2.22	4115-4125 RT 28
36.11-1-12		0.24	0.25	RT 28 BOICEVILLE
36.11-1-31		0.93	0.94	4067 RTE. 28
36.11-1-32.100		1.10	0.99	4073 RT 28

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36.11-1-32.200		2.20	2.00	4073 RT 28
36.11-1-33		0.69	0.63	4091 RT 28
36.11-1-34		1.47	1.05	4099-4103 RT 28
36.11-1-35		1.25	1.74	15 RONSEN RD / RT 28 B
36.11-1-36.1		1.20	1.10	21 RONSEN RD / RT 28 B
36.11-1-36.2		2.40	2.54	RT 28 BOICEVILLE
36.11-1-37		0.56	0.52	81 RONSEN RD / RT 28 B
36.11-1-38		0.50	0.55	85 RONSEN RD / RT 28 B
36.11-1-39		1.00	0.92	89 RONSEN RD / RT 28
36.11-1-40		0.25	0.27	RT 28 BOICEVILLE
36.11-1-41		1.50	1.43	95 RONSEN RD / RT 28 B
36.11-1-42		4.34	3.48	4151 RT 28
36.11-1-43		2.14	2.05	4147 RT 28 BOICEVILLE
36.11-1-45		1.10	1.04	4155 RTE. 28
36.11-2-1		1.00	0.71	4182 RT 28
36.11-2-2		0.75	0.44	RT 28
36.11-2-7		0.75	0.74	17 DEERFIELD RD
36.11-2-8		0.57	0.57	23 DEERFIELD RD
36.11-2-9		0.57	0.59	27 DEERFIELD RD
36.11-2-10		1.00	0.59	31 DEERFIELD RD
36.11-2-11		0.60	0.61	DEERFIELD RD
36.11-2-12		0.62	0.61	47 DEERFIELD RD
36.11-2-13		0.62	0.65	53 DEERFIELD RD
36.11-2-14		0.80	0.79	59 DEERFIELD RD
36.11-2-15		0.87	0.87	63 DEERFIELD RD
36.11-2-16		0.88	0.91	69 DEERFIELD RD
36.11-2-17		0.77	0.90	DEERFIELD RD
36.11-2-18		0.86	0.86	79 DEERFIELD RD
36.11-2-19		0.86	0.84	83 DEERFIELD RD
36.11-2-21.110		2.40	2.41	87 DEERFIELD RD
36.11-2-21.2		0.94	0.96	DEERFIELD RD
36.11-2-21.3		2.21	2.19	88 DEERFIELD RD
36.11-2-22		0.89	0.87	78 DEERFIELD RD
36.11-2-23		1.00	0.96	70 DEERFIELD RD
36.11-2-24		1.20	1.14	64 DEERFIELD RD
36.11-2-25		0.81	0.79	60 DEERFIELD RD
36.11-2-26		0.67	0.73	52 DEERFIELD RD
36.11-2-27		0.75	0.77	48 DEERFIELD RD
36.11-2-28		0.75	0.76	46 DEERFIELD RD

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36.11-2-29		0.75	0.74	38 DEERFIELD RD
36.11-2-30		1.00	0.75	32 DEERFIELD RD
36.11-2-31		1.00	1.04	28 DEERFIELD RD
36.11-2-32		0.82	0.83	22 DEERFIELD RD
36.11-2-33		1.10	1.11	16 DEERFIELD RD
36.11-2-34		1.10	1.11	8 DEERFIELD RD
36.11-2-35		0.85	0.87	69 UPPER BOICEVILLE RD
36.11-2-36		0.68	0.62	75 & 77 UPPER BOICEVILLE RD
36.11-2-37		0.36	0.35	83 UPPER BOICEVILLE RD
36.11-2-38		0.46	0.43	89 UPPER BOICEVILLE RD
36.11-2-39.21		5.09	4.84	99 UPPER BOICEVILLE RD
36.19-1-1		0.30	0.32	3606 RT 28 SHOKAN
36.19-1-2		0.50	0.38	3602 RT 28
36.19-1-3		0.37	0.38	1 CROSWELL MANOR DR
36.19-1-4		0.68	0.70	11 CROSWELL MANOR DR
36.19-1-5.11		2.00	2.01	21 CROSWELL MANOR DR
36.19-1-5.12		1.50	1.55	CROSWELL MANOR DR
36.19-1-5.2		1.10	1.11	27 CROSWELL MANOR DR
36.19-1-6		2.29	2.29	57 CROSWELL MANOR DR
36.19-1-7		1.00	1.03	66 CROSWELL MANOR DR
36.19-1-11		2.00	2.07	90 CROSWELL MANOR DR
36.19-1-12		1.70	1.93	58 CROSWELL MANOR DR
36.19-1-13		1.00	1.23	46 CROSWELL MANOR DR
36.19-1-14.1		3.70	3.66	34 CROSWELL MANOR DR
36.19-1-16		1.00	1.00	CROSWELL MANOR DR
36.19-1-17		1.00	0.99	6 CROSWELL MANOR DR
36.19-1-19		0.50	0.51	RT 28
36.19-1-20		0.56	0.59	3592 RT 28
36.19-1-21		0.94	0.93	3596 RT 28 SHOKAN
36.19-1-23.1		3.29	3.20	CROSWELL MANOR DR
36.19-1-23.2		2.09	2.09	153 DANCING ROCK RD
37.17-1-17		1.00	0.85	40 BLACK RD
37.17-1-18		1.00	0.87	30 BLACK RD
37.17-1-19		0.88	0.91	11 LAUREL LN
37.17-1-20		0.89	0.91	15 DOGWOOD DR
37.17-1-21		0.89	0.92	25 DOGWOOD DR
37.17-1-29		0.93	0.96	25 RED MAPLE RD
37.17-1-30		0.93	0.98	35 RED MAPLE RD
37.17-1-31		0.93	0.96	45 RED MAPLE RD

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<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
37.17-1-32		0.93	0.95	RED MAPLE RD
37.17-1-33		0.93	0.99	55 RED MAPLE RD
37.17-1-34		0.93	1.00	59 RED MAPLE RD
37.17-1-35		0.93	0.97	65 RED MAPLE RD
37.17-1-36		0.93	0.96	73 RED MAPLE RD
37.17-1-37		1.00	0.97	RED MAPLE RD
37.17-1-38		1.29	1.20	81 RED MAPLE RD
37.17-1-39		0.87	0.82	89 RED MAPLE RD
37.17-1-40		1.00	0.97	90 RED MAPLE RD
37.17-1-41		1.00	0.96	1 SHAGBARK DR
37.17-1-42		1.10	1.01	SHAGBARK DR
37.17-1-43		2.05	2.13	15 SHAGBARK DR
37.17-1-44		2.90	3.02	SHAGBARK DR
37.17-1-45		1.60	1.62	46 SHAGBARK DR
37.17-1-46		1.00	0.94	SHAGBARK DR
37.17-1-47		1.10	1.14	16 SHAGBARK DR
37.17-1-48		1.39	1.34	12 SHAGBARK DR
37.17-1-49		0.93	0.90	56 RED MAPLE RD
37.17-1-50		0.93	0.97	50 RED MAPLE RD
37.17-1-51		1.00	1.07	44 RED MAPLE RD
37.17-1-52		0.70	0.71	34 RED MAPLE RD
37.17-1-53		0.69	0.70	TULIP TREE TER
37.17-1-54.1		1.10	1.11	TULIP TREE TER
37.17-1-54.2		1.10	1.18	25 TULIP TREE TER
37.17-1-55		0.89	0.88	8 TULIP TREE TER
37.17-1-56		0.89	0.89	14 RED MAPLE RD
37.17-1-59		0.89	0.91	34 DOGWOOD DR
37.17-1-60		7.40	7.29	8 DOGWOOD DR
37.17-1-61		1.00	0.94	4 DOGWOOD DR
37.17-1-62		2.40	2.45	96 BOSTOCK MT RD
37.17-1-63		1.29	1.29	86 BOSTOCK MT RD
37.17-1-64		2.09	2.10	74 BOSTOCK MT RD
37.17-1-65.1		3.29	3.31	66 BOSTOCK MT RD
37.17-1-71		0.75	0.77	82 BOSTOCK MT RD
37.17-1-72		0.62	0.63	90 BOSTOCK MT RD SHOKAN
37.17-1-73		0.72	0.74	100 BOSTOCK MT RD SHOKAN
37.17-1-74		1.10	1.04	102 BOSTOCK MT RD SHOKAN
37.17-1-75		1.00	0.90	10 BLACK RD
37.17-1-76		1.00	0.93	14 BLACK RD

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37.17-1-77		1.00	0.95	10 LAUREL LN
37.17-1-78		0.81	0.84	14 LAUREL LN
37.17-1-79.1			3.80	
37.17-1-80		10.00	10.02	90 BLACK RD
45.1-2-3.1		14.80	15.45	WATSON HOLLOW RD
45.1-2-3.2		1.50	1.44	52 LAUREL HILL/WATSON HOL
45.1-2-8		1.39	1.57	48 BELL LN
45.1-2-9		1.50	1.46	32 BELL LN
45.1-2-10		2.20	2.09	22 BELL LN
45.1-2-11		1.89	1.73	14 BELL LN
45.1-2-12		0.43	0.39	180 WATSON HOLLOW RD
45.1-2-13		0.75	0.78	176 WATSON HOLLOW RD
45.1-2-14		0.75	0.32	170 WATSON HOLLOW RD
45.1-2-15		0.28	0.43	11 LAUREL HILL/WATSON HOL
45.1-2-16.100		1.39	1.40	166 WATSON HOLLOW RD
45.1-2-16.200		2.20	2.13	166 WATSON HOLLOW RD
45.1-2-16.300		6.00	6.05	166 WATSON HOLLOW RD
45.1-2-17		2.59	2.42	150 WATSON HOLLOW RD
45.1-2-18		12.39	12.26	BURGHER RD
45.1-2-19		1.00	0.90	77 BURGHER RD
45.1-2-20		2.00	2.02	70 BURGHER RD
45.1-2-21		1.00	1.02	66 BURGHER RD
45.1-2-22		1.00	1.11	9 MEADOW LN / BURGHER RD
45.1-2-23.1		5.00	5.00	86 BURGHER RD
45.1-2-23.210		6.00	6.19	82 BURGHER RD
45.1-2-23.310		9.30	9.63	BURGHER RD
45.1-2-23.4		3.90	3.91	78 BURGHER RD
45.1-2-24		8.10	8.62	RT 28A W SHOKAN
45.1-2-25		1.00	0.90	4185 RT 28A
45.1-2-26		0.85	0.86	4181 RT 28A
45.1-2-27		5.00	4.98	4171 RT 28A
45.1-2-28		1.20	1.22	4161 RT 28A W SHOKAN
45.1-2-29		9.10	9.26	4163 RTE. 28A
45.1-2-31		0.50	0.77	54 WATSON HOLLOW RD
45.1-2-32		1.39	1.41	62 WATSON HOLLOW RD
45.1-2-33		0.75	0.64	70 WATSON HOLLOW RD
45.1-2-34.1		1.00	0.97	17 MEADOW LN
45.1-2-34.211		1.00	1.21	62 BURGHER RD
45.1-2-34.212		1.00	1.03	10 MEADOW LN / BURGHER RD

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45.1-2-34.213		1.00	0.98	14 MEADOW LN
45.1-2-34.215		10.80	9.90	MEADOW LN / BURGHER RD
45.1-2-35		1.00	0.99	22 MULROONEY RD / BURGHER
45.1-2-36.1		2.00	1.95	16 MULROONEY RD / BURGHER
45.1-2-37		1.00	0.96	BURGHER RD
45.1-2-38		3.09	3.01	10 BURGHER RD
45.1-2-39		0.82	0.85	20 BURGHER RD
45.1-2-40		2.00	1.97	26 BURGHER RD
45.1-2-41.1		2.29	2.40	46 BURGHER RD
45.1-2-42		0.50	0.49	43 BURGHER RD
45.1-2-43.100		1.89	1.79	134 WATSON HOLLOW RD
45.1-2-44		1.10	1.23	13 BURGHER RD
45.1-2-45		0.30	0.35	132 WATSON HOLLOW RD
45.1-2-47		0.50	0.46	138 WATSON HOLLOW RD
45.1-2-48		3.29	3.22	144 WATSON HOLLOW RD
45.1-2-49		0.50	0.72	WATSON HOLLOW RD
45.1-2-50		0.25	0.29	143 WATSON HOLLOW RD
45.1-2-51		0.25	0.29	145 WATSON HOLLOW RD
45.1-2-52		0.25	0.68	147 WATSON HOLLOW RD
45.1-2-53.1		2.20	2.13	183 WATSON HOLLOW RD
45.1-2-53.2		1.20	1.15	WATSON HOLLOW RD
45.1-2-53.3		2.00	2.15	WATSON HOLLOW RD (OFF)
45.1-2-54		0.07	0.08	WATSON HOLLOW RD
45.1-2-55		2.09	2.04	155 WATSON HOLLOW RD
45.1-2-56		1.60	1.71	187 WATSON HOLLOW RD
45.1-2-59		1.41	1.70	203 WATSON HOLLOW RD
45.1-2-60		1.50	1.48	194 WATSON HOLLOW RD
45.1-2-61		1.10	1.02	20 MOONHAW RD
45.1-2-62		1.10	1.15	24 MOONHAW RD
45.1-2-63		1.29	1.39	25 BELL LN
45.1-2-70		1.39	1.41	193 WATSON HOLLOW RD
45.1-3-1		0.38	0.38	107 WATSON HOLLOW RD
45.1-3-2		0.66	0.59	101 WATSON HOLLOW RD
45.1-3-3		1.00	0.89	97 WATSON HOLLOW RD
45.1-3-4		0.77	0.96	93 WATSON HOLLOW RD
45.1-3-5		0.56	0.56	91 WATSON HOLLOW RD
45.1-3-6		0.46	0.43	11 PR RD 12 / WATSON HOLLOW
45.1-3-7		0.25	0.43	21 PR RD 12 / WATSON HOLLOW
45.1-3-8		0.25	0.36	21-23 PR RD 12 / WATSON HOLLOW

- Sources:
- 1) The list of parcels is based on compilation of maps provided to NYC DEP by each town during the period from April, 2008 to October, 2010.
 - 2) Tax Map Numbers, Assessed Acres and Assessed Address as per NYS ORPS parcel data, 2009.
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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Olive](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
45.1-3-9		3.70	3.51	HI PT MT RD
45.1-3-10		2.70	2.65	HI PT MT RD
45.1-3-11		27.50	27.05	77 HI PT MT RD
45.1-3-13		0.75	0.49	89 WATSON HOLLOW RD
45.1-3-14		1.10	0.99	85 WATSON HOLLOW RD
45.1-3-51.2		11.80	11.50	RT 28A W SHOKAN
45.1-3-52		5.40	5.00	97 HI PT MT RD
45.1-3-53		5.69	5.44	91 HI PT MT RD
45.1-3-54		5.19	4.93	82 HI PT MT RD
45.1-3-55		2.90	2.98	74 HI PT MT RD
45.1-3-56		4.80	4.84	72 HI PT MT RD
45.1-3-57.11		4.00	3.97	28 HI PT MT RD
45.1-3-57.2		7.59	6.44	50 HI PT MT RD
45.1-3-58		1.00	1.06	34 HI PT MT RD
45.1-3-59		0.67	0.68	22 HI PT MT RD
45.1-3-60		4.03	4.34	8 HI PT MT RD
45.1-3-61		0.07	0.07	HI PT MT RD
45.1-3-62.1		1.60	1.57	11 HI PT MT RD
45.1-3-62.2		0.31	0.25	7 HI PT MT RD
45.1-4-1.21		28.79	29.08	2 HI PT MT RD
45.1-4-1.22		1.22	0.51	HI PT MT RD
45.1-4-2.12		28.70	28.51	111 HI PT MT RD
45.1-4-2.131		10.10	10.16	127 HI PT MT RD
45.1-4-2.132		12.39	12.17	HI PT MT RD
45.1-4-3		1.00	0.96	142 HI PT MT RD
45.2-2-34.214			1.06	
45.8-1-1		0.54	0.54	3518 RT 28 SHOKAN
45.8-1-2		1.10	1.08	3516 RT 28 SHOKAN
45.8-1-3		2.90	2.88	3510 RT 28
45.8-1-4		4.09	4.78	3504 RT 28
45.8-1-5		5.40	4.85	3496 RT 28
45.8-1-7.111		10.39	10.08	40-44 RUNGE RD
45.8-1-9		5.59	5.53	121 BOSTOCK MT RD SHOKAN
45.8-1-10		0.50	0.42	107 BOSTOCK MT RD SHOKAN
45.8-1-11.1		10.50	10.44	18 BONNIE BRAE LN
45.8-1-11.2		13.30	13.05	15 MARKLE RD
45.8-1-11.3		3.50	3.62	BOSTOCK MT RD
45.8-1-12.1		1.00	0.97	18 MARKLE RD
45.8-1-12.21		6.00	5.97	12 MARKLE RD

- Sources:
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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Olive](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
45.8-1-12.22		1.70	1.73	MARKLE RD
45.8-1-13		0.10	0.11	3372 RT 28
45.8-1-14		1.60	1.53	3374-3378 RTE. 28
45.8-1-15		0.40	0.42	3382 RT 28 SHOKAN
45.8-1-16		0.46	0.52	3384 RT 28 SHOKAN
45.8-1-17		0.11	0.64	2 BONNIE BRAE LN
45.8-1-19.1		1.70	1.55	36 BONNIE BRAE LN
45.8-1-29		0.12	0.11	RT 28 SHOKAN
45.8-1-30		1.64	1.46	3492 RT 28 SHOKAN
45.8-1-31		0.60	0.57	8 RUNGE RD
46.5-1-1		15.00	15.00	39 BOSTOCK MT RD
46.5-1-2		1.20	1.20	67 BOSTOCK MT RD SHOKAN
46.5-1-3		0.77	0.79	63 BOSTOCK MT RD SHOKAN
46.5-1-4		0.25	0.24	57 BOSTOCK MT RD SHOKAN
46.5-1-5		0.51	0.46	55 BOSTOCK MT RD SHOKAN
46.5-1-6		2.59	2.52	BOSTOCK MT RD
46.5-1-7		2.40	2.35	17 BOSTOCK MT RD SHOKAN
46.5-1-8		2.00	2.05	3338 RT 28
46.5-1-9		6.30	6.39	RT 28 SHOKAN
46.5-1-10		1.70	1.64	3358 RT 28 SHOKAN
46.5-1-11		1.50	1.49	3362-3366 RT 28 SHOKAN
46.5-1-12		1.60	1.62	15 LONGYEAR RD
46.5-1-13		0.50	0.32	35 LONGYEAR RD
46.5-1-14		1.00	0.33	47 LONGYEAR RD
46.5-1-15		0.81	0.49	46 LONGYEAR RD
46.5-1-16		1.10	1.13	36 LONGYEAR RD
46.5-1-19		3.29	3.16	42 LONGYEAR RD
46.5-1-22.1		0.25	0.05	LONGYEAR RD
46.5-1-22.2		0.25	0.18	LONGYEAR RD
46.5-1-23		1.00	0.90	46 LONGYEAR RD
46.5-1-29.1		2.29	2.23	60 LONGYEAR RD
46.5-1-30		1.00	0.97	64 LONGYEAR RD
46.5-1-31		0.81	0.83	3289 RT 28 SHOKAN
46.5-1-32		1.00	1.02	3285 RT 28 SHOKAN
46.5-1-33		0.95	0.96	4 CHURCH ST
46.5-1-41.11		3.59	1.16	31 LONGYEAR RD
46.5-1-41.12		3.59	2.56	31 LONGYEAR RD
46.5-1-44		1.00	0.89	12 LONGYEAR RD
46.5-1-45		1.00	0.91	16 LONGYEAR RD

- Sources:
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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Olive](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
46.5-1-47		0.72	0.56	56 LONGYEAR RD
46.5-1-48.1		2.00	2.05	38 LONGYEAR RD
46.5-1-48.21		1.89	1.85	41 OLD FARM RD
46.5-1-49		1.89	1.76	25 OLD FARM RD
46.5-1-50		1.89	1.85	29 OLD FARM RD
46.5-1-51		2.00	1.97	39 OLD FARM RD
46.5-1-59		1.89	1.84	40 OLD FARM RD
46.5-1-60		2.09	2.18	28 OLD FARM RD
46.5-1-61		1.60	1.74	10 OLD FARM RD
46.5-2-1		1.89	1.79	30 BOSTOCK MT RD
46.5-2-2		0.73	0.69	32 BOSTOCK MOUNTAIN RD
46.5-2-3		0.25	0.20	24 BOSTOCK MT RD SHOKAN
46.5-2-5		1.20	1.14	4 BOSTOCK MT RD SHOKAN
46.5-2-7		1.00	0.85	63 BLACK ALDER RD
46.5-2-8		0.62	0.61	71 BLACK ALDER RD
46.5-2-9		0.85	0.85	75 BLACK ALDER RD
46.5-2-10		2.09	1.24	92 RED MAPLE RD
46.5-2-11		1.29	1.33	91 RED MAPLE RD
46.5-2-12		0.77	0.75	66 BLACK ALDER RD
46.5-2-13		0.76	0.73	58 BLACK ALDER RD
46.5-2-14		0.73	0.71	44 BLACK ALDER RD
46.5-2-15		0.81	0.82	34 BLACK ALDER RD
46.5-2-16		0.43	0.44	28 BLACK ALDER RD
46.5-2-17		0.43	0.42	16 BLACK ALDER RD
46.5-2-18		0.46	0.43	4 BLACK ALDER RD
46.5-2-19		0.25	0.28	3294 RT 28 SHOKAN
46.5-2-20		1.39	1.40	3288 RT 28
46.5-2-21		1.39	1.27	5 RAST RD/ RT 28
46.5-2-22		0.12	0.15	RT 28 SHOKAN
46.5-2-23		0.50	0.75	15 RAST RD
46.5-2-26		0.25	0.22	6 RAST RD
46.5-2-52.12		6.40	6.37	79 ONTEORA CT
46.5-2-54		15.00	14.83	51 BOSTOCK MT. RD.
46.5-2-56		1.00	0.98	35 BLACK ALDER RD
46.5-2-57.1		1.50	1.56	5 BLACK ALDER RD
46.5-2-57.2		1.00	0.93	19 BLACK ALDER RD

-
- Sources:
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Exhibit 4

Draft Public Water Supply Permit for NYC Watershed, November 8, 2010

List of Parcels within the Hamlet Expansion Area, Town of [Olive](#)

<u>Tax Map Number</u>	<u>Partial?</u>	<u>Assessed Acres</u>	<u>GIS Acres</u>	<u>Assessed Address</u>
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Town of Olive Summary:Parcel Count: **504**Total Area: **1,333.31 acres**

-
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 - 3) GIS Acres as per parcel 2009 polygon data provided by the respective County Real Property Tax Service Agency, 2009; for partial tax lots, as per editing by NYC DEP.

Exhibit 5

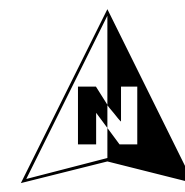
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

Existing & Proposed Designated Areas

Town of Andes
Delaware County

Legend

- 1997 Designated Area
- Taxlot Boundary
- ▮ Town Boundary
- ~ Streams
- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed



Miles
0.8 0.4 0 0.8

NOTE: GIS data are approximate according to their scale and resolution. They may be subject to error and are not a substitute for on-site inspection or survey.

Produced by NYCDEP 11/1/2010

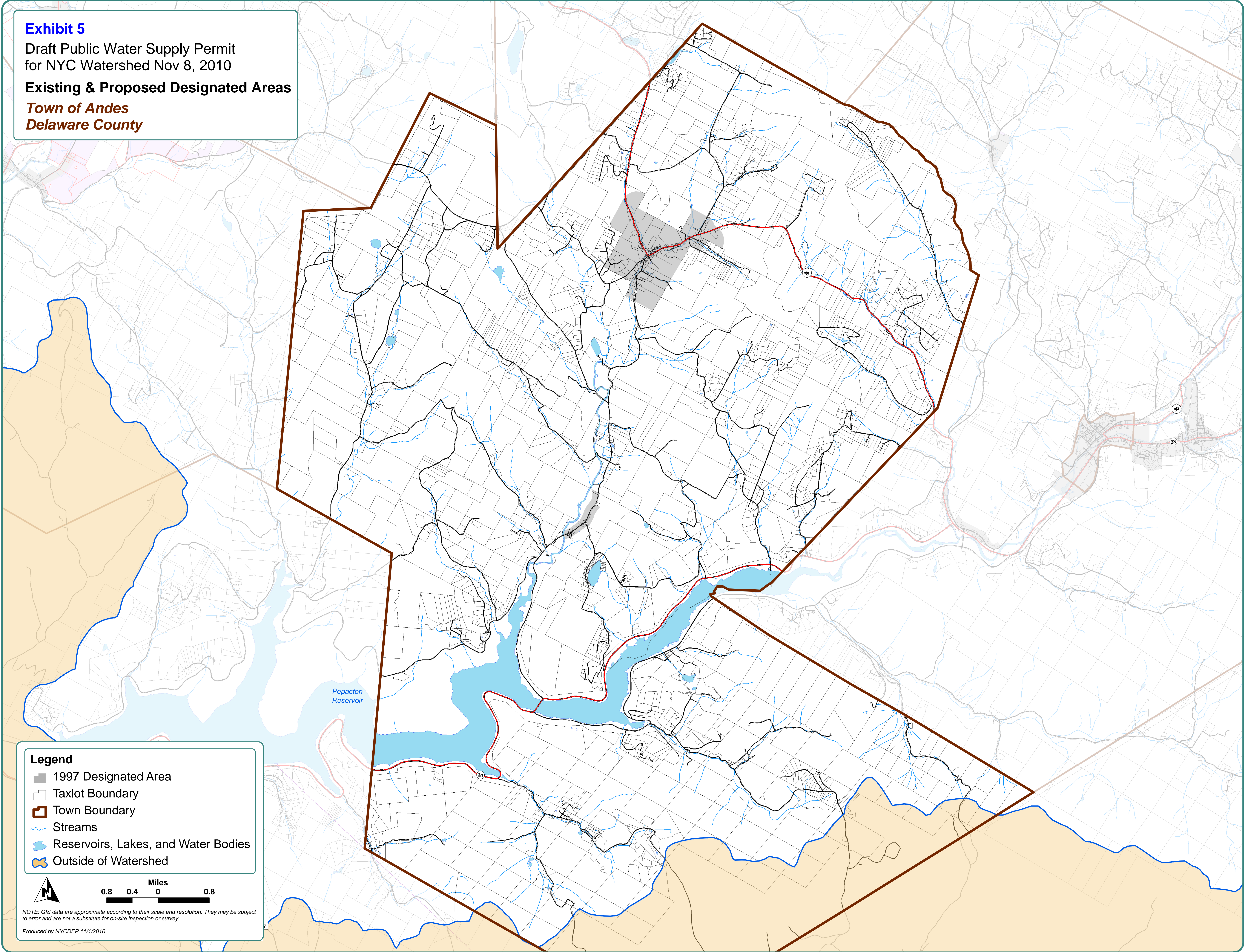
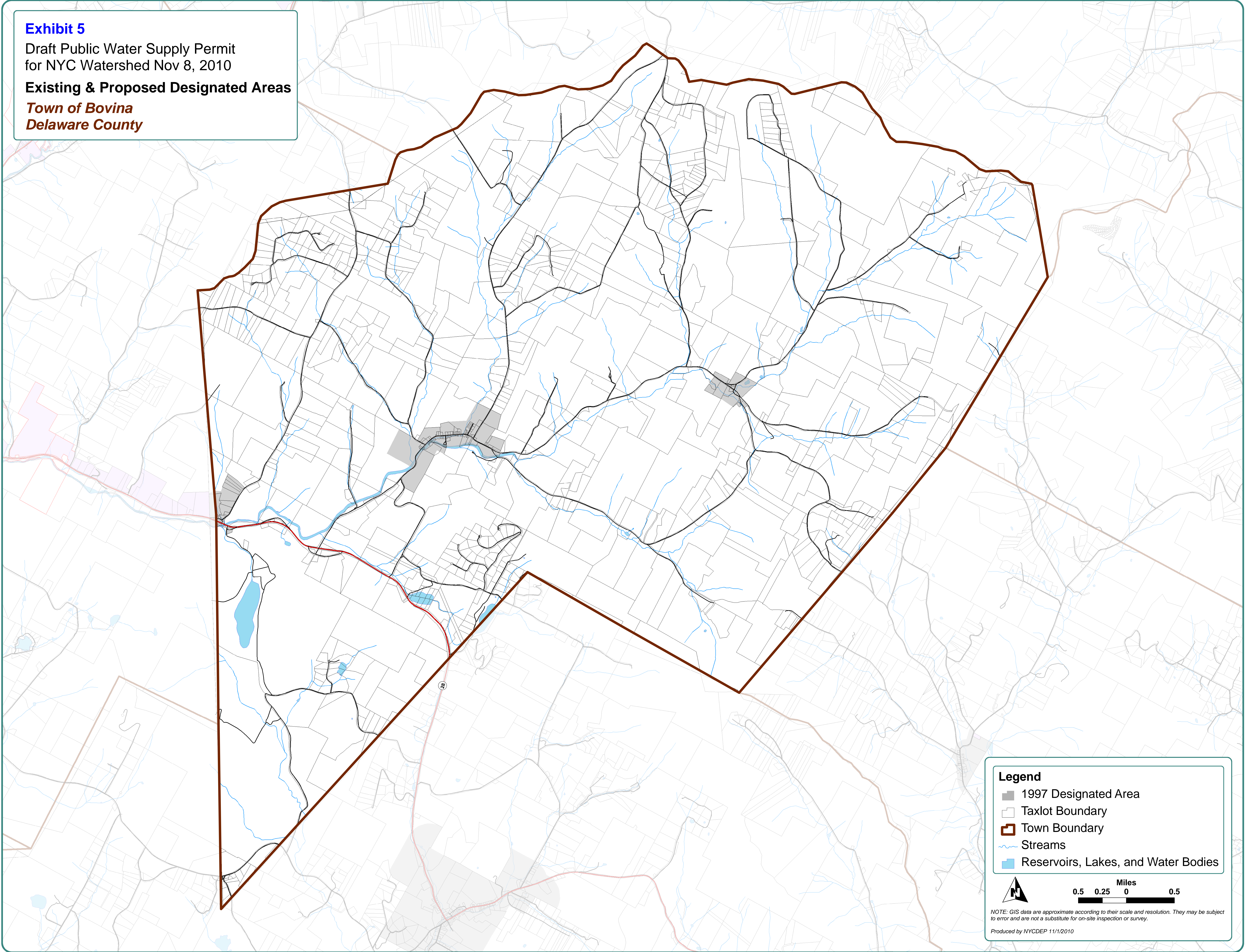


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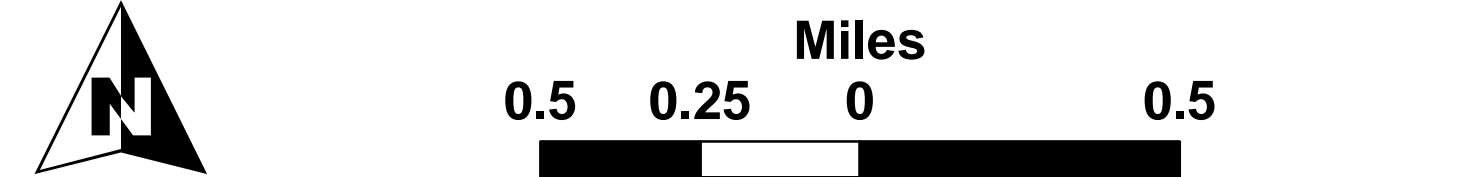
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

Existing & Proposed Designated Areas

Town of Bovina
Delaware County



- Legend**
- 1997 Designated Area
 - Taxlot Boundary
 - Town Boundary
 - Streams
 - Reservoirs, Lakes, and Water Bodies



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Produced by NYCDEP 11/1/2010

Exhibit 5

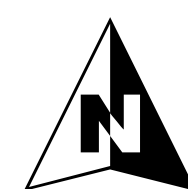
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

Existing & Proposed Designated Areas

Town of Delhi
Delaware County

Legend

- Proposed Hamlet Expansion Area (PEA)
- PEA Partial Taxlot
- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed



0.8 0.4 Miles
0 0.8

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Produced by NYCDEP 11/1/2010

Exhibit 5

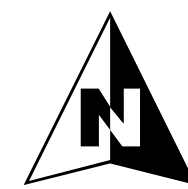
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

Existing & Proposed Designated Areas

Town of Hamden
Delaware County

Legend

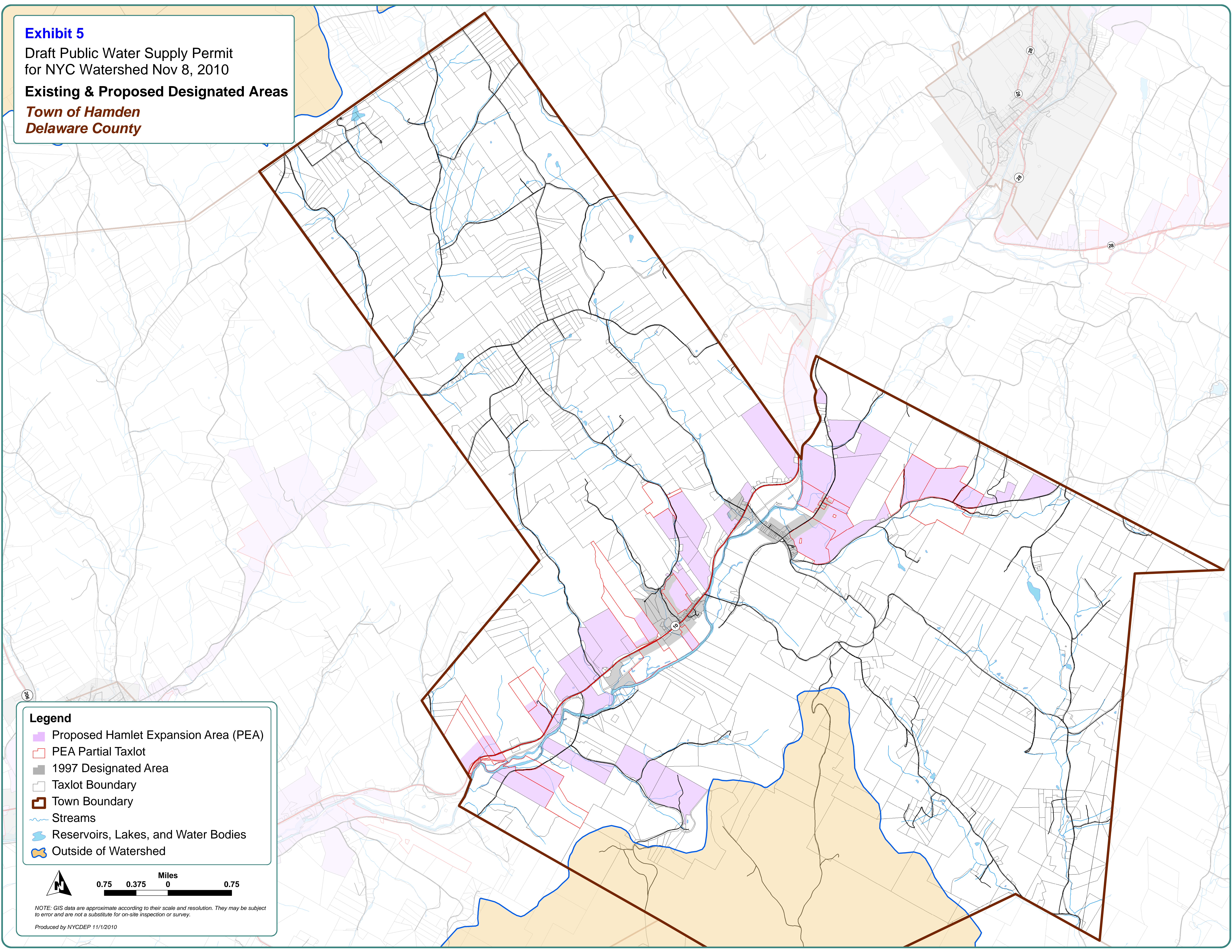
- Proposed Hamlet Expansion Area (PEA)
- PEA Partial Taxlot
- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed



0.75 0.375 Miles 0 0.75

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23

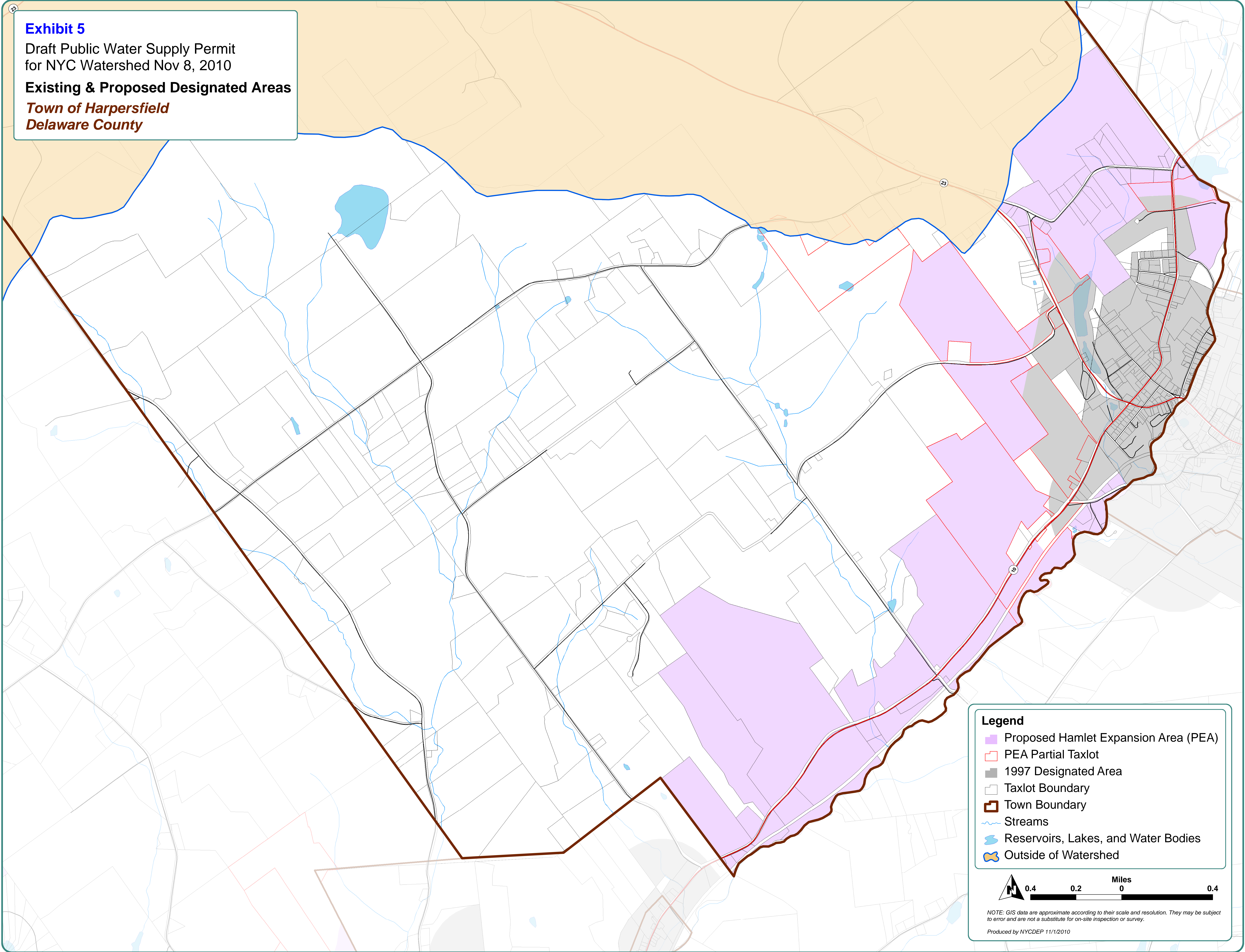
Exhibit 5

Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

Existing & Proposed Designated Areas

Town of Harpersfield

Delaware County



Legend

Proposed Hamlet Expansion Area (PEA)

PEA Partial Taxlot

1997 Designated Area

Taxlot Boundary

Town Boundary

Streams

Reservoirs, Lakes, and Water Bodies

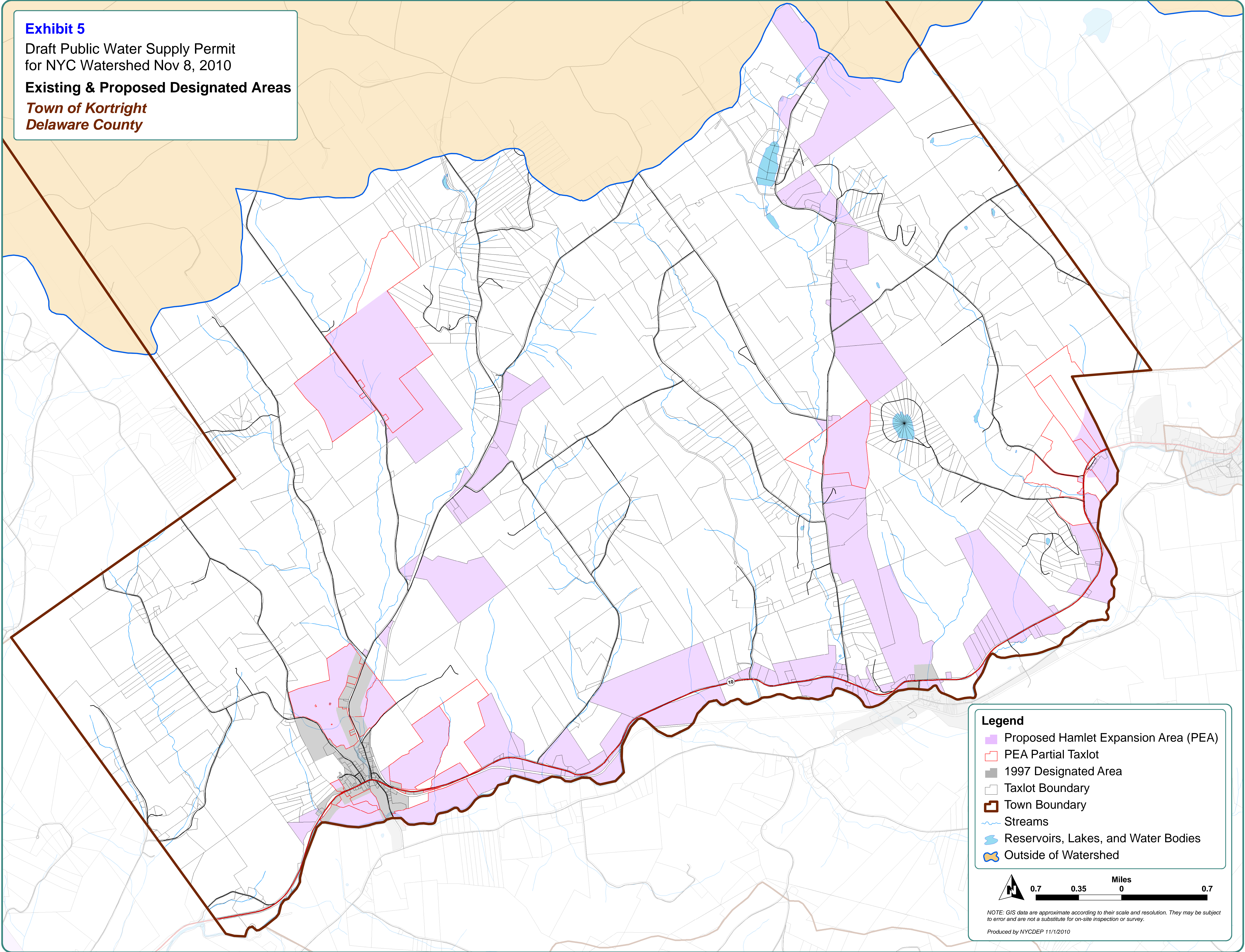
Outside of Watershed

0.4 0.2 0 0.4 Miles

NOTE: GIS data are approximate according to their scale and resolution. They may be subject to error and are not a substitute for on-site inspection or survey.

Produced by NYCDEP 11/1/2010

Exhibit 5
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010
Existing & Proposed Designated Areas
Town of Kortright
Delaware County



Legend

- Proposed Hamlet Expansion Area (PEA)
- PEA Partial Taxlot
- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed

Scale: 0.7 0.35 0 0.7 Miles

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Produced by NYCDEP 11/1/2010


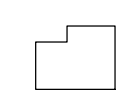

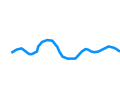

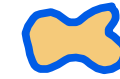
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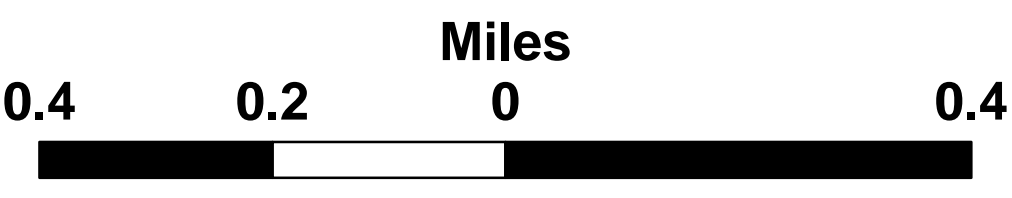
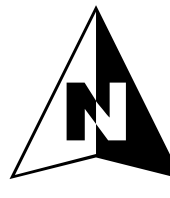
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

Existing & Proposed Designated Areas

***Town of Masonville
Delaware County***

Legend

-  Proposed Hamlet Expansion Area (PEA)
-  Taxlot Boundary
-  Town Boundary
-  Streams
-  Reservoirs, Lakes, and Water Bodies
-  Outside of Watershed



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Exhibit 5

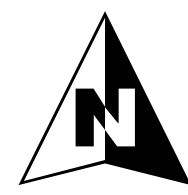
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

Existing & Proposed Designated Areas

Town of Meredith
Delaware County

Legend

- Proposed Hamlet Expansion Area (PEA)
- PEA Partial Taxlot
- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed



0.75 0.375 Miles 0 0.75

NOTE: GIS data are approximate according to their scale and resolution. They may be subject to error and are not a substitute for on-site inspection or survey.

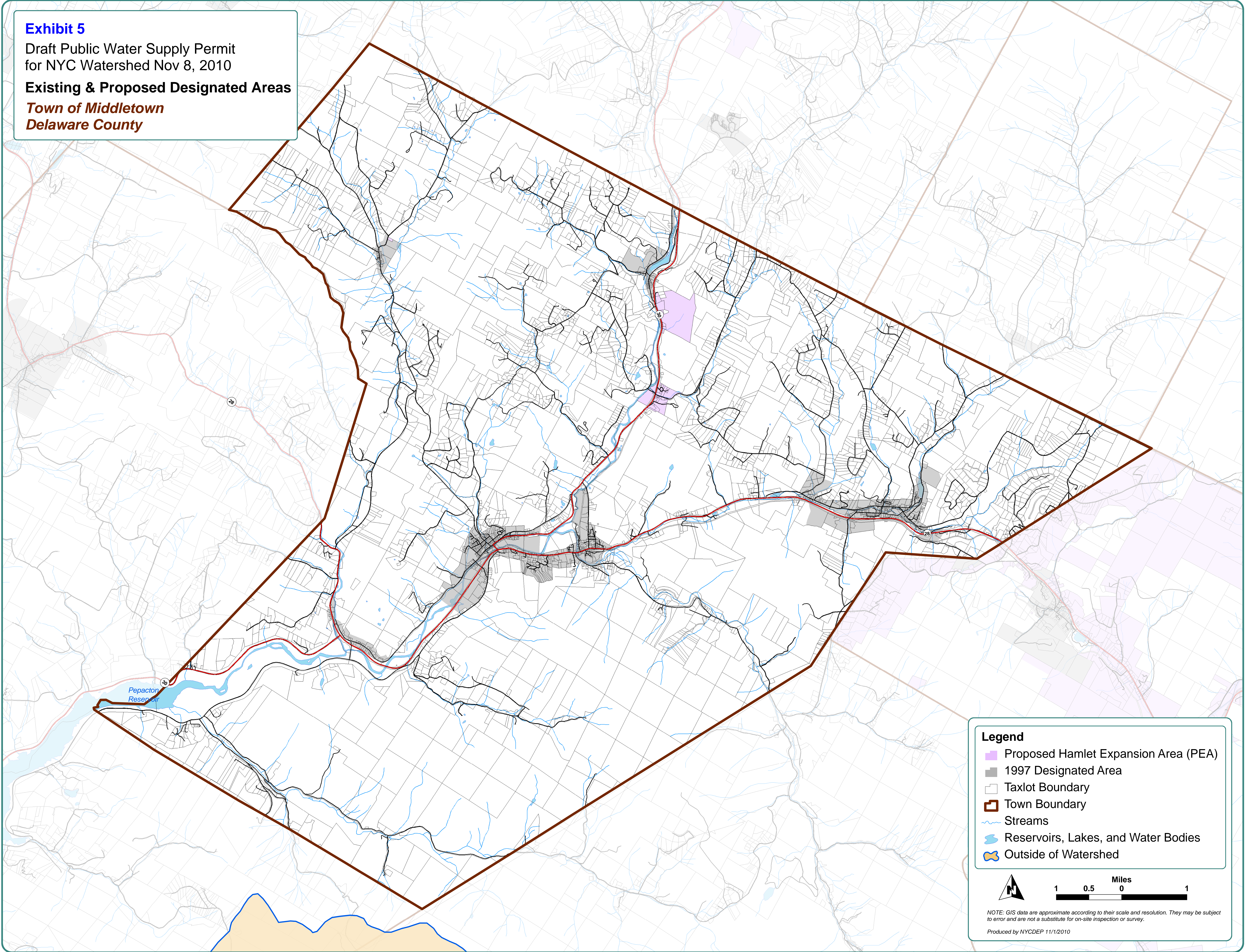
Produced by NYCDEP 11/1/2010

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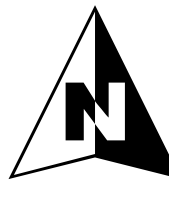
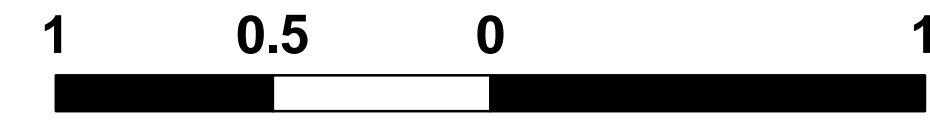
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

Existing & Proposed Designated Areas

***Town of Middletown
Delaware County***



- Legend**
- Proposed Hamlet Expansion Area (PEA)
 - 1997 Designated Area
 - Taxlot Boundary
 - Town Boundary
 - Streams
 - Reservoirs, Lakes, and Water Bodies
 - Outside of Watershed

NOTE: GIS data are approximate according to their scale and resolution. They may be subject to error and are not a substitute for on-site inspection or survey.

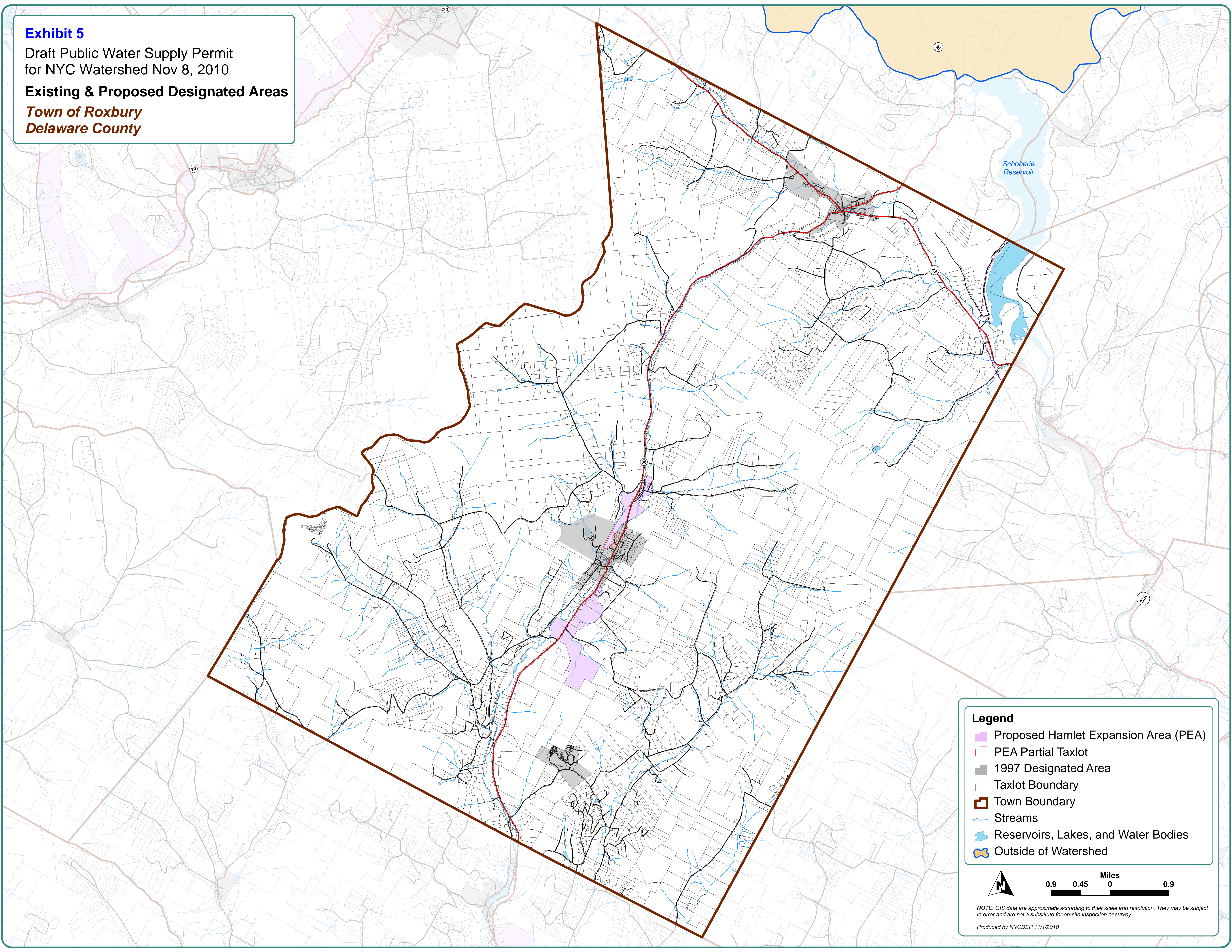
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Exhibit 5

Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

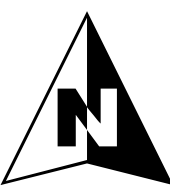
Existing & Proposed Designated Areas

Town of Roxbury
Delaware County



Legend

- Proposed Hamlet Expansion Area (PEA)
- PEA Partial Taxlot
- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed



0.9 0.45 Miles 0 0.9

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Exhibit 5

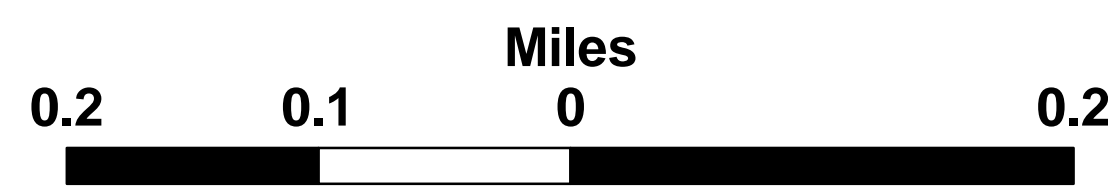
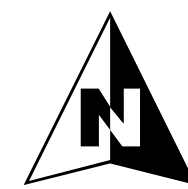
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

Existing & Proposed Designated Areas

Town of Sidney
Delaware County

Legend

- Proposed Hamlet Expansion Area (PEA)
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed



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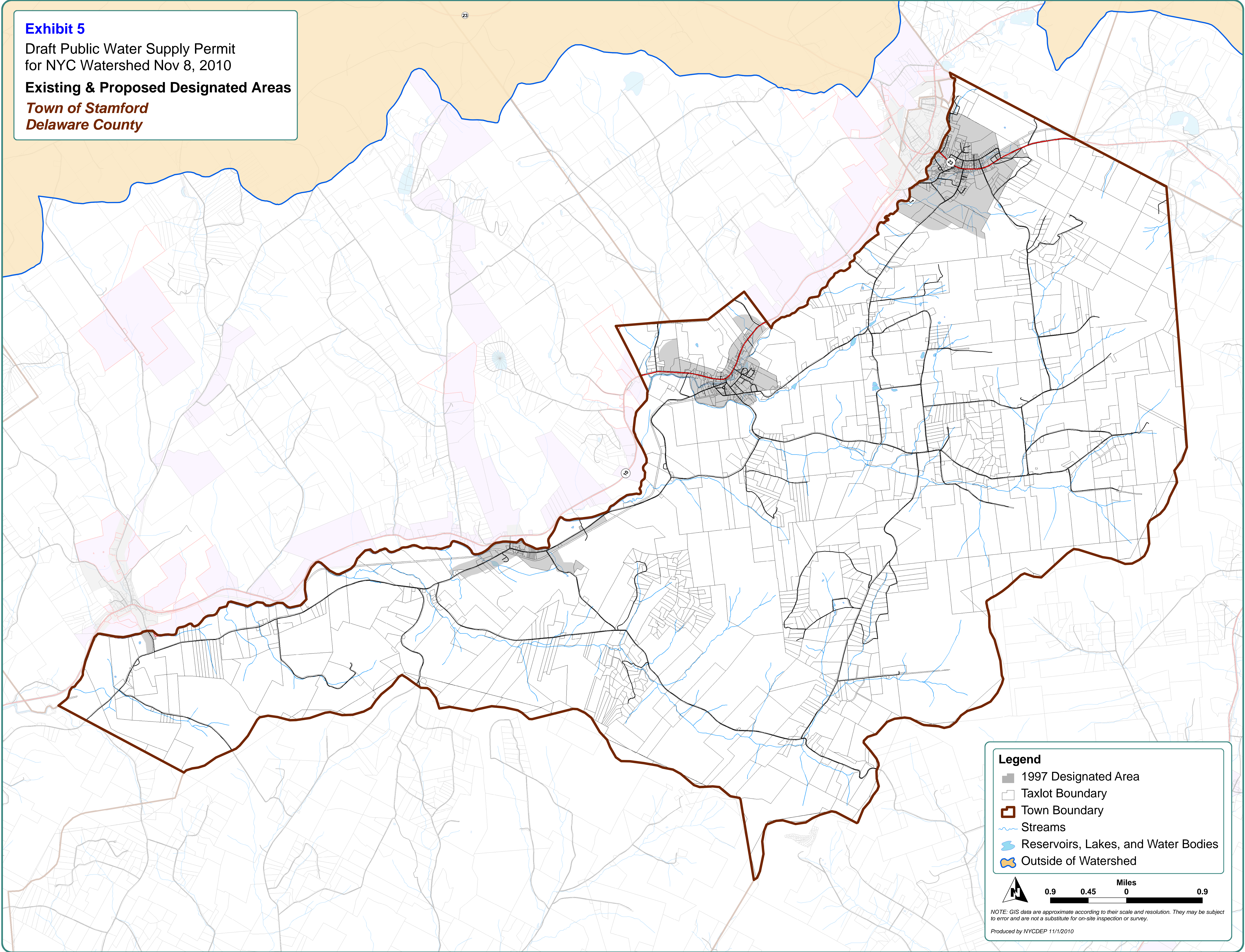
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Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

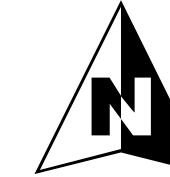
Existing & Proposed Designated Areas

Town of Stamford
Delaware County



Legend

- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed



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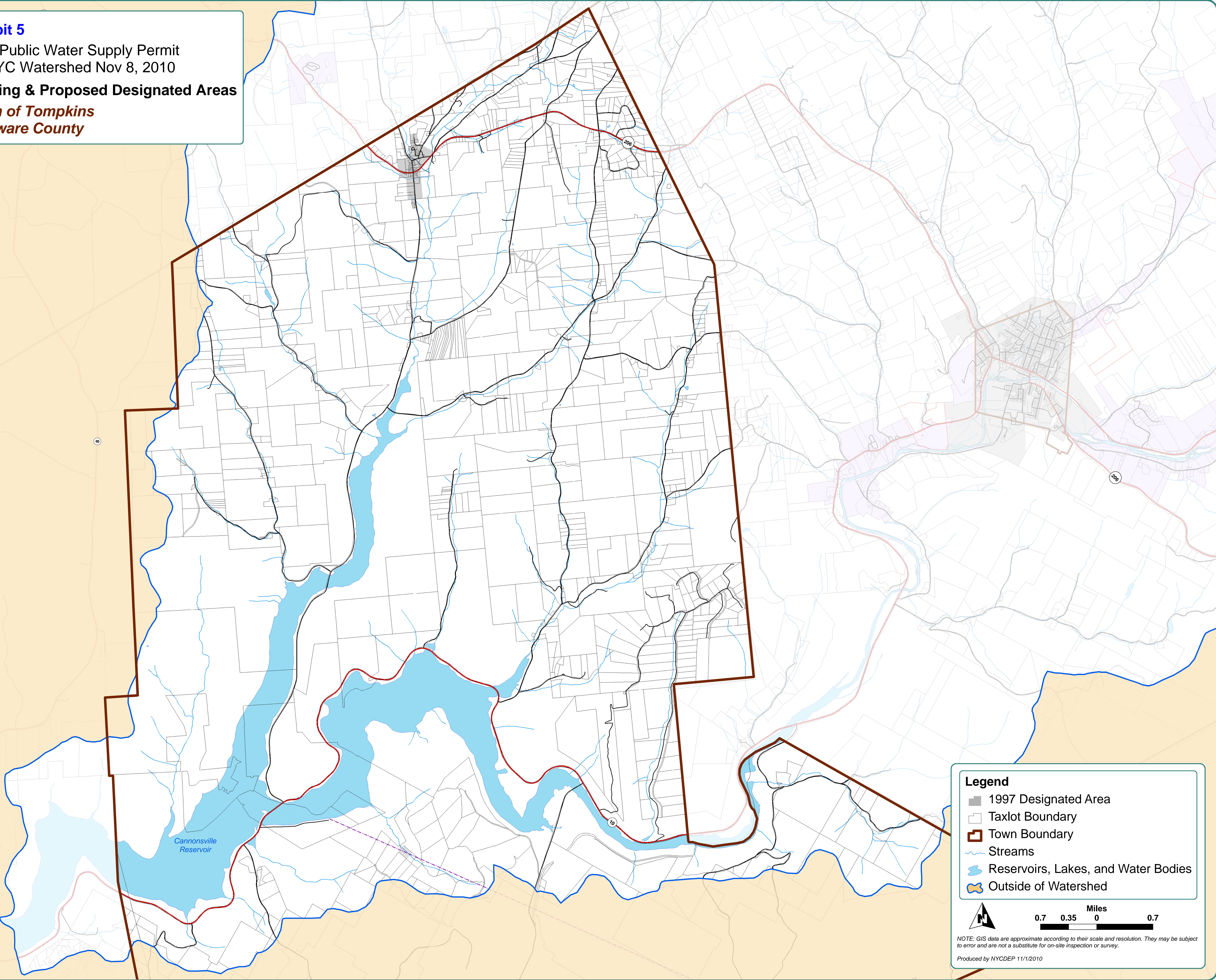
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Exhibit 5

Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

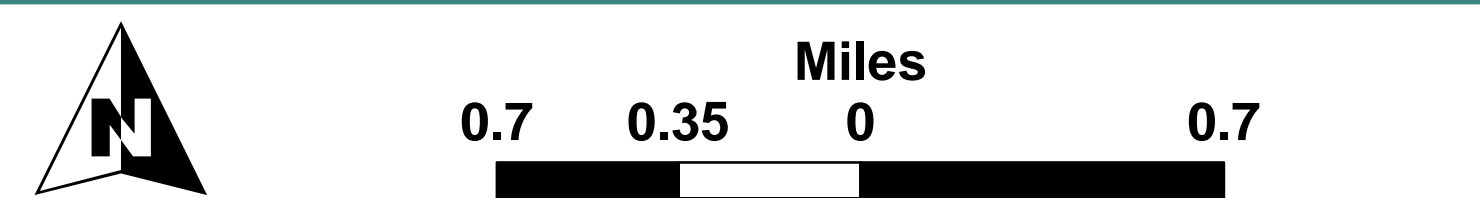
Existing & Proposed Designated Areas

Town of Tompkins
Delaware County



Legend

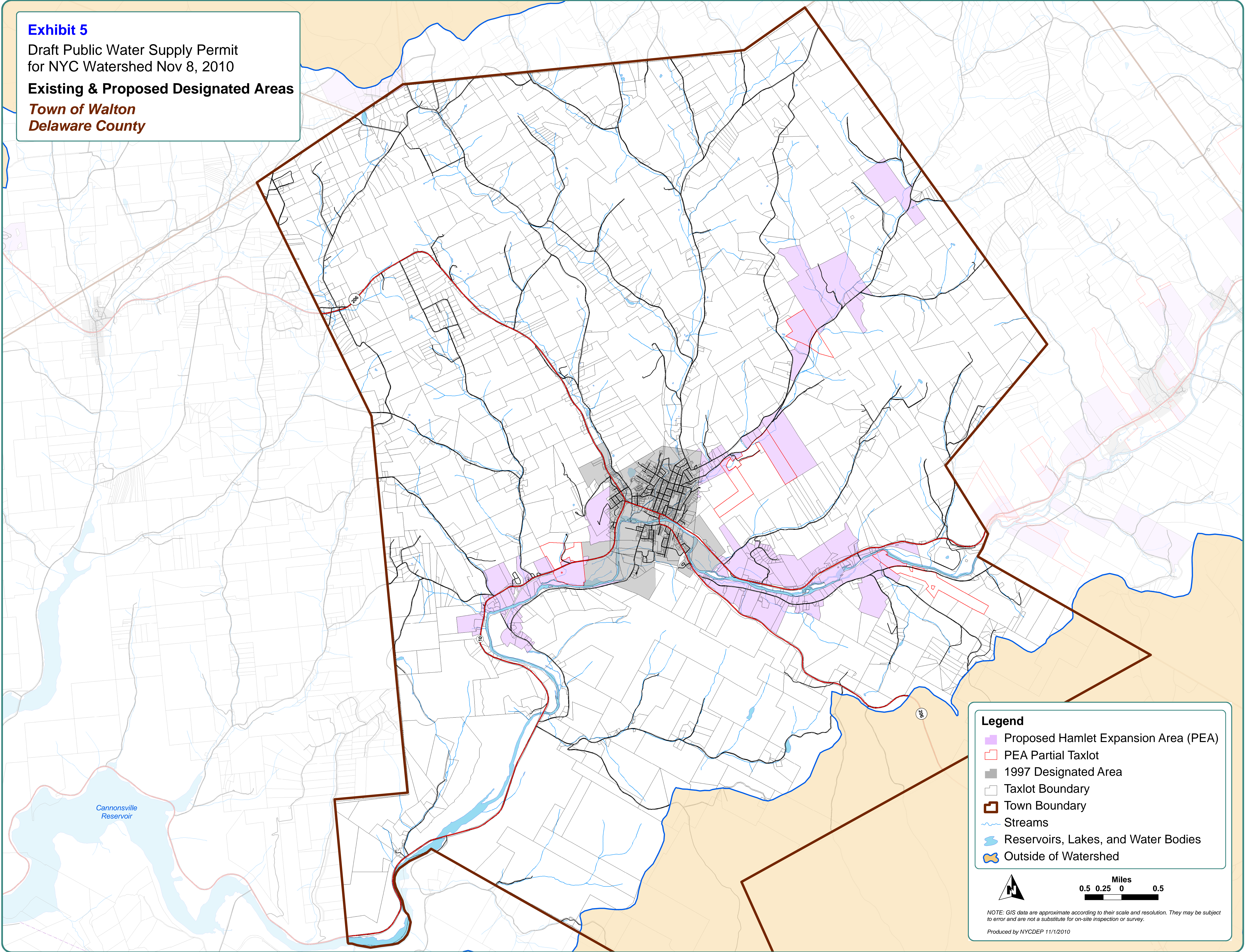
- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
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- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed



NOTE: GIS data are approximate according to their scale and resolution. They may be subject to error and are not a substitute for on-site inspection or survey.

Produced by NYCDEP 11/1/2010

Exhibit 5
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010
Existing & Proposed Designated Areas
Town of Walton
Delaware County



Legend

- Proposed Hamlet Expansion Area (PEA)
- PEA Partial Taxlot
- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed

Miles
0.5 0.25 0 0.5

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Produced by NYCDEP 11/1/2010

Exhibit 5

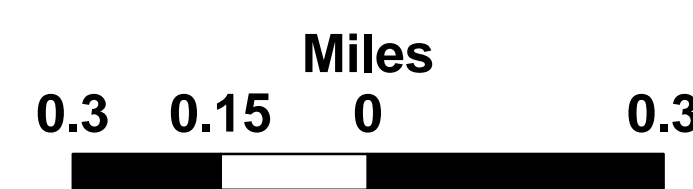
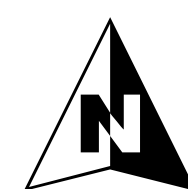
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

Existing & Proposed Designated Areas

***Town of Ashland
Greene County***

Legend

- Proposed Hamlet Expansion Area (PEA)
- PEA Partial Taxlot
- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies



NOTE: GIS data are approximate according to their scale and resolution. They may be subject to error and are not a substitute for on-site inspection or survey.

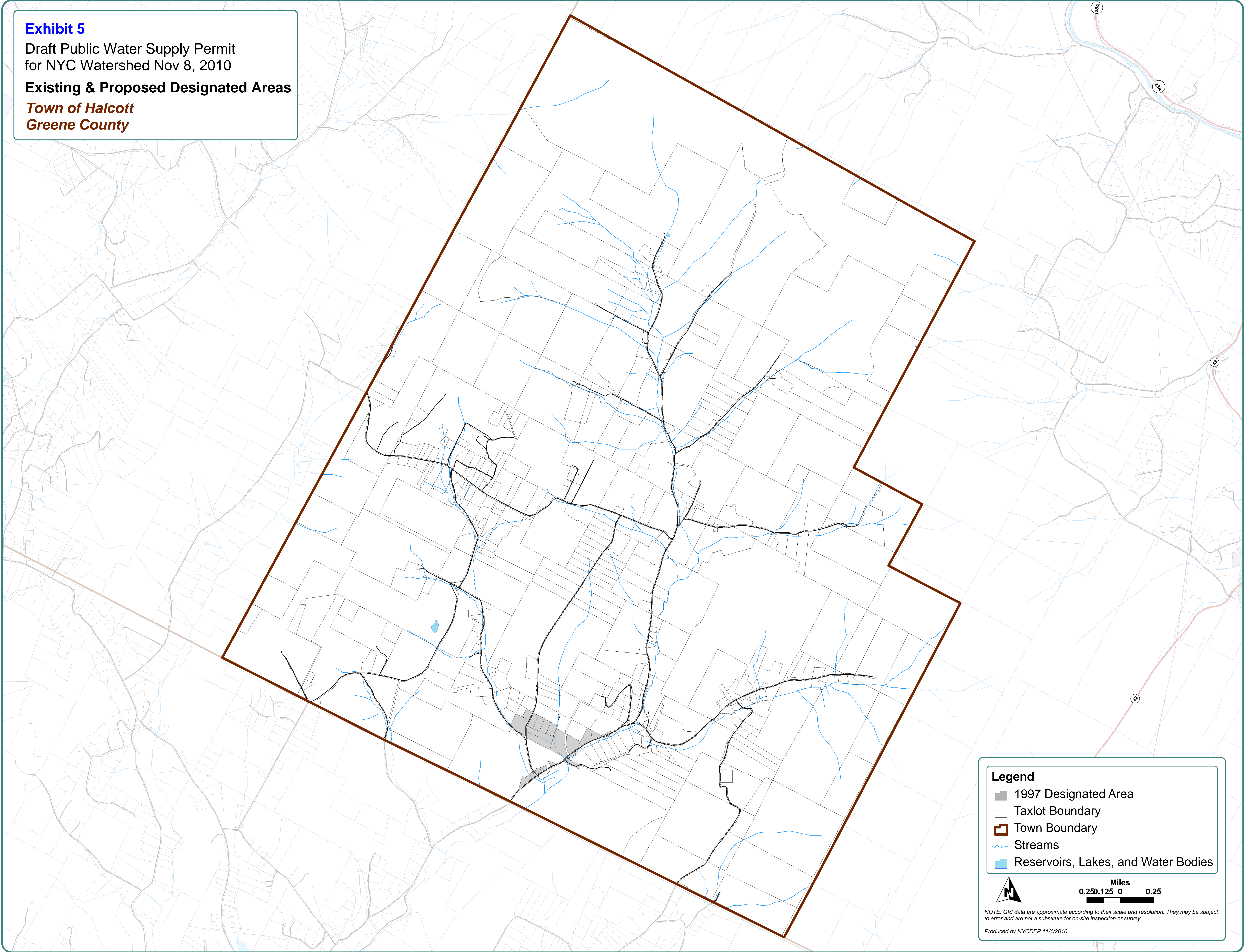
Produced by NYCDEP 11/1/2010

Exhibit 5

Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

Existing & Proposed Designated Areas

***Town of Halcott
Greene County***



Legend

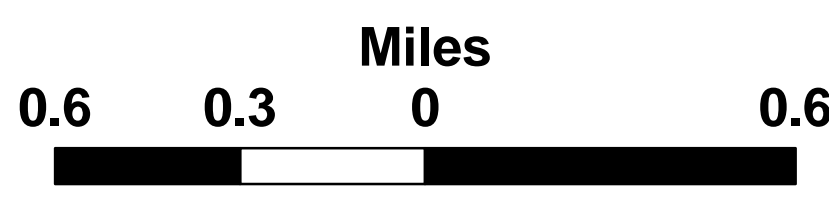
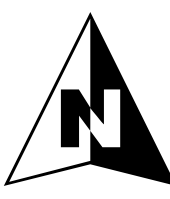
- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies



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Produced by NYCDEP 11/1/2010

Exhibit 5
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010
Existing & Proposed Designated Areas
Town of Hunter
Greene County

- Legend**
- Proposed Hamlet Expansion Area (PEA)
 - PEA Partial Taxlot
 - 1997 Designated Area
 - Taxlot Boundary
 - Town Boundary
 - Streams
 - Reservoirs, Lakes, and Water Bodies
 - Outside of Watershed



NOTE: GIS data are approximate according to their scale and resolution. They may be subject to error and are not a substitute for on-site inspection or survey.

Produced by NYCDEP 11/1/2010

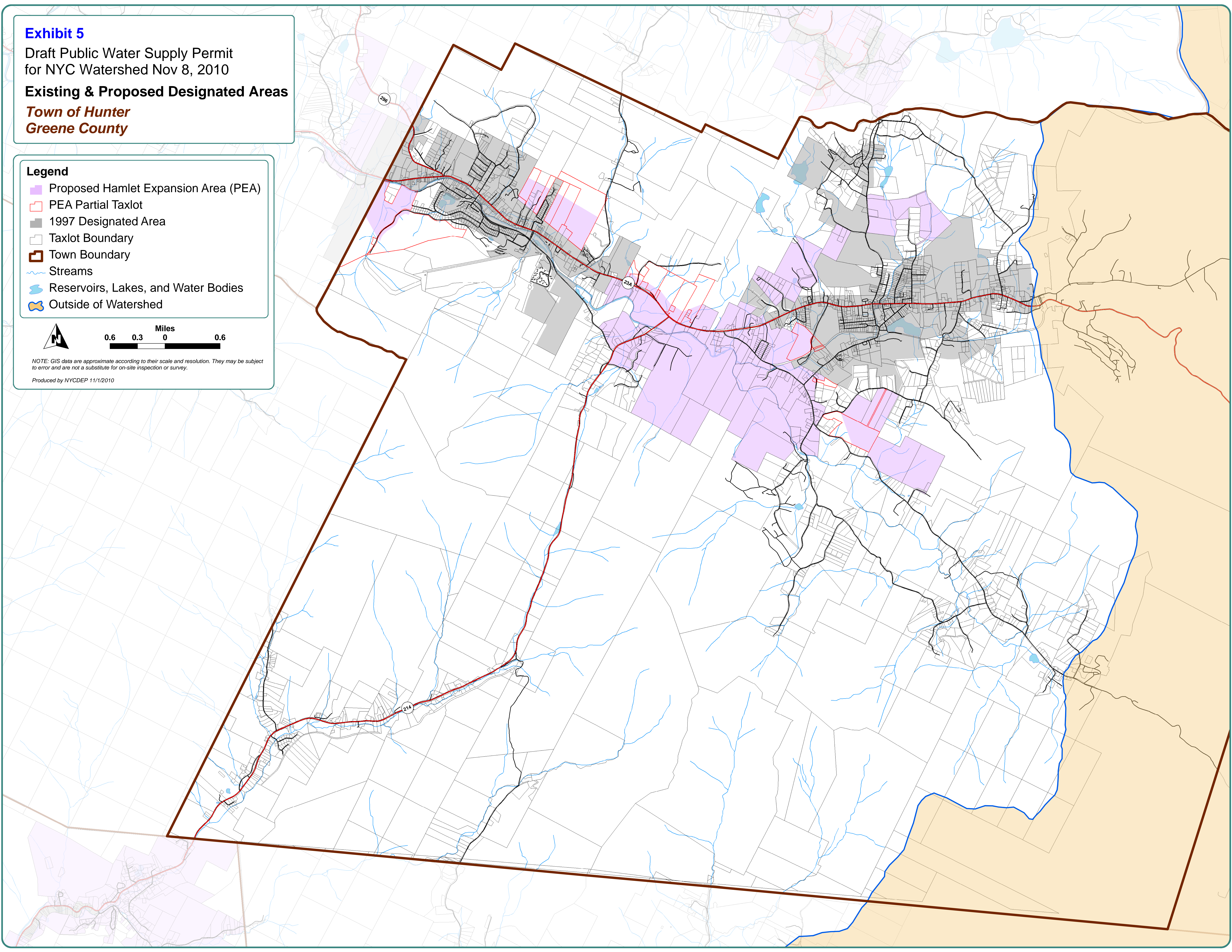
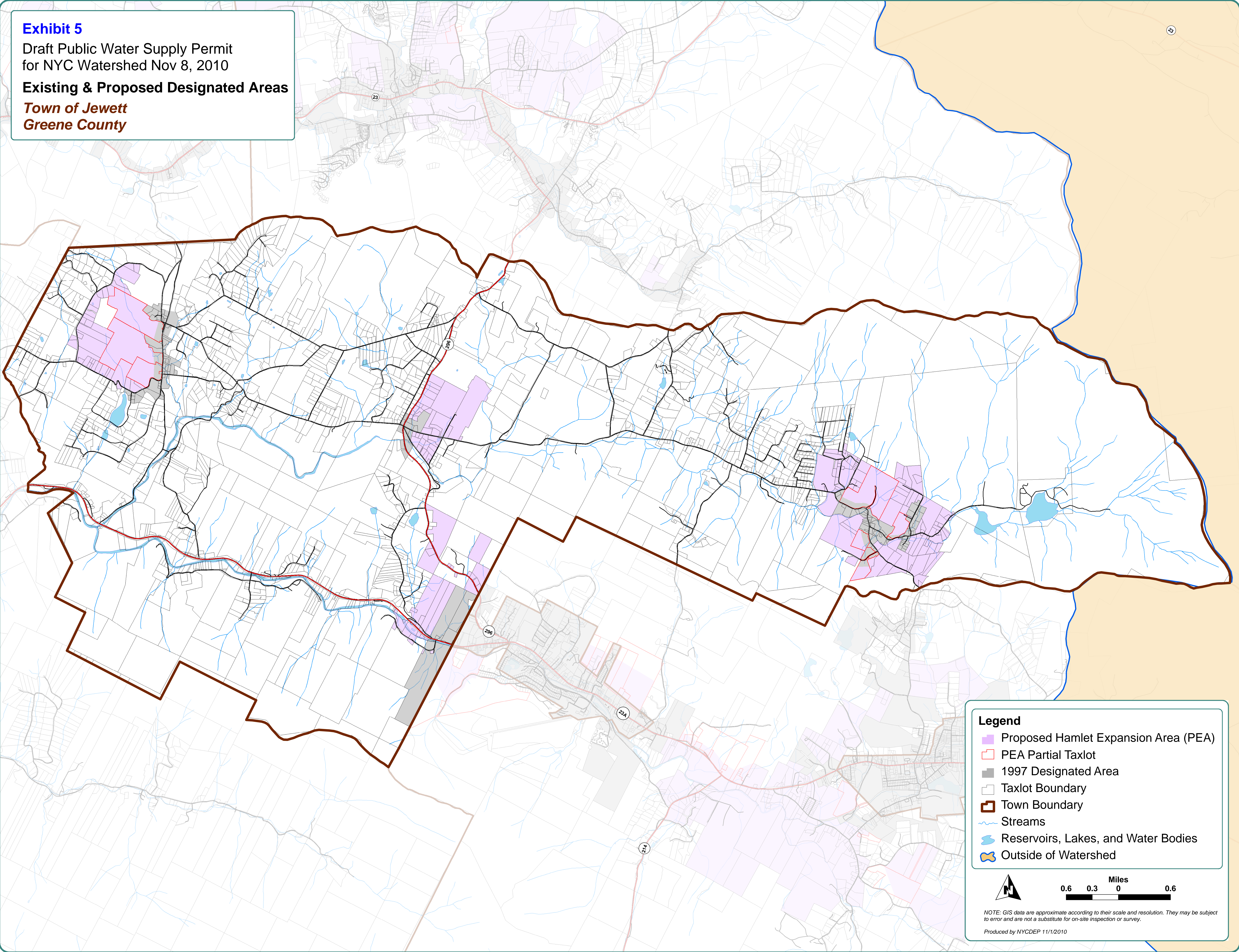


Exhibit 5

Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

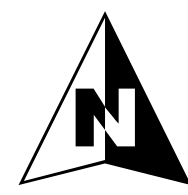
Existing & Proposed Designated Areas

***Town of Jewett
Greene County***



Legend

- Proposed Hamlet Expansion Area (PEA)
- PEA Partial Taxlot
- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed



0.6 0.3 0 0.6
Miles

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Produced by NYCDEP 11/1/2010

Exhibit 5

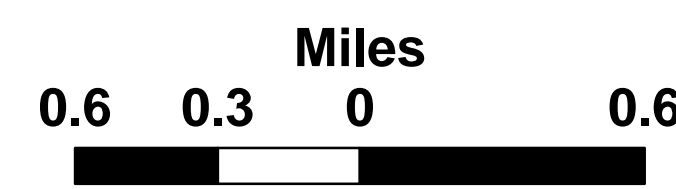
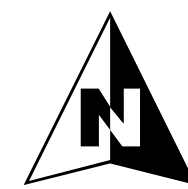
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

Existing & Proposed Designated Areas

***Town of Lexington
Greene County***

Legend

- Proposed Hamlet Expansion Area (PEA)
- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies



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Produced by NYCDEP 11/1/2010

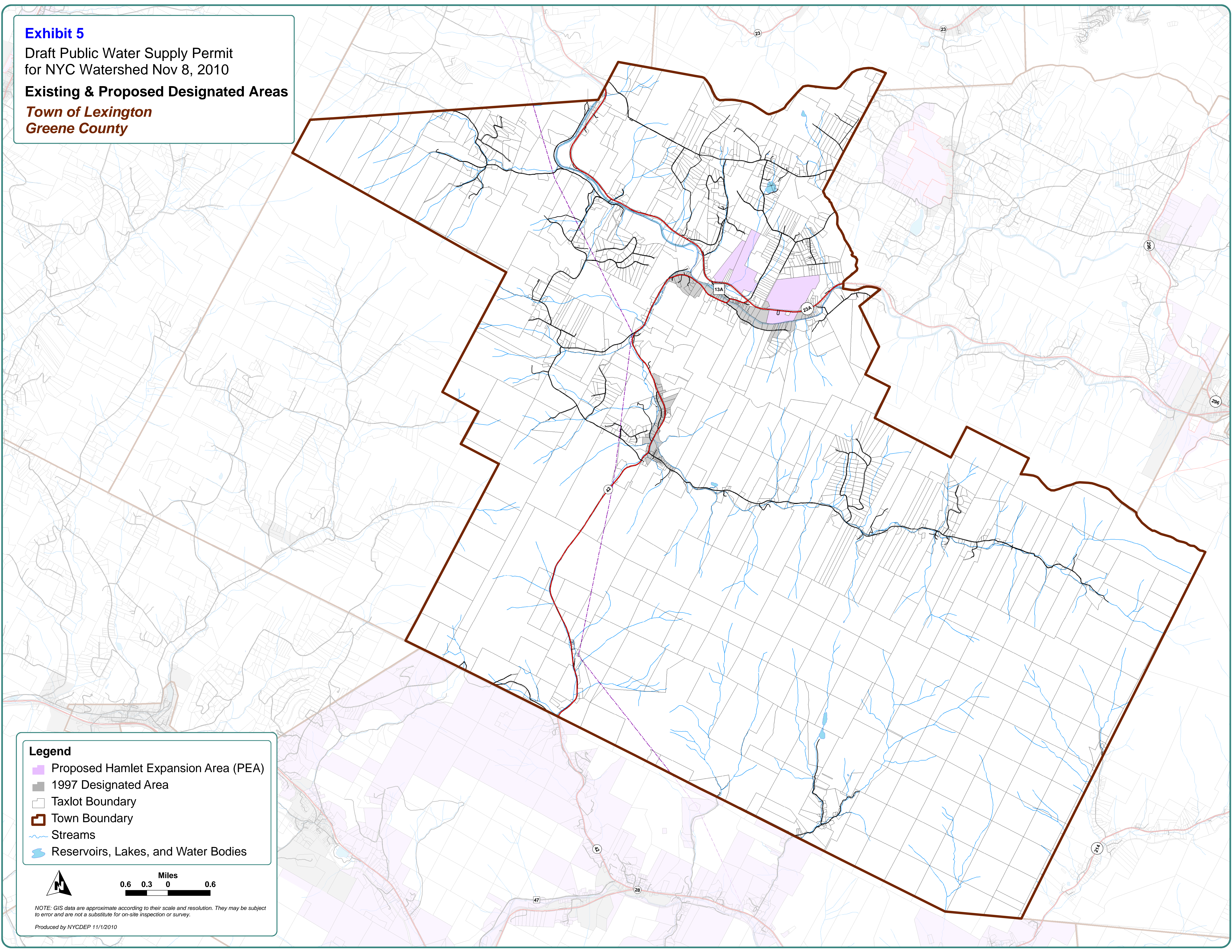
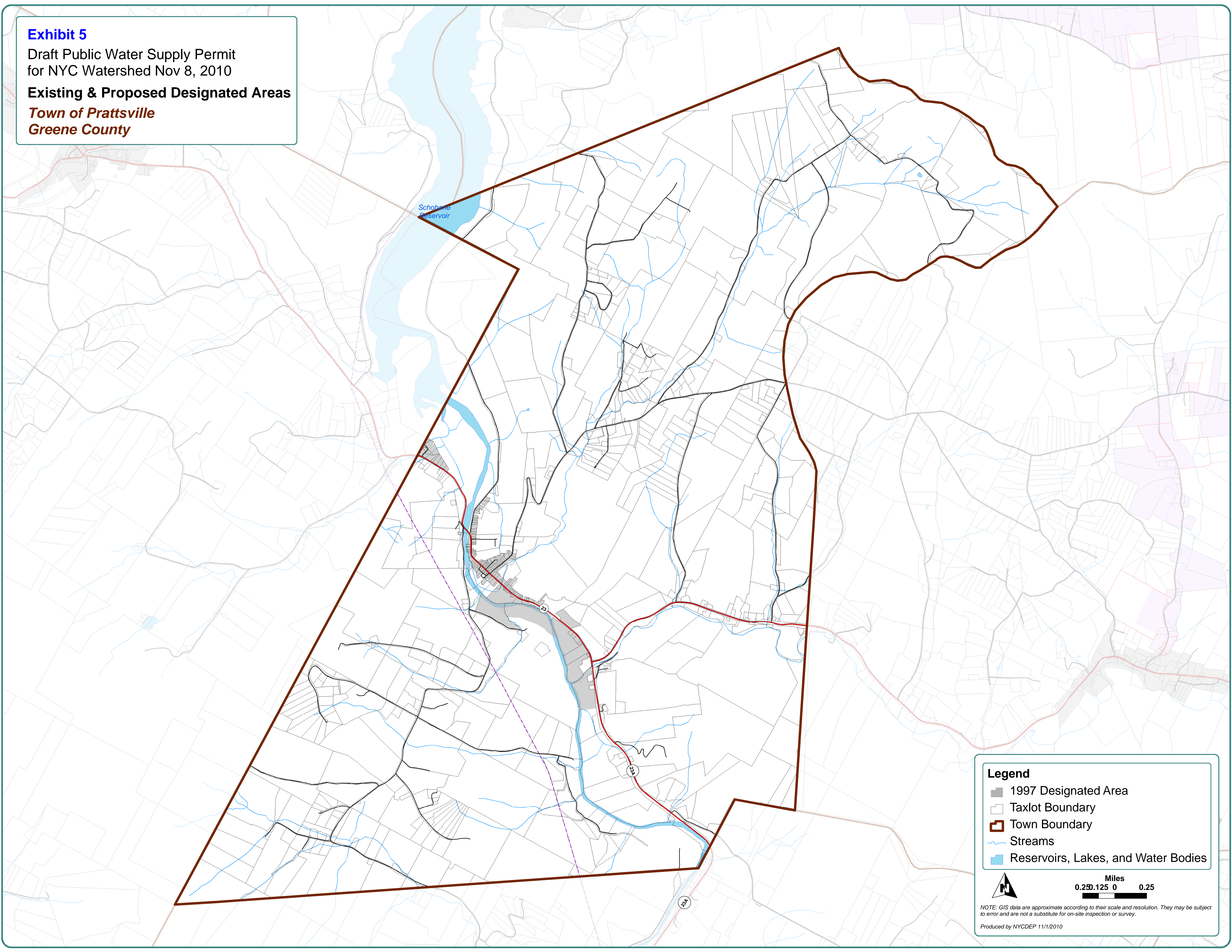


Exhibit 5

Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

Existing & Proposed Designated Areas

Town of Prattsville
Greene County



Legend

- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies



Miles
0.250.125 0 0.25

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Produced by NYCDEP 11/1/2010

Exhibit 5

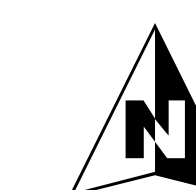
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010

Existing & Proposed Designated Areas

Town of Windham
Greene County

Legend

- Proposed Hamlet Expansion Area (PEA)
- PEA Partial Taxlot
- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed



Miles
0.4 0.2 0 0.4

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Produced by NYCDEP 11/1/2010

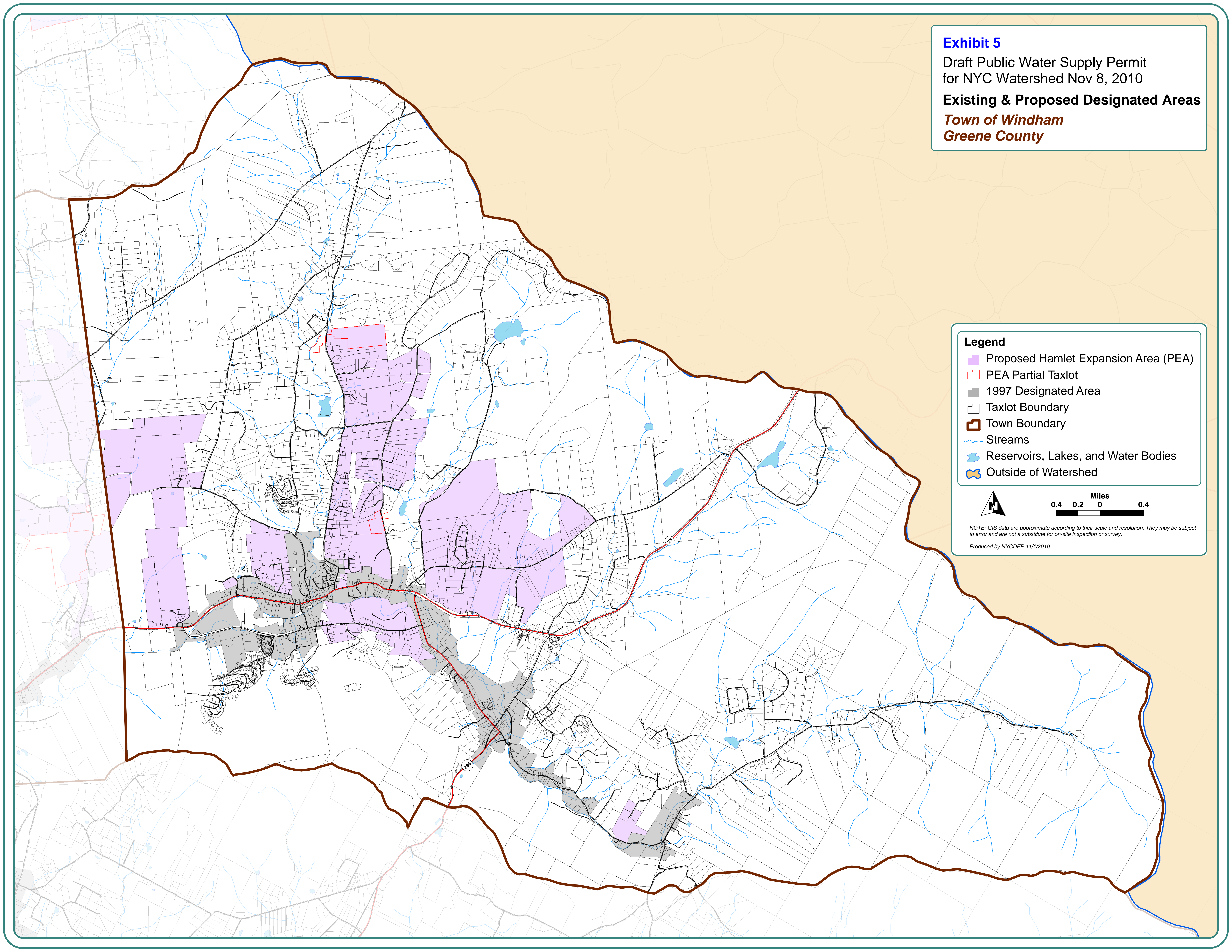
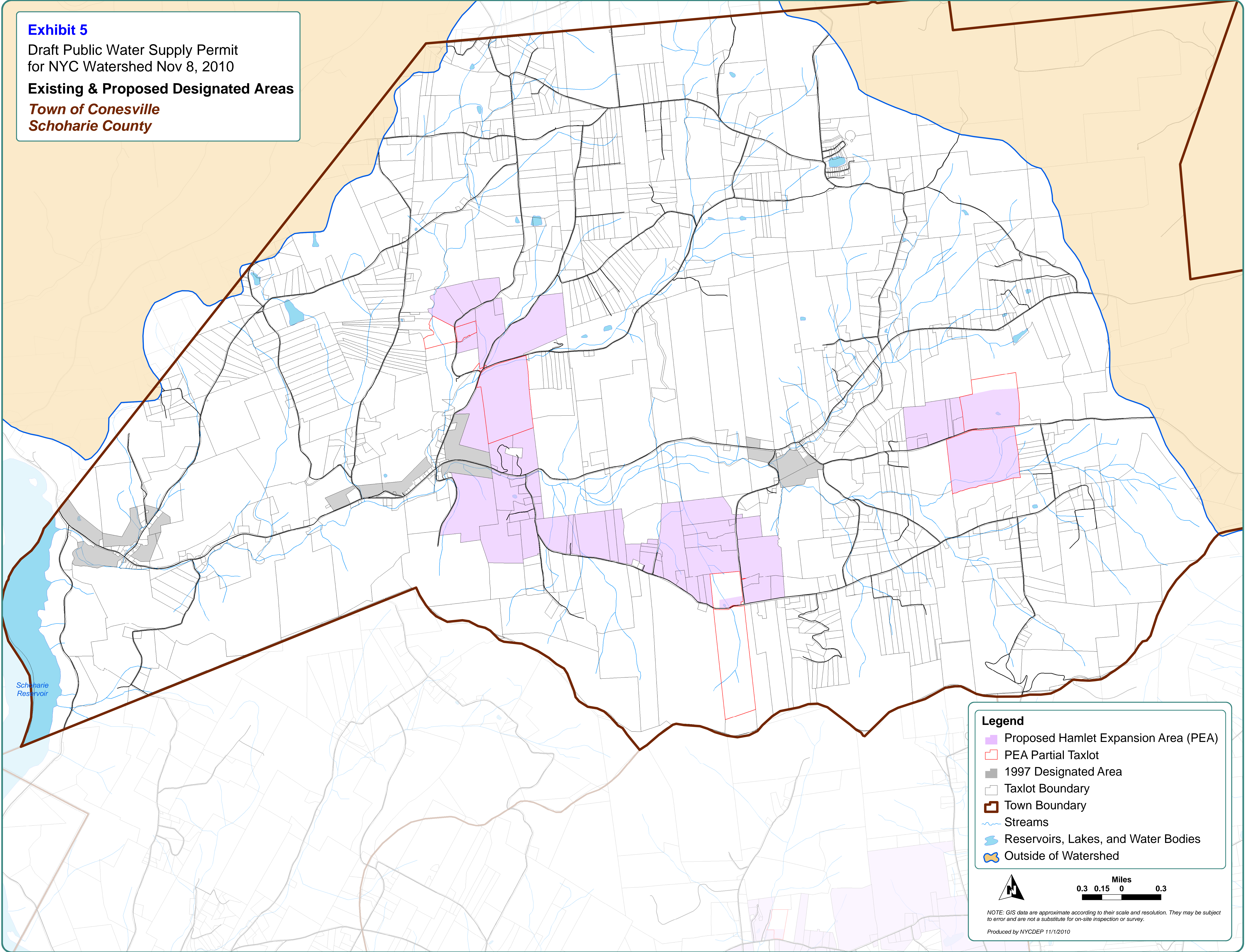
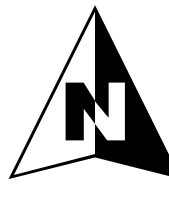


Exhibit 5
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010
Existing & Proposed Designated Areas
Town of Conesville
Schoharie County



Legend

- Proposed Hamlet Expansion Area (PEA)
- PEA Partial Taxlot
- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed

 **Miles**
0.3 0.15 0 0.3

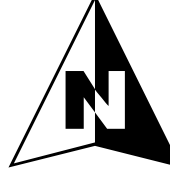
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Produced by NYCDEP 11/1/2010

Exhibit 5
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010
Existing & Proposed Designated Areas
Town of Neversink
Sullivan County

Legend

- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed

 **Miles**
0.4 0.2 0 0.4

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Produced by NYCDEP 11/1/2010

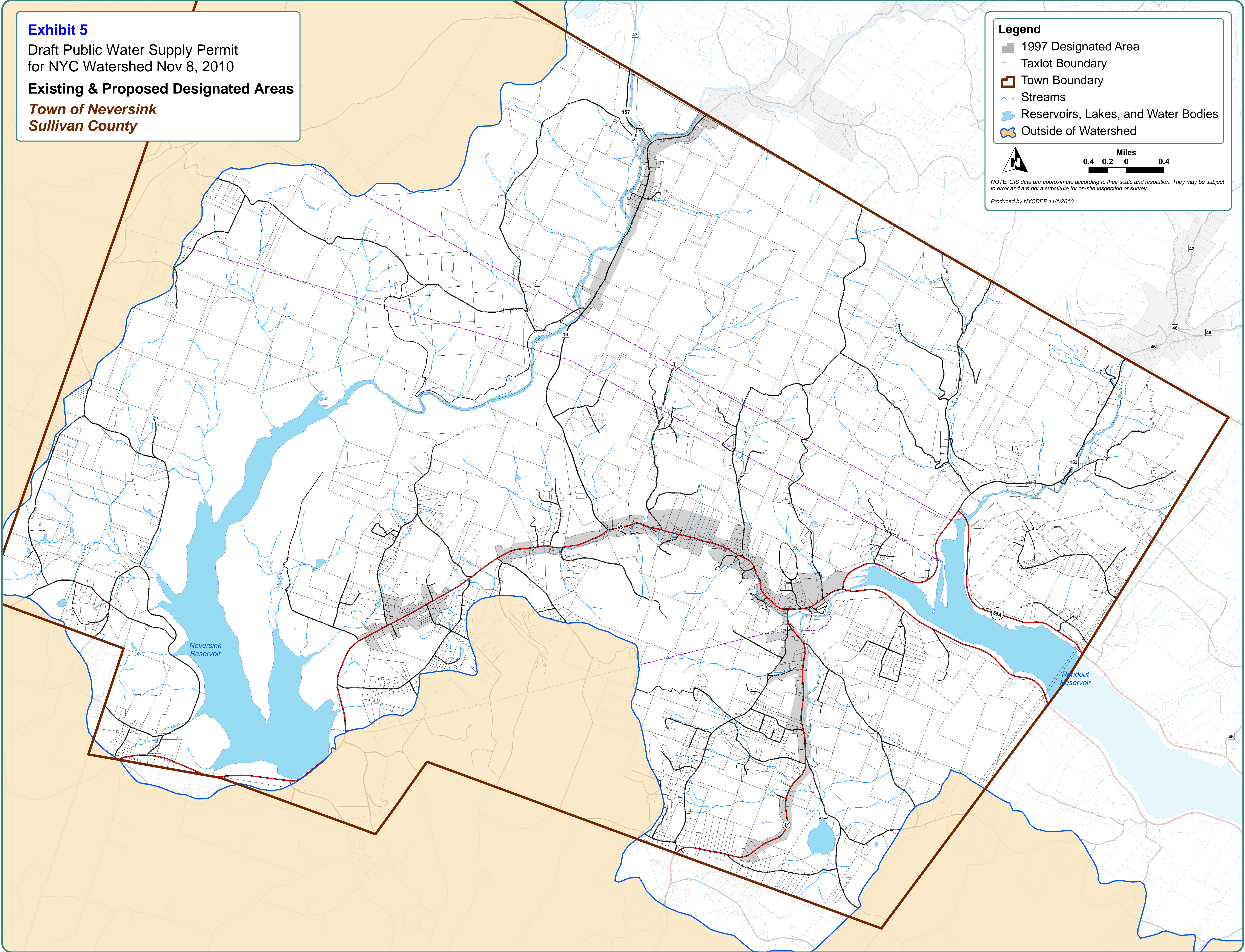
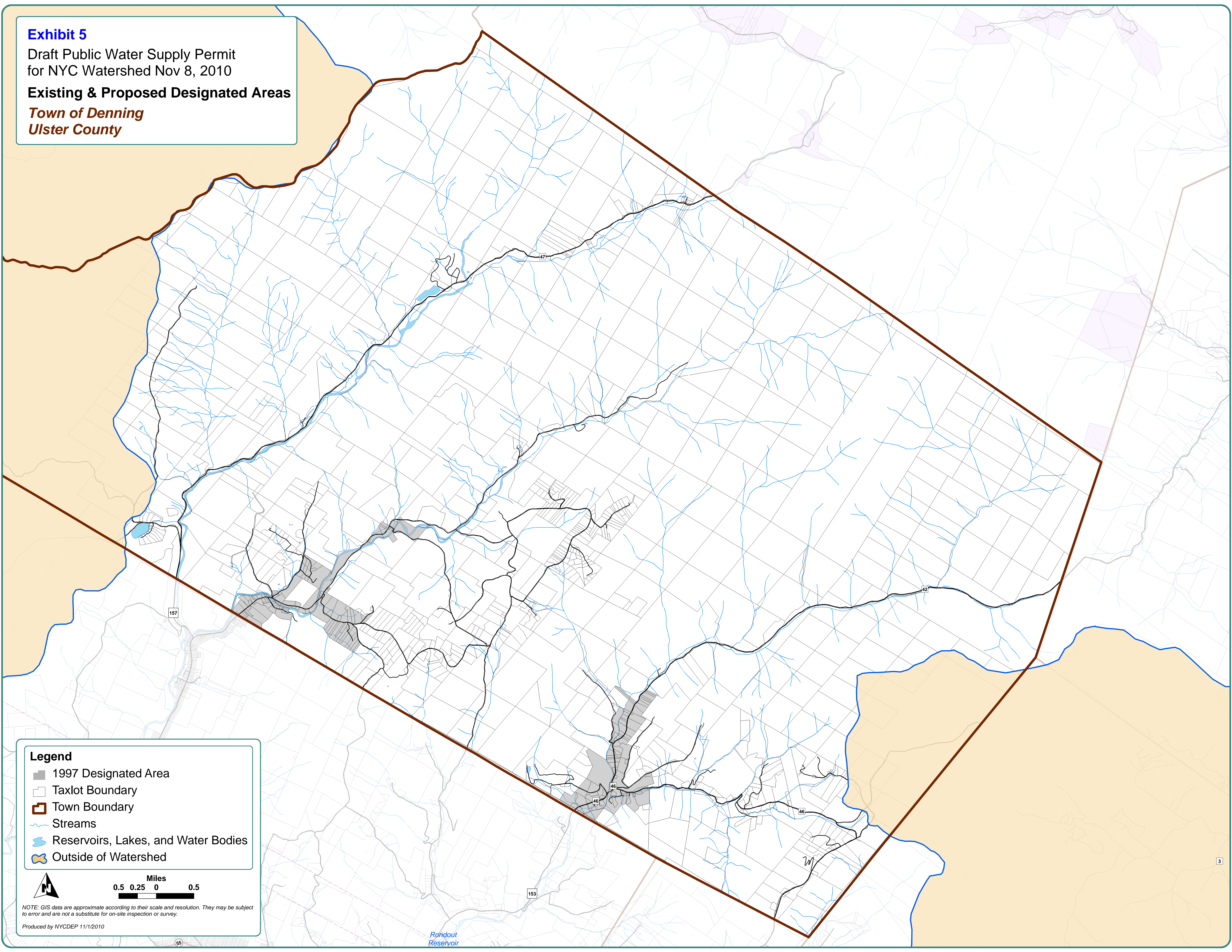


Exhibit 5
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010
Existing & Proposed Designated Areas
Town of Denning
Ulster County



Legend

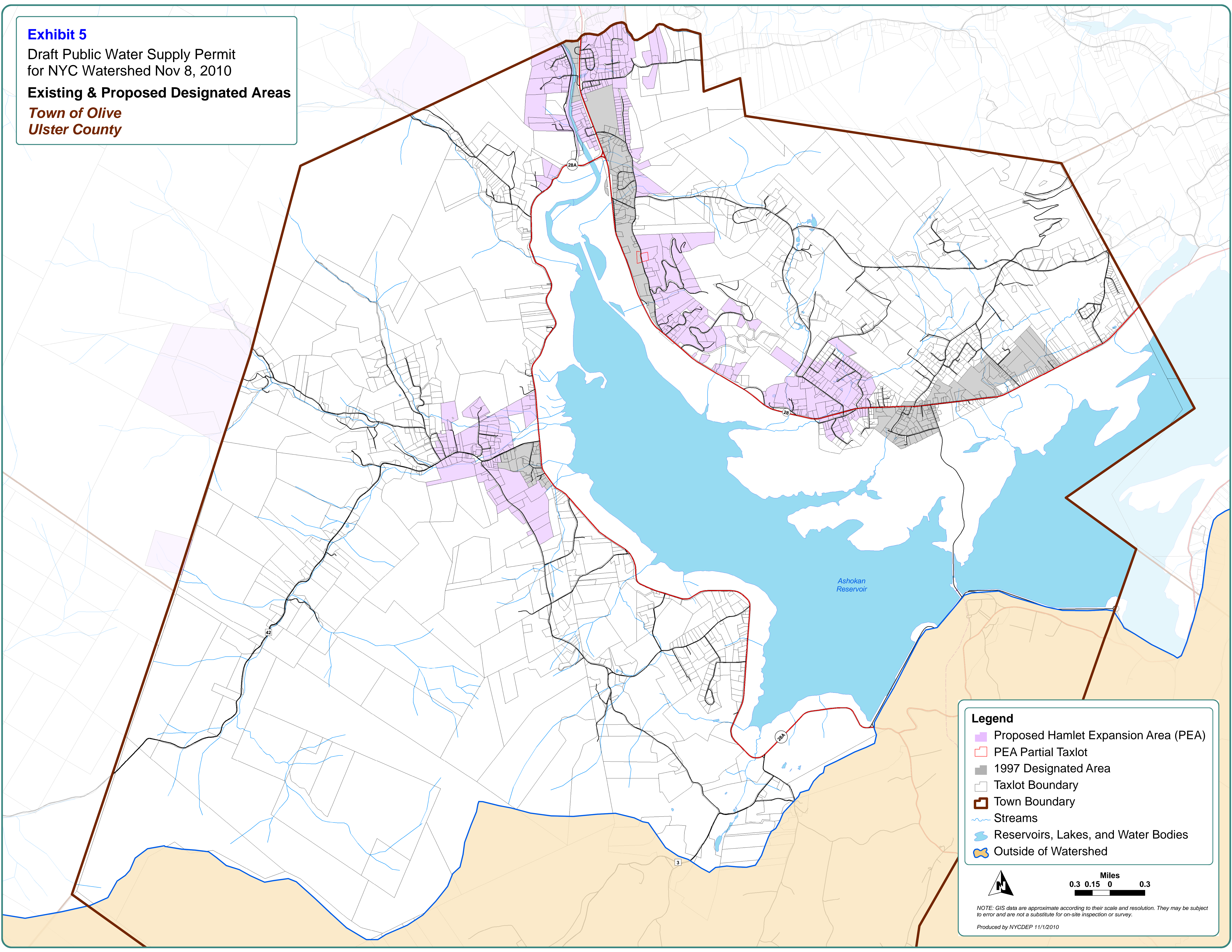
- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed

Miles
0.5 0.25 0 0.5

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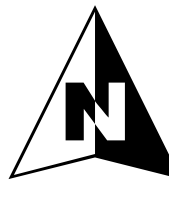
Produced by NYCDEP 11/1/2010

Exhibit 5
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010
Existing & Proposed Designated Areas
Town of Olive
Ulster County



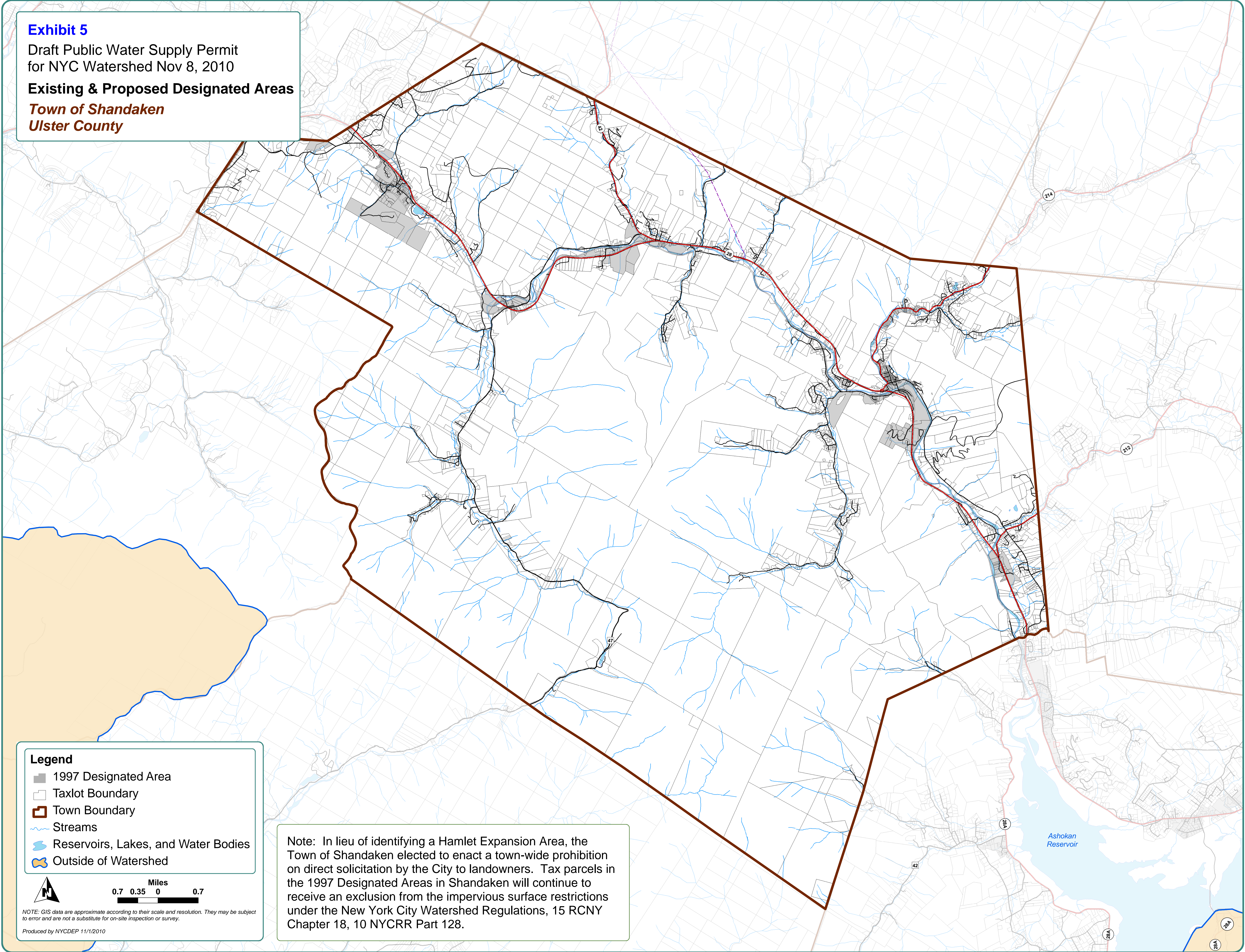
Legend

- Proposed Hamlet Expansion Area (PEA)
- PEA Partial Taxlot
- 1997 Designated Area
- Taxlot Boundary
- Town Boundary
- Streams
- Reservoirs, Lakes, and Water Bodies
- Outside of Watershed

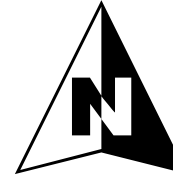
 **Miles**
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Produced by NYCDEP 11/1/2010

Exhibit 5
Draft Public Water Supply Permit
for NYC Watershed Nov 8, 2010
Existing & Proposed Designated Areas
Town of Shandaken
Ulster County



- Legend**
- 1997 Designated Area
 - Taxlot Boundary
 - Town Boundary
 - Streams
 - Reservoirs, Lakes, and Water Bodies
 - Outside of Watershed


Miles
0.7 0.35 0 0.7
NOTE: GIS data are approximate according to their scale and resolution. They may be subject to error and are not a substitute for on-site inspection or survey.
Produced by NYCDEP 11/1/2010

Note: In lieu of identifying a Hamlet Expansion Area, the Town of Shandaken elected to enact a town-wide prohibition on direct solicitation by the City to landowners. Tax parcels in the 1997 Designated Areas in Shandaken will continue to receive an exclusion from the impervious surface restrictions under the New York City Watershed Regulations, 15 RCNY Chapter 18, 10 NYCRR Part 128.

Exhibit 6

DEFINED WOH ROADS ELIGIBLE FOR LAND ACQUISITION EXEMPTION

<u>County</u>	<u>Village</u>	<u>Road</u>
Delaware	Andes	Tremperskill Rd. South
		Gladstone Hollow North
		Route 28 North
		Route 28 South
	Delhi	Route 10 South
		Route 10 North
		Route 28 North
		Route 28 South
		Back River Rd. North (Arber Hill Rd.)
		Back River Rd. South (Arber Hill Rd.)
	Fleischmanns	Route 28 North
		Route 28 South
		County Route 37 North (Halcott Ctr.)
		Old Route 28 North (Covesville)
	Hobart	Route 10 North
		Route 10 South
	Margaretville	Route 28 North
		Route 28 South
		Route 30 North
		County Route 3 South (Dunraven)
	Stamford	Route 23 North
		Route 23 South
		Route 10 North
		Route 10 South
		Back River Rd. South
	Walton	Route 10 South
		Route 10 North
		Back River Road South
		Route 206 North
Greene	Hunter	Route 23A West
		Route 23A East
		Route 296 North
		Route 214 Access (County Route 83)

County

Village

Road

Tannersville

Route 23A West

Route 23A East

County Route 16

County Route 23C

Exhibit 7

NYC DEP Land Acquisition Program

2007 Solicitation Schedule

Catskill-Delaware System, January, 2007

Background

During the first ten years of the Land Acquisition Program, the MOA goal of soliciting 355,050 acres was reached and exceeded. With the end of formal MOA solicitation in 2004, LAP submitted to EPA a Re-Solicitation Plan (October, 2003) which has provided an efficient mechanism to solicit interest within the pool of solicited lands as summarized in Table 1:

Table 1: Solicitation Summary, Program-to-Date

Year	Acres Solicited per MOA	Additional New Solicitations	Acres Re-Solicited
1997	56,299		
1998	51,576		
1999	42,733		
2000	52,846		
2001	55,265		
2002	48,531		
2003			97,817
2004	47,800	14,540	95,848
2005		4,541	94,759
2006		6,743	97,115
Totals	355,050	25,824	385,539

These efforts, together with the WAC Farm Easement Program, have succeeded in protecting over 76,000 acres in the Catskill-Delaware watershed (see Figures 1 & 2, attached). This Solicitation Schedule, and the Solicitation Plan for the period 2008 through 2011 due October, 2007, seek to refine LAP outreach efforts going forward to maximize the quality and quantity of lands protected.

2007 Solicitation Schedule

The 2007 Solicitation Schedule includes components established in the 2003 Re-Solicitation Plan as well as enhanced efforts to improve the quality of the lands considered for protection. Key components include:

- Continued re-solicitation of virtually all vacant lands in Priority Areas 1A, 1B and 2;
- Selective Re-Solicitation of well-qualified lands in Priority Areas 3 & 4;
- Identification of additional lands worthy of solicitation through re-ranking and adjacency analysis (reviewing new opportunities to acquire lands that now abut acquired properties); and
- Identification and removal of less well-qualified lands in PA 3 and 4 from further re-solicitation.

These components are reflected in the 2007 Solicitation Schedule below:

Category	Acres
Resolicit Non-Responders	35,000
Resolicit Not Interested	12,000
Resolicit Offer Refused	17,000
Resolicit New Owners (previously solicited)	7,500
Re-Solicitation Sub-total	71,500
New Solicitation	10,000
Total	81,500

Re-solicitation (at least 71,500 acres) will focus on the best properties within the pool of 326,000 acres already solicited but not yet acquired (see Figure 2 attached). The new solicitation goal (at least 10,000 acres) will incorporate the re-ranking and adjacency initiatives referenced above and represents a formalization of ongoing activity to improve the quality and quantity of lands acquired.

The 2008-2011 Solicitation Plan will provide an in-depth analysis of the pool of solicited lands, evaluate recent program experience in improving the quality of that pool and propose a comprehensive strategy through 2011.

WAC Solicitation

Since starting the program in 1999, WAC has secured farm easements on over 14,000 acres. However, to date WAC's substantial outreach and solicitation efforts have not been reported to EPA. The Plan to be submitted by DEP to EPA in October will include status in regard to such efforts, and provide details (number of farms, acreage, Priority Area, Basin) of farm eligibility for the program, involvement of large vs. small farms, WAC outreach, WAC's system of ranking farms for program participation, and interest level expressed by farms. Goals will also be established running through the term of the Program.

Attachments:

- Figure 1 Cat-Del System, Signed Contracts by R.E. Type
- Figure 2 Cat-Del System, Signed Contracts by Year
- Figure 3 Status of Solicited Properties

NYC DEP Land Acquisition Program

2008 to 2010 Solicitation Plan

Catskill-Delaware System, January 15, 2008

Deliverable: *Re-Evaluate solicitation plan for 2008-10 and submit to EPA/NYSDOH/NYSDEC. WAC acreage to be included. Revised plan(s) will include at least 50,000 acres to be solicited annually.*

Introduction

The 2007 New York City Filtration Avoidance Determination contained significant new commitments by the City to pursue land acquisition in the Catskill-Delaware System for the time period from 2007 through 2017. This 2008 to 2010 Solicitation Plan is submitted in accordance with the 2007 FAD, and details the City's commitment to solicit land in the Cat-Del System in several categories, principal among them:

- **New Solicitation** – Contact the owners of lands not previously solicited;
- **Resolicitation** – Re-contact the owners of land previously solicited; and
- **WAC Solicitation** – Owners of farms to be contacted by the Watershed Agricultural Council about Whole Farm Easements and Forest Easements.

The 2008 - 2010 Solicitation Plan reflects the City's continuing commitment to resolicit parcels previously contacted, as well as significant additional new solicitation in the coming years. Our proposed acreage goals on an annual basis are as follows:

Table 1: Solicitation Plan 2008 to 2010

		Acres Solicited		
Category	Sub-Category	2008	2009	2010
New Solicitation		30,000	25,000	5,000
Resolicitation	Non-Responders	20,000	25,000	30,000
	Not Interested	15,000	15,000	15,000
	Offer Refused	17,000	20,000	20,000
	New Owners (previously solicited)	7,500	7,500	7,500
	Resolicitation Sub-Total	59,500	67,500	72,500
WAC Solicitation		5,000	5,000	5,000
Total Solicitation		94,500	97,500	82,500

This Plan provides a programmatic context for these solicitation goals by briefly reviewing LAP program status and solicitation history, recent program success and the schedule for 2007 FAD deliverables.

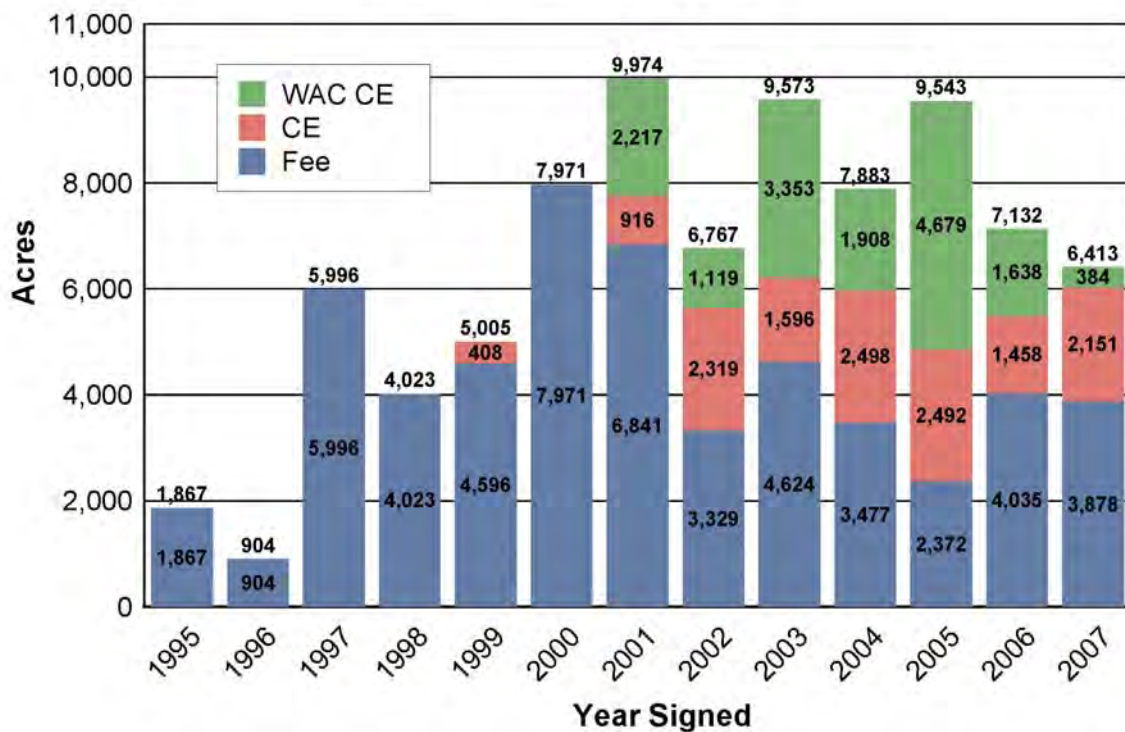
Program Status

Since 1997, LAP (including WAC) has protected over 83,000 acres of land in the Cat-Del System through the acquisition of fee simple and conservation easements. An examination of program activity by Real Estate Type (see Table 2) shows that fee simple purchases comprise about 65 percent of acres acquired. Conservation Easements, including City easements (17 percent) and WAC easements (18 percent) typically involve much larger properties, and have comprised an increasing percentage of acres acquired in recent years (see Figure 1).

Table 2: All Signed Contracts by R.E. Type, Cat-Del System

<u>Real Estate Type</u>	<u># of Parcels</u>	<u>Acres</u>	<u>Avg. Size</u>	<u>Price</u>	<u>Avg. Price/Acre</u>
Fee	831	53,912	65	\$176,330,348	\$3,271
CE	94	13,838	147	\$26,822,762	\$1,938
WAC CE	77	15,299	199	\$17,268,556	\$1,129
Grand Totals:	1,002	83,049	83	\$220,421,665	\$2,654

Figure 1: Executed Contracts by Year & R.E. Type
Catskill-Delaware System



Solicitation History

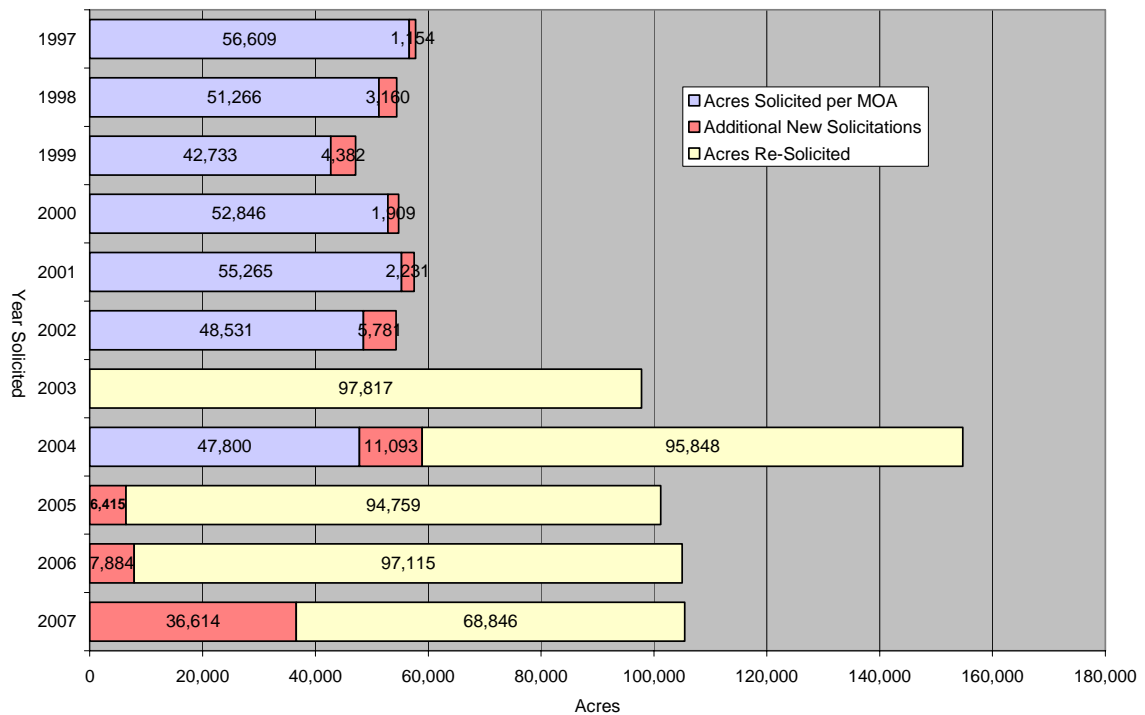
Solicitation by Year

During the first ten years of LAP, the MOA goal of soliciting 355,050 acres was reached and exceeded (see Figure 2). With the end of formal MOA solicitation in 2004, LAP submitted a Re-Solicitation Plan (October, 2003) to EPA which has provided an efficient framework to re-contact landowners and track responses within the pool of solicited lands on a periodic basis¹. Since 2003, resolicitation has generated most of the signed purchase contracts for LAP. Resolicitation goals have

¹ Prior to 2003, LAP resolicited landowners, particularly those in Priority Areas 1 and 2, without a formal tracking system. The Resolicitation Plan allowed improved tracking and analysis of resolicitation intervals and response rates.

been generated on an annual basis, allowing LAP to fine-tune its priorities based on changing program goals and real estate trends (see Figure 2).

Figure 2: LAP Solicitation History



Success Rate

Through 2006, LAP solicitation totaled approximately 399,000 acres. Program-to-date signed purchase contracts (excluding WAC CE's) of 67,640 acres represent 17 percent of this total pool of solicited lands. This LAP success rate will continue to rise as resolicitation continues, although the new solicitation being conducted from 2007 to 2009 may temporarily reduce the growth of the overall success rate.

2007 Solicitation Plan and Results

New Solicitation

The 2007 Solicitation Plan had a goal of 30,000 acres of new solicitations. These new properties were selected based on an updated ranking of unsolicited lands using the LAP ranking procedure (see the Out-Basin Plan, 2000), which incorporates size, slope and surface water features. The highest-ranked unsolicited lands were selected, focusing on vacant parcels over 50 acres and residential parcels over 100 acres. By year end, new solicitations totaled 36,561 acres in the Cat-Del System. The new solicitations were focused on Priority Areas 4 (27,084 acres, 74 percent of total solicited in 2007) and 3 (8,061 acres, 22 percent); the remaining 4 percent represented newly solicited properties in Priority 1 and 2.

As shown in Table 3, 23% of these new solicitations have resulted in contact with an interested landowner. That percentage will continue to grow over the coming months, and LAP expects to sign contracts on a significant number of these properties in 2008 and 2009.

Table 3: 2007 Solicitation Status (Year End-Totals)

<u>Solicitation Category</u>	<u>2007 Plan</u>	<u>Acres Solicited</u>	<u>Percent of Plan</u>	<u>Landowner Interested</u>	<u>Percent Interested</u>
New Solicitation	30,000	36,614	122%	8,435	23%
Resolicit - Non-Responder	20,000	21,361	107%	3,912	18%
Resolicit - Not Interested	12,000	19,160	160%	4,834	25%
Resolicit - Offer Refused	17,000	17,419	102%	9,098	52%
Resolicit - New Owner	7,500	10,906	145%	2,915	27%
	86,500	105,461	122%	29,193	28%

Resolicitation

As in the prior four years, LAP resolicited a significant number of acres in 2007. While the total acreage resolicited dropped (due to a renewed focus on new solicitations, as described above) LAP met with significant success by focusing a larger percentage of resolicitation efforts on owners who were previously uninterested (as opposed to non-responders).

As shown in Table 3, the response rates for all categories of resolicitation compare favorably with new solicitation. This demonstrates that periodic re-contact continues to be an effective process to cultivate interest by landowners who respond differently over time based on personal or market factors. In particular, it is noteworthy that responses from “Not Interested” landowners were actually higher than for either “Non Responders” or for new solicitations. For this reason LAP will continue to emphasize resolicitation of Not Interested landowners in 2008 and 2009.

2008 to 2010 Solicitation Goals

In 2007, LAP, in consultation with DOH, EPA and DEC, began a three-year effort to solicit an additional 90,000 acres, primarily in Priority Areas 3 and 4. These new solicitations totaled over 36,000 acres in 2007, and the goals for 2008 and 2009 (see Table 1) will bring the three-year total to at least 91,000 acres. During 2009 the City will complete a Long Term Land Acquisition Strategy in accordance with the 2007 FAD. It is anticipated that the Strategy will include an extensive evaluation of the pool of solicited as well as unsolicited lands that exist at that time, and that the 2010 New Solicitation goal of 10,000 acres (as shown in Table 1) will be subject to adjustment based on that analysis.

The solicitation goals shown in Table 1 will be implemented through the City’s continued effort to track land ownership changes in the Catskill Delaware System. As in the past, these goals will be implemented in a way that is expected to maximize the water quality benefits of LAP acquisitions. Among these provisions will be:

- Continued re-solicitation of virtually all vacant lands in Priority Areas 1A, 1B and 2;
- Selective Re-Solicitation of lands in Priority Areas 3 & 4; Non-responders will be re-contacted every two years and Offer Refused owners will be reviewed annually;

- Resolicitation of all known new owners of previously solicited land; and
- Identification of lands for new solicitation through re-ranking and adjacency analysis (reviewing new opportunities to acquire lands that now about newly acquired properties).

In addition to ongoing program efforts to meet these enhanced solicitation goals, LAP expects to incorporate Land Trusts and other partners into this solicitation effort during 2008 and 2009. In accordance with the Programmatic Strategy (2007) LAP will seek to use these outside organizations to expand the City's outreach and solicitation resources.

In light of the complexity of implementing the Programmatic Strategy and continued uncertainty regarding the near future for the regional real estate market, the City will monitor implementation of this solicitation plan and make necessary adjustments, in consultation with DOH, EPA and DEC, on an as-needed basis.

WAC Solicitation

Since starting the program in 1999, WAC has secured farm easements on over 15,000 acres (see Table 2). The minimum threshold to be considered for the Farm Easement Program is that a property must have a Whole Farm Plan (WFP); thus WAC is limited to the pool of farms that have WFPs and are not yet under easement. At the start of the program this pool comprised 193 farms and 54,830 acres (of which roughly 10% was leased from other owners); it currently comprises 242 farms and 64,800 acres (of which 11% is leased from other owners), while another 224 farms (acreage undetermined) have expressed interest in applying for WFPs over the next few years – these new WFPs will for the most part represent “small farms” (defined as netting less than \$10,000 in annual revenues).

Since its inception in March of 1999, WAC has solicited easements biannually from all farms that have WFPs in place. Once a landowner expresses interest, the property is ranked against others in the “interested” pool and the properties are pursued in priority order. WAC is in the process of reviewing its application process to address the expected significant increase in activity resulting from development of WFPs on small farms.

Starting in 2008, the City will begin to report the number of farms and acres that WAC solicits each reporting period, for both the Farm Easement Program and the pilot Forest Easement Program to begin later this year.

GRANT OF CONSERVATION EASEMENT

THIS INDENTURE, made this ____ day of _____, 20__ between **THE CITY OF NEW YORK**, a municipal corporation with its principal offices at City Hall, New York, New York 10007 (“Grantor” or “the City”), and the **THE PEOPLE OF THE STATE OF NEW YORK** (“Grantee”) acting by and through their Commissioner of Environmental Conservation (“NYSDEC”), who has an office at 625 Broadway, Albany, NY 12233.

WHEREAS, the Grantor is the owner in fee of certain real property(ies) located in the Town(s) of _____, County of _____, more particularly described in Schedule A attached hereto and incorporated by this reference (“the Protected Property(ies)”); and

WHEREAS, Article 49 of the New York State Environmental Conservation Law provides for the restriction of development and use of property through the establishment of conservation easements on land within the State of New York in order to permanently conserve and protect natural resources and open space; and

WHEREAS, the Protected Property(ies) in its present natural condition has substantial and significant natural resource value because it is located in the watershed of the City of New York, and has not been subject to any extensive development or exploitation; and

WHEREAS, the Grantor and Grantee are both parties to the New York City Watershed Memorandum of Agreement, executed January 21, 1997 (“Watershed MOA”), which provides for the protection of the water quality of the City’s drinking water supply by, *inter alia*, authorizing the City to acquire vacant, undeveloped land in this water supply watershed, subject to certain terms and conditions; and

WHEREAS, the City of New York has been granted a Water Supply Permit from the New York State Department of Environmental Conservation, pursuant to the New York State Environmental Conservation Law, ECL § 15-1501 *et seq.*, authorizing the Commissioner of the New York City Department of Environmental Protection (“NYCDEP”) to acquire, strictly from willing sellers, certain lands within the drainage basins of the Catskill, Delaware and Croton portions of the New York City Watershed (the “Watershed”)

for the purposes of protecting the City's water supply from degradation (DEC Permit No. 0-9999-00051/00001) (the "Watershed Land Acquisition and Stewardship Program"); and

WHEREAS, the Watershed MOA and the Water Supply Permit provides that the City will grant to the NYSDEC a conservation easement that shall run with the land on all land acquired in fee under the City's Watershed Land Acquisition and Stewardship Program to ensure that such land is held in perpetuity in an undeveloped state in order to protect the quality of the New York City drinking water supply; and

WHEREAS, Article II, § 72 of the Watershed MOA provides that historic recreational uses, including fishing, hiking, and hunting, will be allowed to continue on newly acquired fee property, subject to rules and regulations adopted, or permits issued, by NYCDEP, provided that they neither threaten public safety nor threaten to have an adverse impact on water quality. The Parties to the Watershed MOA agree that the following recreational uses are more likely to be allowed on City land, if appropriate, subject to rules and regulations adopted, or permits issued, by NYCDEP: fishing (including fishing by boat) under regulation; hiking, especially where parcels intersect State trails; snowshoeing; cross country skiing; bird watching; educational programs, nature study and interpretation; and hunting (only in certain areas under certain conditions). The following activities are not likely to be allowed on City property even if the property was historically utilized for these purposes: boating (other than for permitted fishing by boat); snowmobiling; camping; motorcycling; mountain bicycling; and horseback riding; and

WHEREAS, in view of the foregoing and pursuant to the provisions of the aforementioned Article 49 of the Environmental Conservation Law, the signatories to the Watershed MOA have determined it to be desirable and beneficial and have requested the City, for itself and its successors and assigns, to grant a Conservation Easement (the "Easement") to the Grantee in order to limit the further development of the Protected Property(ies) while permitting compatible uses thereof;

NOW, THEREFORE, in consideration of the promises and of the mutual covenants and agreement set forth herein, and of the undertakings of each party to the other, the Grantor hereby grants, conveys and releases to Grantee and its successors, pursuant to Article 49 of the Environmental Conservation Law (ECL), an Easement as hereinafter more fully described running with the land in perpetuity in, on, over, under and upon the Protected Property(ies), more particularly described in Schedule A attached hereto and incorporated by

this reference.

1. **Purpose:** The purpose of the Easement is to ensure that the Protected Property(ies) is held in perpetuity in an undeveloped state in order to protect the Watershed and the New York City drinking water supply.

2. **Rights of Grantee.** To accomplish the purposes of this Easement, the Grantor grants to Grantee the following rights, pursuant to Paragraph 5 herein:

(a) The right to enforce the terms, conditions, and restrictions set forth in this Easement.

(b) The right to enter upon and inspect the Protected Property(ies) at reasonable times to monitor the Grantor's compliance with the terms, conditions and restrictions of this Easement.

3. **Declaration of Restrictions.** The parties agree that, except as may be required in the course of any activity allowed by paragraph 4 herein ("Reserved Rights"), the following activities on or uses of the Protected Property(ies) are prohibited:

(a) construction of any new residences, mobile homes or other buildings and structures normally requiring a building code permit on the Protected Property(ies);

(b) dumping or storage of ashes, non-composted organic waste, sewage or garbage, scrap material, discharges or other such waste from off-site sources;

(c) dumping or storage of petroleum and its byproducts, leached compounds, toxic substances, hazardous materials;

(d) use of dune buggies, motorcycles, all-terrain vehicles or other motorized vehicles for recreational purposes;

(e) the excavating, extraction, grading, or removal of soil, sand and gravel, gas or oil;

(f) the expansion of any existing or construction of any new paved driveways, roads, and parking lots;

(g) except in accordance with Article 49 of the ECL, the siting or routing of any facilities required for the local gathering, transmission, or distribution of gas, electricity, water, telephone, or cable television services on, over or under the Protected Property(ies);

(h) the commercial, residential or industrial use of the Protected

Property(ies);

(i) use of the Protected Property(ies) in such a manner that: (i) causes the introduction of sediments, chemicals, microbiological pathogens, nutrients or other pollutants to any watercourse or wetland on the Protected Property(ies) that may adversely effect the quality of such watercourse or wetland; (ii) interferes with or disturbs open space, vegetated areas or steep slopes on the Protected Property(ies); or (iii) is otherwise inconsistent with the purposes of this Easement.

4. **Reserved Rights.** Notwithstanding any provisions in this Easement to the contrary, the City reserves for itself, its successors, lessees, invitees, contractors and assigns, subject to and in accordance with all applicable laws and regulations, including without limitation, the Environmental Conservation Law, the Public Health Law and any rules and regulations promulgated thereto, the following rights with regard to the Protected Property(ies), whether or not Grantor receives any payment or other consideration in connection therewith:

(a) The right to construct, maintain, operate, or remove any buildings, structures, dams, gatehouses, aqueducts, pipes, pumps, monitoring stations, treatment facilities, roadways or any other structures or facilities necessary or appropriate for the operation and maintenance of the City's water supply system, and to take all other actions on the Protected Property(ies) as may be necessary to ensure the safe and efficient operation of such system;

(b) The right to rip-rap, plant, or remove vegetation, or otherwise stabilize or restore slopes and stream banks, undertake earthmoving activities, dredge, fill, dam, create, or divert water courses or wetlands, manage wildlife, or to take any other action necessary to protect and preserve the quality of the New York City drinking water supply;

(c) The right to harvest, plant, chemically treat, or otherwise manage trees and vegetation, and to build, maintain, and stabilize associated landings, enclosures or other related improvements pursuant to such management activity in accordance with NYSDEC's Statewide Guidelines for Forestry Best Management Practices ("DEC's Forestry BMPs" as referenced in the *Silviculture Management Practices Catalogue for Nonpoint Source Pollution Prevention and Water Quality Protection in New York State*, dated October, 1993), or any subsequent revisions thereto, hereby incorporated by reference;

(d) The right to prevent or respond to encroachments, emergencies, man-made or natural disasters, environmental hazards, or threats to human health or safety;

(e) The right to conduct mining of sand, stone, soil, and gravel on the

Protected Property(ies) for use on-site for the purposes of the maintenance and construction of access roads, and parking areas as allowed by this Easement, or off-site for purposes of water quality protection in any area of the Watershed, provided such mining is conducted in such a way as to minimize the adverse effects of such mining on water quality;

(f) The right to conduct mining of sand, stone, soil, and gravel on the Protected Property(ies) for uses other than those described in paragraph (e), provided it is conducted in accordance with any and all NYSDEC applicable laws or regulations. In addition to any necessary permits required, all new mining proposals with the exception of those created under paragraph (e) must be approved by NYSDEC before going into operation. Nothing contained in this Easement shall be construed to prohibit or restrict NYSDEC jurisdiction over mining operations within the Watershed;

(g) The right, in accordance with the Watershed MOA and the Water Supply Permit, to allow, prohibit, or otherwise control all manner of recreational use of the Protected Property(ies) by the public, subject to rules and regulations adopted or permits issued by NYCDEP, and to construct and/or maintain, as may be allowed by the City at its sole discretion, trails, parking areas, boardwalks, boat racks, signs, markers, improvements to facilitate accessibility for the disabled, and other like structures accessory to such recreational uses of the Protected Property(ies); Article II, § 72 of the MOA provides that “historic recreational uses, including fishing, hiking, and hunting, will be allowed to continue on newly acquired fee property, subject to rules and regulations adopted, or permits issued, by NYCDEP, provided that they neither threaten public safety nor threaten to have an adverse impact on water quality. The Parties to the Watershed MOA agree that the following recreational uses are more likely to be allowed on City land, if appropriate, subject to rules and regulations adopted, or permits issued, by NYCDEP: fishing (including fishing by boat) under regulation; hiking, especially where parcels intersect State trails; snowshoeing; cross country skiing; bird watching; educational programs, nature study and interpretation; and hunting (only in certain areas under certain conditions). The following activities are not likely to be allowed on City property even if the property was historically utilized for these purposes: boating (other than for permitted fishing by boat); camping; motorcycling; mountain bicycling; and horseback riding.”

(h) The right to grant, sell, mortgage, transfer, lease, or subdivide the Protected Property(ies) or any part parcel or portion thereof in accordance with and subject to the limitations set forth in paragraph 8 herein;

(i) The right to construct and maintain temporary buildings and structures pertaining to the monitoring of weather, fire, vegetation, wildlife, and other biotic or abiotic features and processes, and to construct and maintain other like improvements pursuant to the conduct of scientific research, subject to the terms and conditions set forth in this Easement;

(j) The right to construct and maintain pervious roadways, parking areas, landings and other such areas necessary to service any activities allowed by this Easement, provided that such construction and maintenance is conducted in accordance with NYSDEC's Forestry BMPs as they pertain to road construction and maintenance;

(k) The right to operate, maintain, repair and/or remove any and all structures, facilities, roads, trails and parking areas existing as of the date of this Easement;

(l) The right to construct or install gates, fencing, signs, and/or access controls on roads or parking areas;

(m) The right to construct, maintain and operate wind energy tower structures and communications tower structures on the Protected Property(ies) provided they are in conformance with any and all NYSDEC applicable laws and regulations. In addition to any necessary permits, all new uses covered under this paragraph must be approved by NYSDEC before being constructed unless such approval is waived by NYSDEC. Approvals granted by NYSDEC may include conditions which become binding upon the Grantor; and

(n) Any and all other rights accruing from the Grantor's ownership of the Protected Property(ies) not expressly prohibited pursuant to this Easement.

5. Enforcement.

(a) In the event that Grantee determines that there is an alleged breach or violation of the terms of this Easement or that such a breach or violation is threatened, Grantee shall provide written notice to Grantor describing the alleged violation, and any measures reasonably calculated to cure the alleged violation; and providing a reasonable time from the date of such notice to implement corrective measures or cure the alleged violation;

(b) At the expiration of the time period provided for in the preceding subparagraph, Grantee shall notify Grantor of any failure to cure the alleged violation or breach set forth in the initial notice, whereupon Grantor shall then have an additional fifteen (15) days from the date of receipt of such notice to implement corrective measures or to cure the violation

or breach;

(c) In the event the Grantor fails to implement corrective measures to cure the violation or breach at the expiration of said fifteen day period, Grantee shall have the right to bring an action at law or in equity in court of competent jurisdiction to enforce the terms of this Easement, to enjoin the violation, to recover damages for the loss of environmental benefits or natural resources of the Protected Property(ies) and/or to require restoration of the Protected Property(ies) to a stable condition.

(d) As used herein with reference to the Protected Property(ies), the term “stable condition” shall mean the approximate general, natural, and undeveloped condition of the Protected Property(ies) as of the date of this Easement, and giving due consideration to the following:

- (i) the normal effects of the passage of time; or
- (ii) the results of natural forces (including but not limited to fires, explosions, earthquakes, landslides, lightning, flooding, or other Acts of God);
- (iii) any measures necessary to protect and preserve the quality of the New York City Drinking Water Supply;

(e) Where this Easement requires or permits the restoration of the Protected Property(ies) to a stable condition following a violation or breach of this Easement, this Easement shall not be construed to allow or require the use of extraordinary means to effect such restoration unless the circumstances reasonably require the use of such extraordinary means. The Parties agree that the following means will ordinarily be used to restore the Protected Property(ies) to a stable condition following a violation or breach of this Easement:

- (i) removal of items and material not allowed by this Easement;
- (ii) closure, filling, grading and planting with appropriate vegetative cover, of areas adversely affected by activities not allowed by this Easement;
- (iii) correction, through reasonably practicable measures, of conditions which adversely affect drainage, flood control, water conservation, fish or wildlife habitat, erosion control or soil conservation.

(f) If a court determines that the Grantor has violated the terms of this Easement, then Grantor shall reimburse the Grantee for all expenses incurred, including court costs and attorney's fees, in enforcing the terms of this Easement. If Grantor prevails in any court action to enforce the terms of this Easement, Grantor's costs of suit, including attorney's fees, shall be borne by Grantee.

(g) Enforcement of the terms of this Easement shall be at Grantee's discretion, and any forbearance or failure of Grantee to exercise its rights under this Easement shall not be deemed a waiver, and shall not prevent or bar Grantee from enforcing any of the terms, conditions, covenants or restrictions of this Easement.

(h) In the event that Grantee conducts regularly scheduled inspections of the Protected Property(ies), Grantee shall provide written notice to Grantor at least three (3) days in advance whereupon Grantee shall have the right to accompany Grantee on such inspections. Grantee shall prepare a report detailing its findings resulting from its such inspections of the Protected Property(ies) and shall provide Grantor with a copy of said inspection reports within thirty (30) days of the inspection:

(i) The Parties agree to cooperate in the enforcement of the terms of this Easement. In the event that either party determines that legal proceedings are necessary against some party other than Grantor or Grantee, or their successors, heirs, assigns, agents, or employees then either party may agree to join the other in such legal proceeding, provided that nothing herein shall obligate Grantor or Grantee to expend any funds, other than for review and execution of related papers.

6. Third Party Enforcement Rights. In accordance with Article 49 of the ECL, and Article II, §82 of the Watershed MOA, this Easement may be enforced by the United States Environmental Protection Agency or the New York State Department of Health, whichever agency has primary enforcement responsibility at the time that enforcement of the Easement is sought, for implementation of the Surface Water Treatment Rule (40 C.F.R. § 141.70 *et seq.*) with respect to the water supply system in which the Protected Property(ies) is situated.

7. Acts Beyond the City's Control. The City shall not be liable for any damage or change to the Protected Property(ies) resulting or arising from acts beyond the City's control, including, Acts of God, natural disasters, war, judicial order, strike, insurrection, unlawful, or unpermitted acts of the public or from acts of Grantee or its agents and

representatives.

8. **Mortgage, Encumbrance, Transfer or Subdivision.** (a) Pursuant to the Watershed MOA and Special Condition 21 of the Water Supply Permit, the Grantor may grant, sell, convey, deed, subdivide, mortgage, lease, transfer or assign any part of the Protected Property(ies) at its discretion and subject to the requirements of the New York City Charter, with 60 days written notice prior to any such conveyance (including the names and addresses of any such grantee, transferee, buyer, assignee, mortgagor or lessee) to Grantee, provided that any such deed mortgage, assignment, or lease or any other instrument of conveyance specifically states that the interest thereby conveyed is subject, without limitation, to the terms of this Easement and any amendments hereto.

(b) Pursuant to the Watershed MOA and Special Condition 21 of the Water Supply Permit, the Grantor may not grant, sell, convey, deed, subdivide, mortgage, lease, transfer or assign any part of the Protected Property(ies) to a tax-exempt entity unless the entity enters into a written agreement acceptable to and with the tax assessing unit to make payments in lieu of full real property taxes and *ad valorem* levies to each applicable taxing entity.

(c) Notwithstanding the preceding subparagraphs (a) and (b), the Grantor may grant, sell, or convey the Protected Property(ies) in fee simple, either encumbered by or free of this Easement, in order to purchase higher priority lands in the New York City Watershed provided the following requirements are met: (i) the Protected Property(ies) must be located in Priority Areas 3 or 4 of the Catskill/Delaware System or C of the Croton System as set forth in Special Condition 6 of the Water Supply Permit and so identified in Schedule A attached; (ii) the United States Environmental Protection Agency and the New York State Department of Health must approve such grant, sale or conveyance; (iii) the City is under contract to purchase the replacement lands of higher priority sale of the Protected Property(ies); and (iv) if acquired by the City in fee, the replacement lands acquired by the City are made subject to a conservation easement in favor of Grantee as provided by the Watershed MOA and the Water Supply Permit, in substantially the same form of this Easement; if acquired by the City as a conservation easement, the replacement easement includes third party enforcement rights in favor of the New York State Attorney General;

(d) In the event that the City satisfied the conditions set forth in the preceding subparagraph (c) and provided Grantor requests extinguishment of this Easement pursuant to the terms herein, the Parties shall promptly enter into and execute a written

Agreement, providing for the extinguishment of this Easement, for filing in the County Clerk's Office(s).

9. **Compliance Certificates.** Upon request to the Grantor, Grantee shall execute and deliver to the Grantor any document, including an estoppel certificate, which certifies the Grantor's compliance with any of its obligations contained in this Easement.

10. **Real Property Taxes.** In accordance with and subject to the limitations and conditions set forth in the Watershed MOA and Special Condition 18 of the Water Supply Permit, Grantor, its heirs, successors and assigns, shall be responsible for appropriate payment of all taxes (including any taxes Grantee would otherwise be subject to pursuant to Real Property Tax Law § 533), assessments, levies, fees and changes on the Protected Property(ies) levied or assessed by any competent governmental authority, and shall furnish Grantee with tax receipts or other evidence of such payment upon Grantee's request.

11. **Condemnation.** In the event that the Protected Property(ies) is taken in whole or in part for any purpose pursuant to the Eminent Domain Procedure Law, then this Easement will be extinguished only as to the portion of the Protected Property(ies) taken. The Grantee shall not be entitled to any portion of the compensation paid for the taking.

12. **Extinguishment of Development Rights.** The Grantor agrees that all development rights specifically restricted by this Easement shall be held by Grantee for so long as this Easement shall remain in effect and may not be transferred to any other land or used to calculate permissible density or lot yield for any other land not restricted by this Easement.

13. **Covenants, Warranties and Representations.** The City hereby warrants, represents and covenants that as of the date of the Easement:

(a) the Protected Property(ies) is free from any mortgages or tax liens of any kind or nature whatsoever;

(b) the City is seized of the premises in fee simple and has full right and title to convey this Easement.

14. **Subject to Conditions of Records.** Except as otherwise specified herein, the grant of this Easement is made subject to all rights, covenants, conditions, easements, and other restrictions of record and shall not impair, abrogate, or otherwise affect any rights that persons other than the Grantor may have to use the Property(ies) pursuant to such rights, covenants, easements, or other matters of record.

15. **Notices.** (a) All notices, requests, and/or approvals required by this

Easement shall be in writing and shall be delivered by registered mail to the following addresses:

If to the Grantor:

NYC DEP
Director, Land Acquisition & Stewardship Program
71 Smith Avenue
Kingston, New York 12401

If to the Grantee:

New York State Department of Environmental Conservation
Director, Lands and Forests
625 Broadway
Albany, New York 12233

(b) In the event that approving party fails to respond within sixty (60) days of receipt of such notice, its approval shall be deemed given.

(c) Either party may change the address to which notice to such party shall be sent by sending written notice of such change to the other party.

16. Miscellaneous. (a) This Easement may not be modified, altered, amended, or extinguished except:

- (i) by written instrument signed and executed by both parties hereto and recorded in the appropriate County Clerk's Office; or
- (ii) in accordance with the requirements of paragraph 8, subparagraphs (c) and (d) of this Easement; or
- (iii) in accordance with applicable provisions of Article 49 of the Environmental Conservation Law.

(b) The City shall provide NYSDEC with a survey of the Protected Property(ies) certified to New York State.

(c) This Easement shall be perpetual, shall run with the land and shall be binding upon and inure to the benefit of the parties hereto, their heirs, successors, assigns, agents and representatives forever.

(d) This Easement shall be governed by and construed in accordance with all applicable laws and regulations of the State of New York.

(e) The City's rights and obligations pursuant hereto shall terminate upon any transfer, sale or conveyance of the Protected Property(ies) in fee simple to a third party.

(f) The provisions of this Easement are severable and if any court of competent jurisdiction shall render a judgement that any provision hereof is null or void, the effect of said judgement shall be limited to the nullified or voided provision of this Easement and the remaining provisions shall continue in full force of the effect.

(g) This Easement is not transferable without the consent of the Grantor.

(h) This Easement shall not be deemed to create a private right of action on the part of any person or entity, other than the State of New York, or the United States Environmental Protection Agency pursuant to paragraph 6 herein, to enforce the terms and conditions contained herein.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representatives as of the date first above written.

The City of New York

By:_____

ACCEPTED

THE PEOPLE OF THE STATE OF NEW YORK

acting by the through the Department of Environmental Conservation

By:_____

Its: Commissioner

APPROVED AS TO FORM BY STANDARD CLASS AS
OF _____

Date _____

Acting Corporation Counsel of the
City of New York

STATE OF NEW YORK)
 : ss.:
COUNTY OF _____)

On the ____ day of _____ in the year 20__, before me, the undersigned personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

NOTARY PUBLIC, STATE OF NEW YORK

STATE OF NEW YORK)
 ss.:
COUNTY OF ALBANY)

On the ____ day of _____ in the year 20__, before me, the undersigned personally appeared _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual(s) whose name(s) is (are) subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their capacity(ies), and that by his/her/their signature(s) on the instrument, the individual(s), or the person upon behalf of which the individual(s) acted, executed the instrument.

NOTARY PUBLIC, STATE OF NEW YORK

Exhibit 10

DEED OF CONSERVATION EASEMENT

This Deed of Conservation Easement (hereafter referred to as the "Easement" or the "Conservation Easement") is granted on this ____ day of _____ 20__, by _____, ("Grantor"), residing at _____, to The Watershed Agricultural Council of the New York City Watersheds, Inc. ("Grantee"), a not-for-profit corporation organized under the New York State Not-For-Profit Law, having its principal office at 33195 State Highway 10, Walton, New York 13856, for the purpose of conserving the agricultural productivity, water quality benefits, and open space character of the subject property.

Whereas:

- A. The Grantor is the sole Owner in fee simple of the farm property (hereafter referred to as the "Property") legally described in Exhibit A and shown on a certain map entitled, "The Watershed Agricultural Council of the New York City Watersheds, Inc., Conservation Easement Survey", in the matter of acquiring easements on Lands of _____, dated _____ and last revised _____ (hereafter referred to as the "Conservation Easement Survey"), which said maps are to be filed concurrently with the deed for the said conservation easement;
- B. The Property is primarily cropland, improved pasture, unimproved pasture and forest land whose soils are productive and are an important natural resource. The Property is located in the _____ Basin of the New York City watersheds. Furthermore, the Property also contains hydrologically active areas and other special natural features which are particularly important to the protection of the water quality of the New York City ("City") water supply;
- C. Article 14, Section 4 of the New York State Constitution states that "The policy of the state shall be to conserve and protect its natural resources and scenic beauty and encourage the development and improvement of its agricultural lands for the production of food and other agricultural products";
- D. Article 25-AA of the New York Agriculture and Markets Law authorizes the establishment of agricultural districts and states: "The socio-economic vitality of agriculture in this state is essential to the economic stability and growth of many local communities and the State as a whole. It is, therefore, the declared policy of the State to conserve, protect and encourage the development and improvement of its agricultural land for production of food and other agricultural products. It is also the declared policy of the State to conserve and protect agricultural lands as valued natural and ecological resources which

provide needed open spaces for clean air sheds, as well as for aesthetic purposes.”;

- E. The New York Environmental Conservation Law, Article 49, Title 3, authorizes conservation easements which are intended to: "implement the state policy of conserving, preserving and protecting environmental assets and natural and manmade resources, the preservation of open spaces, the preservation, development and improvement of agricultural and forest lands";
- F. The Ad Hoc Task Force of Agriculture and New York City Watershed Regulations Policy Group issued recommendations which resulted in the formation of the Watershed Agricultural Council ("WAC") and the development of the Whole Farm Planning / Best Management Practices Program designed to meet the watershed's water quality objectives and sustain and improve the economic viability of watershed farms;
- G. The Constitution and By-Laws of The Watershed Agricultural Council of the New York City Watersheds, Inc., as amended, includes among its objectives and guiding principles the protection of the New York City water supply, the maintenance of the economic viability of agricultural and forest enterprises and the acquisition of easements to protect sensitive lands, provide economic incentives to farmers for pollution prevention and allow for inter-generational transfer of farmlands and operations;
- H. The New York City Watershed Memorandum of Agreement dated January 21, 1997 authorizes an agricultural easement program and provides "funding for the acquisition of Watershed Agricultural Easements and for Watershed Conservation Easements on non-agricultural lands under common ownership with farms from Property owners who have Whole Farm Plans approved by WAC"; and
- I. The Grantee is a "qualified conservation organization," as defined by the Internal Revenue Code, and a "not-for-profit conservation organization," as defined by the New York Environmental Conservation Law and accepts the responsibility of stewarding and enforcing the terms of this Easement and upholding its conservation purposes.

Now, Therefore, for the reasons given above, and in consideration of _____ Dollars (\$# #) paid, the receipt and sufficiency of which is hereby acknowledged, the Grantor voluntarily grants and conveys to the Grantee, and the Grantee voluntarily accepts, a conservation easement as defined by Article 49, Title 3, of the Environmental Conservation Law consisting of the terms, covenants, rights, restrictions and obligations described herein.

1. CONSERVATION PURPOSES.

This Conservation Easement is intended to protect the water quality of the New York City watersheds, and to protect agricultural and forestry lands by limiting the form, location, and density of development and promoting good stewardship by the implementation of Whole Farm Plans.

2. DEFINITIONS.

- (2.a) **Accessory Buildings and Improvements** – A building or improvement, located within the same Acceptable Development Area(s) as the residential dwelling(s), the use of which is customarily incidental and subordinate to the residence(s). Accessory Buildings and Improvements may include: garages, tool sheds, pool and storage sheds, swimming pools, tennis courts, non-commercial greenhouses, decks, septic fields, wells, and other buildings and improvements customarily incidental to the residence(s).
- (2.b) **Agricultural Buildings and Improvements** – A building or improvement used for farm operations and on-farm production, preparation, storage, and marketing of agricultural commodities as defined under Section 301 of the New York State Agriculture and Markets Law, as amended.
- (2.c) **Baseline Documentation** – The document entitled “Baseline Documentation”, incorporated by this reference, that the Grantor and Grantee mutually agree, as depicted by photographs, maps, and supporting text, describes the general condition of the Property, including buildings and improvements, driveways, Acceptable Development Areas, Resource Protection Areas, and Farm Areas located on the Property as of the date of this Conservation Easement.
- (2.d) **Best Management Practices (BMPs)** – Practices that prevent or reduce the availability, release or transport of substances which adversely affect surface and ground waters. These management practices may have standards associated with their installation, operation or maintenance, but do not impose effluent limits for specific substances.
- (2.e) **Bluestone Extraction Plan** – A plan that provides for the identification and application of resource specific managerial and/or structural Best Management Practices designed to mitigate potential adverse environmental impacts of commercial bluestone mining.
- (2.f) **Commercial Forestry** – The felling of trees equal in volume to more than 5,000 board feet of timber or 15 standard cords during one calendar year on the Easement Property.

- (2.g) **Farm Support Housing** – Farm Support Housing shall consist of apartments, single or multi-family dwellings, or other buildings, including trailers or mobile homes, to be used to house farm tenants, employees, seasonal employees, family members or others engaged in agricultural production on the Property.
- (2.h) **Forest Harvest Plan** - A plan that provides a statement of goals and objectives for a specific commercial timber harvest, including the identification and proposed application of water quality Best Management Practices associated with a specific commercial timber harvest. The plan shall describe the size and timing of a harvest and the management practices necessary to mitigate potential adverse environmental impacts.
- (2.i) **Forest Management Plan** – A written plan that establishes comprehensive and long-term goals for forest health, management of forest resources, and protection of water quality on the Easement Property, which Plan has been reviewed, updated, and approved by the Grantee at least every ten years.
- (2.j) **Grantee** – The term "Grantee" includes the original Grantee and its successor and assigns.
- (2.k) **Grantor** – The term "Grantor" includes the original Grantor(s), his/her heirs, successors and assigns, all future Owners of all or any portion of the Property.
- (2.l) **Incidental Agricultural Buildings and Improvements** – A building or improvement used for, and subordinate to, farm operations including, but not limited to, pump houses, sap storage structures, irrigation equipment, bridges, farm roads, stream crossings, and foot paths.
- (2.m) **Owner** – The term "Owner" includes the owner of any beneficial equity interest in the Property or any portion thereof.
- (2.n) **Recreational Buildings and Improvements** – A building or improvement used for recreational activities that does not include any permanent utilities, and/or septic systems.
- (2.o) **Sound Agricultural Practices** – As defined in Section 308 of the New York State Agriculture and Markets Law, as amended, Sound Agricultural Practices refer to those practices necessary for the on-farm production, preparation and marketing of agricultural commodities. Such

practices shall be evaluated by the Commissioner of Agriculture and Markets, upon request, on a case-by-case basis.

(2.p) **Third Party Enforcement Right** – As defined in Title 3 of Article 49 of the Environmental Conservation Law, the term "Third Party Enforcement Right" means a right which empowers a public body which is not a holder of the Easement to enforce any of the terms of the Easement.

(2.p) **Rural Enterprises** – Rural Enterprises shall include, but not be limited to, farm stands, lawful home occupations, professional home offices, bed and breakfasts, farm machinery and auto repair, saw mills, firewood distribution, campgrounds, home schooling, day care and other educational programs. However, trailer parks, auto dealerships, and golf courses are expressly prohibited on the Property.

(2.r) **Waste** – The term "Waste" includes trash, refuse, debris, domestic septic effluent, sewage, sewage sludge or liquid, garbage, discarded chemicals, radioactive materials, and hazardous or toxic substances as defined by Federal, State or Local law.

(2.s) **Whole Farm Plan** – A Watershed Agricultural Council (WAC) Whole Farm Plan (WFP) is a document that identifies, addresses and mitigates environmental concerns to protect the water resources of the New York City watershed without negatively impacting the economic viability of the agriculture enterprise while integrating farm business objectives into the decision making process.

The Whole Farm Planning Process - A WFP is developed by agricultural/conservation professionals and the participating landowner/producer following WAC policy, guidelines and standard operating procedures. The WFP gives specific consideration to aspects of the farm business that relate to water quality objectives and landowner/producer goals. The WFP addresses water quality issues identified through environmental assessments (Environmental Review/Problem Diagnosis (ERPD) and Agricultural Environmental Management (AEM). The mitigation of these water quality concerns is achieved through the implementation of Best Management Practices (BMPs) consistent with NRCS and/or WAC Standards. The landowner/producer agrees to implement BMPs according to the WFP schedule and shall maintain and operate BMPs for their designated life span. The plan may periodically be updated or otherwise revised and shall remain in effect for any period when WAC either funds or otherwise ensures that funding is secured for Grantor for construction of BMPs. Grantor

must maintain such BMPs in accordance with the Whole Farm Plan and any related contractual obligations.

Funding Restrictions - In the event that the Whole Farm Plan ceases to be funded and all contractual obligations the Grantor may have with respect to BMPs have expired, agricultural uses and activities on the Property shall be consistent with the New York State Environmental Conservation Law (ECL) including, but not limited to, requirements applicable to Concentrated Animal Feeding Operations (CAFOs) under ECL Article 17, Title 7, and with the federal Clean Water Act, 33 U.S.C. § 1251 et seq.

A WFP document can include the following documents, but not limited to:

- Environmental Assessment using the Environmental Review/Problem Diagnosis (ERPD) or Agricultural Environmental Management (AEM)
- RUSLE2 Soil Erosion Assessment, WINPST Pesticide Leaching and Run-off Assessment and other NRCS assessments as required
- Plan narrative and photo documentation (pre and post planning and implementation)
- Nutrient Management Plan
- WFP Summary (Farm Mission, Vision and goals)
- WFP-2 Funding and Scheduling Agreement
- All WAC BMP procurement documentation, i.e. BMP Funding Agreement (WFP-1)
- BMP Operations and Maintenance Agreements (O&M)
- Record of communication with the Landowner/Participant
- BMP designs and completed "as built"
- Annual Status Reviews
- Any contractual obligations that will affect the development and implementation of new and/or revised WFP, i.e. federal programs, easements.

3. USE AREAS.

All uses of the Property shall be consistent with the Conservation Purposes of this Easement.

Permitted uses of the Property vary depending on location. The Property is divided into two general easement areas (Agricultural Conservation Easement Area and the Forestry Conservation Easement Area) and three principal use areas (Acceptable Development Area, and Resource Protection Area, and the Farm Area) described below. The general easement areas and the principal use areas are shown on the Conservation Easement Survey, and in the Baseline Documentation. Agricultural uses and activities on the Property shall be consistent with a current Whole Farm Plan. In the event that the Whole Farm Plan ceases to be funded and Grantor's contractual obligations with respect to BMPs have

expired, use of the Property shall be consistent with the applicable requirements of State and federal law as set forth in with Paragraph (2.s).

- (3.a) **Agricultural Conservation Easement Area (ACEA)** – Within the area identified as ACEA on the Conservation Easement Survey, Grantor has the right to produce crops, livestock and livestock products, to clear land for cultivation or pasture and conduct farm operations as defined under Section 301 of the New York State Agriculture and Markets Law, as amended, which shall be consistent with a Whole Farm Plan, as well as the right to engage in all other uses permitted by this Easement.
- (3.b) **Forest Conservation Easement Area (FCEA)** – Within the area identified as FCEA on the Conservation Easement Survey, Grantor has the right to produce timber and other related forest products, including, but not limited to, firewood, maple syrup, Christmas trees, ginseng, and mushrooms as well as the right to engage in all other uses permitted by this Easement. The confinement or pasturing of livestock, the production of orchards, field crops of any kind or forage for livestock is prohibited within the FCEA. No buildings, except Incidental Agricultural Buildings and Improvements, and Recreational Buildings and Improvements pursuant to Section 4, may be constructed in the FCEA.
- (3.c) **Acceptable Development Area (ADA)** – The area(s) identified on the Conservation Easement Survey, in which single family dwelling(s) and associated Accessory Buildings and Improvements, Farm Support Housing, and buildings and improvements for Rural Enterprises may be constructed. Agricultural Buildings and Improvements, farm operations, and farming practices are permitted within the ADA pursuant to Sections 3.a and 3.b above and the terms of this Conservation Easement. However, no more than 10 commercial campsites shall be allowed in an ADA.
- (3.d) **Future Acceptable Development Area (FADA)** – An area consisting of three acres, the specific location and configuration which shall be determined, prior to any permitted construction, only with prior written approval of the Grantee. The FADA is the area, in which single family dwellings and associated Accessory Buildings and Improvements, Farm Support Housing, and buildings and improvements for Rural Enterprises may be constructed. Agricultural Buildings and Improvements, farm operations, and farming practices are permitted within the FADA pursuant to Section 2.b and the terms of this Conservation Easement. However, no more than 10 commercial campsites shall be allowed in a FADA.

(3.e) **Farm Area (FA)** – The residual area of the Property that is within the Agricultural Conservation Easement Area, excluding the Acceptable Development Area(s) and the Resource Protection Area(s), identified on the Conservation Easement Survey, in which Agricultural Buildings and Improvements, farm operations and farming practices are permitted pursuant to Section 3.a above, Section 4.b, and the terms of this Conservation Easement.

(3.f) **Resource Protection Area (RPA)** – The area identified on the Conservation Easement Survey, which contains unique or special natural features such as streams, wetlands or slopes and supporting buffer lands in which no permanent buildings or improvements, except for Incidental Agricultural Buildings and Improvements may be built. Fences are allowed anywhere within the RPA. Grazing and cultivation is permitted subject to Section 3.a above within those portions of an RPA which lie in the Agricultural Conservation Easement Area. However, the portion of the RPA within twenty-five (25) feet of the top of the bank of a watercourse shall not be plowed, cultivated, or tilled except to reestablish naturally disturbed vegetation. Trees and shrubs along streams and waterways on the Property shall be maintained so far as practicable to assist in achieving long-term water quality standards through nutrient absorption, sedimentation control from runoff and stream channel and bank stability.

4. CONSTRUCTION OF BUILDINGS AND IMPROVEMENTS.

No permanent or temporary buildings or other improvements shall hereafter be placed or maintained on the Property except as provided in accordance with this Section. Existing buildings and improvements are shown in the Baseline Documentation. Trailer parks, auto dealerships, and golf courses are expressly prohibited on the Property.

(4.a) **Fences** – Existing fences may be removed, repaired and replaced, and new fences may be built anywhere on the Property for purposes of reasonable and customary management of livestock and wildlife without further approval of the Grantee.

(4.b) **Agricultural Buildings and Improvements** – Grantor may remove, repair, enlarge, construct, or reconstruct Agricultural Buildings and Improvements within the ADA consistent with the Whole Farm Plan. New Agricultural Buildings, or the enlargement of existing Agricultural Buildings, within the Farm Area are permitted with prior notice to the Grantee to ensure such buildings' construction is not located within the RPA and does not exceed an aggregate total of 5,000 square feet. Grantor may enlarge or construct Agricultural Buildings in the Farm Area greater

than the aggregate 5,000 square foot threshold specified above only with prior approval from the Grantee. Prior to commencing any proposed action where Grantor is required to obtain Grantee's approval hereunder, Grantor shall request such approval in writing and shall provide Grantee with information and plans as may be reasonably necessary for Grantee to evaluate such request. Grantee shall give such approval within 45 days of receipt of Grantor's written request, unless it determines that the proposed Agricultural Buildings and Improvements would be unnecessarily located on productive soils, or would otherwise substantially diminish or impair the agricultural productivity or water quality benefits of the Property. Approval shall be deemed given if no written decision is provided by Grantee within 45 days of receipt of Grantor's written request.

- (4.c) **Residential Dwellings** – Existing residential structures and associated Accessory Buildings and Improvements may be removed, repaired, replaced and enlarged within the ADA. With prior notice to the Grantee, no more than _____ (#) new residential structures and their Accessory Buildings and Improvements may be constructed, provided that such structures and improvements are located within the ADA. Construction of residential structures outside of the ADA is prohibited.
- (4.d) **Farm Support Housing** – Existing Farm Support Housing and associated Accessory Buildings and Improvements may be removed, repaired, replaced and enlarged within the ADA. New Farm Support Housing and associated Accessory Buildings and Improvements and the renovation of existing non-habitable buildings to create Farm Support Housing is permitted within the ADA only with the prior written approval of the Grantee. If the Farm Support Housing is no longer needed for that purpose, the buildings may continue in residential use. Construction of Farm Support Housing outside of the ADA is prohibited.
- (4.e) **Rural Enterprises** – Existing Rural Enterprise buildings and improvements may be removed, repaired, replaced and enlarged within the ADA. New Rural Enterprise buildings and improvements and the renovation of existing non-habitable buildings to create Rural Enterprise buildings is permitted within the ADA only with the prior written approval of the Grantee. Construction of Rural Enterprise buildings outside of the ADA is prohibited.
- (4.f) **Recreational Uses** – Use of the Property for rural recreational uses is permitted anywhere on the Property. These uses may include, but are not limited to, hunting, fishing, trapping, skiing, snowmobiling, horseback riding, hiking, and non-commercial camping. Golf courses,

commercial recreational uses involving motorized vehicles, and commercial camping outside the ADA(s) is prohibited on the Property. The construction of buildings and improvements for recreational uses are allowed anywhere on the Property, with the exception of the RPA, and shall not be improved by permanent utilities. An aggregate 1,000 square feet of recreational buildings is permitted, with prior notice to Grantee. Construction or conversion of buildings over the 1,000 square foot aggregate, up to a maximum 5,000 square foot aggregate, is permitted only with advance written approval of the Grantee.

- (4.g) **Towers and Communication Devices** – Communication towers or devices, wind turbines, satellite or television antennae or such similar equipment may be placed on the Property, subject to applicable governmental approval, but only in a manner consistent with the Conservation Purposes of this Easement and with prior written approval of Grantee if such devices or equipment is located outside of the ADA.

5. SUBDIVISION.

Subdivision of the Property and conveyance of any such subdivided parcel is prohibited except as set forth below.

In order to facilitate effective easement stewardship, no more than _____ (#) additional tax parcels may be created by subdivision of the Property. Such subdivided parcels may be conveyed only with prior written approval of the Grantee, upon compliance with the following conditions:

(5.a) Grantor has demonstrated that the proposed subdivision is consistent with the Conservation Purposes of this Easement and will not substantially diminish or impair the agricultural, forestry or water quality values of the Property.

(5.b) Such subdivided parcels shall remain subject to the terms and conditions set forth in this Easement. The size (square foot) limitations for structures, and the number of subdivisions set forth in this Easement shall be reallocated at the time of the proposed subdivision or conveyance, in a manner to be reviewed and approved by Grantee and set forth in the Deed of each new subdivided parcel. At the discretion of the Grantee, a functionally and materially equivalent Deed of Conservation Easement may be recorded at the time of conveyance.

(5.c) The deed(s) of conveyance of all such subdivided parcels shall contain a metes and

bounds description of the subdivided parcel(s) prepared by a licensed professional land surveyor at Grantor's sole cost, which description shall have been reviewed and approved by Grantee prior to conveyance of the subdivided parcel(s).

(5.d) All costs resulting from the subdivision of the Property and conveyance of subdivided parcels, including but not limited to reasonable Grantee and associated staff time, including but not limited to time expended on legal review of documents and updating of baseline documentation, are to be borne by Grantor.

Any further subdivision of the Property and/or conveyance of newly subdivided parcels, beyond that provided for above, may be permitted at the sole discretion of the Grantee in compliance with its current subdivision approval policies and with the Conservation Purposes of this Easement.

6. DEVELOPMENT RIGHTS.

The development rights hereby conveyed to Grantee shall include all development rights except those specifically reserved by Grantor herein and those reasonably required to carry out the Conservation Purposes of this Easement. Grantee shall transfer such development rights only to a qualified organization in compliance with the laws of the State of New York and the regulations established by the Internal Revenue Service governing such transfers.

7. CONSERVATION AND FARMING PRACTICES.

Grantor and Grantee recognize that changes in economic conditions, in agricultural technologies, in accepted farm and ranch management practices, and in the operations of Grantor may result in an evolution of agricultural uses of the Property. Grantor shall retain the discretion to employ any farm uses and management practices provided all agricultural activities are considered Sound Agricultural Practices pursuant to Section 308 of the New York State Agriculture and Markets Law ("Section 308"), as amended, and are consistent with a current Whole Farm Plan as described herein in Section 2.s for the Property or its equivalent, and comply with the terms of this Easement. Any activity which is deemed by Grantee not to comply with either Section 308, the Whole Farm Plan, or this easement, shall be immediately discontinued unless and until approved by Grantee as part of the Whole Farm Plan.

8. FOREST MANAGEMENT.

Trees may be cut to control insects, disease and invasive species, to enhance wildlife habitat, to

prevent personal injury and property damage, and for other domestic uses, including firewood and construction of permitted buildings and fences on the Property. The application of pesticide and fertilizer shall be prohibited unless: (i) such use is necessary for forest management; and (ii) such use is in compliance with an approved Forest Management Plan for the Property; and (iii) Grantee has approved such use; and (iv) such use is consistent with the terms of this Easement. Any and all Commercial Forestry activities shall require a Forest Management Plan and a Forest Harvest Plan, approved by WAC or its successor pursuant to Section 14 of this Easement, submitted at Grantor's sole cost, and consistent with the New York City Department of Environmental Protection's "*Water Quality Guidelines for Timber Harvesting*" or such successor standard approved by Grantee. In the event that Grantor submits a Forest Management Plan and/or a Forest Harvest Plan to Grantee for approval, and Grantee (or its successor pursuant to Section 14 of this Easement) notifies the Grantor in writing that it has no program to approve such a Plan or Plans, Grantor may undertake Commercial Forestry activities so long as the activities are conducted consistent with the NYSDEC Forest Management Stewardship Plans and in accordance with the technical standards set forth in the New York State Department of Environmental Conservation's "Best Management Practices for Water Quality" field guide or such successor standards.

9. MINING.

Except as may be reasonably necessary to carry out the uses permitted on the Property under the terms of this Easement, the exploration for, or development and extraction of, soil, sand, gravel, rock, oil, natural gas, fuel or any other mineral substance by any surface mining method or any other method is prohibited with the exception of bluestone extraction undertaken with written approval of the Grantee.

Prior to commencing any commercial bluestone mining, Grantor, at their sole cost, shall submit a Bluestone Extraction Plan following the guidelines described in the City's "*Water Quality Protection Guidelines for Bluestone Quarrying*" or such successor standard approved by Grantee. Prior to commencing any commercial bluestone mining, such plan shall be reviewed and approved by Grantee.

10. WATER RESOURCES.

Grantor may use, maintain, establish, and construct, water sources, water courses, and water bodies, including ponds, on the Property for the uses permitted by this Easement, provided that Grantor does not significantly impair or disturb the natural course of the surface water drainage or runoff flowing over the Property. Grantor may alter the non-channelized, natural flow of water over the Property in order to improve drainage of agricultural or forest soils, reduce soil erosion, or improve the agricultural or forest management potential of the Property, provided such alteration is consistent with the purposes of this

Easement and is carried out consistent with the Whole Farm Plan.

Any stream work, including but not limited to, gravel removal, streambank or bed disturbance or stabilization, or bridge and culvert construction, shall only be undertaken with prior approval of the Grantee, except for emergency work resulting from natural events beyond the control of the Grantor, such as the need to restore transportation routes, maintain farm operations, and to protect health, safety, and property.

11. IMPERVIOUS SURFACES AND ROAD CONSTRUCTION.

Except for roads, driveways, barnyards, lanes or other improvements constructed within the ADA or consistent with the provisions of a current Whole Farm Plan, no portion of the Property shall be paved or otherwise be covered with concrete, asphalt, or any other impervious paving material. Logging roads are allowed so long as they are consistent with a Forest Harvest Plan. The location and construction of impervious surfaces and roads shall be implemented, in so far as practicable, to avoid substantially diminishing or impairing the agricultural productivity or water quality benefits of the Property.

12. DUMPING, STORAGE AND APPLICATION OF WASTE.

Except as permitted herein, the dumping, storage, application, land filling, or accumulation of any kind of Waste in, on or upon the Property is prohibited.

The routine containerized storage of household trash and garbage is permitted only if stored for purposes of eventual transport off site for proper disposal. The storage and treatment of sewage by an individual subsurface sewage treatment system servicing residential dwellings, Farm Support Housing and other buildings used for rural enterprises allowed under this Easement is permitted only within the ADA, or with prior written approval of Grantee if located outside of the ADA.

The routine storage or accumulation of farm related building debris and other farm related refuse or equipment generated or used on the property, that does not substantially diminish or impair the agricultural or forest productivity or water quality of the Property, is permitted only within the ADA and/or the FADA, or with prior written approval of Grantee if located outside of the ADA and/or the FADA.

The application in, on or upon the Property of domestic septic effluent and/or municipal, commercial, or industrial sewage sludge or liquid for agricultural production purposes is prohibited without the prior written approval of Grantee. Any approved application shall be undertaken only if compliant with

applicable law and consistent with the Whole Farm Plan.

13. RIGHTS-OF-WAY

No rights-of-way, easements of ingress or egress or utility easements shall be granted or developed, on, over, under or across the Property without prior written approval of Grantee.

14. APPROVAL OF GRANTEE.

This Section shall not apply to approvals required under Section 4.b Agricultural Buildings and Improvements.

Prior to commencing any proposed action, including Commercial Forestry, where Grantor is required to obtain Grantee's approval hereunder, Grantor shall request such approval in writing and shall provide Grantee with information and plans as may be necessary for Grantee to evaluate such request, Grantee reserves the right to request additional information as may be required for the evaluation. Grantor's request shall be deemed approved if no written response is provided by Grantee within 45 days of the receipt of the request for approval. Written response from the Grantee may include, but is not limited to, a requirement that Grantor submits to Grantee additional information to evaluate the request. Grantee may approve the request, approve with conditions, or deny the request. Grantee's approval shall be conditioned so that the approval is consistent with the Conservation Purposes of this Easement and will not substantially diminish or impair the agricultural, forestry, or the water quality values of the Property.

15. RIGHTS RETAINED BY GRANTOR.

As Owner of the Property, Grantor retains the right to perform any act not specifically prohibited or limited by this Easement and that is consistent with its Conservation Purposes. These ownership rights include, but are not limited to, the right to exclude any member of the public from trespassing on the Property and the right to sell or otherwise transfer the Property, subject to the Easement, to anyone they choose.

16. INDEMNIFICATION.

Other than as specified herein, this Easement is not intended to impose any legal or other responsibility on the Grantee, or in any way to affect any existing obligation of the Grantor as Owner of the Property.

However, if Grantee is ever required by a court to pay damages resulting from personal injury or property damage that occurs on the Property, the Grantor shall indemnify and reimburse the Grantee for these payments, as well as for reasonable attorneys fees and other expenses of defending itself,

unless due in whole or in part to the negligence of the Grantee or its agents, in which case liability shall be apportioned accordingly.

17. REAL PROPERTY TAXES.

(17.a) Grantor agrees, pursuant to Article 25-AA of the New York State Agriculture and Markets Law, to apply annually for an agricultural assessment on any lands subject to this Easement which are eligible for and have received in any year an agricultural assessment. Grantor agrees to timely file the appropriate application with each assessing unit on forms proscribed by the State Board of Real Property Services and shall furnish the tax assessor such information as the State Board of Real Property Services shall require. Copies of such applications and of any confirmation of the approval of the application for an agricultural assessment shall be provided to the Grantee upon request.

(17.b) Notwithstanding the preceding paragraph, Grantor shall not be required to file an application for an agricultural assessment on any lands subject to this Easement provided that Grantor demonstrates that an agricultural assessment made on such lands pursuant to Article 25-AA would be higher than the assessment made on such lands pursuant to the New York State Real Property Tax Law. Grantor agrees to make such a demonstration to Grantee, upon request.

18. BASELINE DOCUMENTATION.

The conservation values, various use areas and the current use, size, location and condition of improvements of the Property are described in a Baseline Documentation Report (the "Report"). Grantor and Grantee have copies of the Report, and acknowledge that the Report is accurate as of the date of this Easement. The Report may be used by Grantee to establish that a change in the use or character of the Property has occurred, but the report shall not preclude the use by Grantee of other evidence to establish the condition of the Property as of the date of this Easement.

19. MONITORING.

Upon reasonable notice to Grantor, Grantee shall have the right to enter the Property, exclusive of residential dwellings, for the purpose of monitoring the Property. This may include maintaining Farm Easement (All Use Areas) boundary lines, determining whether the provisions of this Easement are being observed, and/or enforcing provisions of this Easement. If Grantee identifies activities or practices that it believes may cause or contribute to violations of State water quality standards during an inspection of the Property, Grantee shall notify the State Department of Environmental Conservation

of such activities or practices. Grantee shall also have the right to monitor the Property, exclusive of residential dwellings, at any time, without prior notice, if Grantee has reasonable cause to believe the provisions of this Easement have been or are being materially violated. However, under all circumstances, Grantee will make its best efforts to notify the Grantor in advance.

20. BINDING DISPUTE RESOLUTION.

If a dispute arises between the Grantor and Grantee concerning the consistency of any proposed use or activity with the purposes of this Easement or any of the specific provisions contained herein, and Grantor agrees not to proceed with the use or activity pending resolution of the dispute, either party may request a meeting between the parties, or refer the dispute to binding arbitration by requesting in writing that NYSDEC appoint an Administrative Law Judge ("ALJ") to act as an Arbitrator to conduct the arbitration and issue a binding determination. The ALJ shall conduct the arbitration under the version of the AAA Commercial Dispute Resolution Procedures Expedited Procedure Rules then in effect. The party seeking arbitration shall provide simultaneous notice to the other party by overnight mail and fax of such request. The request shall state with particularity the nature of the issue in question. Each party will bear its own costs, including half of any costs assessed by NYSDEC for the ALJ's time and expenses. The parties agree that the decision of the ALJ is binding upon the parties.

21. ENFORCEMENT.

In the event a violation or imminent violation of this Easement occurs, Grantee shall immediately notify the Grantor to request that the activity cease and arrange a site visit to mutually resolve the situation to the satisfaction of both parties.

If the Grantor ceases the activity in violation, but is unwilling or unable to cure any violation within ten (10) calendar days after the Grantee's initial site visit, Grantee shall send Grantor a written notice of non-compliance, which shall notify Grantor of the violation and the measures reasonably calculated to cure such violation or imminent violation. Grantor shall have twenty (20) calendar days from the date the Grantor receives such notice, or such other period Grantee may deem appropriate, to cure the conditions constituting the violation. In the event the Grantor fails to cure the violation within the aforementioned twenty (20) calendar days or period designated by Grantee, Grantee shall seek to enforce such other legal and/or equitable remedies as Grantee deems necessary to ensure compliance with the terms and purposes of this Easement.

In the event that the Grantor refuses to cease such activity or agree to a site visit, or when Grantee

determines that a violation or imminent violation could substantially impair the purposes of this Easement, or that an imminent or immediate threat to the City's drinking water supply exists, Grantee may seek an injunction to stop it, temporarily or permanently. If a court with jurisdiction determines that a violation may exist or has occurred, the court may also issue an order requiring the Grantor to restore the Property to its condition prior to the violation.

In any case where a court finds that a violation has occurred, the Grantor shall reimburse the Grantee for all its expenses incurred in stopping and correcting the violation, including but not limited to reasonable attorney's fees. The failure of the Grantee to discover a violation or to take immediate legal action shall not bar it from doing so at a later time.

22. THIRD PARTY ENFORCEMENT.

The City of New York, the New York State Attorney General and their successors shall have the right to enforce a material breach of this Easement subject to the following provisions:

(22.a) Prior to commencing an enforcement action in a court of competent jurisdiction, the City of New York, or the New York State Attorney General must first notify Grantee and Grantor, give Grantee sixty (60) days to take appropriate action, including commencing an enforcement action, and give Grantor sixty (60) days from the receipt of such notice to cure the breach.

(22.b) If Grantee is diligently prosecuting an enforcement action, in either an administrative or judicial proceeding, the City of New York, or the New York State Attorney General shall not have a right to prosecute an action for the same breach of this Easement.

(22.c) Nothing contained herein shall be construed as providing the New York State Attorney General with the right to physically inspect or otherwise enter the Property.

(22.d) The City and its duly authorized agents, employees and representatives shall have joint access to the Property in order to monitor and/or maintain boundaries, to determine compliance with and/or enforce the terms of this Easement in the following instances: (i) the City shall have the right to jointly inspect the Property with Grantee, during any of Grantee's inspections; (ii) notwithstanding the above, the City shall have the right to inspect the Property subject to the Easement without Grantee, when the City determines that an imminent or immediate threat to the City's drinking water supply exists, or where a Grantor may be violating this Easement

through gross or willful negligence and the City has been unable, after good faith efforts, to provide notice to Grantee of such threat or violation, or in the event that Grantee is unable or unwilling to inspect the Property.

23. ACTS BEYOND GRANTOR'S CONTROL.

This Easement shall not be construed to entitle Grantee to bring any legal action against Grantor for any injury to or change in the Property resulting from natural events beyond the control of the Grantor.

Such natural events include fire, flood, storm, war, judicial intervention, strike, insurrection, radioactive fallout, earthquake, landslide or Acts of God, or from any prudent action taken by Grantor under emergency conditions to prevent, abate, or mitigate significant injury to the Property resulting from such causes.

24. TRANSFER OF EASEMENT.

Grantee agrees to notify Grantor in writing at least thirty (30) days in advance of the transfer of this Easement to another conservation organization as further described in this Section. Grantee and the Grantor agree that this Easement may be transferred by Grantee to a "Qualified Organization" under Section 170(h) of the U.S. Internal Revenue Code, and under the New York State Environmental Conservation Law, and only if the agency or Organization expressly agrees to assume the responsibilities imposed on the Grantee by this Easement and only with prior written approval from the City.

If, at any time, Grantee becomes incapable of ensuring, or unwilling to ensure, compliance with the terms of this Easement, or if Grantee shall cease to exist as an entity qualified to hold conservation easements, then its rights and responsibilities shall become vested in and devolve upon a Qualified Organization, provided such Organization shall accept in writing this Easement, and provided such Organization enters into a written agreement with the City pursuant to which such Organization assumes and ensures all duties of Grantee described herein, are performed. If no Qualified Organization can be identified that meets the above criteria, the Grantee's rights and responsibilities shall become vested in and devolve upon the City. In selecting the Qualified Organization to which this Easement may be transferred under this Section, preference shall be given to, and a reasonable effort will be made to assign this easement to a local Organization.

25. TRANSFER OF PROPERTY.

In order to facilitate the stewardship of this Easement and to ensure adequate communication, Grantor agrees to notify Grantee of any conveyance, lease, subdivision or transfer of the Property or any portion thereof, such notice to be given in writing at least thirty (30) days in advance of such conveyance, lease, subdivision or transfer. Any such conveyance, lease, subdivision or transfer shall expressly refer to this Deed of Conservation Easement and shall be made subject to the terms of this Easement.

26. WAIVER OR AMENDMENT.

This Easement may not be materially amended without the written consent of the Grantee, Grantor, and the Attorney General. Any other amendment, modification or waiver will require the written consent of the Grantee and Grantor. Any amendment, modification, or waiver shall be consistent with the purposes of this Easement and shall comply with Section 170(h) of the Internal Revenue Code, or any regulations promulgated in accordance with that section. Any such amendment shall also be consistent with the Environmental Conservation Law or any regulations promulgated pursuant to that law.

27. TERMINATION OF EASEMENT.

If it determines that conditions on or surrounding the Property change so much that it becomes impracticable to fulfill its Conservation Purposes, a court with jurisdiction may, at the joint request of Grantee, Grantor, the Attorney General and the City, terminate the Easement created by this Deed. If condemnation of a part of the Property or of the entire Property by public authority renders it impossible to fulfill all of the Conservation Purposes, the Easement may be terminated through condemnation proceedings with notice from the public authority to Grantee, Grantor, the Attorney General, and the City. If the Easement is terminated and the Property is sold or taken for public use, then, as required by Internal Revenue Service regulations, the Grantee shall be entitled to *number* percent (##%) of the gross sale proceeds or condemnation award which is equal to the ratio of the appraised value of this Easement to the unrestricted fair market value of the Property, as this ratio is determined on the date of this Easement. The Grantee shall use the proceeds consistent with the Conservation Purposes of this Easement.

28. OTHER LAWS AND REGULATIONS IN EFFECT.

This Easement does not relieve the Grantor from any obligation to comply with any applicable ordinances, laws, regulations and/or permit requirements of any competent governmental or regulatory body, including but not limited to the City of New York, its successors or assigns. This Easement shall

not be construed to limit or modify the regulatory authority of the City. In addition to any restrictions or requirements set forth in this Easement, Grantor must apply for and conform to any and all permits in the manner set forth in any applicable law or regulation.

29. FILTRATION NOT TO DEFEAT PURPOSE OF EASEMENT.

Filtration or other treatment of all or any portion of the water supply this Easement seeks to protect, now or in the future, shall not be deemed to defeat the purpose, terms or enforcement of this Easement.

30. INTERPRETATION.

This Deed shall be interpreted under the laws of New York, resolving any ambiguities and questions of the validity of specific provisions so as to give maximum effect to its Conservation Purposes.

31. DURATION AND BINDING EFFECT.

The Easement created by this Deed shall be a servitude running with the land and shall bind and be enforceable against the Grantor and all future Owners. Every provision of this Easement that applies to the Grantor or Grantee shall also apply to their respective agents, heirs, executors, administrators, assigns, and all other successors as their interests may appear.

32. FURTHER COVENANTS.

In the event the execution and delivery by Grantors of any additional document or instrument is necessary or desirable to qualify or perfect this Easement as a conservation easement authorized under Title 3, Article 49, of the Environmental Conservation Law, Grantors shall promptly execute and deliver to Grantee such instrument or other documents as the Grantee may reasonably request.

33. NOTICES.

Any notices required by this Easement shall be in writing and shall be personally delivered or sent by certified mail, to Grantor and Grantee respectively at the following addresses, unless a party has been notified by the other of a change of address:

To Grantor:

[Legal Address]

To Grantee:

Watershed Agricultural Council
33195 State Highway 10
Walton, New York 13856-9751
Attn: Easement Program Manager

34. SUBSEQUENT LIENS ON PROPERTY.

No provisions of this Deed of Conservation Easement should be construed as impairing the ability of Grantor to use this Property as collateral for subsequent borrowing, provided that any mortgage or lien arising from such a borrowing would be subordinated to this Deed of Conservation Easement.

35. ESTOPPEL CERTIFICATES.

Upon request by Grantor, Grantee shall within thirty (30) days execute and deliver to Grantor, or to any party designated by Grantor, any document, including an estoppel certificate, which certifies, to the best of the Grantee's knowledge, Grantor's compliance with any obligation of Grantor contained in this Easement or otherwise evidences the status of this Easement. Such certification shall be limited to the condition of the Property as of Grantee's most recent inspection. If Grantor requests more current documentation, Grantee shall conduct an inspection, at Grantor's expense, within thirty (30) days of receipt of Grantor's written request therefore.

36. SEVERABILITY.

If any portion of this Easement is found invalid, the remainder of the provisions of this Easement shall not be affected.

37. ACCEPTANCE.

As attested by the signature of the Chair of The Watershed Agricultural Council of the New York City Watersheds, Inc., the Grantee hereby accepts without reservation the rights and responsibilities conveyed by this Deed of Conservation Easement.

To Have and To Hold, this Deed of Conservation Easement unto the Grantee, its successors and

assigns.

In Witness Whereof, the Grantor and Grantee, intending to legally bind themselves, have set their hands on the date first written above.

Grantor

Landowner Name

Grantee

Frederick W. Huneke, Chair

The Watershed Agricultural Council of the New York City Watersheds, Inc.

ACKNOWLEDGMENTS

State of New York)

County of _____), ss:

On the _____ day of _____ in the year 20__ before me, the undersigned, a Notary Public in and for said State, personally appeared, **Landowner Name**, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he/she executed the same in his/her capacity, and that by his/her signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public

State of New York)

County of _____), ss:

On the _____ day of _____ in the year 20__ before me, the undersigned, a Notary Public in and for said State, personally appeared, _____, personally known to me or proved to me on the basis of satisfactory evidence to be the individual whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his capacity, and that by his signature on the instrument, the individual, or the person upon behalf of which the individual acted, executed the instrument.

Notary Public

Exhibit A
Legal Description

Exhibit 11

REAL PROPERTY TAX LAW

ARTICLE 5. ASSESSMENT PROCEDURE

TITLE 4-A. ASSESSMENT AND TAXATION OF WATERSHED CONSERVATION EASEMENTS AND WATERSHED AGRICULTURAL EASEMENTS ACQUIRED BY OR ON BEHALF OF THE CITY OF NEW YORK FOR WATERSHED PROTECTION PURPOSES

§ 583. Definitions

As used in this title:

1. "City" means the city of New York.
2. "Tax", "taxes" and "taxation" mean a charge imposed on real property by or on behalf of a county, city, town, village, or school district for municipal or school district purposes, and any special ad valorem levy or special assessment.
3. "Watershed agricultural easement" means a watershed conservation easement which allows the land subject to such easement to be utilized in agricultural production.
4. "Watershed conservation easement" means an easement, covenant, restriction or other interest in real property purchased by or on behalf of the city of New York [on or before December thirty-first, two thousand sixteen] that is located in those areas of the counties of Delaware, Dutchess, Greene, Putnam, Schoharie, Sullivan, Ulster and Westchester located in the watershed of the New York city water supply, created under and subject to the provisions of article forty-nine of the environmental conservation law which, for the purpose of maintaining the open space, natural condition, or character of the real property in a manner consistent with the protection of water quality generally and the New York city water supply specifically, limits or restricts development, management or use of such real property.

§ 584. Taxation of watershed conservation easements and watershed agricultural easements

Any watershed conservation easement shall be subject to taxation for all purposes except as hereafter provided. A watershed agricultural easement shall be subject to taxation as provided in section five hundred eighty-five of this title. The procedures set forth in this title shall govern the levy and payment of taxes on watershed conservation easements and watershed agricultural easements.

§ 585. Taxation or exemption of watershed agricultural easements

1. Any watershed agricultural easement acquired before January first, two thousand eleven shall be exempt from taxation on any assessment roll on which the land subject to the easement qualifies for and receives an agricultural assessment pursuant to article twenty-five-AA of the agriculture and markets law.

2. Any watershed agricultural easement which burdens land which does not receive an agricultural assessment pursuant to article twenty-five-AA of the agriculture and markets law or which is acquired on or after January first, two thousand eleven shall be subject to taxation for all purposes. The taxes levied on such easement shall be levied as provided in this title.

§ 586. Assessment of watershed conservation easements and watershed agricultural easements

1. Upon acquisition of a watershed conservation easement or a watershed agricultural easement, there shall be determined an allocation factor applicable to each parcel subject to such easement. The allocation factor shall be the portion of the value of each parcel which the easement represents, expressed as a percentage. This percentage shall be a fraction, the numerator of which is the fair market value of the easement as finally determined by the city's independent appraisal and the denominator of which is the fair market value of the land subject to the easement, exclusive of improvements and unencumbered by the easement, as finally determined in the city's independent appraisal. The city shall forthwith certify each such allocation factor to the appropriate assessing unit and to the owner of the land subject to the easement. The city shall supply to the assessing unit and the state board the following information used in conjunction with the acquisition of the easement:

(a) the fair market value of the easement as finally determined in the city's independent appraisal;

(b) the fair market value of the land subject to the easement exclusive of improvements and unencumbered by the easement as finally determined in the city's independent appraisal;

(c) the fair market value of each improvement, on the land subject to the easement, as finally determined by the city's independent appraisal;

(d) the name and address of the owner;

(e) the location of the parcel including the tax map parcel designation;

(f) the date the easement was acquired; and

(g) such other information as the assessor may subsequently require for assessment purposes.

2. The assessment of a watershed conservation easement or watershed agricultural easement shall be determined by multiplying the allocation factor for that easement as computed in subdivision one of this section by the assessment determined by the assessor for the land subject to such easement exclusive of the improvements thereon. After subtracting the assessment for each watershed conservation easement or watershed agricultural easement from the parcel's total assessment, the remaining assessment shall be entered on the assessment roll as taxable to the owner of the property. Each watershed conservation easement or watershed agricultural easement, whether it encumbers the entire parcel or only a portion thereof, shall be entered as a separate parcel on the taxable portion of the assessment roll and shall be assessed in the name of the city of New York.

3. Not later than twenty days prior to the date provided by law for the completion of the tentative assessment roll in any assessing unit in which watershed conservation easements or watershed agricultural easements are subject to taxation, but in no event any earlier than the taxable status date for such roll, the assessor shall notify the city of the amount of the assessments of such easements and the amount of the assessments of the lands subject to such easements. In the case of a village which has enacted a local law as provided in subdivision three of section fourteen hundred two of this chapter, the town or county assessor, who prepared a copy of the applicable part of the town or county assessment roll

for village tax purposes, shall also notify the city of the amount of the assessments of such easements and the amount of the assessments of the lands subject to such easements located within the village.

4. The city and the owner of the burdened parcel shall each be a person aggrieved by the assessment of the parcel or parcels burdened by watershed conservation easements or watershed agricultural easements for the purpose of seeking administrative and/or judicial review of such assessments. Whenever the city or property owner seeks administrative or judicial review of the assessment of the land subject to such easement, the party seeking review shall provide a copy of the complaint or petition to the other party with an interest in the parcel subject to the easement within twenty days of the filing of a complaint or the service of a petition. The noncomplaining party (owner or city) shall be deemed a party to the proceeding with full rights to participate and bound by the determination of such proceeding.

5. (a) Where a watershed conservation easement or agricultural conservation easement is acquired:

- (i) On a parcel of property which is otherwise fully exempt from taxation, the assessor shall determine the taxable [assessment] assessed value of the easement by multiplying the allocation factor by the total assessed value of the land; or
- (ii) On a parcel of property which is partially exempt from taxation, the assessor shall determine the taxable [assessment] assessed value of the easement by multiplying the allocation factor by the total assessed value of the land; or
- (iii) On a parcel of property which is partially exempt from taxation, the taxable assessed value of the burdened parcel shall be calculated by pro-rating the partial exemption in the same proportion as the allocation factor. The owner of the burdened parcel shall be entitled to the pro-rated portion of the exemption.

(b) The provisions of this subdivision shall not apply to [parcels receiving an agricultural assessment pursuant to article twenty-five-AA of the agriculture and markets law] watershed agricultural easements as described in subdivision one of section five hundred eighty-five of this title or to parcels burdened by such easements.

[6. Whenever a watershed conservation easement or watershed agricultural easement encumbers only a portion of a parcel, the assessor shall henceforth enter that portion of the parcel encumbered by such easement as a separate parcel on all subsequent assessment rolls.]

7. Whenever a watershed conservation easement or watershed agricultural easement encumbers a parcel containing improvements, those improvements shall be separately assessed in the name of the owner thereof.

§ 587. List of watershed conservation easements and watershed agricultural easements

The city shall annually transmit to the state board, to the assessors of each assessing unit in which the city has acquired watershed conservation easements and watershed agricultural easements, and to town or county assessors, who prepare a copy of the applicable part of the town or county assessment roll for village tax purposes as provided in subdivision three of section fourteen hundred two of this chapter, for each such village in which such easements have been acquired, a list of all such easements therein. Such list shall be used by the assessors in preparing the assessment roll or, for village tax purposes the copy of the applicable part, and shall include the appropriate allocation factor or factors,

and each such easement shall be entered as a separate parcel on the tentative assessment roll by the assessor.

§ 588. Payment of taxes on parcels subject to a watershed conservation easement or watershed agricultural easement

1. The city shall pay taxes levied on watershed agricultural easements and watershed conservation easements pursuant to the foregoing sections of this title in the same manner as any other taxes levied upon real property.

2. Payment of taxes by the owner of a parcel burdened by a watershed conservation easement or watershed agricultural easement made taxable pursuant to this title based upon the assessment of the parcel without consideration of that easement shall entitle that owner to a refund pursuant to section five hundred fifty-six of this article, equal to any taxes payable by the city upon such easement. Such owner shall present the certificate issued pursuant to this section and proof of payment to the tax levying body.

§ 589. Change in allocation factor

[1. The allocation factor determined in subdivision one of section five hundred eighty-six of this title shall remain in effect for at least twenty years from the date it is initially certified to the assessing unit.]

2. At any time after [twenty years from the date] the allocation factor is initially certified to the assessing unit, upon the request of the city or the owner of the parcel burdened by the easement, the office of real property services may compute and certify a new allocation factor based on a change in circumstances. A request for a review of the allocation factor shall be made by submitting to the state board (a) a written request by the landowner, (b) a written request by the city setting forth the claimed change in circumstances, (c) a written stipulation entered into by the city and the landowner setting forth the new allocation factor, or (d) an appraisal or appraisals performed by a licensed real estate appraiser within one year of submission setting forth the current fair market value of the easement and the current fair market value of the land subject to the easement exclusive of improvements and unencumbered by the easement. The state board shall define the changes in circumstances required to change the allocation factor. The party seeking the change in allocation factor shall provide copies of the appraisals and written request to the other party.

3. If one party objects to a change in the allocation factor, the party may submit the appraisals specified in subdivision two of this section within ninety days of receipt of the other parties' appraisal or written request.

4. The office of real property services shall review the materials submitted and issue a current allocation factor determined by the materials submitted.

5. If judicial review is sought to challenge a determination under this section, the action shall be commenced in the county in which the real property is located.

§ 589-a. Authority to promulgate rules

In addition to any other authority conferred upon the state board by statute, the state board is hereby authorized to promulgate rules and mandate the use of forms to implement the provisions of this title.

Exhibit 12

City's Water Conservation Program dated December, 2006 with Annual Updates through June, 2010

December, 2006 Water Conservation Plan.....	Page 2
Annual Update, June 2007.....	Page 56
Annual Update, June 2008.....	Page 86
Annual Update, June 2009.....	Page 92
Annual Update, June 2010.....	Page 121

Water Conservation Program

**New York City Department of Environmental Protection
59-17 Junction Blvd.
Flushing, NY 11373**

December 2006



Table of Contents

Introduction and Summary	2
The Water and Wastewater Systems.....	4
System Demand	16
Water Rate Structure	21
Master Meters	21
Customer Meters	22
Meter Reading.....	22
Meter Repair/Replacement Program.....	23
Distribution Leak Detection, Pipe Repair and Replacement.....	26
Fixture Replacement and Customer Centered Programs	28
Outdoor Water Use Reduction.....	30
Educational Campaign Program to Encourage Water Conservation Behavior.....	32

Appendix Volume

List of DEP Piping by Size and Type
RCNY Chapter 21: Drought Emergency Rules
RCNY Chapter 20: Water Use Rules (Current Version)
RCNY Chapter 20: Proposed Revisions to Water Use Rules

Introduction and Summary

This report is a detailed description of past and current water conservation efforts by the New York City Department of Environmental Protection (“DEP”). The report will update program progress during the past year, including both accomplishments and shortfalls, and describe activities that are being planned or considered for the future. The report will be updated annually and issued to the New York State Department of Environmental Conservation (“DEC”) and the public on June 1 of each year.

DEP’s policy and experience is that saving water is usually the most cost-effective and environmentally benign method of insuring an ample supply of water for the region and that conservation methods are to be used whenever they are cost effective and do not conflict with other important goals.

The city’s water conservation programs address the many sources of water use and waste and have been developed in cooperation and collaboration with regulators, NGO’s and the citizens and businesses of the city over a period of more than 20 years.

With the city’s population expected to rise to 9.1 million by 2030, from 8.3 million in 2005, water efficiency will continue to have an important role to play, not just to help assure supply but also to assist in meeting goals to reduce combined sewer overflows, maintain wastewater quality and meet nitrogen removal goals.

DEP’s program has addressed improved water efficiency in the distribution system and at the end use:

- Each year DEP surveys approximately 4,000 miles (or 59% in FY06) of the distribution piping for leaks, repairing leaks which prevented the continued loss of 5.5 MGD in FY06. The entire city is on a three-year survey schedule while the drainage areas for the Wards Island, Newtown Creek and North River Wastewater Treatment Plants are on a nine-month schedule. This area of concentrated attention covers all of Manhattan, half of the Bronx and about one-quarter of Brooklyn. This leak detection survey program is in addition to repairs of leaks from customer complaints. Leaks discovered through complaint repairs totaled 39.36 MGD for FY06. The leak detection program has brought the distribution system leak rate to about 10-15% of what it was in the 1980’s.
- Each year DEP replaces an average of 55-60 miles of old water mains, equal to 2-3% of the old cast iron mains in the system.
- DEP has substantially completed the largest water meter installation program in North America and is moving during the 2007-2010 period toward radio-based Automatic Meter Reading (“AMR”) providing at least daily readings and eventually, monthly billing.
- The water/sewer system was financially internalized in the mid-1980’s virtually ending cross subsidies with the city’s general revenue budget and placing the cost of operating and maintaining the system on users.

- DEP completed the world's largest toilet replacement program during 1994-1997 resulting in 70-90 MGD of savings through the replacement of 1.3 million toilets. The New York City Housing Authority further contributed approximately 100,000 replacements through their own effort. DEP intends to implement upgraded fixture replacement incentives during the period of 2008-2010 including toilets, urinals and some clothes washers. Other end-use programs are under consideration.
- DEP has upgraded its demand analysis and study capabilities with a new demand study in 2004-2005, addition of full-time staff dedicated to this function and beginning the integration of water use data into city-wide GIS functions.
- Since 1990 the group of water conservation programs implemented by DEP has resulted in a decrease in in-city water consumption and wastewater flow of approximately 23%, at a time when the city's population increased by approximately 7.9%. The three wastewater treatment plants that were exceeding dry weather flow limits in the 1980's are all operating well under their allowed flow rates. Per capita use has declined from more than 200 gcpd around 1990 to 138 gcpd today.

Abbreviations and Acronyms Found in This Report

AMR	Automatic Meter Reading (sometimes referred to as "AMI" for "Advanced Metering Infrastructure")
CIP	Capital Improvement Plan
CSO	Combined Sewer Overflow
CY	Calendar Year
DEC	New York State Department of Environmental Conservation
DEP	New York City Department of Environmental Protection
DRBC	Delaware River Basin Commission
FY	Fiscal Year (July 1 – June 30)
GCPD	Gallons per Capita Per Day
HCF	Hundred Cubic Feet
HPD	New York City Department of Housing Preservation and Development
LF	Linear feet
MGD	Millions of Gallons Per Day
NYCHA	New York City Housing Authority
RWS	Residential Water Survey

Contact People for Issues in this Report

Water Demand Projections, System Auditing, Related Issues

Esther Siskind, Assistant Commissioner, Bureau of Environmental Policy and Assessment
("BEPA") ESiskind@dep.nyc.gov (718) 595-3168

Distribution System Metering

Odd Larsen, Bureau of Water and Sewer Operations OLarsen@dep.nyc.gov (718) 595-5751

Upstate System and Customer Metering

Paul Aggarwal, Bureau of Water Supply, PAggarwal@dep.nyc.gov (914) 741-5151

New York City Water Metering

Customer-Oriented Water Conservation Programs

Warren Liebold, Bureau of Customer Services, wliebold@dep.nyc.gov (718) 595-4657

Educational Programs

Kim Estes-Fradis, Bureau of Communication

KEstes-Fradis@dep.nyc.gov (718) 595-3506

Upstate Customer Metering

Paul Aggarwal, Bureau of Water Supply

PAggarwal@dep.nyc.gov (914) 741-5151

The Water and Wastewater Systems

Water System Overview and Current Issues

DEP supplies water and sewer service to the Boroughs of the Bronx, Brooklyn, Manhattan, Queens, Staten Island, an area of over 300 square miles, and serves over eight million people. The City is also required by State law to sell water in counties where its water supply facilities are located and where it currently provides water to an additional approximately one million people. The Water System provides an average of approximately 1107 MGD of water (2005). Water consumption has decreased since 1990 when an average of approximately 1,500 MGD was provided by the Water System. The amount of water that can be safely drawn from a watershed during the worst period in the drought of record is the "Dependable Yield." DEP has determined that the System could have furnished an average of 1,290 MGD during the drought of record in the mid-1960s. Including groundwater wells in Queens, dependable yield now might total 1,323 MGD although the groundwater wells only currently produce about 15 MGD. During periods of normal rainfall, watersheds supply more than the Dependable Yield. The Sewer System collects and treats an average of approximately 1227 MGD of wastewater (2005). Sewer service is provided to virtually the entire City, except for significant parts of the Borough of Staten Island, the Borough of Queens communities of Breezy Point and Douglaston, and the Borough of Brooklyn community of Seagate. Sewer service is also provided to certain upstate communities in System watershed areas.

History

Early Manhattan settlers obtained water for domestic purposes from shallow privately owned wells. In 1677 the first public well was dug in front of the old fort at Bowling Green. In 1776, when the population reached approximately 22,000, a reservoir was constructed on the east side of Broadway between Pearl and White Streets. Water pumped from wells sunk near the Collect Pond, east of the reservoir, and from the pond itself, was distributed through hollow logs laid in the principal streets. In 1800 the Manhattan Company (now JPMorgan Chase) sank a well at Reade and Centre Streets, pumped water into a reservoir on Chambers Street and distributed it through wooden mains to a portion of the community. In 1830 a tank for fire protection was constructed by the City at 13th Street and Broadway and was filled from a well. The water was distributed through two 12-inch cast iron pipes. As the population of the City increased, the well water became polluted and supply was insufficient. The supply was supplemented by cisterns and water drawn from a few springs in upper Manhattan.

After exploring alternatives for increasing supply, the City decided to impound water from the Croton River, in what is now Westchester County, and to build an aqueduct to carry water from the Old Croton Reservoir to the City. This aqueduct, known today as the Old Croton Aqueduct, had a capacity of about 90 MGD and was placed in service in 1842. The distribution reservoirs were located in Manhattan at 42nd Street (discontinued in 1890) and in Central Park south of 86th Street (discontinued in 1925). New reservoirs were constructed to increase supply: Boyds Corner in 1873 and Middle Branch in 1878. In 1883 a commission was formed to build a second aqueduct from the Croton watershed as well as additional storage reservoirs. This aqueduct, known as the New Croton Aqueduct, was under construction from 1885 to 1893 and was placed in service in 1890, while still under construction.

Since 1842, there have been no significant interruptions of service.

In 1905 the Board of Water Supply was created by the State Legislature. Pursuant to the 1905 Act, the City was empowered to develop areas of the Catskill Mountains, located in the Hudson River Basin, and portions of the Delaware River Basin located to the west of the Catskill Mountains for water supply purposes. In return for these development rights, the 1905 Act requires the City to furnish, upon request, supplies of fresh water to municipalities and water districts in eight northern counties in which City water supply facilities and watersheds are located. The City's obligations under the 1905 Act in this respect have now passed to the Board. The 1905 Act also governs the rates that may be levied for such water. An eligible municipality or district may draw water based on a formula computed by multiplying the local population with the daily per capita consumption in the City. The City is currently engaged in a long-term project to update and modernize various water supply agreements governing the furnishing of water to such municipalities and water districts.

After careful study, the City decided to develop the Catskill region as an additional water source. The Board of Water Supply proceeded to plan and construct facilities to impound the waters of the Esopus Creek, one of the four watersheds in the Catskills, and to deliver the water throughout the City. This project, to develop what is known as the Catskill System, included the Ashokan Reservoir and the Catskill Aqueduct and was completed in 1915. It was subsequently turned over to the City's Department of Water Supply, Gas and Electricity for operation and maintenance. The

remaining development of the Catskill System, involving the construction of the Schoharie Reservoir and Shandaken Tunnel, was completed in 1928.

In 1927 the Board of Water Supply submitted a plan to the Board of Estimate and Apportionment for the development of the upper portion of the Rondout watershed and tributaries of the Delaware River within the State of New York. This project was approved in 1928. Work was subsequently delayed by an action brought by the State of New Jersey in the Supreme Court of the United States to enjoin the City and State of New York from using the waters of any Delaware River tributary. In May 1931 the Supreme Court of the United States upheld the right of the City to augment its water supply from the headwaters of the Delaware River. Construction of the Delaware System was begun in March 1937. The Delaware System was placed in service in stages: The Delaware Aqueduct was completed in 1944, Neversink Reservoir in 1950, Rondout Reservoir in 1951, Pepacton Reservoir in 1954 and Cannonsville Reservoir in 1967.

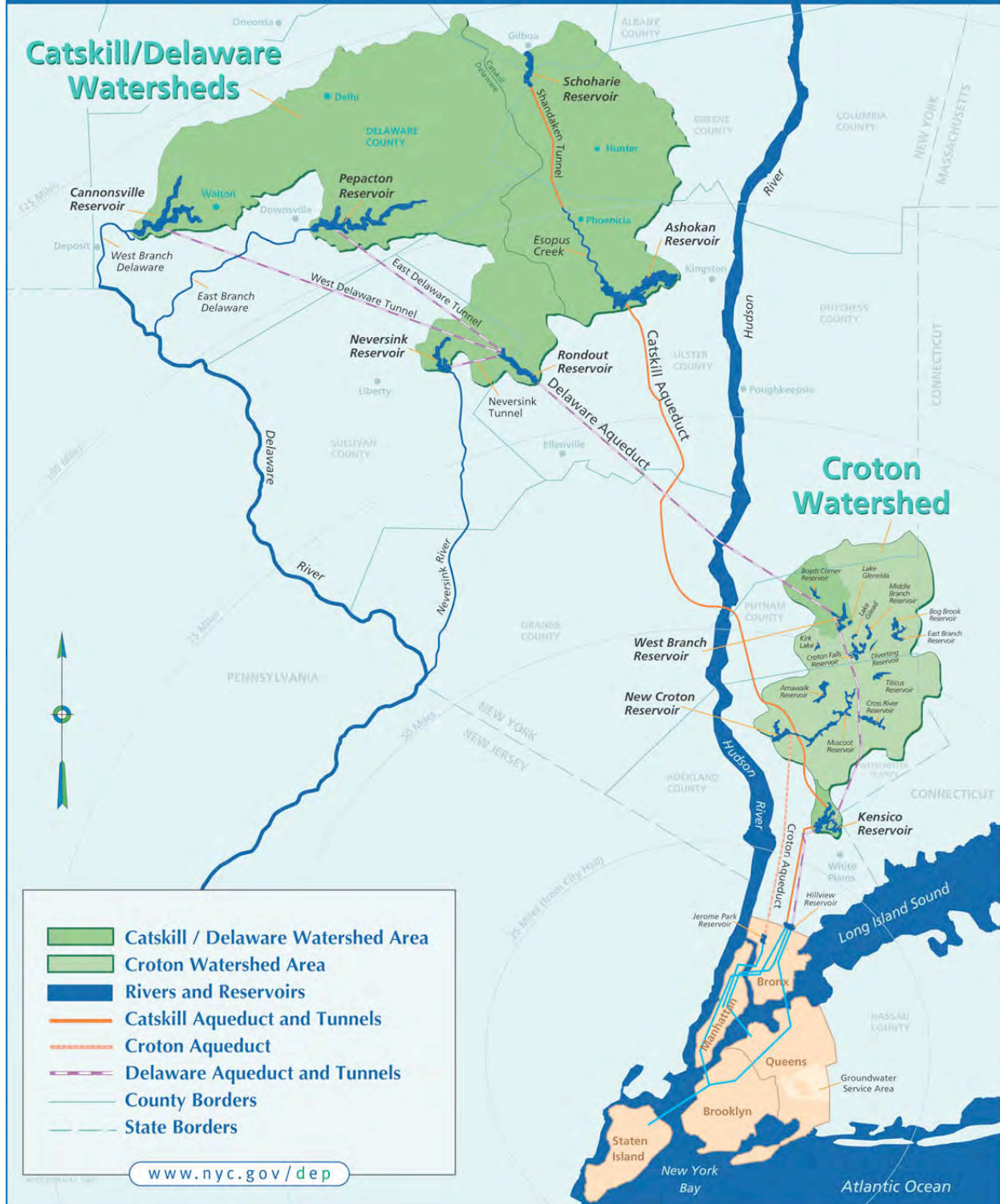
Water for the System is derived from three upstate reservoir systems (the Croton, Catskill and Delaware Systems) and a system of wells in Queens that were acquired as part of the City's acquisition of the Jamaica Water Supply Company ("Jamaica Water"). The three upstate water collection systems include 18 reservoirs and three controlled lakes with a total storage capacity of approximately 550 billion gallons. They were designed and built with various interconnections to increase flexibility by permitting exchange of water from one system to another. This feature mitigates localized droughts and takes advantage of excess water in any of the three watersheds.

The Water System is currently furnishing water to users in portions of four of the eight eligible northern counties. The Water System provides approximately 85% of the water used in Westchester County and approximately 7.5% of the water used in Putnam, Orange and Ulster Counties.

Approximately 95% of the total water supply is delivered to buildings by gravity. Only about 5% of the water is regularly pumped by DEP to maintain the desired pressure. As a result, operating costs are relatively insensitive to fluctuations in the cost of power. When drought conditions exist, additional pumping is required.



New York City's Water Supply System



Water Collection and Distribution

The three main reservoir systems are the Croton, Catskill and Delaware Systems.

The following tables set forth the capacities and original in-service dates of the System's collecting and balancing reservoirs and distribution facilities based on the City records.

COLLECTING RESERVOIRS

<u>NAME</u>	<u>AVAILABLE CAPACITY(1) (BILLION GALLONS)</u>	<u>ORIGINAL IN-SERVICE DATE</u>
CROTON		
New Croton	19.0	1905
Croton Falls Main	14.2	1911
Cross River	10.3	1908
West Branch	10.1	1895
Titicus	7.2	1893
Amawalk	6.7	1897
East Branch	5.2	1891
Muscot	4.9	1905
Bog Brook	4.4	1892
Middle Branch	4.0	1878
Boys Corner	1.7	1873
Croton Falls Diverting	<u>0.9</u>	1911
Total	88.6	
CATSKILL		
Ashokan	122.9	1915
Schoharie	<u>17.6</u>	1926
Total	140.5	
DELAWARE		
Pepacton	140.2	1955
Cannonsville	95.7	1964
Rondout	49.6	1950
Neversink	<u>34.9</u>	1954
Total	<u>320.4</u>	
Total Available Capacity	<u>547.5</u>	

(1) Capacity above minimum operating level.

BALANCING RESERVOIRS AND DISTRIBUTION FACILITIES

SERVICE NAME	STORAGE ORIGINAL CAPACITY (BILLION GALLONS)	IN- DATE
BALANCING RESERVOIRS		
Kensico	30.6	1915
Hillview	<u>0.9</u>	1915
Total Balancing Reservoirs	31.5	
DISTRIBUTION FACILITIES		
Central Park.....	1.0	1862
Jerome Park.....	0.8	1905
Silver Lake (tanks).....	<u>0.1</u>	1970
Total Distribution Facilities	<u>1.9</u>	
Total Storage Capacity	<u>33.4</u>	

The following table sets forth the Dependable Yield and storage capacity for each of the water supply systems.

WATER SYSTEM DEPENDABLE YIELD AND CAPACITY

SYSTEM	DEPENDABLE YIELD (MGD)	STORAGE CAPACITY(1) (BILLION GALLONS)
Croton	240	86.6
Catskill	470	140.5
Delaware	580	320.4
Queens wells.....	<u>33</u>	<u>2.6</u>
Total	<u>1,323</u>	<u>550.1</u>

(1) Capacity above minimum operating level.

Delaware system is limited to 520 MGD during drought

Queens wells could be expanded to 61.8 MGD five-year average under WSA 9424, but have been operating at only 15 MGD.

The Croton System normally provides approximately 10% of the City's daily water supply and can provide substantially more of the daily water supply during drought conditions. The Croton System consists of 12 reservoirs and three controlled lakes on the Croton River, its three branches and three other tributaries. The water in the Croton System flows from upstream reservoirs through natural streams to downstream reservoirs, terminating at the New Croton Reservoir. The watershed which supplies the Croton System has an area of 375 square miles. It lies almost entirely within the State, approximately 45 miles north of lower Manhattan, with a small portion in the State of Connecticut.

The Catskill System watersheds occupy sparsely populated areas in the central and eastern portions of the Catskill Mountains and normally provide approximately 40% of the City's daily water supply. Water in the Catskill System comes from the Esopus and Schoharie Creek watersheds, located approximately 100 miles north of lower Manhattan and 35 miles west of the Hudson River. The Catskill System is comprised of the Schoharie Reservoir (formed by the Gilboa Dam across Schoharie Creek) and Ashokan Reservoir (formed by the Olivebridge Dam across Esopus Creek) and the Catskill Aqueduct.

The Delaware System, located approximately 125 miles north of lower Manhattan, normally provides approximately 50% of the City's daily water supply. Three Delaware System reservoirs collect water from a sparsely populated region on the branches of the Delaware River: Cannonsville Reservoir (formed by the Cannonsville dam on the West Branch of the Delaware River); Pepacton Reservoir (formed by the Downsview Dam across the East Branch of the Delaware River); and Neversink Reservoir (formed by the Neversink Dam across the Neversink River, a tributary to the Delaware River).

In addition, wells in Queens can supplement the City's daily water supply. The wells could be used to provide more of the daily supply during drought conditions. Unlike the rest of the City's water supply, which is a surface and gravity-supplied system originating in a network of upstate reservoirs, well water is pumped from extensive underground aquifers. The acquisition of wells in Queens from Jamaica Water in 1996 represented the first new water supply source for the City since the 1960s when the Delaware surface water system initially came on line. DEP is currently planning improvements to the ground water system which will augment the supply of water from underground aquifers.

Current demand/flow projections show that if conservation programs, including metering, toilet replacement, hydrant locking, leak detection, and public information, remain effective there will be no predicted need for the City to find additional long-term water supply sources to meet normal demand.

The System's water supply is transported through an extensive system of tunnels and aqueducts. Croton System water is delivered from the New Croton Reservoir by the New Croton Aqueduct to the Jerome Park Reservoir in the Bronx. From Jerome Park Reservoir and from direct connections to the New Croton Aqueduct, trunk mains carry water to the service area. The Catskill and Delaware Aqueducts convey water from Ashokan Reservoir and Rondout Reservoir to Kensico Reservoir and then to Hillview Reservoir in Yonkers. Both Kensico and Hillview Reservoirs serve as balancing reservoirs. Water from the Catskill and Delaware Systems is mixed in the Kensico Reservoir, and is conveyed to Hillview Reservoir where water enters Tunnels 1, 2 and 3. Trunk mains carry water from tunnel shafts and from the distribution facilities (Jerome Park and Hillview Reservoirs and Silver Lake Tanks) to the service area.

Rondout-West Branch Tunnel. DEP regularly assesses the condition and integrity of the System's tunnels and aqueducts to determine the extent and effect of water loss. In particular, since the early 1990s, DEP has monitored the condition of the Rondout-West Branch Tunnel, which comprises a portion of the Delaware Aqueduct. The Rondout-West Branch Tunnel carries water 45 miles from the Delaware System under the Hudson River and into West Branch Reservoir. It has a capacity of 900 MGD and normally contributes 50% of the City's water supply. It has the

highest pressures and the highest velocities in the Water System. In addition, a portion of the tunnel crosses a fractured rock formation, which is potentially subject to greater stress than the deep rock tunnels located in the City. As a result of DEP's flow tests, visual observations and other analyses, it has been determined that approximately 15 MGD to 36 MGD of water is being lost from the tunnel and is surfacing in the form of springs or seeps in the area. DEP has initiated the engineering work to determine the nature and extent of repairs which may be necessary to remedy the water loss. DEP has also determined that the situation in the tunnel and amount of water loss is stable. In the opinion of the professional engineering firm retained by DEP in conjunction with that investigation, there is very little immediate risk of failure of the tunnel. DEP intends to make the necessary repairs. The costs to perform such repairs could be substantial depending on the nature of the required repair. To perform the repair work, the tunnel will probably have to be shut down and de-watered. During any such period, it will be necessary for the City to increase reliance on its other water supplies, and to implement more stringent measures to encourage conservation and decrease demand. In general, the Delaware System continues to demonstrate a high degree of reliability after 55 years of continuous service. Nevertheless, DEP considers it prudent to conduct regular tunnel and aqueduct inspections and surveys to detect any problems that might arise so that corrective actions can be taken if needed.

DEP has begun to evaluate additional strategies and projects for improving dependability of water supplies, which could entail the development of additional or interim supplies and demand reduction measures to meet demands during periods of extended facility outages due to planned or unplanned inspection, repair or rehabilitation. DEP has retained a consultant to develop a long term dependability plan. DEP intends to evaluate various alternative projects which, when combined, could allow for any portion of the Water System to be taken out of service for a period of up to one year. Elements of that plan may include: interconnections with other neighboring jurisdictions; increased use of groundwater supplies; increased storage at existing reservoirs; withdrawals and treatment from other surface waters; hydraulic improvements to existing aqueducts; and additional tunnels.

Tunnel 1. From Hillview Reservoir, water from the Catskill and Delaware Systems is delivered into the City by a circular, cement-lined, pressurized, bedrock tunnel that narrows in diameter from 15 to 11 feet. Tunnel 1 is 18 miles in length and extends south from Hillview Reservoir through the West Bronx to Manhattan and Brooklyn. Tunnel 1 is 200 to 750 feet underground and thus avoids interference with streets, buildings, subways, sewers, pipes and other underground infrastructure. These depths are necessary to ensure substantial rock covering necessary to withstand the bursting pressure of the water inside and to ensure water tightness. Tunnel 1 has a capacity of approximately 1,000 MGD. Shafts placed along the tunnel connect with surface mains which deliver water to the distribution system.

Tunnel 2. The second tunnel also delivers Catskill and Delaware System water from Hillview Reservoir. It is a circular, cement-lined, pressurized, bedrock tunnel, 200 to 800 feet below the street surface and 15 to 17 feet in diameter. Tunnel 2 extends south from Hillview Reservoir, east of Tunnel 1, through the Bronx, under the East River at Rikers Island, through Queens and Brooklyn, and connects with Tunnel 1 in Brooklyn. Tunnel 2 has a capacity of more than 1,000 MGD and is 20 miles in length. Shafts placed along the tunnel connect with surface mains which deliver water to the distribution system.

Richmond Tunnel. Connecting to Tunnel 2 in Brooklyn is the ten-foot diameter, five-mile long Richmond Tunnel, which was completed in 1970 and carries water 900 feet beneath Upper New York Bay to Staten Island. The Richmond Tunnel, the Richmond Distribution Chamber, the Richmond Aqueduct and the underground Silver Lake Tanks were designed to improve the water supply facilities of Staten Island. The underground storage tanks (among the world's largest) have a combined capacity of 100 million gallons and replaced the Silver Lake Reservoir (now Silver Lake).

Tunnel 3. A new water tunnel, Tunnel 3, connecting the reservoir system to the City is presently under construction to increase pressure/flow to meet a growing demand in the eastern and southern areas of the City, permit inspection and rehabilitation of Tunnels 1 and 2, and provide water delivery alternatives to the City in the event of disruption in Tunnel 1 or 2. Tunnel 3 is being built in four stages. Stage I commenced operation in July 1998. It follows a 13-mile route which extends south from Hillview Reservoir in Yonkers under Central Park Reservoir in Manhattan, and east under the East River and Roosevelt Island to Long Island City in Queens. Stage II has two distinct legs. They are currently under construction and expected to be completed in 2012. They will extend from the end of Stage I to supply Queens, Brooklyn and the Richmond Tunnel and from the valve chamber at Central Park into lower Manhattan. Upon completion, and with the installation of additional surface mains, Stage II will enable the system to maintain full service even if Tunnel 1 is shut down. The Stage III project is now referred to as the Kensico-City Tunnel (the "Kensico Tunnel"). Stage IV is intended to deliver additional water to the eastern parts of the Bronx and Queens. It would extend southeast from the northern terminus of Stage I in the Bronx to Queens and then southwest to interconnect with the Queens portion of Stage II. Stage IV is currently being re-evaluated.

Kensico-City Tunnel. The Kensico-City Tunnel will extend from the Kensico Reservoir to the Van Cortlandt Valve Chamber, south of Hillview Reservoir. \$1.7 billion is included for the project in the CIP.

The water distribution system consists of a grid network of over 6,200 miles of pipe, as well as valves, fire hydrants, distribution facilities, gatehouses, pump stations, and maintenance and repair yards. Approximately 32% of the pipe in the System was laid before 1930, 37% between 1930 and 1969, and the remainder thereafter. The CIP provides for the programmatic replacement of water mains in accordance with certain established criteria. These criteria were reviewed and confirmed by the U.S. Army Corps of Engineers in its independent study of the City's distribution system completed in November 1988.

Various facilities provide storage to meet the hourly fluctuations in demand for water throughout the City, as well as any sudden increase in draft that might arise from fire or other emergencies. With the exception of some communities in the outlying areas of the City which may experience low pressure service during peak hours in summer months, the water distribution system provides generally excellent service.

DEP has received several approvals for Water Supply Applications in the past, including:

WSA No. 1, City of New York (Original Catskill project: Ashokan Reservoir)

Decision of May 14, 1906

Modifying Decision of September 26, 1927

WSA No. 166, City of New York--10th Application (Schoharie Reservoir approved)

Memorandum of October 13, 1914

Decision of October 21, 1914 [NOTE: Superseded by WSA No. 214]

WSA No. 214, City of New York--11th Application (Schoharie Reservoir modified)

Memorandum of June 6, 1916

Decision of June 6, 1916

WSA No. 466, City of New York--14th Application (Rondout & Pepacton Reservoirs)

Memorandum of May 25, 1929

Decision of May 25, 1929

Modifying Decision of January 26, 1943 (Emergency use of Rondout Reservoir)

Extension of Time for Construction, March 4, 1947

Modification to end obligation to maintain Dunraven Causeway Bridge, October 4, 2002

WSA No. 611, City of New York--16th Application (Lower Rondout Creek)

Memorandum of September 18, 1931

Decision of September 18, 1931 [NOTE: Approval rescinded on June 5, 1951]

WSA No. 1342, City of New York--23rd Application (Neversink Reservoir)

Memorandum and Decision of February 20, 1939

WSA No. 2005, City of New York--30th Application (Cannonsville Reservoir)

Decision of November 14, 1950

The Wastewater (Sewer) System

The Sewer System is comprised of the sewage collection system and the water pollution control facilities.

History

Systematic collection of sewage and building of sewers began in the City as early as 1696. Major portions of the Sewer System in lower and central Manhattan were begun in the early 1830s and completed by 1870. The oldest sewer now in service was built in 1851. The oldest components of the Sewer System, located in Manhattan and Brooklyn, are constructed mostly of brick, clay and cement. The other Boroughs have newer sewers made primarily of vitreous clay and concrete. Historically, waste collection and disposal was a matter of local jurisdiction. Upon consolidation of the City in 1898, Presidents of the five Boroughs were given responsibility for sewage collection and disposal in their respective Boroughs. A Commissioner of Borough Works was established in each Borough for planning, constructing and administering its sewer system. This local responsibility for sewage collection existed until the mid-1960s.

Although water pollution control did not become a major issue until recent years, it has been a concern of local conservationists and public officials for over a century. The first water pollution control facility in the City was opened in 1886, when a small plant was constructed on Coney Island to protect the bathing beaches. In 1904, a Sanitary Commission was established and

charged with developing a master plan for water pollution control in the City. Although the Sanitary Commission completed its task in 1910, water pollution control plant construction did not receive serious attention until 1929, when the City established a department to construct water pollution control facilities under the jurisdiction of the Department of Sanitation. In the 1930s this function was transferred to the Department of Public Works. In 1931, a plant construction program was begun to construct a system of water pollution control plants and associated facilities to control and treat all sewage produced within the City. The first of these plants, Coney Island, opened in 1935. Three larger plants, Wards Island, Tallmans Island and Bowery Bay, were placed in operation before the end of the 1930s. During the 1940s two additional plants, Jamaica and 26th Ward, were opened. The post-war years witnessed an intensified construction effort and, by 1967, 12 major treatment plants were in operation treating about 1,000 MGD at an average removal efficiency of about 65%. At that time most other urban areas were providing only about 35% removal efficiency.

The City Charter of 1963 consolidated the Borough sewer organizations into a City-wide department under the Department of Public Works. In 1968, various municipal services were consolidated into a single agency known as the Environmental Protection Administration, which included responsibility for sanitation and water and air quality resources. Within the Environmental Protection Administration, the Department of Water Resources had jurisdiction over the Bureaus of Water Supply and Water Pollution Control. These Bureaus were responsible for water supply and sewage collection and treatment. In 1977, water supply, sewage collection and treatment, and air quality monitoring responsibilities were combined into DEP.

Sewage Collection and Treatment

The Sewer System's plants currently treat approximately 1,225 MGD of wastewater. The Sewer System is divided into 14 drainage areas corresponding to the 14 water pollution control plants and includes over 6,600 miles of sewer pipes of varying size which are classified as one of three types: sanitary, storm or combined. Sanitary sewers accommodate household and industrial waste. Storm sewers carry rainwater and surface water runoff. Combined sewers carry both types of waste. Approximately 70% of the City's sewers are of the combined type. In addition to the sewage pipes, the Sewer System includes catch basins and seepage basins to prevent flooding and sewer backups.

The Sewer System is comprised of a number of sewer facilities built to varying standards. Different materials and methods of construction were used resulting in different life cycles. Approximately 4,000 miles or two-thirds of the City's sewer pipe is made of vitreous clay. Significant mileage of sewer pipe is composed of other building materials including cement, reinforced concrete, iron and brick. Some pipe in the collection system was installed before 1870, and approximately 15% of all sewer pipe in the collection system is over 100 years old.

The facilities related to the treatment of sewage include water pollution control plants, a combined sewer overflow treatment plant, wastewater pump stations, laboratories, sludge dewatering facilities and inner-harbor vessels which transport sludge between facilities. Sludge is a by-product of the sewage treatment process. Sludge that is treated through the sewage treatment process (or "biosolids") is acceptable for land-based beneficial use either directly or after additional provisions such as composting, lime stabilization or thermal pelletization.

Issues of both water supply volume and consequent sewage treatment volume are raised from time to time in connection with the System. Measures to increase the supply of water available to the System and to increase the CSO sewage treatment capacity of the various water pollution control plants in the System are either being constructed under the CIP or are under continuing review for feasibility and cost effectiveness. However, the immediate approach to both the issues of supply and treatment capacity is conservation, through voluntary changes in user behavior, through education and the effect of actual use charges based on metered water usage, leak detection and repair and increased use of newly designed low-flow water use fixtures such as toilets.

New York City Drainage Areas and Wastewater Treatment Plants



NYCDEP/PA/AJ 5/05

System Demand

In 2005, the City consumed an average of 1,108 million gallons of water per day (MGD). As recently as 1990, the City consumed an average of 1,500 MGD. Past City efforts to encourage conservation have been extremely successful in saving water even as the population increased. Between 1990 and 2003, water use decreased by 23.2 percent while population increased by 7.9 percent.

DEP's historical and current water demand for in-city consumers through the year 2045 are shown in Figure 1 and Table 1. These projections are used in DEP's infrastructure and other planning efforts.

DEP also supplies water to several upstate communities in Orange, Putnam, Ulster, and Westchester Counties. A summary of historic upstate water consumption from 1994 to 2005 is provided in Table 2. Projections for upstate water consumption are not available at this time, but it is anticipated that Westchester County will continue its current population and water demand growth trend whereas growth in other supplied counties will remain minimal.

Per capita water consumption in 2005 was approximately 138 gallons per capita per day (gcpd), a decrease from 208 gcpd in 1988.

Table 1 2006 DEP Interim In-City Water Demand

Year	Historic Population	Interim Population Projection	Historic Water Demand (MGD)	Interim Water Demand Projections (MGD)	Historic Wastewater Flow (MGD)	Interim Wastewater DWF Projections (MGD)
1979	7,070,525		1,512.4			
1980	7,000,717		1,505.9			
1981	7,033,086		1,309.3			
1982	7,065,455		1,382.4			
1983	7,097,824		1,423.8			
1984	7,130,194		1,465.0			
1985	7,162,563		1,325.8			
1986	7,194,932		1,350.7			
1987	7,227,301		1,446.5			
1988	7,259,670		1,483.9			
1989	7,292,039		1,401.7		1676	
1990	7,324,408		1,423.8		1575	
1991	7,392,803		1,469.3		1582	
1992	7,461,198		1,368.6		1537	
1993	7,529,593		1,368.5		1515	
1994	7,597,988		1,357.7		1530	
1995	7,666,383		1,325.7		1439	
1996	7,734,778		1,297.9		1431	
1997	7,803,173		1,205.5		1374	
1998	7,871,568		1,219.5		1332	
1999	7,939,963		1,237.2		1269	
2000	8,008,278	8,008,278	1,240.4		1259	

Table 1 2006 DEP Interim In-City Water Demand

2001		8,058,000	1,184.0		1250	
2002		8,107,000	1,135.6		1175	
2003		8,156,000	1,093.7		1206	
2004		8,205,000	1,099.5		1178	
2005		8,254,000	1,107.6		1227	
2006		8,304,000		1121		1238
2007		8,354,000		1123		1240
2008		8,405,000		1122		1239
2009		8,455,000		1121		1238
2010		8,507,000		1120		1238
2011		8,536,000		1128		1245
2012		8,565,000		1135		1251
2013		8,594,000		1141		1256
2014		8,624,000		1148		1261
2015		8,654,000		1154		1267
2016		8,684,000		1160		1272
2017		8,713,000		1166		1278
2018		8,743,000		1173		1283
2019		8,774,000		1179		1288
2020		8,804,000		1185		1294
2021		8,834,000		1191		1299
2022		8,865,000		1196		1303
2023		8,895,000		1201		1307
2024		8,926,000		1206		1311
2025		8,956,000		1210		1315
2026		8,987,000		1215		1320
2027		9,018,000		1221		1324
2028		9,049,000		1226		1329
2029		9,080,000		1232		1334
2030		9,112,000		1237		1339
2031		9,131,000		1242		1343
2032		9,152,000		1247		1347
2033		9,174,000		1250		1350
2034		9,196,000		1254		1353
2035		9,218,000		1258		1356
2036		9,240,000		1261		1359
2037		9,263,000		1265		1362
2038		9,285,000		1268		1365
2039		9,307,000		1272		1368
2040		9,329,000		1275		1371
2041		9,352,000		1278		1374
2042		9,374,000		1281		1377
2043		9,397,000		1284		1379
2044		9,419,000		1288		1382
2045		9,446,000		1291		1385

Figure 1 2006 DEP Interim In-City Water Demand

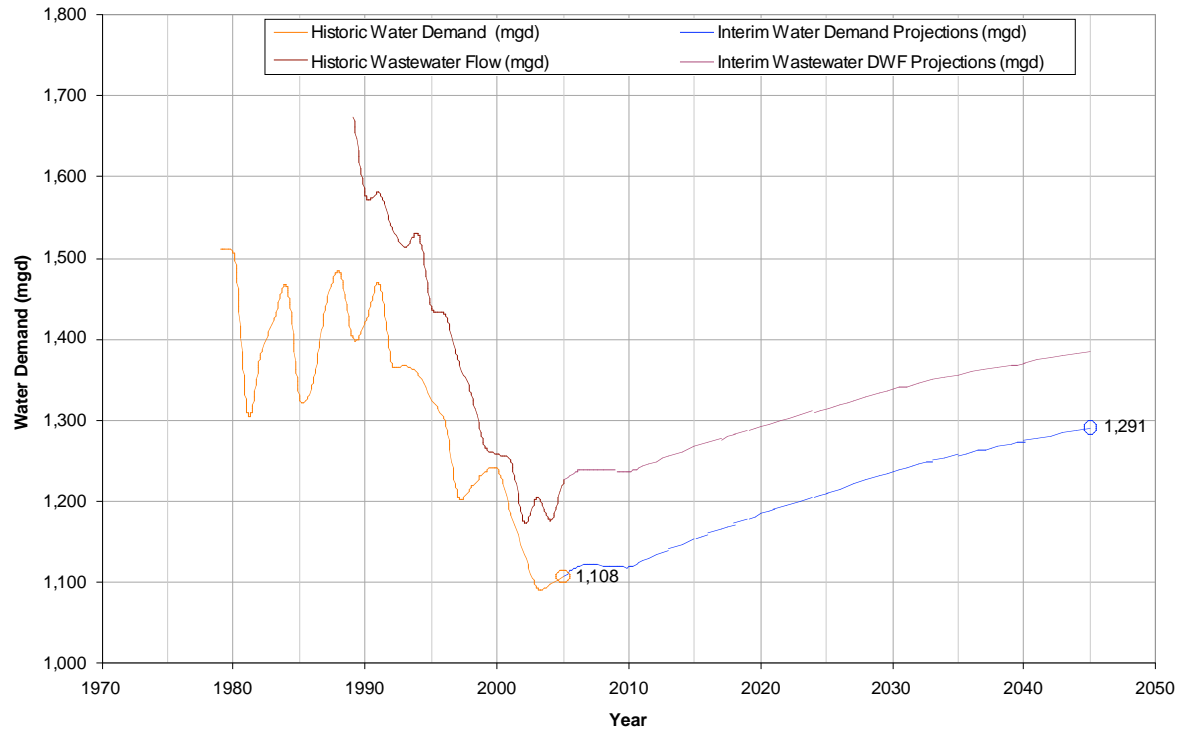


Table 2 Upstate Water Demand on DEP System

Year	Historic Water Demand (MGD)
1994	119.1
1995	123.0
1996	120.2
1997	123.1
1998	124.6
1999	128.4
2000	124.9
2001	128.3
2002	121.0
2003	115.8
2004	117.5
2005	123.7

Table 3: Largest Upstate Customers (Over 2 MGD)	
Customer	2003 MGD
Yonkers	28.46
United Water New Rochelle	18.79
Mt. Vernon	8.95
Westchester Joint Water Works #1	8.08
White Plains	7.83
Greenburgh	6.81
Yorktown	3.17
Ossining	2.85
Scarsdale	2.82
New Windsor/Stewart Airport	2.58
Portchester/Rye	2.53
Tarrytown	2.30
Cortland	2.21
Remaining 36 Customers	17.81

Water Use by Category and System Audit

Based on 2002 metering data, water usage by category is presented by borough and city as a whole in Table 4.

Table 4 2003 Percent Daily Water Consumption by Borough		
	Residential	Non-Residential
Manhattan	68%	32%
Bronx	92%	8%
Brooklyn	81%	19%
Queens	82%	18%
Staten Island	89%	11%
NYC Total	80%	20%
Does not include UAW and other non-metered usage.		

Statistically significant data for some non-residential customer classes is still not available due to unacceptably large numbers of estimated meter readings from these customers. Inadequate data for these non-residential customer classes prevents DEP from completing and further refining its water demand model and any system auditing analysis. The effort to resolve this problem will continue through the next year. DEP has also recently completed an updated analysis of distribution system losses. That analysis and a system water balance table, will appear in the June 2007 edition of this report. The table will list consumption between residential and non-residential, metered and unmetered, losses and UAW with a format similar to Table 4a:

Table 4a : General Water Balance 2003	
Category	Daily Average Consumption (MGD) and (Notes)
Known Water Use in Buildings and Other End Uses	
Residential Metered	461 (1)
Residential Unmetered	355 (1)
Non-Residential Metered	184
Non-Residential Unmetered	20 (2)
Subtotal Residential	817
Subtotal Non-Residential	204
Total Known Water Use in Buildings and Other End Uses	1021
Distribution System Leakage	xx (3)
Unaccounted-For Water Exclusive of Distribution Leakage	xx (4)
Total Daily Average Water Entering City: 2003	1094 (5)

Notes:

1. “Residential Metered” includes properties metered and billed on a metered basis. “Residential Unmetered” includes properties metered but billed on flat-rate, and extrapolated consumption of unmetered residential properties. From meter data used in interim draft demand study.
2. “Non-residential Unmetered” is extrapolated from the unit consumption of metered properties in the respective building class. From interim draft demand study.
3. “Distribution System Leakage” is calculated from measured leak rates from distribution leak detection surveys and repairs and leak rates and numbers from report leaks (main breaks, service line breaks). The June 2007 Report will include a detailed analysis.
4. Total Average Daily Water Entering City – Total Known End Uses – Distribution System Leakage
5. Average Daily Flow Into the City as Measured by Hillview and Shaft Meters.

Water Rate Structure

Water/wastewater rates are set annually by the New York City Water Board after a series of public hearings. The public rate setting process begins in April with the publication of “Public Information Regarding Water and Sewer Rates” available at <http://nyc.gov/html/dep/html/wboard.html#bluebook>.

93%+ of customers are billed on metered rates. One rate applies to almost all customers and that rate is currently (July 1, 2006 – June 30, 2007) \$4.69/HCF of which \$1.81 is the water charge and \$2.88 is the wastewater charge. The water and wastewater charges are allocated based on the difference in system costs between water and wastewater.

Approximately 7% of customers are billed on unmetered rates, often referred to as “frontage.” This is a system of charges associated with building size and the number of water-using fixtures. This system of unmetered rates will end on July 1, 2009 when customers will either move to metered billing or a conservation-conditioned flat rate for high-density, generally low-income apartment buildings, the Multifamily Conservation Program (<http://nyc.gov/html/dep/html/meter.html#mcp>).

The Water Board has commissioned analyses on alternative rate structures over the years, including rates theoretically designed to encourage greater efficiency of use. The Board has yet to be convinced that under current operating conditions there are any alternative rates which will provide a cost-effective rate-based tool. However, future movement to automatic meter reading and to monthly billing, as well as eventually replacing the current billing system with a more modern system, may result in a reassessment of this view.

Master Meters

DEP uses three venturi tubes to obtain flows entering City Tunnel No.’s 1, 2, and 3 from Hillview Reservoir. These venturi tubes are connected to meters using differential pressure (DP) cells to provide master flow readings for the three City Tunnels. All three meters have monthly charts to record the flow as well as digital counters to provide cumulative flow readings.

Currently there are 40 shafts in service on the three City Tunnels which bring water to the surface and distribute it to consumers. Except for two shafts, they have venturi tubes and DP cells to measure the flow. Where meters are missing or temporarily out of service, the flows are estimated by DEP engineers. In addition, Radcom datalogging connections allow DEP engineers to monitor the flows remotely. The individual shaft flows for each tunnel are also compared to the master meters at Hillview Reservoir. If abnormalities are found, field investigations are quickly started so that repairs or adjustments can be made. By carefully monitoring the tunnel flows, DEP is able to expeditiously correct many conditions which could contribute to water main breaks or flow reversals resulting in discolored water and water quality complaints.

When the Croton System is in service, most of the flow leaving the Jerome Park Reservoir is measured by venturi meters at various locations in the Bronx and Manhattan. The largest flow component from the Jerome Park Reservoir is measured at a location in northern Manhattan. The flow to the East Bronx is measured at an East Bronx location. Pumped water from the Jerome

Park Reservoir is measured at the Jerome Avenue Pumping Station in the Bronx and the 40th Street Pumping Station in Manhattan. In addition, flow to the South Bronx is measured at the south end of the Jerome Park Reservoir. Currently, the flow meters at the Mosholu Pumping Station and Inwood area of Manhattan are out of service. In the future, when the Croton Water Treatment Plant is completed and placed in service (2011), all Croton water will be measured by new magnetic flowmeters.

Customer Meters

Metering of Remaining Unmetered Properties

Approximately 97% of accounts are physically metered. The unmetered properties fall into a few categories:

1.3%	Refused to meter, being billed 100% surcharge over flat-rate charges
0.7%	Pending meter installation, often with technical problems
1%	Properties with deteriorated water service pipes, exempt properties (houses of worship), vacant properties

The number of properties surcharged for failing to meter has dropped from 35,000 in 2000 to approximately 11,000 in 2006.

DEP will bid a new meter installation contract set in early 2007.

Properties with deteriorated service pipes, usually either lead or galvanized metal, pose a unique problem. If the service line is sufficiently deteriorated that it is leaking, DEP can order it repair under “leak and waste” rules and the meter installation can then be performed. If the service line is not leaking, but both the meter installation contractor and DEP agree that the pipe is likely to fail if an installation is performed, DEP’s options are limited. To hurry the eventual replacement of these service lines, which would also serve the interest of reducing customer exposure to lead from some of those service lines, DEP is proposing changes to the city’s water use rules (Rules of the City of New York, Title 15, Chapter 20) to prohibit repair, as opposed to replacement, of lead or galvanized meter service lines and to require the installation of a water meter by any licensed plumber who applies for a permit to repair or replace a service line for an unmetered property.

Vacant properties will be metered when the property is redeveloped.

Houses of worship were made exempt from water/sewer charges in the 1980’s due to a law passed by the State Legislature. The (approximately) 1,400 unmetered exempt properties were not originally included in the Universal Metering Program but DEP will conduct a campaign to meter them in 2007-2008.

Meter Reading

Meters installed during DEP’s Universal Metering Program, since 1987, have had “absolute encoder” registers and remote meter reading receptacles, usually installed on the front or side wall of the building. These allowed the great majority of meters to be read without having to gain

physical access to the buildings. They have proven to be somewhat imperfect since they can be broken intentionally or accidentally and actual read rates have not exceeded 85-87% citywide. Meters are read quarterly and billing occurs on a quarterly schedule, except for several thousand accounts either connected into a telephone-based (“inbound”) AMR system or read by the building owners/managers with reads faxed to DEP. These “Read Your Own Meter” customers are read and billed monthly. The telephone AMR system shows actual read rates of 93-94%, with estimated reads coming from meters that have malfunctioned or had their telephone connections interrupted.

DEP has been testing radio-based AMR alternatives over the last two years and at this writing plans to issue an RFP for a city-wide fixed network AMR system to be installed over a three-year period. Such a system will not only allow an eventual move to monthly billing, but will provide a rich source of water use data since a fixed network system can read meters daily or even more often. This data will improve DEP’s ability to understand customer water use, calculate unaccounted-for water in a more detailed manner and track savings from conservation programs. It will also provide early leak detection warnings that can be transmitted to customers.

DEP cooperated with a Con Edison pilot of Itron’s mobile AMR system in 2005-2006 involving approximately 300 properties in Brooklyn. DEP has been placing “hard to read” and “Read Your Own Meter” accounts throughout Brooklyn, Queens and Manhattan onto a mobile system manufactured by Transparent Technologies which currently totals about 200 accounts but is expected to grow to several hundred or more during 2006-2007.

Current plans are to develop a citywide “fixed network” system leveraging a citywide wireless system being installed by the New York City Department of Information and Telecommunication Technology (DOITT) during 2007-2008. DOITT’s project will identify and develop rooftop locations for AMR receivers along with its own equipment, and the DOITT system will be used to transmit the meter readings back to DEP. Pilot installations of several manufacturers equipment and an RFP are scheduled for early 2007.

Meter Repair/Replacement Program

Water meters register at a slower rate as they age. The exact age when replacement makes sense may depend on the physical age of the meter, the amount of water that has flowed through the meter over the years (the “mileage”), water quality, the type of meter and perhaps the manufacturer. An additional consideration is the cost to access a building to perform the work. For “1” – “1” meters in DEP’s system, it appears that replacement is clearly cost effective by 18-22 years of age.

Since the earliest meters installed during the Universal Metering Program will be reaching 20 years old beginning in 2007-2008, the replacement of at least 100,000 meters will be included in the citywide AMR project currently scheduled to begin before the end of 2007. In addition to this, DEP inspectors routinely replace 30,000+ small meters each year and will be scaling up to approximately 50,000 by 2008. DEP Information Systems staff are preparing a report listing meters installed in 1995 or before with their total registration to help prioritize small meter systematic replacement over the next several years.

DEP began a program of consciously replacing larger (2" or larger) old meters in the system in 2004. That program continues today. During the original Universal Metering Program, 48,000 smaller old meters were replaced as part of that effort.

Inaccuracy and under registration among larger water meters is an even more important issue than for smaller meters since far more water flows through them and under registration has a greater impact.

DEP has been performing field meter accuracy tests for many years and in 1999 we compiled data on larger turbine and compound meters to determine typical accuracy levels of older meters. The results are presented in Table 5.

Table 5: Older Turbine and Compound Meter Accuracy		
Meter Size/Type/Age	Mean Accuracy	Sample Size
3" Turbine 1-5 years old	65%	5
3 x e" Comp., 1-5 years old	84%	11
3 x e" Comp., 6-10 years old	77%	16
3 x : " Comp., 6-10 years old	87%	2
3 x : " Comp., 11-15 years old	78%	3
3 x : " Comp., 16+ years old	70%	2
4 x e" Comp. 1-5 years old	83%	11
4 x e" Comp., 6-10 years old	98%	4
4 x e" Comp., 11-15 years old	97%	2
4 x e" Comp., 16+ years old	84%	2
4 x : " Comp. 1-5 years old	90%	21
4 x : " Comp. 6-10 years old	89%	41
4 x : " Comp. 11-15 years old	49%	7
4 x : " Comp. 16+ years old	74%	12
4 x 1" Comp. 1-5 years old	95%	6
4 x 1" Comp. 6-10 years old	84%	21
4 x 1" Comp. 11-15 years old	86%	18

Table 5: Older Turbine and Compound Meter Accuracy		
4 x 1" Comp. 16+ years old	75%	12
4" Turbine, 1-5 years old	91%	14
4" Turbine, 6-10 years old	96%	14
4" Turbine, 11-15 years old	77%	18
4" Turbine, 16+ years old	90%	23
6 x 1" Comp. 1-5 years old	92%	11
6 x 1" Comp. 6-10 years old	94%	21
6 x 1" Comp. 11-15 years old	81%	5
6 x 1" Comp. 16+ years old	96%	2
6" Turbine, 1-5 years old	97%	11
6" Turbine, 6-10 years old	87%	15
6" Turbine, 11-14 years old	51%	14
6" Turbine, 16+ years old	78%	15
8" Turbine, 1-5 years old	100%	2
8" Turbine, 6-10 years old	83%	3
8" Turbine, 16+ years old	58%	2

In 2004 DEP began two contracts aimed specifically at replacing the largest and oldest meters in the system. Those two contracts replaced 1,100 meters out of the 5,000 over 2" turbine and compound meters. Several hundred more have been replaced under other replacement contracts.

This work is continuing through current and future meter replacement contracts. DEP is also conducting an analysis of the billable consumption "before" and "after" the large meters were replaced, to estimate revenue gains.

In addition to these directed meter replacements, DEP also repairs and replaces 30,000 – 50,000 meters each year with smaller meter replacements (2" and smaller) and repairs being performed by DEP Inspectors and larger meter replacements being performed by licensed plumber Contractors.

Distribution Leak Detection, Pipe Repair and Replacement

The appendix includes tables which list the quantities of distribution pipe by size and material. The following table summarizes that information. Cast iron piping is generally the oldest and ductile iron and polyethylene-lined cast iron the newest.

Table 6: Water Main Quantities by Material Type (Linear Feet)		
Material Type	Quantity	Percentage
Cast iron	12,701,124	35.45%
Ductile iron	9,765,553	27.26%
Concrete lined cast iron	12,102,978	33.78%
Concrete	178,781	0.50%
Steel	1,056,729	2.95%
Polyethylene Lined	5,154	<0.1%
Unknown	15,043	<0.1%
TOTAL	35,825,362 (6,785 miles)	

Table 7: Water Main Quantities by Age		
Vintage	Quantity	Percentage
Pre-1900	3,524,871	10%
1901-1920	3,734,078	11%
1921-1940	9,085,758	26%
1941-1960	5,831,591	16%
1961-1980	5,145,377	14%
1981-2000	6,783,039	19%
2001-2005	1,546,109	4%

DEP replaced slightly under 59 miles of distribution pipe annually, on average, between 1996 and 2005 and plans to replace slightly more than an average of 56 miles annually from 1996 through 2015.

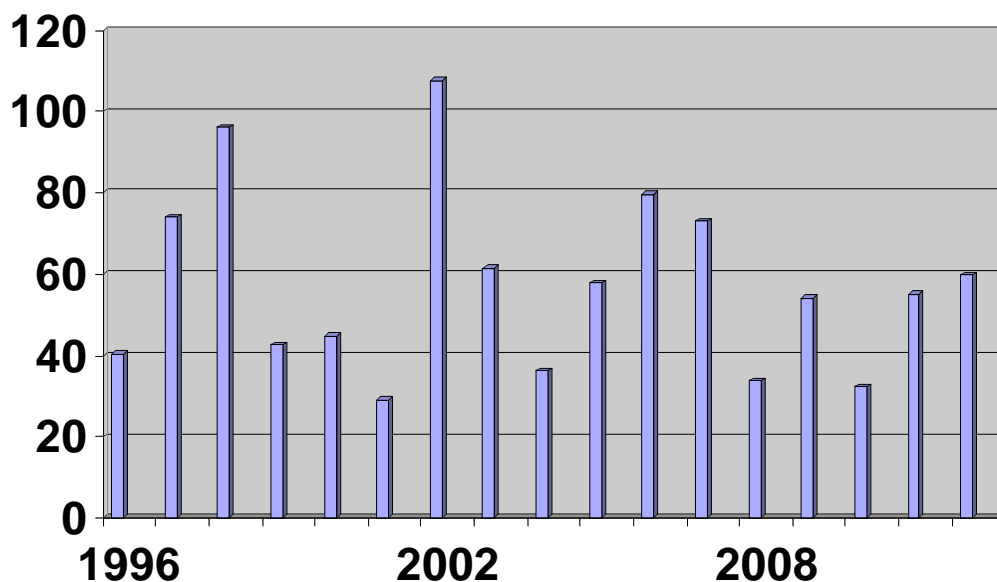
Distribution system leaks are detected and repaired both in response to customer complaints, and through a systematic survey of the distribution system. All parts of the distribution system are surveyed at least once every three years and the system located in the drainage areas for the Newtown Creek, North River and Wards Island wastewater plants is surveyed at least once every nine months.

Table 8: Distribution Leak Repair Statistics: FY06	
Survey Work	
Length of Piping Surveyed	21,524,265 LF (4,076 miles)
Number of Leaks Repaired	115
Water Savings	5.46 MGD
Source of Leak	39% Service Line, 34% Valve, 11% Hydrant, 10% Joint Leak, Main 6%

Table 8: Distribution Leak Repair Statistics: FY06	
Complaint Work	
Number of Leaks Repaired	249
Water Savings	39.36 MGD
Source of Leak	43% Service Line, 33% Main Break, 12% Valve, 12% Joint Leak, <1% Hydrant Leak

Table 9: Expansion and Results of Distribution Leak Detection		
Time Period	Linear Feet Surveyed (000,000 LF)	Leaks Found/Repaired (GPD per 1,000 LF)
Initial Citywide Cycle (1984-1990)	40.13 (Over six years)	2,334
FY1988	5.5	4,600
FY1996	23	550
FY2006	21.5	253.6

Miles of Pipe Replaced or Planned



Fixture Replacement and Customer Centered Programs

75% of residential water use occurs in the bathroom for toilet flushing, showers and use of the bathroom lavatory. Improving the efficiency of use in the bathroom was a clear goal for DEP and any water utility with water conservation goals.

Residential Water Survey Program (RWS): Understanding the Housing Stock

DEP began offering free water saving kits to homeowners in 1991 as well as free walk-through surveys of private homes to identify leaks and install low-flow showerheads, faucet aerators, and toilet displacement bags. By 1993 this program expanded to include multiple dwellings. Currently, small commercial occupancies are also included.

The RWS effort was directed at actual installation of water-saving items, as tens of thousands of water-saving showerheads and faucet aerators were installed, but also at collecting data on water use (and leaks) in New York residences. This information served both to educate property owners and to inform DEP about where leak problems lie.

Table 10: Leaks Measured During NYC Residential Water Surveys (2001-2003)		
Leak Location	Number of Leaks	Leak Rate (gpd)
Shower	1949	70
Toilet Overflow	1837	574
Toilet Flapper	1414	533
Bathroom Faucet	1411	46
Kitchen Faucet	1225	44
Flushometer Valve	651	389
Toilet Ballcock	320	523
Toilet Shutoff Valve	32	440
Percentage of Dwelling Units with Leaks: 24.6%		

Toilet Rebate Program (1994-1997)

DEP conducted the largest toilet replacement program in history between 1994 and 1997 during which time more than 1.3 million toilets were replaced. A 20-year net present value comparison of the toilet rebate program and equivalent expansions of the supply and wastewater systems found that the conservation program would provide a net savings of \$196 million from deferring construction of new supply and wastewater treatment capacity by ten years. The cost of conserved water was estimated at \$4.54 million per MGD, as compared to approximately \$10 million per MGD for new supply and wastewater treatment sources.

Total savings from the program have been estimated at about 80 MGD and an impact evaluation of the program (FN) found a 29% reduction in use among participating apartment buildings.

Plans for Future Programs

The eventual need to temporarily close the Delaware Aqueduct to allow repair of the leak has led DEP to study a wide variety of possible demand reduction and supply diversification projects to prevent supply shortfalls during the period of the Delaware Aqueduct outage. New incentive programs to replace additional existing toilets, existing urinals and to provide an incentive to install higher-efficiency toilets and urinals in new construction are amongst the most cost-effective options studied. DEP plans to begin offering a voucher-based toilet replacement program to high-density apartment buildings by the end of 2007 or beginning of 2008 and expand the program citywide by 2009. Incentives aimed at clothes washers in apartment building laundry rooms and laundromats are also being planned.

Table 11: Currently Planned Fixture/Appliance Incentive Programs (Estimated) 2008-2011			
Project Description	Estimated Savings (MGD)	Estimated Cost (\$000,000)	\$M/MGD
Toilet Replacements (Phase I, 2008)	10	26	2.60
Toilet Replacements (Phase II 2009-2010)	30	99	3.30
Clothes Washers	10	35	3.50
Cost-Sharing ICI Program	4.5	16	3.60
School-Public Building Replacements	5.5	16	2.88
Subtotal	60 MGD	157	2.62

Phase I of the toilet replacement program is fully funded and DEP is developing the specifications for an Administrative Project Management Contractor in Fall 2006. Funds for Phase II and the Clothes Washer effort should be added to the capital budget in January 2007. A program to replace old fixture in public schools and other public buildings is currently under discussion, as is a performance-based program to co-fund water-saving projects in non-residential properties. By comparison to the under-\$3 million per MGD cost of the efficiency programs, the lowest capital cost for supply projects is approximately \$10 million per MGD.

Public Buildings (NYCHA)

As part of the wastewater consent decrees, the New York City Housing Authority replaced 103,432 toilets in buildings located in the Newtown Creek, North River and Wards Island drainage areas during the 1990's through 2004. This is almost 99% of the fixtures in NYCHA buildings within the drainage area. NYCHA's periodic bathroom renovation projects throughout their system continue to add to their savings through the present day.

Public Buildings (Non-NYCHA)

DEP is in the early planning stages of a project for fixture replacements in city schools and other public buildings. DEP contracted with a water/energy engineering firm to perform detailed non-residential water audits of both private and public commercial-industrial buildings. Several New York City schools and hospitals were surveyed and data collected on the potential cost and savings of fixture replacements in these buildings. With cooperation from the Department of Education and School Construction Authority, DEP hopes to identify buildings which do not have water-saving fixtures and are not scheduled for capital upgrade projects in the next several years. These buildings would then be the subject of a fixture replacement program.

Building Manager Education

Since 1991 DEP and HPD have co-sponsored water conservation seminars design primarily for apartment building managers and maintenance staff, but open to the public. Over 5,000 people associated with more than 800,000 dwelling units have attended these seminars over time. The seminars compose part of a Building Education curriculum organized by HPD as well as stand-alone seminars offered biweekly.

Outdoor Water Use Reduction

Although DEP maintains restrictions and limits on outdoor water use, even outside of a drought emergency, outdoor water use has not been a high priority for program development since outdoor use is relatively minor. In 2005 and 2006 use during the warmest months was only 10-16% higher than average daily use during mid-winter and some of that additional use was due to the operation of evaporative cooling towers for central air conditioning systems. Average daily use in April and May, before the air conditioning season, was no higher than average daily use in January and February.

Watering Restrictions and Enforcement

DEP maintains and occasionally updates Chapter 20 and Chapter 21 of the Rules of the City of New York ("RCNY"). Chapter 20 includes general water use rules including connections to the system, meters, backflow protection and rules governing outdoor water use. Chapter 21 contains rules in effect during a drought emergency.

Chapter 21 was updated and revised in 2006 and Chapter 20 is current being updated with a new version of the Rules expected late in early 2007. The new version of Chapter 21, as well as the existing and proposed versions of Chapter 20 are included in the Appendix.

The water use rules included in Chapter 20 are generally similar to those maintained by many water utilities. They include:

- a) Prohibition against most outdoor water use between the hours of 11 a.m. and 7 p.m. and between November 1 and March 31.
- b) Requirement that hoses have nozzles. The proposed updated rule limits the flow rate of such nozzles to 5 gpm and requires automatic shutoff handles.

- c) Car washes using city water (as opposed to those using ground water) are required to recycle 80% of their water.
- d) Public fountains and similar uses must use recirculated water.
- e) Hydrant use requires a permit. The proposed changes place the onus on the applicant to demonstrate they could not use metered water in lieu of a hydrant.

The drought emergency rules describe a drought emergency as having three possible stages of increasing seriousness: Stages 1-3. Major issues of the drought rules include:

- a) Lawn watering is prohibited beyond Stage 1 and watering of golf course fairways is prohibited even in Stage 1. Home lawn watering is limited to every other day.
- b) Sidewalk and vehicle washing is prohibited except for health and safety reasons or Code compliance
- c) Request by the DEP Commissioner to the New York City Water Board to enact a “drought emergency rate increase”
- d) Esthetic and recreational uses are banned.
- e) Requirements for extensive “save water” signage

Hydrant Use Controls

DEP has installed locking devices on more than 30,000 hydrants citywide and also joins with the Fire Department in distributing spray caps each season. This policy has reduced peak use on all but the most severe heat waves.

Water Reuse

On July 1, 2004 the New York City Water Board created the Comprehensive Water Reuse Program (“CWRP”) rate which provides for a discounted water/sewer rate for mixed use or residential buildings that recycle water using a “blackwater” recycling system. One year later the qualifications for the rate were expanded to buildings which recycle blackwater or combinations of greywater and stormwater or greywater and district steam condensate. Only one building has applied for this rate, to date.

DEP is also examining the feasibility of reusing stormwater released by MTA sump pumps and reclaimed water near selected wastewater treatments plants.

Educational Campaign Program to Encourage Water Conservation Behavior

In order to help educate the public and raise awareness about water conservation, the DEP has developed, through its Bureau of Communications and Intergovernmental Affairs, a public education and outreach program. This program has been running for many years and has several integrated components that address a wide range of topics through a multiple media approach, as outlined below.

- Publications
- Promotional Items
- School Programs
- Public Event-based Programs
- Web Site

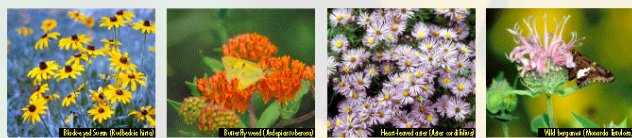
The following sections provide descriptive information regarding DEP programs conducted during 2005, programs planned for 2006, and new initiatives that will be investigated for implementation in 2006 and 2007.

Publications

A list of flyers, brochures, posters, and publications is provided in Table 12. These items were displayed or distributed throughout the public education program, and most are readily available on the DEP web site. Examples of the publications are shown in the following pages.

Table 12. Literature / Publications

New York City's Wastewater Treatment System (Report)
2004 New York Harbor Water Quality Report (Report on CD)
New York City's Water Supply System (Postcard for Conference)
Grease Disposal Tips (Leaflet)
Biosolids Beneficial Use Program (Leaflet)
Floatables Reduction Program (Leaflet)
Staten Island Bluebelt (Leaflet)
Clean Streets = Clean Beaches (Poster/Leaflet)
The DEP in The News (Newsletter)
Bureau of Wastewater Treatment: Bureau Summary (Report)
New York City 2004 Drinking Water Supply and Quality Report (Report)
Fire Hydrants (Poster)
Dos & Don'ts of Water Conservation (Leaflet)



PLANT A "NATIVE NEW YORKER"

What is a native plant?

A native plant lives or grows naturally in a particular region without direct or indirect human intervention. There are a large variety of native plants that grow throughout New York City. New York City native plants include the following: ferns, grasses, sedges, trees, vines, shrubs, and wildflowers. Plants evolve over time in response to climate, soils, rainfall, drought, and frost, as well as interactions with the other species inhabiting the local community. Thus, native plants possess certain traits that make them uniquely adapted to local conditions, providing a practical and ecologically valuable alternative for landscaping, conservation and restoration projects.

In North America, plant species are generally described as native if they occurred here prior to European settlement. This distinction is made because of the large-scale changes that have occurred since the arrival of the European settlers. The Europeans imported a variety of plants to this country and today, many are still a major component of traditional lawns and gardens.

Benefits of native plants

The benefit of growing and landscaping with native plants is that they are more likely to thrive under the local conditions while being less likely to invade new habitats. Native plants are well adapted to local environmental conditions, maintain or improve soil fertility, reduce erosion, and often require less fertilizer and pesticides than many alien plants. These characteristics save time and money and reduce the amount of harmful run-off threatening the aquatic resources of our streams, rivers, and estuaries. In addition, functionally healthy and established natural communities are better able to resist invasions by alien plant species. So, the use of native plants can help prevent the spread of alien species already present in a region and help avert future introductions.

On a broader ecological scale, planting native species contributes to the overall health of natural communities. Disturbances of intact ecosystems that open and fragment habitat, such as land clearing activities, increase the potential of invasion by alien species. Native plants provide important alternatives to alien species for conservation and restoration projects in these disturbed areas. They can fill many land management needs currently occupied by non-native species, and often with lower costs and maintenance requirements. Once established in an appropriate area, most native plant species are hardy and do not require watering, fertilizers, or pesticides.

Black-eyed Susan (*Rudbeckia hirta*) is an easy-to-grow biennial that thrives in poor soil. In colder climates, sow in mid-summer for blooms the following summer. In warmer climates, sow in early spring for late summer blooms.

Butterfly weed (*Asclepias tuberosa*) is part of the milkweed family and grows up to 2 feet. The flowers tend to be bright orange, and showy. Butterfly weed flourishes during the months of July and August and attracts many butterflies. The foliage is a favorite food of monarch caterpillars.

Heart-leaved aster (*Aster cordifolius*) is part of the Aster family and grows up to 4 feet. The flowers are powder blue, showy, and bloom through the months of August-October.

Wild bergamot (*Monarda fistulosa*) grows to 4 feet. Flowers bloom lilac or pink and grow between the months of July-September. Other native *Monarda* species include: Horse mint (*Monarda punctata*) which grows up to 3 feet and has yellow flowers with purple spots; and Bee balm (*Monarda didyma*) which grows up to 4 feet and has red flowers. All three species attract humming birds.

Other native plants to consider for your garden:

Birdfoot violet (*Viola pedata*)
Jack-in-the-pulpit (*Arisaema triphyllum*)
Perfoliate bellwort (*Uvularia perfoliata*)
Smooth blue aster (*Aster laevis*)
Wake robin (*Trillium erectum*)
Wild blue lupine (*Lupinus pennsylvanicus*)
Wild columbine (*Aquilegia canadensis*)
Wild geranium (*Geranium maculatum*)
Yellow forest violet (*Viola pubescens*)



Michael R. Bloomberg, Mayor
Emily Lloyd, Commissioner

Information was gathered from: City of New York Department of Parks and Recreation, www.nyc.gov/parks; US EPA, www.epa.gov; Garden of Eatin'; New York Botanical Garden, www.nybg.org; NY State Natural Heritage Program, www.dec.state.ny.us

HOW TO SAVE WATER AND KEEP PLANTS GREEN DURING A DROUGHT EMERGENCY

Mayor Bloomberg declared a drought emergency beginning April 1, 2002. Here are some facts about the drought and a list of ways you can help.

An open hydrant wastes one million gallons of water per day. Report **open hydrants** and **water waste** by calling (718) DEP-HELP.

PROHIBITED ACTIVITIES:

- No washing of vehicles, sidewalks, driveways, or streets.
- No ornamental fountains.

WHEN AND HOW TO WATER:

- Lawn watering is currently restricted to 7:00 am to 9:00 am and 7:00 pm to 9:00 pm with even numbered addresses on even dates, and odd numbered addresses on odd dates. In a Stage II emergency all lawn watering is prohibited.
- All other plants (flowers, perennials, annuals, and ground cover, shrubs, and trees) may only be watered with hand-held containers filled from a hose, hoses restricted to less than five gallons per minute, or low-pressure/low-flow irrigation devices.

OTHER WAYS TO KEEP PLANTS GREEN:

- Spread mulch or wood chips in planting beds to help plants maintain moisture.
- Weed planting beds often to relieve competition for water.
- Cultivate/aerate soil to help dry soil absorb and retain rainwater.
- Water plants with gray water (such as bath and dish water) using hand held containers, and collect rainwater in closed containers whenever possible.
- Water in the early morning or evening to prevent evaporation.
- Use hose with automatic shut-off nozzles. They control the flow of water and allow you to walk away from the hose without wasting water.
- Use soil moisture retention additives. When added to soil, they help it retain nutrients and moisture.
- Use tree gators to water your street trees, backyard trees and large shrubs.
- Avoid planting annuals, but if planting is absolutely necessary, use drought tolerant annuals such as portulaca, marigold, wax begonia, verbena, and be prepared to maintain them.

To learn more about the drought visit the DEP or Parks web site at:
www.nyc.gov/parks or www.nyc.gov/dep

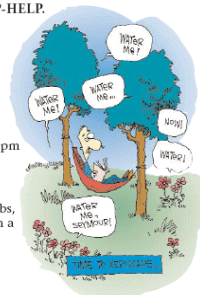


City of New York
Parks & Recreation

Save Water
Don't Drip
New York Dry!



Michael R. Bloomberg, Mayor
Emily Lloyd, Commissioner



The DOs & DON'Ts of Water Conservation

In or out of a drought, every New Yorker can save hundreds of gallons of water each week by following these simple water-saving tips.

BATHROOM	KITCHEN & LAUNDRY
<ul style="list-style-type: none"> ✓ Do take short showers and save 5 to 7 gallons a minute. ✓ Do fill the tub halfway and save 10 to 15 gallons. ✓ Do install water-saving toilets, showerheads and faucet aerators. Place a plastic bottle filled with water in your toilet tank if you can't switch to a low flow toilet. ✗ Don't run the water while shaving, washing your hands or brushing your teeth. Faucets use 2 to 3 gallons a minute. ✗ Don't use the toilet as a wastebasket, and don't flush it unnecessarily. 	<ul style="list-style-type: none"> ✓ Do run the dishwasher and washing machine only when full. Save even more by using the short cycle. ✓ Do install faucet aerators. ✗ Don't let the water run while washing dishes. Kitchen faucets use 2 to 3 gallons a minute. Filling a basin only takes 10 gallons to wash and rinse. ✗ Don't run water to make it cold. Have it chilled in the refrigerator, ready to drink.
<p>EVERYWHERE</p> <ul style="list-style-type: none"> ✓ Do repair leaky faucets and turn taps off tightly. A slow drip wastes 15 to 20 gallons each day. ✗ Don't open fire hydrants. 	<p>OUTDOORS</p> <ul style="list-style-type: none"> ✓ Do use a self-closing nozzle on your hose. ✗ Don't water your sidewalk or driveway - sweep them clean. ✗ Don't overwater your lawn or plants. Water before 9 a.m. or after 7 p.m.

Do share this information with family and friends.

REPORT LEAKS & WATER WASTE.
Call 311

Visit DEP's Web site at: www.nyc.gov/dep



Michael R. Bloomberg, Mayor
Emily Lloyd, Commissioner

Printed on recycled paper. 4/02.

PLAY WITH A HYDRANT AND YOU'RE PLAYING WITH FIRE.

Hydrants are for fighting fires, not for having fun.

Each time a hydrant is opened illegally, a thousand gallons of water are wasted each minute, and children risk serious injury from the powerful flow.

There's also a severe loss of water pressure. Which means if there's a fire, someone could die.

So if you need to cool off, try the beach or the nearest pool, or get an approved spray cap for a neighborhood hydrant from your local fire house.



Save Water.
It Could Save a Life.

TO REPORT
OPEN HYDRANTS, CALL
311



Michael R. Bloomberg, Mayor
Emily Lloyd, Commissioner

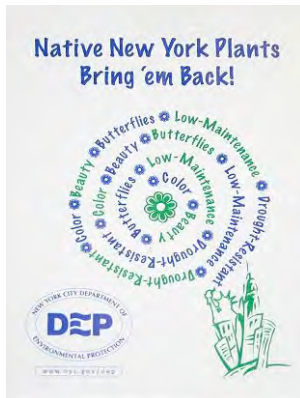
Promotional Items

The DEP distributed approximately 267,450 promotional items at various tabling events. Table 13 summarizes the advertising efforts of this program for 2005 and provides a list of additional promotional items as well. Examples of the promotional items are depicted in the following pages and include Save Water Sponges, magnets, book marks, buttons, and bumper stickers.

Table 13. Public Outreach Program

Promotional Item Distribution, 2005

Category	Total Number
Beach Bags	10,250
Frisbees	8,500
Litter Bags	10,000
Metro Card Holders	35,000
Save Water Sponges	25,000
Twixit Clips	19,700
Save Water – Don't Drip	
New York Dry (Bumper Sticker)	25,000
Dos & Don'ts of Water Conservation (Bookmark)	130,000
Dos & Don'ts of Water Conservation (Magnet)	4,000
	267,450



The DOs & DON'Ts of Water Conservation



BATHROOM

- ✓ Do take shorter showers and fill the tub halfway.
- ✗ Don't run water while washing your hands & brushing your teeth.

KITCHEN & LAUNDRY

- ✓ Do run the dishwasher & washing machine only when full.
- ✗ Don't run water to make it cold. Chill it in the refrigerator, ready to drink.

EVERYWHERE

- ✓ Do install water-saving fixtures.
- ✗ Don't ignore leaky toilets & faucets. Turn taps off tightly.

OUTDOORS

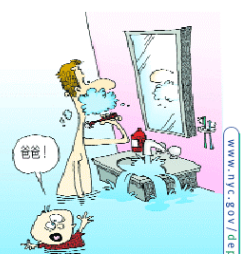
- ✓ Do use a self-closing nozzle on your hose.
- ✗ Don't open fire hydrants.

REPORT LEAKS & WATER WASTE. Call 311

In or out of a drought, every New Yorker can save hundreds of gallons of water each week by following these simple water-saving tips.


Michael R. Bloomberg, Mayor
Randy Ligon, Commissioner

節省用水注意事項



浴室

- ✓ 應該縮短淋浴時間，只將浴缸的水加到一半。
- ✗ 不應在洗手、刷牙時讓水繼續流。

廚房和洗衣

- ✓ 應該只在洗碗機和洗衣機裝滿之後才使用。
- ✗ 不應將水龍頭打開等水變冷。應該將水放在冰箱中降溫以供飲用。

所有地方


- ✓ 應該安裝節水裝置。
- ✗ 不應忽視漏水。應將水龍頭擰緊。

戶外

- ✓ 應該在水管上使用自動開關噴咀。
- ✗ 不應打開消防栓。

請報告漏水及浪費水的現象。
電話: (718) 337-4357

不論是否乾旱缺水，只要按照以上常識去做，每一位紐約人每週都能節省幾百加侖水。


紐約市市長 Michael R. Bloomberg
環境事務長 Christopher O. Ward

ЧТО НУЖНО И ЧЕГО НЕЛЬЗЯ ДЕЛАТЬ ДЛЯ ЭКОНОМИИ ВОДЫ



БАНЯ И КОМНАТА

- ✓ Стойте меньше времени под душем и заполняйте ванну наполовину.
- ✗ Не оставляйте кран открытым на то время, пока вы моете руки и чистите зубы.

КУХНЯ И СТИРКА

- ✓ Используйте посудомоечную или стиральную машину, только если она заполнена.
- ✗ Не сливайте воду, чтобы охладить ее. Охлаждайте воду в холодильнике до температуры, приятной для питья.

ВЕЗДЕ И ПОВСЮДУ


- ✓ Обязательно установите арматуру, которая экономит воду.
- ✗ Не проходите мимо утечек воды. Полностью закрывайте краны.

ВО ДВОРЕ

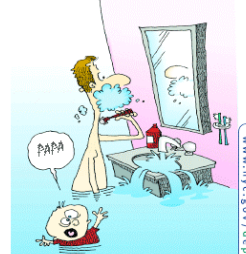
- ✓ Используйте шланг с самозакрывающимся распылителем воды.
- ✗ Не открывайте пожарные гидранты.

СООБЩАЙТЕ ОБ УТЕЧКАХ И ПОТЕРЯХ ВОДЫ. Звоните по телефону (718) 337-4357

Как и в засушливые времена при обычных атмосферных условиях каждый житель Нью-Йорка может существенно экономить сотни галлонов воды, следуя приведенным выше простым советам.


Майкл Р. Блумберг, мэр
Кристофер О. Уорд, глава департамента

LOS "SI" Y LOS "NO" para conservar agua



CUARTO DE BANO

- ✓ Tome duchas más cortas y llene la bañera por la mitad.
- ✗ No deje correr el agua mientras se lava las manos o se cepilla los dientes.

COCINA Y LAVADERO

- ✓ Use el lavaplatos y la máquina de lavar la ropa sólo cuando estén llenos.
- ✗ No deje correr el agua para que se enfíe. Refrigere agua en la nevera y téngala lista para beber.

EN CUALQUIER LUGAR


- ✓ Instale artefactos que ahorran agua.
- ✗ No pase por alto las goteras. Al cerrar las llaves del agua, asegúrese que estén bien ajustadas.

AL AIRE LIBRE

- ✓ Use una boca de cierre automático en su manguera.
- ✗ No abra hidrantes de incendio.

Para informar sobre goteras y desperdicio de agua, llame al 311.

Hay o no una sequía, todo neoyorquino puede ahorrar cientos de galones de agua cada semana siguiendo estos simples consejos


Michael R. Bloomberg, Alcalde
Christopher O. Ward, Comisionado

Save Water

Don't Drip New York Dry!

REPORT LEAKS AND WATER WASTE • CALL 311

School Programs

DEP's Bureau of Communications and Intergovernmental Affairs will continue to develop and implement school-based education programs to help make young people and adults aware of the importance of conserving water. DEP will provide classroom lessons, staff development workshops for teachers and administrators, printed material describing harbor water issues, and assistance for curriculum development and student research projects.



DEP's ongoing partnerships with education and environmental organizations, such as the New York City Soil and Water Conservation District, the Bronx River Alliance, Council on the Environment of New York City, the American Littoral Society, the New York-New Jersey Harbor Estuary Program and the South Street Seaport Museum enable DEP to reach a diverse audience.



DEP's environmental education resources for New York City's public and private schools emphasize critical and creative thinking, decision-making skills, communication and collaborative learning across disciplines. All programs are inquiry-based and are aligned with New York City Performance Standards in Science, Math, Social Studies and Applied Learning and with the New York City Department of Education's new Science Scope and Sequence.

NEW YORK CITY WATER SUPPLY

Activity 1: CREATE A RAINSTORM



This is an excellent ice-breaking activity to use with students of all ages and any group size, as well as for beginning a teacher training workshop.

Objectives:

- To creatively help teachers and students understand the water cycle.
- To actively engage students and teachers in learning about the source of their drinking water.

Method:

- Pose the question: "Where do you think your drinking water comes from?" Some responses may be "rain," "snow," "reservoirs."
- Introduce the activity: "As a group, right in this room, we are going to create a rainstorm. You will need to concentrate and use your imagination. We will make the rainstorm using our hands and feet, so make sure that you have enough room to do so. Let's review the different things we will do. (Go through each movement). Now, watch my hands and as I change what they are doing, you follow and do the same thing."
- Start to **rub your palms together**. You can narrate the storm if you chose. "We are in the Catskill Mountains, over 125 miles away from New York City. It's summer and a rainstorm is brewing. The wind is picking up and leaves start to rustle and a cloud covers the sun."
- Snap your fingers**. "The raindrops are starting to fall, lightly at first and streams begin to fill and lakes form."
- Clap with two fingers to palm**. "The rain is starting to fall a little harder." Water is flowing quickly down the mountains.
- Clap**. "The storm is getting more intense. The raindrops are falling harder and heavier. Rivers and streams swell. Reservoirs, large bodies of water, built to hold this rain and melting snow, fill with water."

- Slap your lap and stamp your feet**. "The summer cloudburst is reaching its peak as the wind rushes through the trees and the rain comes heavy and fast."
- Clap**. "It has been an intense cloudburst, but like many summer storms, it doesn't last long. The rain is starting to slack off and the wind is dying down."
- Clap with two fingers on palm**.
- Snap fingers**. "Rain drops fall in the reservoir in smaller drops."
- Rub palms together**. "The sun comes out from behind the clouds, the leaves are fresh and wet and green. Small streams and puddles rush over the sloping ground. Whispering: And our rainstorm is over." Stop rubbing palms together. Remain silent for a few seconds.

Discussion:

- Now that you have completed the activity, discuss in more detail where NYC's drinking water comes from. "Does anyone know where we get our drinking water?" Take responses.
- "What happens if we don't get enough rain or snow where the reservoirs are located?" Introduce the concept of water conservation and drought.
- Discuss the concept of a watershed (the land that water flows across or under on its way to a stream, river, lake or reservoir).

For more information contact:

New York City
Department of Environmental Protection
59-17 Junction Boulevard
Flushing, NY 11373
educationoffice@dep.nyc.gov

Dial 311 for all NYC government information and services

Also visit DEP's Web site at:

www.nyc.gov/dep

New York City Department of Environmental Protection • Bureau of Public Affairs
59-17 Junction Boulevard • Flushing, NY 11373-5108 • Dial 311 for all NYC government information and services

NEW YORK CITY WATER SUPPLY

Activity 2: THE VALUE OF WATER



This activity examines our perception of water and helps students understand, through acting, the importance of water in our lives.

Objectives:

- To help participants understand how much water they use each day.
- To encourage discussion about the value of water.

Materials:

- A one-gallon jug
- Your imagination

Method:

- Ask your students if they have used water during the day. Some may answer that they have not. How was water used? List responses on the board. Encourage your students to include all water use, including the water they gave to pets and plants. Ask your students to think about the dependence living things have on water.
- Hold up a filled gallon water container and ask: "How many gallons of water do you think you use each day?" Think about how much each activity uses. For example, a five minute shower uses about 50 gallons, one flush of the toilet averages three to five gallons and brushing teeth with the water running uses about 15 gallons. Estimate personal water use again. If the numbers are closer to 100 gallons a day, they are correct.
- "How do we get our water at home?" [Turn the tap.] Demonstrate the simplicity of this action.
- Ask your students to imagine living in New York City 160 years ago, before people could simply turn on the tap and get clean water. Where would their water come from? [From a local well or a stream.]
- Pretend I go outside to a local well for water. "What is a well?" Use the example of digging a hole in the sand at the beach and having it fill with water as an illustration of a well. What will you need to bring with you? [A bucket, a lantern at night and warm clothing during the winter.] Let's get ready to go...

- Participants can do this activity as a group or one or two students can act it out in front of the class. Walk to the well, set down our lantern and bucket, and lower the well bucket to get water. Hold the full bucket and empty it into the bucket you will carry home. Carry the bucket carefully. Why? [You do not want to spill any water.] Bring the bucket inside and lift it onto a table. "How did that feel?" [Heavy, a lot of work.] Imagine having to gather water that way all the time. "How would you feel about this water?" [Valuable, important, needs protection.] "Would you be careful with the water you use at home or would you waste it?" [Careful because I would not want to have to gather more water unnecessarily. I would conserve water.]
- "How much does water weigh?" Pass around the gallon jug of water. Estimate its weight. A gallon of water actually weighs 8.34 pounds. How much would a five gallon bucket weigh?

Discussion:

- If anyone in the class has gone camping ask how they treated the water they carried?
- Ask your students to describe how water is collected and reserved in countries their families are from or those they may have visited.

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NEW YORK CITY WATER SUPPLY

Activity 3: WHAT IS A WATERSHED?



This hands-on activity allows students and teachers to create a working model of a watershed. It also allows the audience to see the different parts of a watershed and how rain effects this environment.

Objectives:

- To introduce students and teachers to the concept of watersheds.
- To engage students and teachers in learning about the source of New York City's drinking water and its relationship to watersheds.

Materials:

- For each group of 4-6 participants:
- A plastic or metal tray (at least 4" deep)
 - A spray bottle filled with water
 - 6 sheets of newspaper
 - One large sheet of plastic wrap
 - 2 paper towels
 - Food coloring (optional)

Method:

- Introduce the activity by explaining that students will create a landscape in their box that looks very much like the area that collects New York City's drinking water.
- Ask students to work cooperatively within their groups and to discuss their observations.

Part I

- Instruct participants to create a mountainous landscape in the basin using pieces of newspaper. Mold the newspaper into mountains and place them in the plastic tray.
- Give each group a piece of plastic wrap to cover the newspaper. Make sure that the wrap is molded to the contours and tuck ends inside.
- Using the fine mist from the spray bottle, rain on the landscape. Pay careful attention to what the water drops are doing. "How are they moving?" [Downhill] "Are they collecting?" [Forming puddles and/or streams] "What might the puddles represent?" [Lakes and reservoirs] "Did these lakes form simply by spraying directly onto them?" [They formed by streams feeding them with water] After the landscapes have been sprayed, discuss these questions. Ask someone from each group to speak to the class about the observations their group made.

- Discuss what physical feature of the watershed the plastic wrap represents. Encourage students to explore how the water moved over the plastic. What in nature might this represent? [The bedrock of the mountains.]

Part II

- Hand out paper towels to each group. Mold to the landscape.
- Rain and observe how water moves through the landscape.
- Pose questions: "Is the water flowing in the same manner?" [It spreads out, does not move as quickly, still it flows downhill.] "What does the paper towel represent?" [soil and vegetation]
- Discuss the role vegetation plays in the natural landscape. Trees and grasses for example help to regulate the flow of water and help to prevent flooding and erosion.

Part III (Optional)

- Add a few drops of food coloring to each landscape and rain again. Pretend the color represents a chemical that was accidentally poured into the soil. What observations can you make? How does rain affect the movement of pollutants? [It is mixed with the water and pollutes the reservoirs. It soaks into the soil.]
- "What does this mean to our water supply?" [It is very important to protect our water supply and our watershed from pollution.]

Discussion:

- You have just created a watershed. Can you describe it? Why is watershed protection important to New York City?
- Can you now describe how our drinking water is collected in the watershed? Share this important information with your family and friends.
- What happens when there is not enough precipitation in the watershed? What do you do to conserve water at home and school?

For more information contact:

NYC Department of Environmental Protection, 59-17 Junction Boulevard, Flushing, NY 11373
educationoffice@dep.nyc.gov

Visit DEP's Web site at:

www.nyc.gov/dep

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NEW YORK CITY WATER SUPPLY

Activity 4: TESTING THE WATERS: AN INTRODUCTION TO WATER QUALITY



This hands-on curriculum-based activity allows students and teachers to explore introductory water quality testing. The lesson focuses on two specific parameters, pH and chlorine residual.

Objectives:

- To introduce the concept of water quality testing, utilizing kits and/or scientific instruments.
- To investigate specific water quality parameters: pH and chlorine residual.
- To link the importance of good water quality for humans with other living things.
- To support curriculum-based learning and new performance standards.

Materials:

- Plastic collection bottle
- pH testing kit or litmus paper
- Chlorine testing kit

Background:

Ask your students what they think it means to have a good and safe drinking water supply. Why is good water quality so important to us and other living things? Ask the class if they know what agency in New York City is responsible for the operation, maintenance and protection of our water supply.

The New York City Department of Environmental Protection (DEP) has the job of supplying water to all of you every day. DEP provides approximately 1.3 billion gallons of water to over 9 million people each day. DEP has to make sure that there is enough water for all of us to use. They also have to make sure that the water is safe to drink.

There are many types of scientists that work at DEP to test the water. A monitoring program is in place in our upstate watersheds (at the reservoir and feeder streams) and in the city (within the distribution system) to do this. Scientists that study fresh bodies of water are

called limnologists. They go out to the streams and reservoirs several days a week to collect water samples and then bring these bottles into the laboratory. There, microbiologists examine the water for bacteria and algae. Chemists, another type of scientist, look for chemicals and compounds such as calcium, lead, copper, nitrates, phosphorus and hardness to determine the chemical composition of the water. There are five laboratories that test our water daily. Four of them are located upstate and conduct various analyses on our source water. The one laboratory in Queens examines the water throughout the distribution system within the City of New York.

New York City's water supply is not filtered, but certain chemicals are added to treat the water. Quary the class on what chemicals are added. All water entering New York City's distribution system is treated with chlorine, fluoride, orthophosphate, and, in some cases, sodium hydroxide. Chlorine is added to disinfect the water. Fluoride is added to prevent tooth decay and cavities. Orthophosphate is added to create a protective film on pipes which reduces the release of metals, such as lead, from household plumbing. Sodium hydroxide is added to the water to raise the pH and reduce corrosivity.

As the water is entering the distribution system, samples are collected by field personnel at sampling stations, which are located throughout the five boroughs. Sampling stations were installed throughout the five boroughs to ensure an accurate and reliable method of collecting distribution water samples. At these stations, preliminary testing is done for temperature, pH, chlorine residual and phosphates. Then the water sample is brought back to the laboratory for routine and more intensive testing. The water is analyzed for a broad spectrum of microbiological, chemical, and physical measures of quality. In 2001, DEP collected over 47,000 in-city samples and performed approximately 1,031,000 analyses.

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Table 14 presents a summary of event locations per borough.

**Table 14. Number of Education Events
Per Borough, 2005**

Location	Number of Events
Bronx	6
Brooklyn	16
Manhattan	52
Queens	20
Staten Island	0
City-wide	45
Total	139
Average Events Per Month	12

Public Event-based Programs

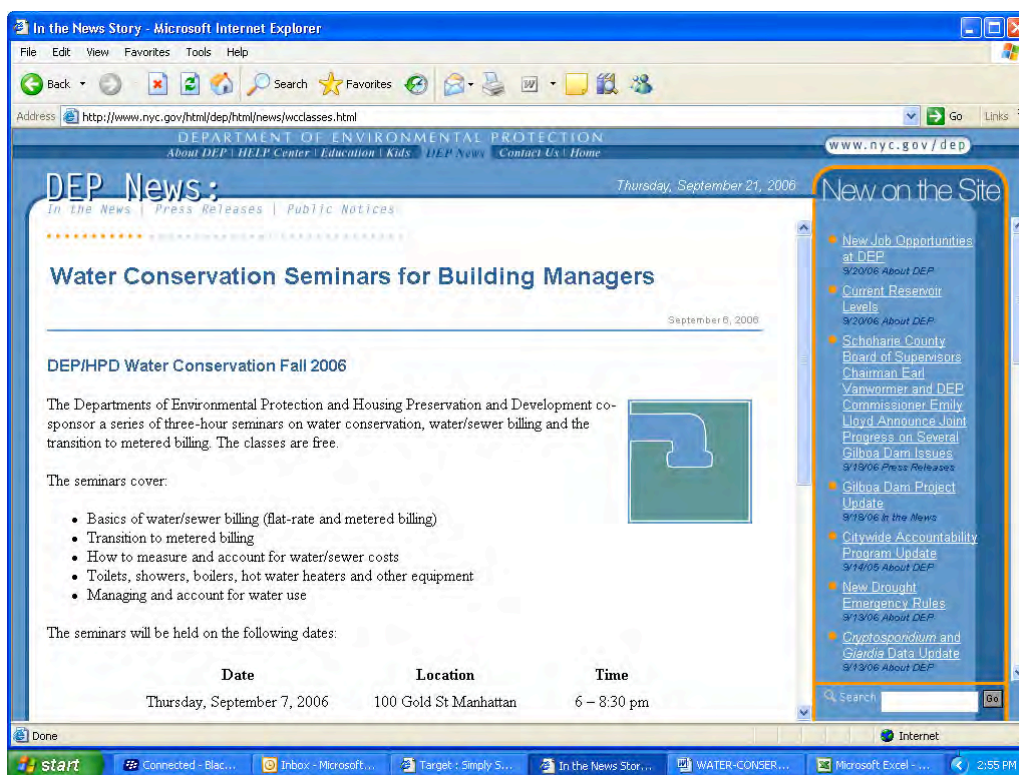
In 2005, the DEP attended 227 public outreach events, averaging approximately 19 events per month. Events included table top displays and outreach at 78 fairs, festivals, and concerts, most of which were community based. Other events included displays and outreach at 67 greenmarkets and farmers markets and 5 “Clean Streets = Clean Beaches” events, with the remainder including a combination of community group outreach, such as presentations and table top displays at churches, professional associations, and the Boy Scouts, as well as events conducted at City parks and museums. Table 15 includes a summary of events per borough, respectively.

**Table 15. Number of Public Outreach Events
Per Borough, 2005**

Location	Number of Events
Bronx	22
Brooklyn	52
Manhattan	82
Queens	39
Staten Island	20
City-wide	12
Total	227
Average Events per Month	19

DEP Website www.nyc.gov/dep

The DEP Web Site constitutes one of the most accessible and far reaching portions of the DEP public education program. The site has numerous pages and links that connect viewers to all manner of topics with which the DEP is associated, including such far ranging issues as large construction projects (e.g., the creation of the new water supply tunnel), billing and customer service information, press releases, water quality data, departmental organizational information, and environmental education and data. With specific regard to institutional, regulatory, and public education programs addressing water conservation, the web site provides a clearinghouse for the DEP public education program including event and training schedules, contacts and links for more information, downloadable promotional materials and publications (e.g., posters, flyers, reports), and press releases.



Likewise, regulatory assistance may be found through the web site “help center” which provides links to appropriate forms, rules, and contacts to assist businesses, residents, and institutions in complying with water and sewer use regulations and to encourage the web audience to adopt environmentally sound water and sewer use habits. The major target audiences for the web site are outlined below and in Table 16, and the site’s organization by topic is provided in Table 17.

The DEP web site has been organized into four categories to target four distinct major audiences to help the department to provide conveniently accessible information to its constituency, as follows in Table 16. In addition to the four major categories, the web site also contains links on its homepage to “About DEP” and “Contact Us” pages, which span all four target audiences.

Table 16. DEP Web-Site Organization by Target Audience

Link - Category	Target Audience	General Resources Provided
Help Center (Customer Service)	Consumers and Businesses	Information, including regulatory compliance, water conservation, and pollution prevention information, to help those with a billing and/or regulatory relationship with the DEP.
DEP News	General Public	Press releases, project descriptions, and publications designed to inform the general public, as well as to assist other organizations in reporting on DEP issues.
Environmental Education	Schools, Professionals, Community Organizations, General Public	Wide ranging information, including reports, data, and class programs, designed to educate the larger New York community about environmental issues and to promote environmentally responsible behavior.
Kids	Schools, Children, Parents	Environmental education materials and activities designed for children.

The DEP website addresses water conservation in institutional, regulatory, and public education programs throughout its content and across all of the target audiences. Institutional programs are covered through several avenues. Consumers and businesses can find water conservation and pollution prevention information through the Help Center (Customer Service) pages. The news media, as well as the general public, can obtain information from DEP press releases, project reports, and event descriptions. Automatic e-mail press release updates are also available. The technical community also has access to water quality and DEP performance data, including the annual Harbor Water Quality Reports and City-wide Accountability data.

Regulatory information is also provided in multiple places accessible through the DEP website. The most direct links are provided through the Help Center pages, which allow businesses easy and organized access to regulatory requirements, pollution prevention information, and water conservation information.

Finally, the public education component of the website enhances the myriad of DEP public education programs by providing easy internet access to event schedules, educational materials for teachers and students, downloadable promotional information such as flyers and posters, reading lists, project descriptions, and the host of information associated with the DEP Public Education Programs.

The full DEP website organization has been provided in Table 7. Those categories containing information specific to institutional, regulatory, and public education programs have been highlighted and sub-categories illustrating the breadth of the relevant environmental information and the multiple pathways through which information is promoted within the website have also been included. Over fifteen links that provide cross-referenced environmental and pollution prevention information exist within the first two levels of the web site providing access to numerous resources relevant to institutional, regulatory, and public education programs to promote water conservation.

Several critical links with the DEP's partners leverage the outreach power of the DEP website, most notably, the links with NYC.gov, the official New York City web site, which exposes the DEP to a much larger, City-wide audience.

Table 17. DEP Web-Site Organization by Topic

Category	Sub-category	Institutional Components Related to Water Conservation	Regulatory Components Related to Water Conservation	Public Education Components Related to Water Conservation	Information / Materials
About DEP	Drinking Water Supply			X	
	Watersheds			X	
	Reservoir Levels			X	
	Commissioner's Statement			X	
	City-wide Accountability Program				Catch Basin maintenance data
	Wastewater Treatment				Floatables Reduction Program, Grease Discharges, Food Waste Disposers, Grease Disposal Tips, Biosolids Beneficial Use Program, Harbor Water Quality Survey
	Air, Noise, Hazmat				
	Job Opportunities				
	DEP's Bureaus			X	
Help Center	Consumer Resources			X	Grease Disposal Tips, Protect Your Water Meter and Pipes from Freezing, Annual Water Supply Statement, How Can I Save Water?
	Meter and Billing Forms			X	

Table 17. DEP Web-Site Organization by Topic

Category	Sub-category	Institutional Components Related to Water Conservation	Regulatory Components Related to Water Conservation	Public Education Components Related to Water Conservation	Information / Materials
	Water Board Rates			X	
	How Can I Save Water			X	
	Environmental Control Board			X	
	Business Resources			X	Smart Business (guide to environmental regulations and permitting requirements), Pollution Prevention, Preventing Grease Discharges, Additional Resources, Environmental Economic Development Assistance Unit
	Environmental Compliance			X	
	Drought Information			X	Numerous links to water saving tips, water conservation rules, and drought characterization and water supply status
	Doing Business with DEP			X	
Education	Education Materials			X	Large variety of educational materials and contacts
	Suggested Reading List			X	Over 10 websites and over 30 books listed for Adult Reading; Over 10 websites an over 40 books listed for Child Reading.
	The City's Water Supply			X	

Table 17. DEP Web-Site Organization by Topic

Category	Sub-category	Institutional Components Related to Water Conservation	Regulatory Components Related to Water Conservation	Public Education Components Related to Water Conservation	Information / Materials
	Water Saver's Workbook			X	Series of activities, quizzes, and readings related to water conservation.
Kids	Fun Activities and Lessons For Children of All Ages			X	Wow, I Didn't Know That – an instructive quiz related to water conservation and pollution prevention.
DEP News	DEP News	X	X	X	DEP's online newspaper containing recent articles and reports about DEP projects and issues.
	Interactive Features			X	List based search of newsworthy topics and press releases.
	Press Releases			X	Links to recent and archived DEP press releases.
	Public Notices		X	X	Links to recent and archived public notices.
Contact Us	Where to Contact the DEP			X	Contact number for water quality condition reporting by the public.
	Sign Up for Email Updates			X	Automatic e-mail updates concerning environmental news items.
	Email the Commissioner				

Future Actions

This section, Future Actions, describes public education programs that DEP seeks to support in 2006 and 2007 to address water conservation. These future actions are based on the continuation and enhancement of the variety of successful, ongoing programs that the DEP has implemented as well as a DEP endorsement of City-wide programs sponsored by other government agencies. Through these actions, DEP can further its commitment to implementing effective public education programs aimed at water conservation.

- **School Programs:** DEP will continue to provide support for City-wide environmental education resources targeting students and teachers (131 programs were supported in 2005). Support would continue to include the provision of speakers, teacher workshops, presentations, and promotional literature and items for school groups related to floatable reduction, water quality, water conservation, and other environmental topics. Similar support targeted to students and teachers would also be provided for conferences, environmental centers, museum educational programs, and community organizations, as necessary. In addition to the many programs reported last year, 2005, DEP also reached out to all the elementary and middle schools (public, private and parochial) in the New York City area, mailing 3,500 copies of the guidelines for its annual Water Conservation Art and Poetry Contest. For the last twenty years, DEP has been encouraging fifth and sixth grade students to creatively express their understanding of the New York City's water resources and the importance of wastewater treatment.

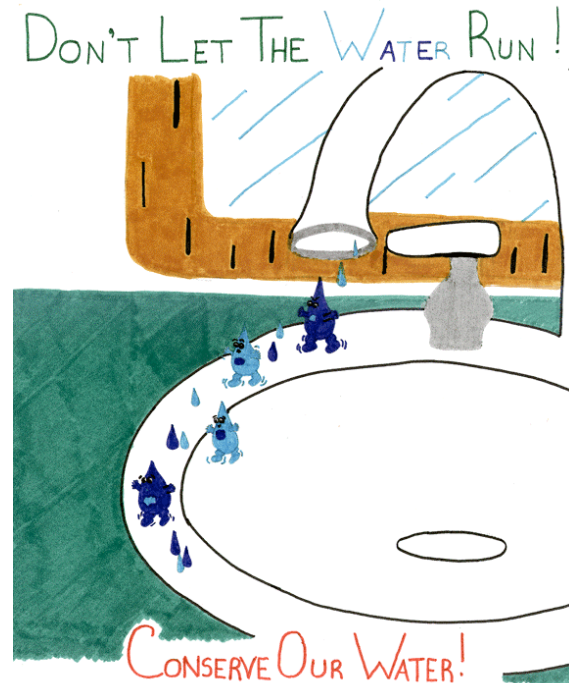


In 2006, DEP's Art and Poetry Contest included specific topics related to water conservation, such as:

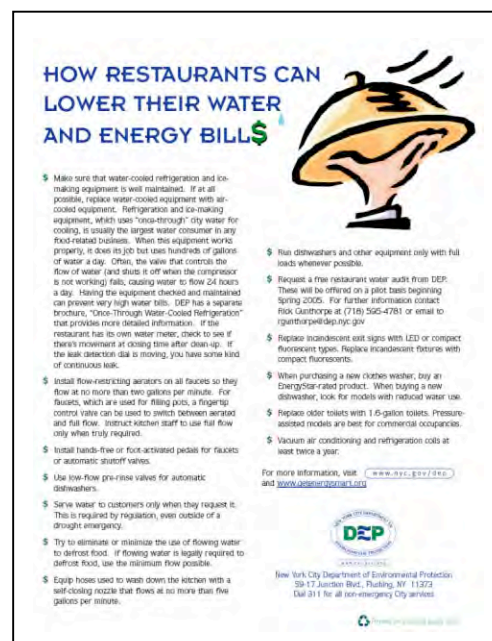
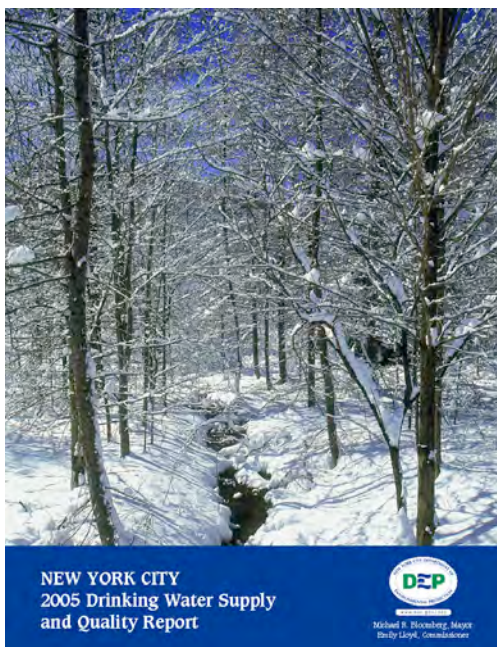
- How we use water everyday at home and in school and how it can be conserved.
- The value of water in our lives.
- The purpose of fire hydrants and their proper use.
- People share the earth's water supply with other living things.
- No matter where we live, we can help keep water clean.
- The unique properties of water make it special to all of us.
- The importance of the Croton, Catskill and Delaware watersheds.
- How our water is protected to be sure it is safe to drink.

Almost 300 students were honored in the presence of their families and teachers for their outstanding expressions and understanding of the environment.

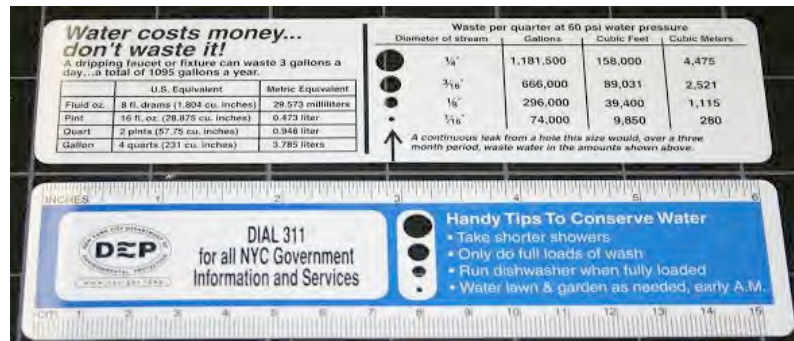
The contest has been conducted with the support of the New York City Department of Education, New York Archdiocese, The Board of Jewish Education, Greek Orthodox Archdiocese, Lutheran Schools, and Independent Schools.



- Publications:** The wide array of DEP environmental education related literature and publications will continue to be produced and updated, as necessary, for distribution at school events, public events, and on the DEP website. Specific documents that received updates in 2006 include the New York Harbor Water Quality Report, the Drinking Water Supply and Quality Report, How to Read Your Water Meter, and High Efficiency Clothes Washers.



- **Promotional Items:** DEP will continue to provide promotional items such as magnets, bumper stickers, bookmarks, rulers, stickers, book covers, sponges, and beach toys with environmental education related messages. These items will be distributed at school and public events to reinforce water conservation messages.



- **DEP Website:** DEP will continue to improve and enhance its website. Both existing and future content will enable the public to learn more about the activities and status of the projects and initiatives aimed at conserving water. The site will provide education and outreach material, customer service updates and notices, press releases, public meeting announcements and other public information.

Drought and Emergency Procedures

From time to time the Water System experiences drought conditions caused by significantly below-normal precipitation in the watershed areas. The most recent drought was in 2002.

The Water System relies upon a surface water supply, and is sensitive to major fluctuations in precipitation. Throughout even the worst droughts, the Water System has continued to supply sufficient amounts of water to the City. To ensure adequate water supply during drought conditions, DEP, in conjunction with other City, State and interstate agencies, maintains a Drought Management Plan. The Drought Management Plan defines various drought phases that trigger specific management and operational action. Three defined phases are: "Drought Watch," "Drought Warning," and "Drought Emergency." A Drought Emergency is further subdivided in four stages based on the projected severity of the drought and provides increasingly stringent and restrictive measures.

A Drought Watch is declared when there is less than a 50% probability, based on the existing record since 1927, that either the Catskill or Delaware reservoir system will be filled by the following June 1. This phase initiates the pumping of water from the Croton System. In addition, during this phase a public awareness program begins and users, including upstate communities taking water from the System, are requested to initiate conservation measures. New York State Department of Health ("NYSDOH"), NYSDEC, and the Delaware River Basin Commission (the "DRBC") are advised of the Water System's status, and discussions are held with City agencies concerning their prospective participation in the event of a declaration of a Drought Warning.

A Drought Warning is declared when there is less than a 33% probability that either the Catskill or Delaware reservoir system will fill by June 1. All previous efforts are continued or expanded and additional programs are initiated, including the coordination of specific water saving measures by other City agencies.

A Drought Emergency is declared when it becomes necessary to reduce consumption by imposing even more stringent measures. In addition to the imposition of restrictions, DEP may enhance existing System management and public awareness programs, expand its inspection force and perform additional leak and waste surveys in public and private buildings. DEP may also require communities outside of the City that are served by the System to adopt similar conservation measures. The Drought Management Plan can be downloaded from DEP's website: <http://nyc.gov/html/dep/html/drought.html>. This URL is also home to copies of general water use restrictions and Drought Emergency Rules.

DEP maintains, and regularly updates, regulations describing water use restrictions during a Drought Emergency. These rules are contained in Rules of the City of New York (RCNY) Chapter 21 and are promulgated and amended through a public rulemaking process. The rules are divided into three Drought Emergency Stages: I, II and III with restrictions increasing in number and severity with each Stage.

Appendix I

DEP Piping by Size and Type

Size and Type	Linear Feet	percentage size by type
	TOTAL	
1" unknown	166	
1.5" unknown	836	
3" unknown	447	
2"		
Cast Iron	23,885	28.94%
Ductile Iron	896	1.09%
Concrete Lined Cast Iron	49,242	59.67%
Unknown	8,506	10.31%
Total	82,529	100.00%
4"		
Cast Iron	103,588	75.73%
Ductile Iron	4,934	3.61%
Concrete Lined Cast Iron	27,513	20.12%
Unknown	743	0.54%
Total	136,778	100.00%
6"		
Cast Iron	1,324,833	84.28%
Ductile Iron	43,648	2.78%
Concrete Lined Cast Iron	202,484	12.88%
Steel	742	0.05%
Unknown	47	0.00%
Polyethylene Lined	188	0.01%
Total	1,571,942	100.00%
8"		
Cast Iron	6,085,067	36.59%

DEP Piping by Size and Type

Ductile Iron	4,258,245	25.60%
Concrete Lined Cast Iron	6,280,148	37.76%
Steel	7,877	0.05%
Unknown	278	0.00%
Total	16,631,615	100.00%

10"

Cast Iron	52,924	70.83%
Ductile Iron	5,883	7.87%
Concrete Lined Cast Iron	15,776	21.11%
Steel	138	0.18%
Unknown	-	0.00%
Total	74,721	100.00%

12"

Cast Iron	3,023,687	27.51%
Ductile Iron	3,560,994	32.40%
Concrete Lined Cast Iron	4,350,494	39.58%
Steel	56,643	0.52%
Polyethylene Lined	369	0.00%
Total	10,992,187	100.00%

14"

Cast Iron	14,698	74.97%
Ductile Iron	74	0.38%
Concrete Lined Cast Iron	3,656	18.65%
Steel	-	0.00%
Unknown	1,177	6.00%
Total	19,605	100.00%

16"

Cast Iron	431,460	63.93%
Ductile Iron	15,506	2.30%
Concrete Lined Cast Iron	223,977	33.18%
Steel		0.59%

DEP Piping by Size and Type

		3,993	
Unknown		-	0.00%
	Total	674,936	100.00%
18"			
Cast Iron		-	0.00%
Ductile Iron		612	17.71%
Concrete Lined Cast Iron		-	0.00%
Steel		-	0.00%
Unknown		2,843	82.29%
	Total	3,455	100.00%
20"			
Cast Iron		720,009	22.35%
Ductile Iron		1,683,253	52.25%
Concrete Lined Cast Iron		790,653	24.54%
Steel		27,536	0.85%
Unknown		-	0.00%
	Total	3,221,451	100.00%
24"			
Cast Iron		132,726	54.59%
Ductile Iron		46,223	19.01%
Concrete Lined Cast Iron		56,799	23.36%
Steel		3,568	1.47%
Polyethylene Lined		3,828	1.57%
	Total	243,144	100.00%
30"			
Cast Iron		144,981	70.93%
Ductile Iron		5,285	2.59%
Concrete Lined Cast Iron		29,463	14.41%
Concrete		175	0.09%
Steel		23,724	11.61%
Polyethylene Lined		769	0.38%
	Total	204,397	100.00%

DEP Piping by Size and Type

36"

Cast Iron	215,907	52.47%
Ductile Iron	20,956	5.09%
Concrete Lined Cast Iron	16,732	4.07%
Concrete	31,252	7.60%
Steel	126,611	30.77%
Total	411,458	100.00%

42"

Cast Iron	345	28.47%
Ductile Iron	-	0.00%
Concrete Lined Cast Iron	29	2.39%
Concrete	88	7.26%
Steel	750	61.88%
Total	1,212	100.00%

48"

Cast Iron	411,598	37.58%
Ductile Iron	96,969	8.85%
Concrete Lined Cast Iron	52,946	4.83%
Concrete	133,102	12.15%
Steel	400,663	36.58%
Total	1,095,278	100.00%

54"

Cast Iron	-	0.00%
Ductile Iron	-	0.00%
Concrete Lined Cast Iron	-	0.00%
Concrete	1,095	42.41%
Steel	1,487	57.59%
Total	2,582	100.00%

60"

Cast Iron	3,419	1.68%
Ductile Iron	20,734	10.21%
Concrete Lined Cast Iron	43	0.02%

DEP Piping by Size and Type

Concrete	4,637	2.28%
Steel	174,309	85.81%
Total	203,142	100.00%
66"		
Cast Iron	2,067	3.77%
Ductile Iron	17	0.03%
Concrete Lined Cast Iron	-	0.00%
Concrete	-	0.00%
Steel	52,753	96.20%
Total	54,837	100.00%
72"		
Cast Iron	9,930	5.28%
Ductile Iron	1,324	0.70%
Concrete Lined Cast Iron	3,023	1.61%
Concrete	335	0.18%
Steel	173,353	92.23%
Total	187,965	100.00%
84"		
Cast Iron	-	0.00%
Ductile Iron	-	0.00%
Concrete Lined Cast Iron	-	0.00%
Concrete	7,491	74.37%
Steel	2,582	25.63%
Total	10,073	100.00%
96"		
Cast Iron	-	0.00%
Ductile Iron	-	0.00%
Concrete Lined Cast Iron	-	0.00%
Concrete	606	100.00%
Steel	-	0.00%
Total	606	100.00%

TOTALS

Cast Iron	12,701,124
Ductile Iron	

DEP Piping by Size and Type

	9,765,553
Concrete Lined Cast Iron	12,102,978
Concrete	178,781
Steel	1,056,729
Polyethylene Lined	5,154
Unknown	15,043
Total	35,825,362
	35,825,362

Water Conservation Program

Annual Update

**New York City Department of Environmental Protection
59-17 Junction Blvd.
Flushing, NY 11373**

July 2007



www.nyc.gov/dep

Introduction and Summary

This report is an update of the Water Conservation Program Plan issued by the New York City Department of Environmental Protection (“DEP”) in December 2006. The original document is available from DEP in paper and PDF format. That original report contains detailed information on the history and operation of the water supply and wastewater treatment systems as well as historic information on water conservation efforts. Please request a copy of that document for a more complete picture of DEP’s efforts. This report provides information on more recent activities.

With the city’s population expected to rise to 9.1 million by 2030, from 8.3 million in 2005, water efficiency will continue to have an important role to play, not just to help assure supply but also to assist in meeting goals to reduce combined sewer overflows, maintain wastewater quality and meet nitrogen removal goals.

Abbreviations and Acronyms Used in This Report

AMR	Automatic Meter Reading (sometimes referred to as “AMI” for “Advanced Metering Infrastructure”)
BMP	Best Management Practices
CIP	Capital Improvement Plan
CSO	Combined Sewer Overflow
CY	Calendar Year
DEC	New York State Department of Environmental Conservation
DEP	New York City Department of Environmental Protection
DRBC	Delaware River Basin Commission
FY	Fiscal Year (July 1 – June 30)
GCPD	Gallons per Capita per Day
HCF	Hundred Cubic Feet
HPD	New York City Department of Housing Preservation and Development
LF	Linear feet
MGD	Millions of Gallons per Day
NYCHA	New York City Housing Authority
RCNY	Rules of the City of New York
RFEI	Request for Expressions of Interest
RFP	Request for Proposals
RWS	Residential Water Survey
SCA	School Construction Authority
WPCP	Water Pollution Control Plant (Sewage Treatment Plant)

Program and Activity Updates

Incentive Programs

Preparations for a new series of conservation incentive programs continued with plans to bid the contract to administer the program during summer 2007 and develop the IS capability for the

application and reporting process by the beginning of 2008. DEP has begun briefing manufacturers on planned details. An incentive program for toilets and probably clothes washers for apartment building laundry rooms will be opened for high-density buildings currently on flat-rate billing during the first quarter of CY 2008. The program is scheduled to open citywide and be expanded to urinals, in 2009.

Table 1: Currently Planned Fixture/Appliance Incentive Programs (Estimated) 2008-2011			
Project Description	Estimated Savings (MGD)	Estimated Cost (\$000,000)	\$M/MGD
Toilet Replacements (Phase I, 2008)	10	26	2.60
Toilet Replacements (Phase II 2009-2010)	30	99	3.30
Clothes Washers	10	35	3.50
Cost-Sharing ICI Program	4.5	16	3.60
School-Public Building Replacements	5.5	16	2.88
Subtotal	60 MGD	157	2.62

DEP is also researching details of a possible incentive program for laundromats.

Fixture Replacements in Public Buildings

Discussions have begun between DEP, SCA and the Mayor's Office of Operations on a program to replace plumbing fixtures in schools and eventually other public buildings. DEP's desire is that the first stage of the program concentrates on schools within the Jamaica WPCP drainage area as part of a CSO reduction effort in that area. SCA is researching fixture installation details in various past school designs.

Conservation Rates, Stormwater Rates and Incentives for Stormwater BMP's

DEP's Bureau of Environmental Planning and Analysis (BEPA) is exploring issuing a consultant RFP this fall to examine advantages and disadvantages of several conservation rates, examine practical issues that must be addressed to implement a stormwater rate and research possible incentives for stormwater management BMP's

RFEI on Performance-Based Efficiency Projects to be Issued

Water efficiency opportunities exist well beyond fixture replacements. Replacement of once-through water-cooled equipment, steam condensate reuse, water reuse and irrigation-based measures are only a few examples. In July 2007 DEP will issue a public notice asking for comments on a proposed scoring system to evaluate proposals for incentives for these water efficiency measures. The Request for Expressions of Interest also has the goal of encouraging facility managers, the engineering community and others to start thinking about projects that might be the subject of a proposal.

New Analysis of Distribution Losses

A review of system distribution losses was conducted during late 2006 as part of the department's

“Dependability Program” and is under review by the Bureau of Water and Sewer Operations. The water balance table will be updated once that review is complete.

Advanced Metering Infrastructure

DEP moved forward with plans for a system-wide Advanced Metering Infrastructure (“AMI”) by issuing a Request for Applications in early May 2007 and taking several other steps required for the Program. The initial set of proposers was screened to two finalists in May and those two technologies are the subject of a field test that is being conducted during July 2007. 400 buildings around each of two sets of fixed-network receivers will be equipped with radio transmitters with half of the transmitters assigned to each technology. One receiver is located in lower Manhattan and the second in northeast Brooklyn. The system for citywide installation will be selected by the end of the calendar year. A contract to purchase 100,000 meters to replace some meters during the AMR project is currently being bid. Installation of the new system is planned over the period 2008-2011.

Water Metering

DEP plans the following actions to resolve the last 1%+ of unmetered properties:

1. Bidding new installation/replacement contracts for Brooklyn/Queens (July 2007), Manhattan/Bronx (September 2007) and outdoor pits (September 2007) to serve both normal replacement needs and installation of meters for customers were not fully contacted and documented during the last contracts, a small number of customers requiring outdoor pits and exempt customers who are not metered.
2. Mailing a solicitation to unmetered exempt customers informing them of their obligation to meter and referring them to a DEP Contractor.
3. Mailing “final warning letters” to customers who did not respond to metering attempts during the last contracts but whose notification records were insufficient to support assessing a surcharge for failing to meter.
4. Continuing the metering of unmetered public schools and other public buildings.
5. Regular review of properties originally found to be vacant to ensure they are metered when renovated.
6. Updating reimbursement amounts and making other changes to the Reimbursable Metering Program. A public notice was issued during the spring and the rule changes will be finalized at a New York City Water Board meeting in September.

Changes in Water Use Rules

DEP is completing revisions in RCNY Chapter 20, “Rules Governing the Supply and Use of Water.” The proposed revisions are enclosed as an Appendix to this report. The proposed changes related to water conservation and quality include the following:

1. Requirement that all new or replacement water service pipes have curb valves. Currently only services 3” and larger are required to have curb valves. The ability to shut off water supply without a street excavation eases enforcement of obligations to pay and to observe water use rules.

2. Requirement that any lead or galvanized metal service pipe be completely replaced, rather than repaired, if it leaks. This is aimed at speeding the replacement of these types of services both for water quality purposes and to reduce distribution system losses.
3. Requirement that water meters, service pipes and associated vales and fittings be manufactured of a “no lead” alloy.
4. Requirement, or clarification, that public fountains and sprays must have automatic shutoffs.

Contact People for Issues in this Report

New York City Water Metering

Customer-Oriented Water Conservation Programs

Requests for the original Water Conservation Plan

Warren Liebold, Bureau of Customer Services, wliebold@dep.nyc.gov (718) 595-4657

Water Demand Projections, System Auditing, Related Issues

Esther Siskind, Assistant Commissioner, Bureau of Environmental Planning and Analysis (“BEPA”) ESiskind@dep.nyc.gov (718) 595-3168

Distribution System Metering

Odd Larsen, Bureau of Water and Sewer Operations OLarsen@dep.nyc.gov (718) 595-5751

Upstate System and Customer Metering

Paul Aggarwal, Bureau of Water Supply, PAggarwal@dep.nyc.gov (914) 773-4456

Educational Programs

Kim Estes-Fradis, Bureau of Communication

KEstes-Fradis@dep.nyc.gov (718) 595-3506

**Department of Environmental Protection
Notice of Opportunity to Comment on Proposed Amendments to
Chapter 20 of Title 15 of the Rules of the City of New York
Governing and Restricting the Use and Supply of Water**

NOTICE IS HEREBY GIVEN PURSUANT TO THE AUTHORITY VESTED IN The Department of Environmental Protection by sections 24-308, 24-309, 24-310, 24-332, 24-334, 24-337, 24-342, and 24-346 of the Administrative Code of the City of New York that the Department of Environmental Protection is proposing to amend the rules governing and restricting the use and supply of water.

Please note that new text is underlined and deleted material is [bracketed].

Statement of Basis and Purpose

The New York City Department of Environmental Protection (DEP) promulgated “Use and Supply of Water” (15 RCNY 20-01 *et seq.*) incorporating standards and requirements for performing connections to the water supply system, installing meters, service lines and backflow prevention devices, establishing water use restrictions and procedures for obtaining permits.

The amendments to Sections 20-01, 20-02, 20-03, 20-04, 20-05, 20-08, 20-09 and 20-10 reflect technical changes that have occurred since the last amendments in 2000 and improve language about protection of the condition of the water service.

The Department has set forth detailed procedures for enforcing permit requirements that a plumber or contractor shall utilize prior to the connection to a hydrant, the disconnection of a meter for repair or changing of piping and the setting of a meter.

The proposed amendment to Section 20-01 would set forth detailed procedures for enforcing permit requirements and would improve enforcement by allowing DEP not to issue permits to licensed plumbers who have repeatedly violated the Rules.

Revisions to Section 20-03 would include a change in the copper piping spec for the above-ground portion of the service line, set limits on the lead content of metal used for service lines and associated fittings and improve language about the property owner's obligation to protect the condition of the water service pipe.

Changes to Section 20-05 language include provisions governing meter permits, notification and rules related to the move to Automatic Meter Reading, language about meter technologies that do not require minimum straight pipe lengths before and after the meter

and more detailed metering requirements for types of water services that serve both domestic and fire protection purposes.

Section 20-08 amends language about the water use restrictions relating to drinking fountains, recreational sprinklers, sidewalk flushing and car washing.

Section 20-10 increases the number of terms defined to better explain the concepts contained in this Rule.

The Rules are authorized by section 1043 of the Charter of the City of New York and sections 24-308, 24-309, 24-310, 24-332, 24-334, 24-337, 24-342 and 24-346 of the Administrative Code of the City of New York.

* * *

Chapter 20 of Title 15 of the Rules of the City of New York is hereby amended to read as follows:

Section one. Subdivisions (a), (b), and (c) of Section 20-01 of Title 15 of the Rules of the City of New York are amended, and a new subdivision (g) is added, to read as follows:

§20-01 Permits. (a) *General information.* Subject to the provisions of this chapter, permits will be issued for the following purposes upon receipt of proper applications and permit fee:

Hydrant, Use of

Meter Disconnect for Repair or Change of Piping (“Break Seal”)

Meter Setting, New, Replacement or Additional

(b) *Issuance.* Permit applications shall be submitted, and permits shall be obtained before commencement of any work requiring a permit. Where permits involving plumbing work are required, such permits will be issued only to Licensed Master Plumbers, and to plumbers in the employ of municipal, state or federal agencies and authorities. Permits to set, reset, repair, or disconnect a water meter on service pipes with a diameter of less than one and one-half (1½) inches may be issued to persons who may lawfully perform such work under §20-05(c) of these

Rules. Meter repair permits may also be issued to meter repair companies for repair on the premises of water meters.

- (1) Any work performed without a permit as required by these Rules shall be a violation.
- (2) Permits for all emergency work must be obtained within forty-eight (48) hours or by the end of the second business day following commencement of the work.
- (3) Upon the expiration date of a plumber's license, if such license is not renewed within 60 days after such expiration date, all permits issued under that license shall also expire.

(c) *Regulation of permit work.* [If a Licensed Master Plumber or meter repair company commits three (3) or more violations of these Rules during a three (3) month period, the Commissioner, after providing the Licensed Master Plumber or meter repair company with an opportunity to be heard, may refuse to issue additional permits to such Licensed Master Plumber or meter repair company in accordance with §24-309 of the Administrative Code.]

If a Licensed Master Plumber or meter repair company fails to comply with three (3) or more provisions, standards or requirements of these Rules, or the terms and conditions of any permit already issued under these Rules, during a three (3) month period, the Commissioner or his/her designee, in accordance with §24-309 of the Administrative Code, may make a determination not to issue additional permits from applications submitted from such Licensed Master Plumber or meter repair company until such time as all the violations or non-compliances are corrected.

(1) In the event the Commissioner or his/her designee makes such a determination, the BCS Deputy Commissioner shall mail the determination to the address set forth in DOB's records.

(2) The Licensed Master Plumber or meter repair company, as applicable, may appeal the Commissioner's determination by filing a notarized petition within 60 days from the date of the Commissioner's determination with the Commissioner, 59-17 Junction

Boulevard, 19th Floor, Flushing, New York 11373-5108. The appeal shall state the name and address of the petitioner, include a short and plain statement of the matters to be adjudicated, address each of the violations mentioned in the Commissioner's determination, with a statement of the reason or reasons why the petitioner believes the determination was incorrect, including supporting documentation, and include the Commissioner's determination. During the review of the appeal, the Commissioner shall continue to issue permits to the Licensed Master Plumber or meter repair company.

(3) Upon review of the appeal, the Commissioner may, in his/her discretion, grant or deny the petition. Appeals shall be processed within 30 calendar days of receipt of such appeal. If the Department shall fail to process an appeal within 30 calendar days the appeal shall be granted, provided that the petitioner has responded to all requests for information submitted by the Department.

(4) The filing of an appeal shall not relieve the petitioner from complying with any requirements of the Rules, and shall not immunize any person or entity from any civil or criminal prosecution authorized under the Rules.

(g) *Return of permit after completion of work.* Within five (5) business days following the completion of any work for which a meter permit has been issued, the permit, carrying a certification of the date of completion of the work, shall be returned to the Department. A permit shall expire after 270 days for new construction work and after 30 days for meter replacements or first-time meter installations in existing buildings. If the work is to be performed after that time, the applicant must apply for a permit extension before the original permit expires. If a completed meter permit is not returned upon completion of the work, the official meter set date shall be 30 days after issuance of the permit for meter replacements or first-time meter installations in existing buildings or 270 days after issuance of the permit for new construction work.

§2. Subdivisions (d) and (q) of Section 20-02 of Title 15 of the Rules of the City of New York are amended to read as follows:

§20-02 Taps To City Water Mains.

(d) *Location of corporation stops (taps) and wet connections.* Water main corporation stops (taps) and wet connections shall be installed in front of the property to be supplied with water. All old taps or wet connections shall be plugged or destroyed prior to the installation of the new tap or wet connection.

(q) *Shut-off of tap by licensed master plumber.* A Licensed Master Plumber must secure a permit to open or shut a tap controlling a service pipe connected to a City water main for any repair, replacement or installation. If it is necessary to shut off the water main while repairing, replacing or installing a service pipe, the Licensed Master Plumber shall immediately notify the Department. The shut off shall be made only by the Department, and the permittee must pay all costs associated with shutting off the main. If a property is vacant and sealed longer than one year, the property owner must have the tap destroyed or plugged and the service line plugged. If the property owner fails to take this action, the Department may perform the work upon written notice to the mailing address on file with the Department and assess the cost to the property owner.

§3. Subdivisions (f), (j), (k), (n) and (t) of Section 20-03 of Title 15 of the Rules of the City of New York are amended, and subdivisions (s), (t), (u) and (v) are relettered, and new subdivisions (v), (w), (x) and (y) are added, to read as follows:

§20-03 Water Service Pipes.

(f) *Materials for service pipes and fittings.*

- (1) New service pipes two (2) inches in diameter or less shall be brass pipe or copper tubing.

- (2) Service pipes larger than two (2) inches in diameter shall either be brass or ductile iron, except that the above-ground portion of the service pipe, up to four (4) inches in diameter, may be Type K or Type L copper.
- (5) All service pipes shall conform to the most recent revision of the following standards, except that all service pipes, corporation stops, tail pieces, nuts and other fittings shall have a lead content that shall not exceed 0.250%:
- (ii) Department of Citywide Administrative Services, Division of Municipal Supply Services 32-T-1 Standard for Copper Tubing, except that above-ground, indoor service pipe four (4) inches or smaller, including the meter setting and piping for any backflow prevention device, shall be Type K or Type L copper.
- (j) *House control valves.* House control valves, which shall be made of material similar to the corresponding service pipes, shall be gate type with the exception of those between the sizes of three-quarter ($\frac{3}{4}$) inch and two (2) inches, which may be full port ball valves. The lead content of such valves shall not exceed 0.250%. The house control valve shall be placed in the service pipe inside the building within two (2) feet of the building wall, and shall be located where it is accessible at all times. All valves shall be designed for a 150 psi minimum working pressure. For fire, sprinkler, and standpipe service pipes, and for any service pipe which supplies sprinkler heads, the house control valve shall be an OS&Y Valve or an indicating valve approved by the Department of Buildings. Notwithstanding the preceding sentence, for fire or combined service pipes two (2) inches or smaller, the house control valve may be an OS&Y valve or a UL/FM-approved full-port ball valve approved by the Department of Buildings.
- (k) *Curb valves.*
- (2) Curb valves shall be required on all new or replacement domestic water service pipes [larger than two (2) inch in size] and on any water service pipe that provides [for] fire protection. All curb valves shall be set in the service pipe in the sidewalk

area, and shall be located eighteen (18) inches from the curb or other such locations as may be approved by the Department.

- (4) The property owner shall protect the curb valve/box from any damage and shall promptly report in writing to the Department any circumstances that may adversely affect the operation of the curb valve.

(n) *Service pipe depth.* All service pipes shall be installed at a depth of at least three and one-half (3 ½) feet, no more than six (6) feet below ground, unless a written waiver is obtained from the Department. Where a service pipe is installed with less than three and one-half (3 ½) feet of cover, it must be insulated and protected in accordance with [Department] the requirements described in §20-03(y). A service pipe shall not be laid within twelve (12) inches of any other sub-surface structure, conduit or pipe. A service pipe shall not be laid directly below, and parallel with, any sub-surface structure, conduit or pipe.

[(s)] (r)

[(t)] (s) *Service pipe repairs.* A new service pipe must be installed where more than one-half (½) of an existing service pipe is in need of a repair or when any repairs are required and the existing service pipe is lead, galvanized steel or galvanized iron. All repairs must conform with the standards described in §20-03 of these Rules.

[(u)] (t)

[(v)] (u)

(v) *Protection of service pipe and house control valve.* The property owner is responsible for preventing physical deterioration of the service, curb valve, house control valve or distribution pipe which may damage a meter or prevent its maintenance or replacement. The owner shall be responsible for repairing or replacing equipment, service or distribution piping to allow maintenance, proper operation or replacement of the meter. The property owner, and not the Department, is responsible for the maintenance of the service and distribution pipe and its associated fittings and equipment. The meter setting is the responsibility of the Department.

(w) *Replacement of old service pipes upon establishment of new water service.*

If a tap or wet connection has been destroyed or shut off due to vacancy of a building, the service pipe must be replaced as part of any new tap or wet connection unless the existing service pipe is

less than 40 years old, has a functioning curb valve and is neither lead, galvanized steel or galvanized iron.

(x) *Installation of a meter on unmetered properties whenever a domestic service pipe is replaced, repaired or relaid.* Whenever a domestic or combined service pipe for an unmetered property is installed, replaced, repaired or relaid, a water meter shall be installed to cover the entire premises in accordance with §20-05 of these Rules. When the work is not performed under emergency conditions, DEP will indicate on the permit that the property is unmetered. When the service pipe relay, repair or replacement occurs on an emergency basis, the Licensed Master Plumber may install a set of meter inlet and outlet valves and a spool piece of a length similar to the displacement meter for that size service if the Licensed Master Plumber does not have a meter available for installation at the time of the emergency visit. If the property owner will not allow the installation of a water meter as part of the service replacement, installation, repair or relay, the Licensed Master Plumber must return the meter permit completed but include a statement that the owner would not allow the installation of a meter.

(y) *Insulation.* Insulation, where required by §20-03(n), shall be cellular glass insulation manufactured in accordance with ATSM C552 “Standard Specification for Cellular Glass Thermal Insulation”, where a quality system for manufacturing, inspecting and testing insulation is certified in accordance with the requirements of ISO 9002. The insulation shall be fabricated in half sections wherever possible. For large diameter piping where half sections are not practical, curved sidewall segments are preferred. Wherever possible, the insulation should be factory jacketed with a 70 mil thick self-sealing high polymer asphaltic membrane with an integral glass scrim and aluminized mylar film on the surface. Mastic finish shall be pitcote 300 or an asphalt cutback mastic. Reinforcing fabric shall be an open mesh polymer fabric with 6 x 5.5 mesh per inch configuration. Sealant shall be a nonsetting butyl sealant with a minimum 85% solids content. The Department shall maintain a list of approved insulation materials. Alternate materials may be submitted for approval by the Department.

§4. Subdivisions (c), (e) and (h) of Section 20-04 of Title 15 of the Rules of the City of New York are amended to read as follows:

§20-04 Backflow Prevention Devices, Water Hammer Arresters, Pumps And Separation Valves.

(c) *Cross connection control reviews.* A Cross Connection Control Review shall be required prior to approval of a permit application for installation of a corporation stop (tap) or wet connection that will be used to supply water to a property that poses a backflow hazard. A Cross Connection Control Review shall also be required prior to installation of a [two (2) inch corporation stop (tap) or] wet connection. Approval of Cross Connection submissions shall not constitute approval of the meter setting or other aspects of the water service design.

(e) *Backflow prevention device testing requirements.*

- (1) Each RPZ or Double Check Valve must be tested upon installation, and at least once annually, thereafter, [by a backflow preventer tester who is certified by the New York State Department of Health] including as otherwise required by the Building or Health Codes. Each RPZ or Double Check Valve shall be either reset or tested at any time water service is interrupted and then restored, including during the replacement or repair of the water meter, if the device needs to be reset. Testing shall be performed by a backflow preventer tester who is certified by the New York State Department of Health and employed by a Licensed Master Plumber. A test report certifying that the backflow prevention device is operating properly must be submitted to the Department.

(h) *Suction tanks.*

- (1) [Connections] Domestic water connections to premises with a pumped supply which exceeds 400 gpm (total) must be equipped with either a suction or a surge tank, as required by the Department of Buildings.

§5. Subdivisions (a), (b), (d), (e), (f), (g), (i), (j), (l), (m), (n), (p), (q), and (r) of Section 20-05 of Title 15 of the Rules of the City of New York are amended to read as follows:

§20-05 Meters.

(a) *Placement.*

- (1) An approved water meter shall be installed wherever City water is supplied and for all wells or other water sources that discharge into the City sewer system. The Department may require installation of additional meters as a condition for certain New York City Water Board rate or billing programs.
- (2) Each building shall have one (1) meter on each service pipe supplying the building set at the point of entry. [After acceptance by the Department such meters will be owned, maintained, repaired and read by the Department.]
However, the Department may issue a variance or approval allowing two (2) or more separate meters to serve residential and non-residential (or rate-eligible and ineligible) occupancies on the same lot to comply with a rate or billing program established by the New York City Water Board.
- (4) All water used in the construction of buildings less than six (6) stories in height shall either be metered or be supplied by a hydrant permitted in accordance with §20-08. If water used during construction is metered, the meter shall be placed as described in §20-05(a)(3). Permit applications for temporary water service during construction shall include the name and contact information for the Licensed Master Plumber or construction management company.
- (5) Metering of fire service pipes and combined service pipes.

- (i) Fire service pipes in premises supplied with City water shall be metered with an approved detector assembly or an approved fire service meter. Fire service pipes of two-and-one-half (2½) inches shall be provided with equipment applicable to a three (3) inch service pipe.
- (ii) [Combined fire/domestic service pipes] Combined services or domestic services with sprinkler heads [one and one-half] two ([1½]2) inches or smaller shall use a single meter approved by the Department on the [combined] service pipe. Positive displacement meters shall not be used for such applications. [Combined fire/domestic service pipes larger than one-and-one-half (1½)] Domestic services with sprinkler heads larger than two (2) inches may use one meter specifically approved by the Department for this purpose on the [combined] service pipe, or a standard displacement or other meter approved by the Department on the domestic branch and a detector check valve assembly on the fire branch. Combined services with sprinkler heads larger than two (2) inches may use one fire service meter approved by the Department on the combined service pipe, or a standard displacement or other meter approved by the Department on the domestic branch and a detector check valve assembly on the fire branch. Service pipes of two-and-one-half (2½) inches shall be provided with equipment applicable to a three (3) inch service pipe.
- (iv) Inlet and outlet valves are not required for fire service meters or detector assemblies on combined service pipes, except for the building shut-off valve. A test tee must be provided for meter testing purposes on fire service meters. A test port shall not be placed on the bypass meter on a Detector Check Valve Assembly.

(b) Meter permits, inspection and approval of meter work.

(2) Within [seventy-two (72) hours] five (5) business days following the completion of any work for which a meter permit has been issued, the permit, carrying a certification of the date of completion of the work, shall be returned to the Department. A permit shall expire after 270 days for new construction work and after 30 days for meter replacements or first-time meter installations in existing buildings. If the work is to be performed after that time, the Licensed Master Plumber must apply for a permit extension before the original permit expires.

(3) After acceptance by the Department of the meter work, indicated by installation of a seal, or after one year from the return of a completed permit with access to the property available for the Department to inspect the work, whichever comes first, such meters will be owned, maintained, repaired and read by the Department. If access is not available, any warning or violation shall be issued to the property owner.

(d) *Approved water meters.* Meters shall meet the following requirements:

(3) The serial number of the meter shall be imprinted on the case or register head and all meter serial numbers shall be unique for the manufacturer.

(6) For displacement type water meters, the following shall also be required:

(i) All [three-quarter ($\frac{3}{4}$) inch and] five-eighth ($\frac{5}{8}$) inch through one (1) inch meters shall be of frost protection design with cast-iron bottom plates. Cast-iron bottom plates shall be made corrosion resistant by suitable coating and/or internal lining as approved by the Department.

(7) All meters shall have a main case composed of an alloy that shall have a lead content that shall not exceed 0.250%.

(e) *Turbine and compound meters.*

- (2) An approved meter strainer shall be installed on all new or replacement compound and turbine meter installations, unless the meter is manufactured complete with an internal strainer.

(f) *Used or repaired meters.*

- [(1)] No used or repaired meter shall be installed to cover a service pipe at [a new] the same or a different location unless it has been repaired, tested for accuracy, found to conform to AWWA new meter accuracy standards and has been approved by the Department.

- [(2)] All used meters shall be repaired, conform to AWWA accuracy standards, and be approved under permit before being set at a new location.]

(g) *Sizing.*

- (2) A meter shall not be larger than the service pipe supplying the meter, the piping in the meter setting, or the water distribution piping in the building, unless specifically approved in writing by the Department or as noted in §20-05(a)(5) for two-and-one-half (2½) inch fire services or combined services. If two meters both cover the calculated peak flow rate, the smaller of the two meters shall be used unless approved in writing by the Department. Unless a fixture count and flow analysis, as described in §20-05(g)(1), has been approved by the Department, a one- or two-family home with gravity-flush water closets shall not have a meter on a domestic service without fire sprinklers larger than three-quarters (¾) inch and three-, four-, five- and six-family homes shall not have a meter on a domestic service larger than one (1) inch.

Exceptions to these requirements, and the use of Appendix Table #8 for meter sizing, will be considered by the Department only when a building's plumbing system uses only street water pressure and documented incoming water pressure is

less than 35 psi for buildings four (4) through six (6) stories high, or less than 30 psi for buildings less than four (4) stories in height.

- (3) The minimum size meter for new installations and replacements shall be [three quarter ($\frac{3}{4}$) inch, except that existing five eighths ($\frac{5}{8}$) inch cold water meters may be repaired and reset at their present locations] five-eighths ($\frac{5}{8}$) inch.

(i) *Settings.* Notwithstanding any other provisions to the contrary, all meters shall be set or reset according to the following requirements:

- (1) Meters shall be set as near as possible to the point of entry of the service pipe through the building or vault wall and shall be placed so that they may be easily inspected, maintained and replaced. Evaporative cooling tower meters or other meters used to calculate a wastewater allowance when located downstream of a billing meter, shall be placed as close to the end use as practical. A property owner shall not erect or maintain any physical barrier that prevents access to, or repair or replacement of, the water meter.

- (ii) Turbine and compound meters shall be set with straight sections of pipe as provided in Appendix Figures #7, #7A, #9, #9A, #10 and #10A. If pipe lengths cannot conform to those indicated in Appendix Figures #7, #7A, #9, #9A, #10 and #10A, [the meter shall be calibrated in place] a meter technology shall be used which does not require minimum straight pipe lengths. The Department shall identify such meter technologies in its list of approved meters. An approved meter strainer is required unless one is included in the meter design or in the case of single-jet or electromagnetic meters, is not required by the meter manufacturer.

- (4) Meter settings shall have an inlet valve and outlet valve immediately upstream/downstream of the meter which shall be of a type approved by the Department.

(i) Except for meters two (2) inches or smaller where space constraints prevent any approved meter technology from being installed with an inlet valve, or as noted in §20-05(a)(5), a house control valve shall not be used in lieu of a meter inlet valve.

(ii) A[n] meter outlet valve is not required for fire meters on a dedicated fire service or the fire service branch of a combined service, for a Detector Check Valve Assembly or if the property has approved backflow prevention equipment which includes an outlet valve.

(iii) Where a meter is placed in [an existing] a pit alongside a sewer trap, the meter test tee shall be located outside of the pit in an accessible location.

- (5) Connections shall be made by coupling, union, flange union or approved compression fittings and bored for sealing with holes not less than three thirty-seconds ($\frac{3}{32}$) of an inch in diameter. Compression fittings are permitted for three quarter ($\frac{3}{4}$) inch through two (2) inch meters only. Unions, couplings or compression fittings that permit removal of the meter and/or setter without breaking the seal wire are prohibited. All water meter settings of two (2) inches and smaller sizes shall utilize valves and fittings constructed of bronze [conforming to ASTM B-62(85-5-5-5)] with a lead content that shall not exceed 0.250%, or copper alloys of commercially pure copper and bronze mill products. Bolts, studs, nuts, screws and other external fastening devices shall be made of a bronze alloy or stainless steel conforming to AWWA standards, and shall be designed for easy removal following lengthy service. Above-ground, indoor service pipe, including the meter setting and any backflow prevention device shall be Type K or Type L copper, if copper is acceptable for such size service pipe.

- (6) Meter setters & resetters.

Meter setters and resetters [three quarter inch ($\frac{3}{4}$)] five-eighths inch ($\frac{5}{8}$) through two inch (2) shall conform to the following:

- (i) Seamless copper tubing having a type "K" wall thickness in accordance with ASTM B-88 specifications shall be used for all prefabricated water meter setters. All bronze parts shall be an alloy with a lead content that shall not exceed 0.250%.

(8) Valves.

All new displacement type water meter settings shall utilize full port ball valves or angle key valves for the inlet and outlet control of the meter. These valves shall be furnished with handles for the manual operation of the valves without the need of a wrench. Turbine and compound meters shall be installed with full port ball valves (through two (2) inch only) or gate type valves.

- (11) Any connection to a test tee assembly or to any point ahead of a meter used for billing purposes is strictly forbidden.

(12) Electrical continuity.

All settings shall be designed to ensure positive electrical continuity with, or without, the meter being set, via bronze grounding clamps with stainless steel screws and electrical bonding cables (#6 THHN-THWN) which can be confirmed visually, unless a pre-fabricated setter designed for electrical continuity is used or the water service is known not to be used as an electrical ground.

(j) By-Pass.

- (1) [By-passes] Unmetered by-passes around meters are prohibited except those approved in writing by the Department, such as:

- (i) Tunnels where hazardous conditions may exist.
- (ii) Selected properties having only one (1) source of supply where any shut-down would endanger public health and safety.

- (2) If a by-pass is permitted by the Department, the installation shall conform to Appendix Figure #10 or #10A. The by-pass shall be configured so that the top case and interior meter can be removed for repairs or replacement.
- (3) Properties that wish to avoid lengthy shutdowns related to replacement of large meters may install paired meters that can supply the building through one or the other meter on a service pipe.
- (l) Metering condominium and homeowners' association developments.
 - (1) An individual water meter to be read by the Department shall be installed for each separately-owned dwelling unit in all new condominium and homeowners' associations structures of three (3) stories or less when each such unit is supplied with hot water and space heat by its own separate domestic hot water heater and space heating system and not by a common water heater or space heater. Such meters' remote receptacles or AMR transmitters shall be located in a common location in each structure with each meter clearly labeled as to the unit it supplies.
 - (2) Condominiums and homeowner's associations that cannot be individually metered as described in §20-05(l)(1) shall have a meter at the point of entry of the water service for the building or buildings.
- (m) Removal.
 - (1) If a meter has been disconnected without securing a permit as per §20-05(b) and §20-05 (c), it shall not be reset [until the Department has tested and approved the meter] but shall be replaced with a new meter approved by the Department.

(n) Seals.

A seal placed by the Department for the protection of any meter, valve, fitting or other water connection shall not be tampered with or defaced. The seal shall not be broken except after securing a permit from the Department. Breaking the seal without such a permit shall be a violation, except for Emergency repairs as described in §20-01(f). The Department may also remove the meter for testing and resetting or replacement. The customer shall be responsible for safeguarding and protecting the seal and the meter. Application of a seal on a new or replacement meter shall denote approval by the Department.

(p) *Protection of meters, service pipes and settings.*

(1) The property owner shall protect the meter, setting, AMR transmitter and remote against physical damage, freezing conditions and abuse. The property owner is responsible for preventing physical deterioration or other conditions of [a] the service pipe which may damage a meter or prevent its maintenance or replacement. In such cases the owner shall be responsible for repairing or replacing equipment, service piping or any other physical barriers, including asbestos insulation, needed to allow maintenance, proper operation or replacement of the meter.

(q) Encoding registers.

(9) All registers shall be installed with wire to a remote receptacle or AMR transmitter with all three wires properly connected at the register head.

(r) Remote receptacles and AMR transmitters.

(3) Placement of receptacle.

Placement of the remote receptacle shall comply with the following guidelines:

(i) Location.

Receptacles shall be located on the front or side exterior of the building. The remote receptacle shall be accessible to the meter reader and close to electric and gas meters. Receptacles shall not be installed behind bushes, locked gates, etc. If applicable, remotes shall be set inside storefront security gates. When meters are installed for a two (2) family home, the remotes should be as close together as possible so that both readings can be taken from the same location, preferably on the front of the building. For certain high-rise apartment or office buildings with glass, marble or other similar facades, the remote may be located in a publicly accessible location, such as the building lobby, where it will not require the meter reader to obtain keys or contact building personnel. In the alternative, for buildings with glass, marble or similar facades or with landmarked status, the remote may be placed in the electric meter room with a sign, "Water Meters." The location of the remote must be indicated in the permit as returned to the Department.

(4) AMR Transmitter.

The Department will conduct a transition from the use of remote receptacles to the use of radio-based automatic meter reading systems, with information on that transition to be published in the list of approved water meters, detector assemblies, pit meter equipment, meter attachments and meter-associated equipment. When the Department has begun installing AMR transmitters Citywide, meter installations shall be required to include the approved AMR transmitter, and the use of remote receptacles shall no longer be permitted. AMR radio transmitters for domestic meters shall be mounted on the exterior surface of an exterior building wall above ground level, unless otherwise specified by the

Department. AMR radio transmitters for evaporative cooling tower makeup water meters or other meters located on the upper floors of a building shall be mounted on the exterior of the building wall, at a roof parapet or other location to permit effective transmission of the radio signal.

§6. Paragraphs five, six, seven, eight of subdivision (a) of Section 20-08 of Title 15 of the Rules of the City of New York are amended, and a new paragraph four of subdivision (a) is added, and paragraphs four, five, six, seven and eight of subdivision (a) are renumbered, to read as follows:

§20-08 Water Use Restrictions And Fire Hydrant Use.

(a) *Water use restrictions.*

(4) Shutoffs Required for Drinking Fountains and Recreational Sprinklers.
Drinking fountains shall operate only when activated by a user. Recreational sprinklers shall be equipped with a timer to stop flow if the sprinkler is not being used or shall not operate when not in use.

[(4)](5) Restrictions on Serving of Water.

[(5)](6) Watering of Lawns and Gardens.

(i) The use of a hose, automatic sprinkler or other means to water lawns or gardens is prohibited between the hours of 11:00 a.m. and 7:00 p.m. Automatic [sprinkler or] irrigation systems shall include a sensor or control which shall prevent operation during or within 24 hours of substantial rain.

- (ii) Between the first day of November and the last day of the following March, the following activities are prohibited using City water: (a) the use of hoses and sprinklers, and (b) the watering of lawns and gardens, except for the watering of non-turf plants with a hand-held container.
- (iii) The following activities are prohibited at all times: (a) the use of hoses [without nozzles] which flow at more than five (5) gpm at sixty (60) psi or which, regardless of flow rate, are not equipped with an automatic shutoff mechanism which will turn off the flow of water if a handle or trigger is not actively held or compressed, and (b) the practice of allowing sprinklers to flood sidewalks, gutters and roadways.

[(6)](7) Sidewalks flushing.

The flushing of sidewalks is prohibited between the hours of 11:00 a.m. and 7:00 p.m. In addition, the flushing of sidewalks by means of a hose or piping is prohibited between the first day of November and the last day of the following March. This provision, however, shall not be construed to prohibit the washing of such surfaces, particularly the exterior surface of a building, where such washing is required as part of repairs mandated by the Administrative Code or to protect the health and safety of the public. Any hose used to supply City water for sidewalk cleaning purposes must be equipped with a nozzle which limits flow to no more than five (5) gpm at sixty (60) psi and which is equipped with an automatic shutoff mechanism which will turn off the flow of water if a handle or trigger is not actively held or compressed.

[(7)](8) Temporary Suspension of Permission to Use City Water for
Purposes Listed in [Subsections] subdivisions [(5)] (6) and [(6)] (7).

[(8)](9) Car washing.

(iii) Any hose used to supply City water for non-commercial car washing purposes must be equipped with a nozzle which limits flow to no more than five (5) gpm at sixty (60) psi and which is equipped with an automatic shutoff mechanism which will turn off the flow of water if a handle or trigger is not actively held or compressed.

§7. Paragraphs one and four of subdivision (b) and paragraph two of subdivision (c) of Section 20-08 of Title 15 of the Rules of the City of New York are amended to read as follows:

(b) Fire hydrant use.

- (1) Fire hydrants may be routinely opened only by authorized employees of the Department and/or the Fire Department. All others seeking permission to open a fire hydrant must secure a permit from the Department. Fire Hydrant Use Permits must be displayed at the site where water is being used. Permits for the use of hydrants may not be granted when, in the view of the Department, water from a metered source is available to serve the end use described in the permit application. Permit applicants are required to describe the proposed use in detail and indicate why another alternative (e.g., existing metered source or construction meter) cannot be used.
- (4) With the exception of hoses used to extinguish fires, any hose connected to a fire hydrant must be equipped with either an approved backflow prevention device or an approved four (4) inch air gap[.], unless in the Department's opinion, the application does not pose a backflow hazard, such as watering a community garden. Applications which do require an air gap or backflow prevention device include, but are not limited to, demolition dust control, pavement breaking, cutting and sawing, mixing and curing of concrete or mortar, well digging, washing/pumping of manholes, basements or sewers, application of pesticides, herbicides, paints, curing agents or fertilizers, washing down roadway construction, or make-up water (See Appendix Figure #6).

(c) *Installation and maintenance of corporation stops (taps), wet connections, service pipes and curb valves.*

(2) Shut-off charges

Should the Department shut a tap because of a leaking service pipe, non-payment of a bill, denial of access for an inspection or meter replacement or repair, failure to make repairs required for the installation or replacement of a meter, or non-compliance with Department rules, the owner shall pay a shut-off charge in accordance with the Water and Wastewater Rate Schedule of New York City Water Board.

§7. Section 20-09 of Title 15 of the Rules of the City of New York is amended to read as follows:

§20-09 Enforcement.

Any person who is in violation of or fails to comply with any provision, standard or requirement of these Rules or the terms and conditions of any permit issued pursuant to these Rules shall be subject to the issuance of notice(s) of violation and other civil or criminal enforcement action(s) pursuant to the provisions of §24-346 of the Administrative Code of the City of New York, including but not limited to payment of civil penalties and compliance with orders of the Commissioner and/or the Environmental Control Board.

In addition to any civil and criminal enforcement pursuant to §24-346 of the Administrative Code of the City of New York, the Department may refuse to issue permits to any person who is in

violation of or fails to comply with any provision, standard or requirement of these Rules or the terms and conditions of any permit, in accordance with Section 20-01(c) of these Rules.

§8. Section 20-10 of Title 15 of the Rules of the City of New York reads as follows:

§20-10 Glossary.

AMR – Automatic Meter Reading. The use of radio or telephone-based technology to read water meters.

BCS. Bureau of Customer Services.

Combined service. A water service which supplies both domestic and fire suppressions end uses and the fire protection requirements exceed the domestic demand and determine the size of the service.

Completed meter permit. A meter permit returned to the Department that indicates the meter size, type, serial number, remote identification number, meter and remote receptacle location, and date of installation that has been signed and sealed by the licensed plumber and lists the licensed plumber's business address.

Distribution piping All piping downstream of the water meter setting.

Domestic service with sprinkler heads. A domestic service sized for domestic demands which has been approved by the Department of Buildings to supply a limited number of fire sprinkler heads.

Internal water main. A water main constructed by a private entity in private property and not in a mapped street, record street or a street for which an opinion of dedication has been issued. Internal water mains are under the jurisdiction of the Department from the City or private water main up to and including the meter [or first valve within the property] .

Meter set date. The date the meter is installed.

Meter setter/resetter. A shop or factory-fabricated set of piping, valves and an electrical continuity bar installed as a unit designed to hold a water meter of two (2) inches or less in diameter.

Non-turf plants. Plants other than a lawn.

Sealed Building. A building with windows and doors which are locked and covered or blocked by concrete block, bricks, sheet metal or other materials intended to prevent access. Windows covered with wooden boards shall not constitute a sealed building.

Service Pipe. A water supply pipe which connects the customer to a City water main, private water main or internal water main. Service pipes connecting a single customer's premises to a City water main or a private water main are under the jurisdiction of the Department from the City or private water main up to and including the meter set in metered properties, or first valve within the property in unmetered properties.

UL/FM. Underwriter's Laboratories/Fireman's Mutual.

Vacant building. A building which is not inhabited, or is occupied illegally.

Water Meter Setting. The water meter, inlet and outlet isolation valves, test port or test tee and associated piping and fittings.

Water Conservation Program

Annual Update

**New York City Department of Environmental Protection
59-17 Junction Blvd.
Flushing, NY 11373**

June 2008



www.nyc.gov/dep

Introduction and Summary

This report is an update of the Water Conservation Program Plan issued by the New York City Department of Environmental Protection (“DEP”) in December 2006. The original document is available from DEP in paper and PDF format. That original report contains detailed information on the history and operation of the water supply and wastewater treatment systems as well as historic information on water conservation efforts. Please request a copy of that document for a more complete picture of DEP’s efforts. This report provides information on recent activities.

With the city’s population expected to rise to 9.1 million by 2030, from 8.3 million in 2005, water efficiency will continue to have an important role to play, not just to help assure supply but also to assist in meeting goals to reduce combined sewer overflows, maintain wastewater quality and meet nitrogen removal goals.

Abbreviations and Acronyms Used in This Report

AMR	Automatic Meter Reading (sometimes referred to as “AMI” for “Advanced Metering Infrastructure”)
BMP	Best Management Practices
CIP	Capital Improvement Plan
CSO	Combined Sewer Overflow
CY	Calendar Year
DEC	New York State Department of Environmental Conservation
DEP	New York City Department of Environmental Protection
DRBC	Delaware River Basin Commission
FY	Fiscal Year (July 1 – June 30)
GCPD	Gallons per Capita per Day
HCF	Hundred Cubic Feet
HPD	New York City Department of Housing Preservation and Development
LF	Linear feet
MGD	Millions of Gallons per Day
NYCHA	New York City Housing Authority
RCNY	Rules of the City of New York
RFEI	Request for Expressions of Interest
RFP	Request for Proposals
RWS	Residential Water Survey
SCA	School Construction Authority
WPCP	Water Pollution Control Plant (Sewage Treatment Plant)

Program and Activity Updates

Water Metering

The city is now 97%+ metered. The remaining 25,000 unmetered accounts include, approximately:

1. Properties surcharged for failing or refusing to meter (40%)
2. Unmetered exempt properties (4%)
3. Unmetered city properties (3%)
4. Properties with technical difficulties waiting to be metered (15%)
5. Vacant properties (2%)
6. Others (36%) which include accounts still labeled “unmetered” because they are part of multi-account metered properties on ‘frontage transition,” properties with meters never set up properly on the account, properties served by adjoining metered properties and other minor categories. These will mostly resolve themselves once all properties are either on metered billing or the Multifamily Conservation Program rate.

The number of properties is approximately half the number of accounts since physically metered multi-account properties on “flat rate transition” are composed of accounts that are counted as metered or unmetered even though the property is physically metered.

DEP is performing the following actions to resolve the last 1%+ of unmetered properties:

1. Bidding new installation/replacement contracts for Brooklyn/Queens and Manhattan/Bronx which will begin work mid-2008 and an outdoor pit contract (2009) to serve both normal replacement needs and installation of meters for customers who were not fully contacted and documented during the last contracts, a small number of customers requiring outdoor pits and exempt customers who are not metered.
2. Mailing a solicitation to unmetered exempt customers informing them of their obligation to meter and referring them to a DEP Contractor.
3. Mailing “final warning letters” to customers who did not respond to metering attempts during the last contracts but whose notification records were insufficient to support assessing a surcharge for failing to meter.
4. Continuing the metering of unmetered public schools and other public buildings.
5. Regular review of properties originally found to be vacant to ensure they are metered when renovated.
6. DEP has updated reimbursement amounts and made other changes to the Reimbursable Metering Program. A public notice was issued during spring 2007 and the rule changes were finalized at a New York City Water Board meeting in September 2007.

Advanced Metering Infrastructure

This project has moved forward by completion of the following tasks:

1. DEP and the New York City Department of Information Technology and Telecommunications (DoITT) completed contract negotiations with Aclara RF (formerly Hexagram) and a contract to purchase a citywide AMI system should be registered by June 30, 2008.
2. Aclara RF, DoITT, and DEP have begun network design, expected to be completed by July 1.
3. DEP has bid contracts to install the AMI transmitters and to replace approximately 400,000 old meters beginning in March 2008. By June 30 the installation contracts for Brooklyn, Queens, the Bronx and Manhattan will have been bid and one will have been

awarded. The others are scheduled for award in July. Staten Island will follow a few months later when funding becomes available. Installation of the system will commence during July or August 2008 and be substantially complete in three years. The 400,000 meter replacements represent the oldest meters in the system dating from the early years of the Universal Metering Program. The AMI system will read meters at least four times a day resulting in a dramatic expansion of water consumption data and providing a low-cost route to monthly billing. Customers will be able to access all of their reads online and DEP will move to monthly billing for most customers.

Changes in Water Use Rules

DEP has completed revisions in RCNY Chapter 20, "Rules Governing the Supply and Use of Water." The proposed revisions were enclosed as an Appendix to last year's report. A final public hearing was held on June 16, 2008 and when the revisions receive final approval from the city's Law Department they will take effect. The proposed changes related to water conservation and quality include the following:

1. Requirement that any lead or galvanized metal service pipe be completely replaced, rather than repaired, if it leaks. This is aimed at speeding the replacement of these types of services both for water quality purposes and to reduce distribution system losses.
2. Requirement that water meters, service pipes and associated valves and fittings be manufactured of a "no lead" alloy.
3. Requirement, or clarification, that public fountains and sprays must have automatic shutoffs.

Upgraded Analysis of Customer Demand

DEP is in the process of developing revised water demand projections for New York City. The basis for the projections and analyses will be the existing available metering data for years 2001-2007 and onward. DEP is conducting extensive analysis of the existing data to identify water usage statistics by building class and land use classifications. Since approximately 97% of New York City is metered, the volume of data generated in the years 2001 through 2007 is massive. To properly manage and organize the data, Microsoft SQL server software is being used and a staff person partially dedicated to this function has been hired. The statistical analysis portion of the study will be performed using SAS[®] software which is designed specifically for analysis of large databases. Additionally, geographic and spatial analyses will be performed using ArcGIS software. The addition of far greater amounts of data through AMI will add to the depth of the analysis. This project began in early 2008 and some analyses will be available by next year's report.

Incentive Programs

No funding is currently planned for any incentive programs beyond a first phase of toilet replacements that will be limited to apartment buildings applying for the New York City Water Board's Multifamily Conservation Program. The development of software for applications processing and analysis will commence in late 2008 and the program itself in 2009. DEP has

begun briefing manufacturers on planned details. The program will be amenable to relatively easy expansion if funds for a larger program are provided in the future.

Fixture Replacements in Public Buildings

DEP Contractors will be performing design surveys of rest rooms in public schools in Manhattan, the Bronx, Queens and Brooklyn during 2008 to develop data and existing condition observations that will form the basis for a future project with the School Construction Authority and the Department of Education to replace toilets, lavatory faucets and urinals in public schools.

Conservation Rates, Stormwater Rates and Incentives for Stormwater BMP's

The Water Board issued a consultant RFP in June to examine advantages and disadvantages of several conservation rates, examine practical issues that must be addressed to implement a stormwater rate and research possible incentives for stormwater management BMP's. The consultant is expected to begin work in July 2008 and have a draft report/recommendations in one year.

RFEI on Performance-Based Efficiency Projects to be Issued

Water efficiency opportunities exist well beyond fixture replacements. Replacement of once-through water-cooled equipment, steam condensate reuse, water reuse and irrigation-based measures are only a few examples. In July 2007 DEP issued a public notice asking for comments on a proposed scoring system to evaluate proposals for performance-based incentives for these water efficiency measures. The Request for Expressions of Interest also has the goal of encouraging facility managers, the engineering community and others to start thinking about projects that might be the subject of a proposal. Replies were received from several individuals and organizations, mostly concerning water reuse. Since this concept is not currently funded it is in a "standby" status.

New Analysis of Distribution Losses

A review of system distribution losses was conducted during late 2006 as part of the department's "Dependability Program" and is under review by the Bureau of Water and Sewer Operations. The water balance table will be updated once that review is complete.

Contact People for Issues in this Report

New York City Water Metering
Customer-Oriented Water Conservation Programs
Requests for the original Water Conservation Plan
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Water Demand Projections, System Auditing, Related Issues
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Distribution System Metering

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Upstate System and Customer Metering

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Educational Programs

Kim Estes-Fradis, Bureau of Communication

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Water Conservation Program

Annual Update

**New York City Department of Environmental Protection
59-17 Junction Blvd.
Flushing, NY 11373**

June 2009



**New York City Department of
Environmental Protection**

Introduction and Summary

This report is an update of the Water Conservation Program Plan issued by the New York City Department of Environmental Protection (“DEP”) in December 2006. The original document is available from DEP in paper and PDF format. That original report contains detailed information on the history and operation of the water supply and wastewater treatment systems as well as historic information on water conservation efforts. Please request a copy of that document for a more complete picture of DEP’s efforts. This report provides information on recent activities.

With the city’s population expected to rise to 9.1 million by 2030, from 8.3 million in 2005, water efficiency will continue to have an important role to play, not just to help assure supply but also to assist in meeting goals to reduce combined sewer overflows, maintain wastewater quality and meet nitrogen removal goals.

Water demand continued a modest downward trend in the last year, as illustrated in the graph “Historical Water Demand and Population.” DEP continued efficiency-related programs and also began or completed a number of initiatives that will provide benefits in the future:

1. Automatic Meter Reading DEP began the installation of a citywide fixed-network AMR system in November 2008 with the start of installation work for Data Collection Units (“DCU”) around the city as part of NYC DoITT’s NYCWiN citywide wireless system. Replacement of most pre-1998 water meters and installation of the AMR “MTU’s” on all water meters began the first week of March 2009 with substantial completion planned in three years.
2. Expansion of Water Demand Analysis Capability DEP’s Bureau of Environmental Planning and Analysis (“BEPA”) has adding staffing and software tools to analyze water consumption data. Through BEPA the New York City Water Board is conducting a study of “conservation rates,” storm water rates and possible incentives for storm water BMP’s.
3. Promulgation of New Water Use Rules DEP’s operational bureaus and legal affairs staff completed the public revision of RCNY Chapter 20 in 2008. The new rule takes effect on June 22, 2009. The changes address several water quality and leak prevention issues in addition to a number of technical and procedural changes.
4. “Green Code Task Force” Mayor Bloomberg, Council Speaker Quinn and the U.S. Green Building Council sponsored a wide-ranging review of the city’s Building Code with the goal of revising specific parts of the Code to meet environmental and “green building” goals. Technical Committees completed their work and issued recommendations in 2008. Review of the recommendations by the city and an industry advisory committee is currently underway in 2009.
5. Continuation of Ongoing Education Programs DEP’s Bureau of Community and Intergovernmental Affairs (“BCIA”) continues to conduct a variety of education programs on water and water efficiency directed at both students and adults.

Abbreviations and Acronyms Used in This Report

AMR	Automatic Meter Reading (sometimes referred to as “AMI” for “Advanced Metering Infrastructure”)
BMP	Best Management Practices
CIP	Capital Improvement Plan
CSO	Combined Sewer Overflow
CY	Calendar Year
DCU	Data Collection Unit (AMR)
DEC	New York State Department of Environmental Conservation
DEP	New York City Department of Environmental Protection
DoITT	New York City Department of Information Technology and Telecommunications
DRBC	Delaware River Basin Commission
FY	Fiscal Year (July 1 – June 30)
GCPD	Gallons per Capita per Day
HCF	Hundred Cubic Feet
HPD	New York City Department of Housing Preservation and Development
LF	Linear feet
MGD	Millions of Gallons per Day
MTU	Meter Transmitter Unit (AMR)
NYCHA	New York City Housing Authority
RCNY	Rules of the City of New York
RFEI	Request for Expressions of Interest
RFP	Request for Proposals
RWS	Residential Water Survey
SCA	School Construction Authority
WPCP	Water Pollution Control Plant (Sewage Treatment Plant)

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Distribution System Metering
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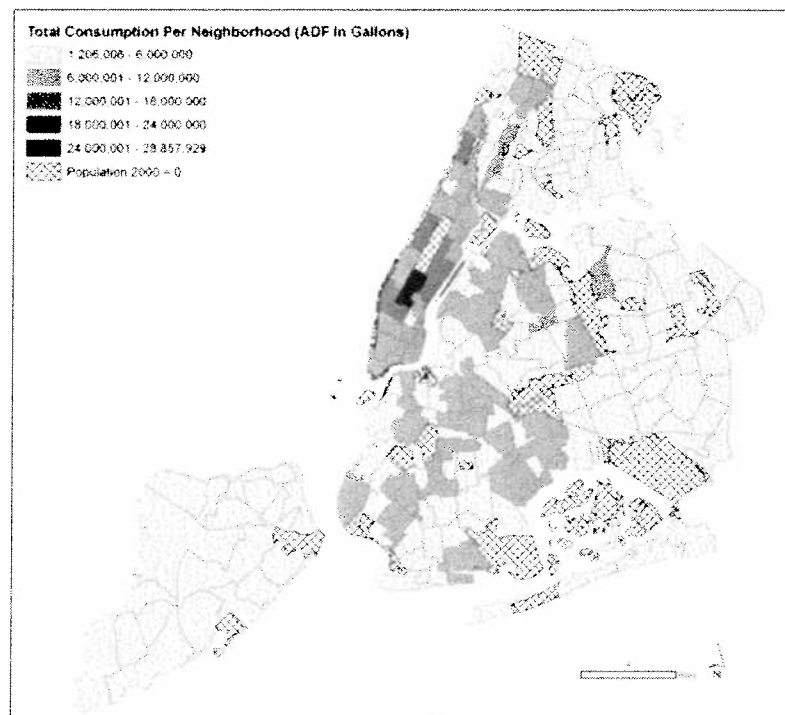
Upstate System and Customer Metering
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Educational Programs
Kim Estes-Fradis, Bureau of Communication
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Historical Water Demand and Population

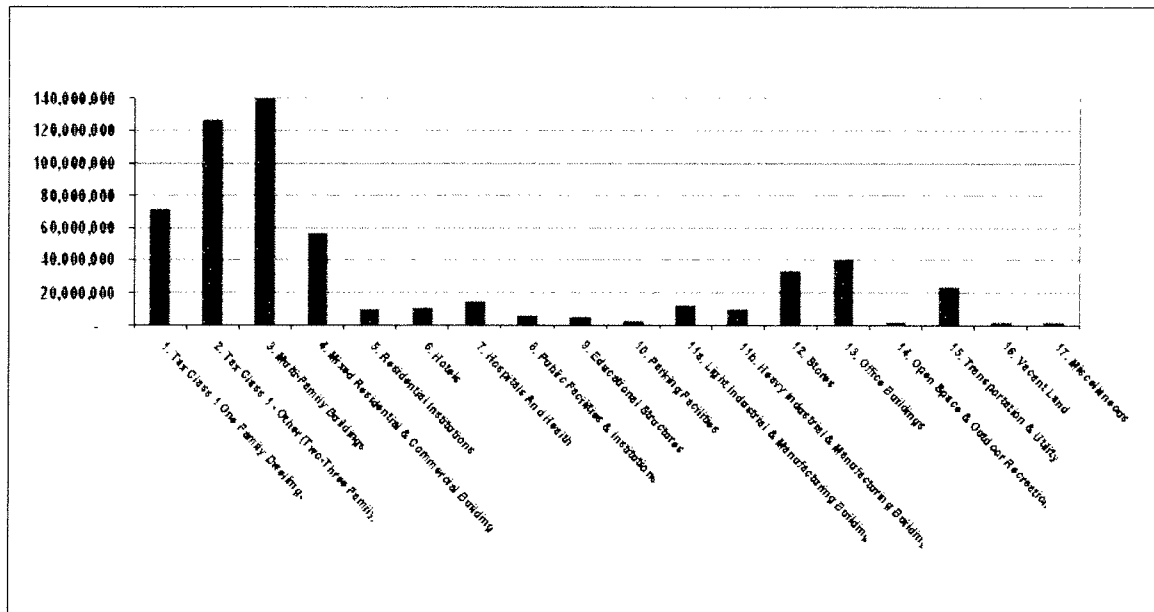


Consumption by Neighborhood FY2008



Consumption by Land Use

FY2008 Meter Billed Customers



Program and Activity Updates

Water Metering - Advanced Metering Infrastructure

Installation of the rooftop Data Collection Units (“DCU’s”) began in November 2008 and will be substantially complete by September 2009. The network provides close to double redundancy so by May 2009 with 200 out of 337 DCU’s installed we have coverage for Brooklyn and almost all of Queens, the Bronx and Manhattan.

Large-scale installation of the transmitters (“MTU’s”) on water meters, and the replacement of approximately 50% of pre-1997 small meters began on March 5 in Brooklyn and Queens and in mid-March in Manhattan. Work in the Bronx began in early April 2009. Staten Island will begin on or about July 1. By mid-July 50,000 MTU’s had been installed and the installation rate was moving upward from 450-500 per day with a goal of reaching 1,200 – 1,500 per day by the end of summer.

The system is generating a 97% actual read rate with the remaining 3% attributable to installation errors that will be corrected. Most MTU’s are programmed to read the meter and transmit the read four times a day. Meters 2” and larger will be read once an hour. Installation of the AMR/AMI system will not only improve customer service and collections but will increase the volume of water use data by orders of magnitude. DEP will move from having meters read four times a year with an 85% actual read rate overall, to four times a day (for most customers) or hourly (for larger customers) with a 97%+ actual read rate.

Before the end of 2009 DEP plans to make consumption data available for most customers through its website.

Water Use and Demand Analysis

The Bureau of Environmental Planning and Analysis (“BEPA”) within the DEP has been tasked with tracking and understanding current and past water consumption trends, which are largely based on the consumption data dating from 2001 to the present. This consumption is estimated for each available borough, block and lot and verified through various analytical methods.

Given that New York City consists of over 850,000 lots, and approximately 97% of New York City accounts are metered, the generated volume of water consumption data requires extensive clean-up and verification. To properly manage and organize the data, Microsoft SQL server software is being used. The statistical analysis portion of the study is performed using SAS® software which is designed specifically for analysis of large databases. Additionally, geographic and spatial analyses are performed using ArcGIS software.

This data is used in conjunction with various planning efforts within the agency, such as emergency preparedness, study of the DEP’s rate structure, projecting water use into the future based on past trends and available population projections.

The Water Board hired a consultant in 2008 to examine advantages and disadvantages of several conservation rates, examine practical issues that must be addressed to implement a stormwater

rate and research possible incentives for stormwater management BMP's. The study has benchmarked NYC's rate structure against other municipalities across the country, researched the types of stormwater, fixed/variable, and other rate structures implemented elsewhere, and has identified data needs required to more fully understand the implications of potential implementation in NYC. The study's expected release will be toward the end of 2009.

Changes in Water Use Rules

DEP has completed revisions in RCNY Title 15 Chapter 20, "Rules Governing the Supply and Use of Water." The proposed revisions were enclosed as an Appendix to last year's report. A final public hearing was held on June 16, 2008 and final approval from the city's Law Department was received in May 2009 at which time final publication of the rule occurred to announce promulgation of the new rule as of June 22, 2009. The proposed changes related to water conservation and quality include the following:

1. A requirement that any lead or galvanized metal service pipe be completely replaced, rather than repaired, if it leaks. This is aimed at speeding the replacement of these types of services both for water quality purposes and to reduce distribution system losses.
2. A requirement that water meters, service pipes and associated valves and fittings be manufactured of a "no lead" alloy.
3. A requirement, or clarification, that public fountains and sprays must have automatic shutoffs.
4. A requirement that the water service pipe to a vacant building be disconnected after one year of vacancy and empowerment of DEP to perform the work and charge the owner if the owner does not act. This is aimed at reducing leakage from service pipes.

Green Code Task Force

In 2008 Mayor Bloomberg established a task force of architects, engineers and design professionals in partnership with the New York City Chapter of the U.S. Green Building Council to develop recommendations for changes in city codes and rules that will improve energy- and water efficiency as well as sustainable construction practices. The Task Force's technical committees submitted recommendations in late 2008 which are now being reviewed by the city and an industry advisory group prior to the introduction of legislation to the Council.

<http://usgbcny.org/advocacy/>

The Council previously passed and Mayor Bloomberg signed Local Law 86/2005 which requires new municipal buildings to be LEED-certified or LEED Silver depending on the size and value of the project. This requirement effectively commits designers to the use of "high efficiency" toilets and urinals.

Educational Programs

School Programs

DEP's BCIA will continue to develop and implement school-based education programs to help make young people and adults aware of the consequences of littering and the importance of

conserving water. DEP will provide classroom lessons, staff development workshops for teachers and administrators, printed material describing water issues, and assistance for curriculum development and student research projects. DEP continues to work in collaboration with the DSNY, New York City Department of Parks and Recreation, NYSDEC and the United States Environmental Protection Agency (EPA) to promote the “Clean Streets = Clean Beaches” campaign and other environmental education programs. Ongoing partnerships with education and environmental organizations, such as the New York City Soil and Water Conservation District, the Bronx River Alliance, Council on the Environment of New York City, the American Littoral Society, Children for Children, Going Coastal, and the South Street Seaport Museum enable DEP to reach a diverse audience.

Education and Outreach

DEP’s environmental education resources for New York City’s public, private, and parochial schools emphasize critical and creative thinking, decision-making skills, communication and collaborative learning across disciplines. All programs are inquiry-based and are aligned with New York City Performance Standards in Science, Math, Social Studies and Applied Learning and with the New York City Department of Education’s new Science Scope and Sequence.

http://www.nyc.gov/html/dep/html/water_and_sewer_bills/propmgmt.shtml

DEP, in partnership with Trout Unlimited, runs Trout in the Classroom program, a watershed environmental education initiative for elementary through high school students. The purpose of Trout in the Classroom is to create partnerships between New York City and upstate watershed schools as they raise trout from eggs, observe and study them in the classroom, and release them into New York State approved streams. These activities help students to develop a conservation and anti-litter awareness that encourages them to develop an understanding of the shared water resources. Participants in the 2008 Trout in the Classroom teacher conference on October 14, 2008 are listed in the table below.

2008 Trout in the Classroom Participants	
Borough	Organization
Brooklyn	Public School 29
Manhattan	Studio School
Queens	Public School 102
Queens	Public School 192
Brooklyn	Middle School 319
Manhattan	The Neighborhood School
Brooklyn	Public School 10
Bronx	Bronx New School
Brooklyn	Green School
Manhattan	Greenhouse School
Bronx	Urban Assembly School for Wildlife Conservation
Brooklyn	Public School 230
Brooklyn	Public School 107
Bronx	Intermediate School 98

2008 Trout in the Classroom Participants	
Borough	Organization
Manhattan	Our Lady Queen of Martyr's School
Bronx	Mott Hall School
Manhattan	Connelly Middle School

On May, 8 approximately 850 young people and adults participated in the New York City Department of Environmental Protection's Twenty-second Annual Water Conservation Art & Poetry Program award ceremony. This program is an exciting opportunity for New York City's fourth, fifth and sixth grade students to creatively express their knowledge, through art and poetry, of our City's valuable water resources. The award ceremony, held at Cooper Union, honored the students in the presence of their teachers, friends and family members. Participants in the Art and Poetry Program were from the organizations listed in the following table:

DEP Water Conservation Art and Poetry Program Participants	
Borough	Organization
Bronx	Bronx River Art Center
Bronx	CS 92
Bronx	Family Life Academy Charter School
Bronx	Fieldston Middle School
Bronx	Henry Hudson IS 125
Bronx	Immaculate Conception School
Bronx	Mount Saint Michael Academy
Bronx	Our Lady of the Assumption
Bronx	PS 18
Bronx	PS 30
Bronx	PS 37
Bronx	PS 75
Bronx	PS 91
Bronx	St. Clare's of Assisi
Bronx	Visitation School
Brooklyn	A. Fantis Parochial School
Brooklyn	Fillmore Academy
Brooklyn	Hellenic Classical Charter School
Brooklyn	IS 187
Brooklyn	IS 239
Brooklyn	John Hus Moravian
Brooklyn	PS 1
Brooklyn	PS 127
Brooklyn	PS 15
Brooklyn	PS 151
Brooklyn	PS 157
Brooklyn	PS 160
Brooklyn	PS 164
Brooklyn	PS 172
Brooklyn	PS 179

DEP Water Conservation Art and Poetry Program Participants	
Borough	Organization
Brooklyn	PS 200
Brooklyn	PS 204
Brooklyn	PS 205
Brooklyn	PS 207
Brooklyn	PS 219
Brooklyn	PS 226
Brooklyn	PS 255
Brooklyn	PS 346
Brooklyn	PS 7
Brooklyn	PS 97
Brooklyn	St. Agatha School
Brooklyn	St. Anselm
Brooklyn	St. Cecilia School
Brooklyn	St. Michael
Brooklyn	St. Stanislaus Kostka
Manhattan	Institute for Collaborative Education
Manhattan	Our Lady Queen of Martyrs
Manhattan	PS 187
Manhattan	PS 59
Manhattan	St. David's School
Manhattan	St. George School
Manhattan	The School at Columbia University
Manhattan	United Nations International School
Queens	Christ Lutheran School
Queens	IS 25
Queens	MS 158
Queens	Our Lady of Sorrows
Queens	PS 101
Queens	PS 102
Queens	PS 118
Queens	PS 122
Queens	PS 133
Queens	PS 15
Queens	PS 165
Queens	PS 169
Queens	PS 205
Queens	PS 38
Queens	PS 74
Queens	PS 78
Queens	PS 88
Queens	PS 94
Queens	St. Andrew Avellino School
Queens	St. Benedict Joseph Labre
Queens	St. Joan of Arc
Queens	St. Robert Bellarmine
Staten Island	IS 75
Staten Island	PS 1
Staten Island	PS 53
Staten Island	PS 57

DEP Water Conservation Art and Poetry Program Participants	
Borough	Organization
Staten Island	PS 6
Staten Island	St. Ann School
Staten Island	St. Charles
Staten Island	St. Joseph - St. Thomas

On June 30, fifty educators took part in a day-long bus tour of the New York City watershed visiting sites such as the Ashokan Reservoir, the Frost Valley Model Forest, a working sawmill, a restored stream and an environmental education center. The purpose of the tour was for educators to learn about programs that emphasize the link between well-managed forests and water quality protection, such as water quality monitoring, stream and riparian buffer management, watershed regulations, watershed forestry and agriculture and environmental education and community outreach.

New York City Watershed Bus Tour Participants	
Borough	Organization
Brooklyn	Brooklyn Botanic Garden
Brooklyn	Brooklyn Children's Museum
Brooklyn	Brooklyn College, Education
Brooklyn	Groundswell
Citywide	American Littoral Society
Citywide	NY Restoration Project
Citywide	NYC Dept. of Education
Citywide	NYC Inner City Outings
Citywide	NYS Dept. Environmental Conservation
Citywide	NYU & Visiting Nurse Service of NY
Manhattan	Alianza Dominicana
Manhattan	Alliance for Progress
Manhattan	American Museum of Natural History
Manhattan	City Parks Foundation
Manhattan	Council on the Environment
Manhattan	Green Guerillas
Manhattan	Jewish Community Center
Queens	Alley Pond Environmental Center
Queens	Eastern Queens Alliance
Queens	NYC DEP
Queens	Queens Botanical Garden
Queens	Queens Museum
Queens	Trout in the Classroom
Staten Island	High Rock Park - Staten Island Greenbelt
Staten Island	Staten Island Greenbelt
Staten Island	Staten Island Zoo

On July 17 and October 30, the New York City Department of Environmental Protection hosted professional development workshops for formal and non-formal educators at the Queens

Museum of Art. Participants learned about creative ways to incorporate the study of water resources into their curriculum using the New York City watershed model and the panorama of NYC.

Participants of the DEP Professional Development Workshops

Date	Borough	Organization
7/17/2008	Brooklyn	P.S.31
7/17/2008	Citywide	American Littoral Society
7/17/2008	Citywide	City College of New York
7/17/2008	Citywide	Elementary School Science Association
7/17/2008	Citywide	Friends of the Old Croton Aqueduct
7/17/2008	Citywide	NYC Department of Education
7/17/2008	Citywide	NYS Office of Parks, Reservation, and Historic Preservation
7/17/2008	Citywide	Watershed Agricultural Council
7/17/2008	Citywide	Wildlife Conservation Society
7/17/2008	Manhattan	Alianza Dominicana
7/17/2008	Manhattan	American Museum of Natural History
7/17/2008	Manhattan	Millennium High School
7/17/2008	Queens	LaGuardia and Wagner Archives
7/17/2008	Queens	NYC DEP
7/17/2008	Queens	Queens Botanical Garden
10/30/2008	Bronx	Bronx New School
10/30/2008	Bronx	Community School 66
10/30/2008	Brooklyn	NY Aquarium
10/30/2008	Brooklyn	NYCDOE -Gateway Center for Science
10/30/2008	Citywide	MGI/GEAR UP
10/30/2008	Citywide	American Museum of Natural History
10/30/2008	Citywide	New York City Department of Education
10/30/2008	Manhattan	American Museum of Natural History
10/30/2008	Manhattan	Booker T Washington MS 54
10/30/2008	Manhattan	City College of New York
10/30/2008	Manhattan	The Neighborhood School
10/30/2008	Queens	PS 133
10/30/2008	Queens	Far Rockaway High School

The following three tables list the 2008 schedule of educational events, a listing of recipients of public education materials and a summary of event locations per borough, respectively.

**Public Outreach - Education Report, 2008:
Events and Materials**

Date	Borough	Organization
1/10/2008	Manhattan	Institute of Collaborative Education
1/11/2008	Brooklyn	Math and Science Exploratory School
1/12/2008	Manhattan	Adelphi University Manhattan Campus
1/12/2008	Staten Island	Public School 57
1/15/2008	Queens	Public School 36
1/17/2008	Manhattan	Public School 116

**Public Outreach - Education Report, 2008:
Events and Materials**

Date	Borough	Organization
1/18/2008	Manhattan	Institute for Collaborative Education
1/18/2008	Brooklyn	Math& Science Exploratory School
1/22/2008	Bronx	Public School 37
1/23/2008	Manhattan	Public School 29
1/24/2008	Manhattan	Public School 29
1/25/2008	Manhattan	Humanities Prep Academy High School
1/28/2008	Brooklyn	Middle School 88
1/31/2008	Manhattan	Institute for Collaborative Education
2/2/2008	Citywide	American Museum of Natural History
2/11/2008	Citywide	UNICEF
2/13/2008	Manhattan	Law & Public Service High School
2/15/2008	Queens	Public School 962
2/15/2008	Queens	MS 294
2/25/2008	Brooklyn	IS 220
2/27/2008	Manhattan	Public School 116
2/28/2008	Queens	Public School 88
2/29/2008	Brooklyn	MS 447
2/29/2008	Queens	MS 294
3/3/2008	Queens	Public School 124
3/5/2008	Staten Island	Public School 57
3/12/2008	Bronx	Community School 66
3/15/2008	Manhattan	NYC Tap Project
3/14/2008	Brooklyn	Public School 86
3/19/2008	Bronx	Public School 754
3/20/2008	Brooklyn	Public School 205
3/22/2008	Citywide	American Museum of Natural History
3/25/2008	Queens	Public School 133
3/26/2008	Brooklyn	PS 116
3/26/2008	Brooklyn	Public School 321
3/27/2008	Manhattan	Henry Street School for International Studies
3/31/2008	Manhattan	Middle School 319
4/2/2008	Brooklyn	Public School 10
4/3/2008	Bronx	New Explorers High School
4/3/2008	Queens	Public School 133
4/4/2008	Queens	Public School 102
4/8/2008	Brooklyn	The Green School
4/9/2008	Manhattan	Neighborhood School
4/11/2008	Brooklyn	Public School 27
4/12/2008	Citywide	Science Council of New York
4/14/2008	Manhattan	Children's Aid Society
4/15/2008	Manhattan	Institute for Collaborative Education
4/15/2008	Manhattan	Public School 163
4/16/2008	Queens	Queens College
4/17/2008	Brooklyn	Public School 107
4/17/2008	Manhattan	Middle School 319
4/17/2008	Manhattan	Children's Aid Society (Mirabal)
4/18/2008	Manhattan	Green School
4/22/2008	Manhattan	Connelly Middle School
4/23/2008	Queens	Sacred Heart School
4/26/2008	Brooklyn	Global Youth Service Day

**Public Outreach - Education Report, 2008:
Events and Materials**

Date	Borough	Organization
4/28/2008	Manhattan	Public School 116
4/29/2008	Queens	Public School 102
4/30/2008	Brooklyn	John Dewey High School
4/30/2008	Manhattan	Institute for Collaborative Education
5/1/2008	Bronx	Public School 37
5/2/2008	Manhattan	Public School 187
5/2/2008	Manhattan	Public School 87
5/2/2008	Manhattan	Manhattan Comprehensive
5/2/2008	Brooklyn	Green School Brooklyn Center
5/5/2008	Brooklyn	The Environmental Science Academy IS 220
5/8/2008	Manhattan	Water Conservation Art and Poetry Ceremony
5/12/2008	Queens	Middle School 74
5/13/2008	Brooklyn	Public School 10
5/13/2008	Brooklyn	Connelly Middle School
5/14/2008	Queens	Public School 124
5/14/2008	Bronx	Children's Aid Society
5/14/2008	Queens	Wendell Holmes Intermediate School
5/15/2008	Brooklyn	Public School 29
5/15/2008	Manhattan	Math and Science Exploratory School
5/15/2008	Manhattan	PS 163
5/15/2008	Queens	Hunter and Public School 78
5/16/2008	Manhattan	Neighborhood School
5/16/2008	Brooklyn	Brooklyn New School
5/17/2008	Manhattan	American Museum of Natural History
5/20/2008	Manhattan	Baruch College Campus High School
5/23/2008	Brooklyn	High School for Youth and Community Development
5/23/2008	Manhattan	High School for Law and Public Service
5/23/2008	Brooklyn	High School for Youth and Community Development
5/23/2008	Manhattan	High School for Law and Public Service
5/30/2008	Manhattan	St Clare's School
6/5/2008	Brooklyn	John Dewey High School
6/6/2008	Queens	Middle School 217
6/9/2008	Queens	Public School 116
6/12/2008	Bronx	Ethical Culture Fieldston School
6/17/2008	Manhattan	Columbia Secondary School for Math, Science and Engineering
7/1/2008	Manhattan	Humanities Preparatory Academy
7/3/2008	Manhattan	Alianza Dominicana
7/8/2008	Brooklyn	Groundswell
7/14/2008	Brooklyn	Groundswell
7/15/2008	Brooklyn	Touro College
7/24/2008	Brooklyn	Urban Scholars Program, City College
7/28/2008	Manhattan	CUNY School of Professional Studies
8/6/2008	Queens	Middle School 109
9/6/2008	Staten Island	CSI High School for International Studies
10/7/2008	Bronx	Middle School / High School 368
10/15/2008	Manhattan	Drop Summit Seminar
10/16/2008	Queens	Public School 78

**Public Outreach - Education Report, 2008:
Events and Materials**

Date	Borough	Organization
10/17/2008	Citywide	Green Horizons
10/21/2008	Queens	Green Connections
10/22/2008	Queens	LaGuardia Community College
10/29/2008	Brooklyn	Public School 9
10/29/2008	Bronx	The Exploration Academy High School
10/29/2008	Staten Island	St Clare's School
10/30/2008	Queens	Queens Museum Teacher Workshop
11/6/2008	Queens	Queens Museum
11/6/2008	Queens	Newtown High School
11/14/2008	Staten Island	Public School 57
11/15/2008	Queens	Public School 78
11/7/2008	Manhattan	Youth Noise
11/7/2008	Queens	Public School 148
11/10/2008	Manhattan	Nightingale School
11/10/2008	Manhattan	Manhattan East School
11/13/2008	Queens	Newtown High School
11/21/2008	Manhattan	Public School 33
11/25/2008	Manhattan	Baruch College Campus High School
11/25/2008	Manhattan	High School for Law and Public Service
21/1/2008	Manhattan	Public School 33
12/3/2008	Staten Island	Public School 57
12/3/2008	Manhattan	The Neighborhood School
12/4/2008	Queens	Public School 133
12/8/2008	Manhattan	The Neighborhood School
12/9/2008	Manhattan	Baruch College Campus High School
12/10/2008	Manhattan	Middle School 54 Booker T. Washington
12/11/2008	Manhattan	Allen Stevenson
12/16/2008	Queens	Public School 102
12.17/2998	Queens	Public School 33
12/19/2008	Manhattan	Public School 33
12/19/2008	Manhattan	High School for Law and Public Service

Additional Promotional Items, Literature, and Publications Were Sent to the Following Organizations	
Location	Organization
Bronx	Exploration Academy HS
Bronx	Middle School/High School 368
Bronx	Exploration Academy High School
Bronx	PS 90
Bronx	Community School 66
Bronx	PS 71
Bronx	Urban Assembly School for Wildlife
Bronx	PS 75
Bronx	New Explorers High School
Bronx	PS 754
Bronx	CS 66
Bronx	Ethical Culture Fieldston School

Additional Promotional Items, Literature, and Publications Were Sent to the Following Organizations	
Location	Organization
Bronx	PS 119
Brooklyn	Groundswell Mural Project
Brooklyn	IS 296
Brooklyn	Touro College
Brooklyn	Girl Scout of New York
Brooklyn	79 PCT Explorers
Brooklyn	Edward Murrow High School
Brooklyn	PS 31
Brooklyn	CUNY School of Professional Studies
Brooklyn	Staten Island Green Belt
Brooklyn	PS 58
Brooklyn	Girls Scout at St. Mark School
Brooklyn	PS 27
Brooklyn	PS 321
Manhattan	Hunter Elementary School
Manhattan	Baruch College Campus HS
Manhattan	Manhattan East Middle School
Manhattan	HS for Law & Public Service
Manhattan	Museum of the City of New York
Manhattan	Children for Children
Manhattan	Corlears School
Manhattan	Harvey Milk High School
Manhattan	NYC Dept of Health
Manhattan	PS 33
Manhattan	Museum of the City of New York
Manhattan	PS 166
Manhattan	IS 61
Manhattan	Metropolitan Montessori School
Manhattan	Nightingale Bamford School
Manhattan	HS for Environmental Studies
Manhattan	Delta Middle School
Manhattan	Patrick Henry Middle School
Manhattan	NYC Parks Department
Manhattan	City Parks Foundation
Manhattan	Health Venture Group
Manhattan	NYC Dept. of Education
Manhattan	New York City Soil & Water Conservation
Manhattan	Millennium HS
Manhattan	PS 124
Manhattan	MS 104
Manhattan	PS 116
Manhattan	Grace Church School
Manhattan	Horticultural Society
Manhattan	American Museum of Natural History
Manhattan	UNICEF
Manhattan	PS 116
Manhattan	Institute of Collaborator Education
Queens	MGI/Gear up @ Queens College
Queens	PS 33

Additional Promotional Items, Literature, and Publications Were Sent to the Following Organizations	
Location	Organization
Queens	PS 78
Queens	Theresa Paplin School
Queens	John Bowne High School
Queens	PS 213
Queens	Queens Museum of Art
Queens	PS 43
Queens	Lexington School for the Deaf
Queens	Boy Scouts of America
Queens	PS 133
Queens	Bell Academy (MS 294)
Queens	Bronx HS of Science
Queens	Hunter -Middle School
Queens	PS 212Q
Queens	PS 70
Queens	John Adams High School
Queens	Newtown High school
Queens	PS 139
Queens	PS 199
Queens	IS 109
Queens	Dept. of Design & Construction
Staten Island	PS 57
Staten Island	Staten Island Bluebelt

**Number of Education Events
Per Borough, 2008**

Location	Number of Events
Bronx	9
Brooklyn	29
City-wide	5
Manhattan	54
Queens	31
Staten Island	6
TOTAL	134
Average Events per Month	17

Public Event-Based Programs

In 2008, the DEP attended 229 public outreach events, averaging approximately 19 events per month. Events included table top displays and outreach at 6 fairs, festivals, and concerts, most of which were community based. Other events included displays and outreach at 24 Greenmarket events, 6 beach clean-up events, the International Hotel/Motel Restaurant trade Show, and National Night Out, with the remainder including a combination of community group outreach, such as materials, presentations and table top displays at expos, professional associations, as well

as events conducted at City parks. The following table includes the schedule of public outreach events during 2008.

Schedule of DEP Public Outreach Events, 2008

Date	Borough	Event Description
1/2/2008	Bronx	Town Hall Meeting
1/2/2008	Queens	Town Hall Meeting
1/3/2008	Queens	Citizens Advisory Committee Meeting. Brooklyn-Queens Aquifer Feasibility Study
1/9/2008	Manhattan	Housing Preservation & Development (HPD) Water Conservation Class
1/12/2008	Queens	PIP Public Outreach
1/24/2008	Manhattan	HPD Water Conservation Class
1/26/2008	Staten Island	PIP Public Outreach
1/29/2008	Brooklyn	PIP Public Outreach
1/30/2008	Brooklyn	PIP Public Outreach
2/4/2008	Manhattan	New York Water Environment Association (NYWEA) Winter Meeting
2/4/2008	Brooklyn	HPD Water Conservation Class
2/5/2008	Manhattan	New York Water Environment Association (NYWEA)
2/6/2008	Bronx	Town Hall Meeting
2/7/2008	Queens	Citizens Advisory Committee Meeting. Brooklyn-Queens Aquifer Feasibility Study
2/7/2008	Queens	PIP Public Outreach
2/11/2008	Manhattan	PIP Public Outreach
2/13/2008	Brooklyn	PIP Public Outreach
2/17/2009	Bronx	HPD Water Conservation Class
2/19/2008	Queens	Queens Community Board #14 Community Outreach
2/19/2008	Brooklyn	PIP Public Outreach
2/21/2008	Brooklyn	PIP Public Outreach
2/26/2008	Queens	PIP Public Outreach
2/28/2009	Manhattan	HPD Water Conservation Class
3/3/2008	Brooklyn	HPD Water Conservation Class
3/4/2008	Manhattan	PIP Public Outreach
3/5/2008	Bronx	Town Hall Meeting
3/6/2008	Queens	Citizens Advisory Committee Meeting. Brooklyn-Queens Aquifer Feasibility Study
3/7/2008	Manhattan	PIP Public Outreach
3/10/2008	Manhattan	HPD Water Conservation Class
3/11/2008	Brooklyn	PIP Public Outreach
3/13/2008	Manhattan	Conservation Seminar – Housing Conservation Coordinators
3/18/2008	Queens	Town Hall Meeting
3/22/2008	Manhattan	Go Green East Harlem
3/24/2008	Manhattan	HPD Water Conservation Class
3/27/2008	Queens	PIP Public Outreach
4/2/2008	Bronx	Town Hall Meeting
4/2/2008	Bronx	PIP Public Outreach
4/3/2008	Queens	Citizens Advisory Committee Meeting. Brooklyn-Queens Aquifer Feasibility Study
4/7/2008	Brooklyn	HPD Water Conservation Class
4/9/2008	Manhattan	PIP Public Outreach
4/12/2008	Queens	Beach 30th Street Clean-up and Restoration Planting Day

Schedule of DEP Public Outreach Events, 2008

Date	Borough	Event Description
4/15/2008	Queens	Town Hall Meeting
4/16/2008	Staten Island	PIP Public Outreach
4/19/2008	Manhattan	Earth Day Harlem
4/23/2008	Brooklyn	PIP Public Outreach
4/25/2008	Brooklyn	Plum Beach Clean-up/Planting Project
4/26/2008	Brooklyn	Plum Beach Clean-up/Planting Project
4/29/2008	Manhattan	HPD Water Conservation Class
4/29/2008	Manhattan	21 st Annual Co-op and Condo Expo
4/30/2008	Queens	PIP Public Outreach
5/1/2008	Queens	Citizens Advisory Committee Meeting. Brooklyn-Queens Aquifer Feasibility Study
5/3/2008	Queens	Beach 30th Street Rockaway Earth Day Environmental Art Unveiling
5/5/2008	Brooklyn	HPD Water Conservation Class
5/7/2008	Bronx	Bronx Community Board #12 Community Outreach
5/7/2008	Brooklyn	PIP Public Outreach
5/7/2008	Queens	Town Hall Meeting
5/10/2008	Queens	Twin Ponds Stream Clean-up Day
5/12/2008	Manhattan	HPD Water Conservation Class
5/20/2008	Queens	Town Hall Meeting
5/27/2008	Manhattan	HPD Water Conservation Class
6/3/2008	Manhattan	Morgan-Stanley Sustainability Exhibit
6/4/2008	Bronx	Bronx Community Board #12 Community Outreach
6/5/2008	Queens	Citizens Advisory Committee Meeting. Brooklyn-Queens Aquifer Feasibility Study
6/9/2008	Brooklyn	HPD Water Conservation Class
6/12/2008	Manhattan	HPD Water Conservation Class
6/13/2008	Citywide	MTA Conservation Workshop
6/16/2008	Manhattan	Buildings NY
6/17/2008	Manhattan	Buildings NY
6/17/2008	Queens	Town Hall Meeting
6/28/2008	Queens	Plover Awareness Day at Rockaway Beach 54th Street
7/2/2008	Bronx	Town Hall Meeting
7/3/2008	Queens	Citizens Advisory Committee Meeting. Brooklyn-Queens Aquifer Feasibility Study
7/15/2008	Bronx	Greenmarket: Boro Hall
7/15/2008	Queens	Queens Community Board #1 Community Outreach
7/15/2008	Brooklyn	Multi-Family Buildings Conference
7/17/2008	Brooklyn	Greenmarket: Boro Hall
7/17/2008	Queens	Open House at the Queens Museum
7/17/2008	Queens	Open House at the Queens Museum
7/18/2008	Manhattan	Greenmarket: Union Sq.
7/19/2008	Brooklyn	East New York Diagnostic & Treatment Center 18th Annual Health Fair
7/22/2008	Bronx	Greenmarket: Boro Hall
7/22/2008	Manhattan	Power Engineering Society
7/24/2008	Brooklyn	CUNY School of Professional Studies
7/24/2008	Brooklyn	Greenmarket: Boro Hall
7/26/2008	Manhattan	City of Water
7/29/2008	Bronx	Greenmarket: Boro Hall

Schedule of DEP Public Outreach Events, 2008

Date	Borough	Event Description
7/31/2008	Brooklyn	Greenmarket: Boro Hall
8/1/2008	Manhattan	Greenmarket: Union Sq.
8/5/2008	Bronx	Greenmarket: Boro Hall
8/5/2008	Bronx	National Night Out
8/5/2008	Brooklyn	National Night Out
8/5/2008	Manhattan	National Night Out
8/5/2008	Manhattan	National Night Out
8/5/2008	Manhattan	National Night Out
8/5/2008	Queens	National Night Out
8/5/2008	Queens	National Night Out
8/5/2008	Queens	National Night Out
8/6/2008	Bronx	Bronx Community Board #12 Community Outreach
8/6/2008	Manhattan	Concert
8/6/2008	Manhattan	Hunter College, CUNY
8/6/2008	Manhattan	Hunter College, CUNY
8/7/2008	Brooklyn	Concert
8/7/2008	Brooklyn	Greenmarket: Boro Hall
8/7/2008	Queens	Citizens Advisory Committee Meeting. Brooklyn-Queens Aquifer Feasibility Study
8/8/2008	Manhattan	Greenmarket: Union Sq.
8/9/2008	Manhattan	Summer Streets
8/11/2008	Brooklyn	Concert
8/12/2008	Bronx	Greenmarket: Boro Hall
8/14/2008	Brooklyn	Concert
8/14/2008	Brooklyn	Greenmarket: Boro Hall
8/15/2008	Manhattan	Greenmarket: Union Sq.
8/16/2008	Manhattan	CUNY Institute for Sustainable Cities
8/16/2008	Manhattan	Summer Streets
8/19/2008	Bronx	Greenmarket: Boro Hall
8/19/2008	Queens	Queens Community Board Community Outreach
8/21/2008	Brooklyn	Concert
8/21/2008	Brooklyn	Greenmarket: Boro Hall
8/22/2008	Brooklyn	Greenmarket: Boro Hall
8/22/2008	Queens	National Day Out
8/23/2008	Manhattan	Summer Streets
8/26/2008	Bronx	Greenmarket: Boro Hall
8/28/2008	Brooklyn	Concert
8/28/2008	Brooklyn	Greenmarket: Boro Hall
8/29/2008	Manhattan	Greenmarket: Union Sq.
9/2/2008	Bronx	Greenmarket: Boro Hall
9/3/2008	Bronx	Bronx Community Board Community Outreach
9/4/2008	Queens	Citizens Advisory Committee Meeting. Brooklyn-Queens Aquifer Feasibility Study
9/8/2008	Brooklyn	HPD Water Conservation Class
9/16/2008	Queens	Queens Community Board #14 Community Outreach
9/16/2008	Manhattan	HPD Water Conservation Class
9/20/2008	Brooklyn	International Beach Clean-up Day -
9/22/2008	Manhattan	Medellin, Colombia Visit to DEP
9/23/2008	Manhattan	NYC Soil and Water Conservation District(Conference)
9/23/2008	Manhattan	IEEE Power and Energy Society - Industry Application

Schedule of DEP Public Outreach Events, 2008

Date	Borough	Event Description
		Conference
9/24/2008	Queens	Business Resource Day
10/1/2008	Bronx	Town Hall Meeting
10/2/2008	Queens	Citizens Advisory Committee Meeting. Brooklyn-Queens Aquifer Feasibility Study
10/2/2008	Manhattan	Housing Conservation Coordinators Seminar
10/6/2008	Brooklyn	HPD Water Conservation Class
10/11/2008	Brooklyn	Bed-Stuy Alive 2008 Community Affair
10/14/2008	Manhattan	HPD Water Conservation Class
10/17/2008	Manhattan	Greenmarket: Union Sq.
10/19/2008	Manhattan	Mayor's CUP NYC Kayak Championship
10/21/2008	Queens	Queens Borough Cabinet Meeting
10/22/2008	Manhattan	NYC DEP
10/22/2008	Manhattan	NYC DEP
10/23/2008	Manhattan	The Stuyvesant Cove Park Association
10/24/2008	Manhattan	Con Ed's Advocacy Today Conference
10/24/2008	Manhattan	Greenmarket: Union Sq.
10/26/2008	Queens	Bayside Historical Society: Annual Fort Totten 5K Race
10/27/2008	Manhattan	BRAVO - Top Chef New York "Taste of the Five Boroughs" Grand Central Station
10/28/2008	Manhattan	Jamaica Bay Symposium
10/30/2008	Staten Island	Wagner College
10/31/2008	Manhattan	Barnard College
10/31/2008	Manhattan	Barnard College
10/31/2008	Queens	Queens Center Mall/Queens Economic Development Corp
11/5/2008	Bronx	Town Hall Meeting
11/5/2008	Queens	Town Hall Meeting
11/6/2008	Queens	Citizens Advisory Committee Meeting. Brooklyn-Queens Aquifer Feasibility Study
11/9/2008	Manhattan	Int'l Hotel/Motel & Restaurant Trade Show: Jacob Javits
11/10/2008	Manhattan	Int'l Hotel/Motel & Restaurant Trade Show: Jacob Javits
11/10/2008	Manhattan	Go Green To Save Green
11/11/2008	Manhattan	Int'l Hotel/Motel & Restaurant Trade Show: Jacob Javits
11/12/2008	Brooklyn	Senator Montgomery's Resource Expo
11/12/2008	Manhattan	Go Green To Save Green
11/14/2008	Manhattan	Greenmarket: Union Sq.
11/22/2008	Brooklyn	Brooklyn Children's Museum
12/3/2008	Bronx	Bronx Community Board Outreach
12/3/2008	Manhattan	The Neighborhood School (Trout in the Classroom)
12/3/2008	Manhattan	The Neighborhood School (Trout in the Classroom)
12/4/2008	Queens	Citizens Advisory Committee Meeting. Brooklyn-Queens Aquifer Feasibility Study
12/8/2008	Brooklyn	HPD Water Conservation Class
12/15/2008	Manhattan	"From Faucet to Flush" Exhibit
12/20/2008	Queens	105th Pct - Toys for Kids

Hydrant Education Action Teams (“HEAT”)

DEP worked with six Hydrant Education Action Teams (HEAT) comprised of 75 high school and college students who canvassed neighborhoods in all five boroughs disseminating information about the effects of illegally-opened fire hydrants on water pressure in the City’s distribution system. DEP and HEAT were present at several public events throughout the summer to raise awareness about two priority topics: water conservation and illegally-opened fire hydrants. DEP set up hydration stations, distributed reusable water bottles, and provided educational materials.

Hydrant Education Action Team Events

Date	Events Per Date	HEAT Organizations
7/1/2008	2	Ridgewood Southern Qns. Pk. Assoc.
7/2/2008	2	Ridgewood Southern Qns. Pk. Assoc.
7/3/2008	2	Ridgewood Southern Qns. Pk. Assoc.
7/7/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
7/8/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
7/9/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
7/10/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
7/11/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
7/12/2008	1	Ridgewood

Hydrant Education Action Team Events

Date	Events Per Date	HEAT Organizations
7/14/2008	1	Southern Qns. Pk. Assoc.
7/15/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
7/16/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
7/17/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
7/18/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
7/21/2008	4	Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Southern Qns. Pk. Assoc.
7/22/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
7/23/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
7/24/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
7/25/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2

Hydrant Education Action Team Events

Date	Events Per Date	HEAT Organizations
		Southern Qns. Pk. Assoc.
7/28/2008	4	Alianza CB 5 Alianza CB 4 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
7/29/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
7/30/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
7/31/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
8/1/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
8/2/2008	2	Ridgewood Alianza Manh. Team 2
8/4/2008	5	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Southern Qns. Pk. Assoc.
8/5/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
8/6/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
8/7/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1

Hydrant Education Action Team Events

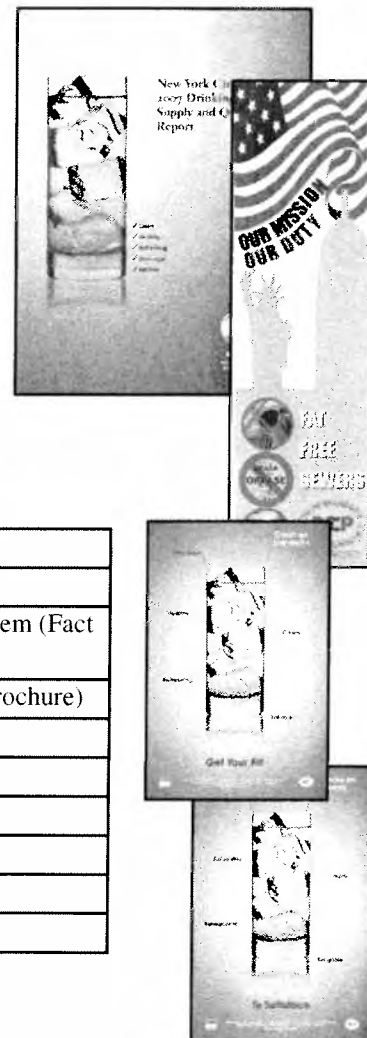
Date	Events Per Date	HEAT Organizations
		Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
8/8/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
8/9/2008	1	Alianza Manh. Team 2
8/10/2008	1	Ridgewood
8/11/2008	5	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Southern Qns. Pk. Assoc.
8/12/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
8/13/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
8/14/2008	6	Ridgewood Alianza CB 5 Alianza CB 4 Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.
8/15/2008	5	Ridgewood Alianza Alianza Manh. Team 1 Alianza Manh. Team 2 Southern Qns. Pk. Assoc.

**Number of Public Outreach Events
Per Borough, 2008**

Location	Number of Events
Bronx	23
Brooklyn	39
City-wide	1
Manhattan	65
Queens	43
Staten Island	3
Subtotal	174
HEAT Events	179
Average Events per Month	29
Total	353

Publications

A list of flyers, brochures, posters, and publications is provided in Table 6-11. These items were displayed or distributed throughout the public education program, and most are readily available on the DEP website. Examples of the publications, including the floatables reduction and grease disposal tips flyers, and several versions of the “Clean Streets = Clean Beaches” posters, are shown along the right margin of the preceding and following pages.

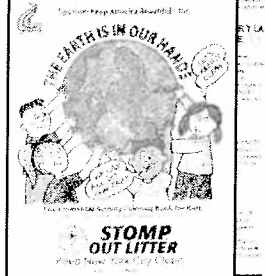
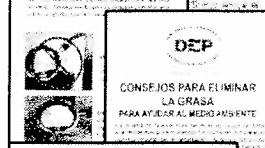
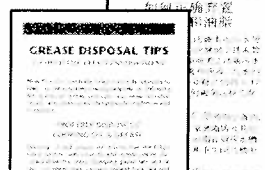
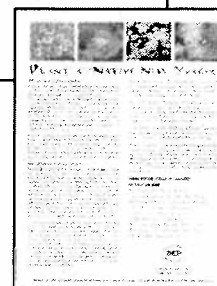
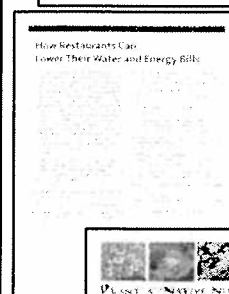
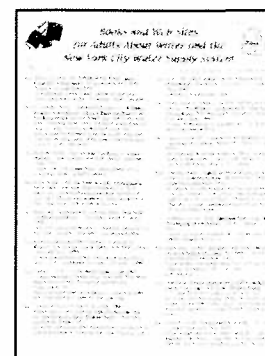


Literature / Publications 2008

2006 New York Harbor Water Quality Report (Report on CD)
Biosolids Beneficial Use Program (Leaflet)
BMPs for Non-Residential Direct and Indirect Dischargers of Grease to the Public Sewer System (Fact sheet)
Books and Websites for Adults about Water and the New York City Water Supply System (Brochure)
Bureau of Wastewater Treatment: Bureau Summary (Report)
Celebrating New York City's Clean Drinking Water (Fact sheet)
Celebrating New York City's Harbor Water Quality Programs (Fact sheet)
Central Park Reservoir Expedition Journal (Booklet)
City that Drinks the Mountain Sky (Leaflet)
Clean Streets = Clean Beaches (Litter Bag)

Literature / Publications 2008

Clean Streets = Clean Beaches (Poster/Leaflet)
Clean Streets = Clean Beaches When It Rains You Don't Go To the Beach, Your Litter Does (Leaflet)
Combined Sewer Overflow Stakeholder Meeting (Poster)
Comprehensive Water Reuse Program Applications and Instructions
Don't Let the Water Run (Journal)
Dos & Don'ts of Water Conservation (Leaflet) <i>English, Spanish, Chinese, Korean, Russian</i>
Earth Day (Banner)
Environmental Education Resources for Students and Teachers (Fact sheet)
Facts about the New York City Water Supply System (Fact sheet)
Fat Free Sewers – Our Mission Our Duty (Leaflet)
Floatables Reduction Program (Leaflet)
Glossary of Wastewater Treatment Terminology (Fact sheet)
Glossary of Water Terminology (Fact sheet)
Good Cleaning Practices – Food and Restaurant Industry (Leaflet)
Grease Disposal Tips to Help the City's Environment (Leaflet) <i>English, Spanish, Chinese, Korean</i>
Grease Down the Drain Think Again (Poster) <i>English, Spanish, Chinese, Russian, Greek, Hindi, Arabic, Yiddish</i>
Great Books and Websites for Children about Water and the New York City Water Supply System (Brochure)
High Efficiency Clothes Washers (Fact sheet)
How DEP Protects New York City's Beaches (Bill insert)
How Restaurants Can Lower Their Water and Energy Bills (Poster/Leaflet)
How Water and Sewer Fees Improve Your Water and Protect Your Environment (Fact sheet)
Jamaica Bay Watershed Protection Plan/Prioritized Strategies (Poster)
Jamaica Bay Watershed Protection Plan/Salt Marsh Islands (Poster)
New York City 2006 Drinking Water Supply and Quality Report (Report)
New York City Water Is... (Coloring book)
New York City Water Supply Activity, Create a Rainstorm (Educational Activity)
New York City Water Supply Activity, The Value of Water (Educational Activity)
New York City Water Supply Activity, What is a Watershed? (Educational Activity)
New York City Water Supply Monitoring, Testing and Treatment (Leaflet)
New York City's Wastewater Treatment System (Report)
New York Water Guide (Brochure)
Newtown Creek Nature Walk Scavenger Hunt (Booklet)
Newtown Creek Nature Walk (Leaflet)
No Grease, Hand Washing Only (Laminated Sign)
No Grease, Vegetable/Fruit Washing Only (Laminated Sign)
NY – NJ Harbor Estuary Pumpouts – Keep Our Waters Clean, User Pumpout Guide (Brochure)
NYC DEP Automatic Meter Reading - AMR (Bill Insert)
NYC Water Get Your Fill (Assortment of 5/English, Spanish flyer)
NYCDEP Harbor Survey Program (Leaflet) <i>English, Spanish, Chinese</i>
NYCDEP Harbor Survey Program (Panel at the South Street Seaport Wet Lab)
Once-Through Water-Cooled Refrigeration, Ice-Making and Air Conditioning (Fact sheet)



Literature / Publications 2008

Plant a Native New Yorker (Leaflet)
Play With a Hydrant and You're Playing with Fire (Poster) <i>English, Spanish</i>
Preventing Grease Discharges into Sewers Guidelines for New York City Businesses (Brochure) <i>English, Spanish, Chinese, Korean, Russian</i>
Reading Your Water and Sewer Bill (Bill Insert)
Reduce Your Water and Sewer Bill (Fact Sheet)
Residential Water Use - Leaks and Their Cost (Fact sheet)
Residential Water Use (Fact sheet)
Save Water! (Jar Opener)
Smart Business, a Guide to DEP Environmental Regulations and Permitting Requirements for Businesses in New York City (Brochure)
Smart Printing, a Guide to Environmental Regulations and Permit Requirements for Printers (Booklet)
Staten Island Bluebelt (Brochure)
STOMP Out Litter - Keep New York City Clean (Coloring book)
The DEP in the News (Newsletter)
The Magic School Bus at the Waterworks, Special New York City Edition (Book)
The Magic School Bus at the Waterworks, Teacher's Guide (Booklet)
Top 10 Ways to STOMP OUT LITTER (Leaflet) <i>English, Spanish, Chinese, Korean, Yiddish, Russian</i>
Trout In The Classroom (Booklet)
Water Conservation Art and Poetry Certificates
Water Conservation Art and Poetry Invites
Water Conservation Art and Poetry Program Guidelines 2008 (flyer)
Water Conservation Series/Innovative Toilet & Urinal Technologies (Poster)
Water, water, everywhere! (Panel at the South Street Seaport Wet Lab)
Water? Just Ask. Don't Drip New York Dry (Restaurant Tent Card)



Water Conservation Program

Annual Update

**New York City Department of Environmental Protection
59-17 Junction Blvd.
Flushing, NY 11373**

June 2010



Introduction and Summary

This report is an update of the Water Conservation Program Plan issued by the New York City Department of Environmental Protection (“DEP”) in December 2006. The original document is available from DEP in paper and PDF format. That original report contains detailed information on the history and operation of the water supply and wastewater treatment systems as well as historic information on water conservation efforts. Please request a copy of that document for a more complete picture of DEP’s efforts. This Program Update provides information on recent activities.

In the past, information about DEP’s water conservation efforts have been split between this Plan Update and wastewater plant consent decree periodic reports. This edition of the Program Update incorporates water conservation-related metrics that previously were included in those reports into this volume with the goal of producing one comprehensive annual report on water conservation activities.

With the city’s population expected to rise to 9.1 million by 2030, from 8.3 million in 2005, water efficiency will continue to have an important role to play, not just to help assure supply but also to assist in meeting goals to reduce combined sewer overflows, maintain wastewater quality and meet nitrogen removal goals.

Water demand continued a modest downward trend in the last year, as illustrated in the graph “In-City Historical Water Demand and Population.” DEP continued efficiency-related programs and also began or completed a number of initiatives that will provide benefits in the future:

1. Automatic Meter Reading DEP began the installation of a citywide fixed-network AMR system in November 2008 with the start of installation work for Data Collection Units (“DCU”) around the city as part of NYC DoITT’s NYCWiN citywide wireless system. Replacement of most pre-1998 water meters and installation of the AMR “MTU’s” on all water meters began the first week of March 2009 with substantial completion planned within three years. By the end of 2009 DCU coverage of all boroughs with the exception of Staten Island was complete and 180,700 MTU’s had been installed, 2% ahead of schedule. As this report was being prepared in June 2010 the number of MTU’s installed had risen to 362,800 or 45% complete. DEP began offering website access to customers of their consumption data during summer 2010.
2. Expansion of Water Demand Analysis Capability DEP’s Bureau of Environmental Planning and Analysis (“BEPA”) has adding staffing and software tools to analyze water consumption data. Through BEPA the New York City Water Board is conducting a study of “conservation rates,” storm water rates and possible incentives for storm water BMP’s.
3. Promulgation of New Water Use Rules New water use rules took effect on June 22, 2009. The changes address several water quality and leak prevention issues in addition to a number of technical and procedural changes. Another round of updates and revisions will begin in 2010.
4. “Green Code Task Force” Mayor Bloomberg, Council Speaker Quinn and the U.S.

Green Building Council sponsored a wide-ranging review of the city’s Building Code with the goal of revising specific parts of the Code to meet environmental and “green building” goals. Vetting of the recommendations by Technical Committees continued through 2009 and some are being introduced to the City Council for consideration in 2010.

5. Continuation of Ongoing Education Programs DEP’s Bureau of Community and Intergovernmental Affairs (“BCIA”) continues to conduct a variety of education programs on water and water efficiency directed at both students and adults.

Abbreviations and Acronyms Used in This Report

AMR	Automatic Meter Reading (sometimes referred to as “AMI” for “Advanced Metering Infrastructure”)
BMP	Best Management Practices
CIP	Capital Improvement Plan
CSO	Combined Sewer Overflow
CY	Calendar Year
DCU	Data Collection Unit (AMR)
DEC	New York State Department of Environmental Conservation
DEP	New York City Department of Environmental Protection
DoITT	New York City Department of Information Technology and Telecommunications
DRBC	Delaware River Basin Commission
FY	Fiscal Year (July 1 – June 30)
GCPD	Gallons per Capita per Day
HCF	Hundred Cubic Feet
HPD	New York City Department of Housing Preservation and Development
LF	Linear feet
MGD	Millions of Gallons per Day
MTU	Meter Transmitter Unit (AMR)
NYCHA	New York City Housing Authority
RCNY	Rules of the City of New York
RFEI	Request for Expressions of Interest
RFP	Request for Proposals
RWS	Residential Water Survey
SCA	School Construction Authority
WPCP	Water Pollution Control Plant (Sewage Treatment Plant)

Contact People for Issues in this Report

New York City Water Metering
 Customer-Oriented Water Conservation Programs
 Requests for the original Water Conservation Plan
 Warren Liebold, Bureau of Customer Services, wliebold@dep.nyc.gov (718) 595-4657

Water Demand Projections, System Auditing, Related Issues
Esther Siskind, Assistant Commissioner, Bureau of Environmental Planning and Analysis (“BEPA”)
ESiskind@dep.nyc.gov (718) 595-3168

Distribution System Metering
Odd Larsen, Bureau of Water and Sewer Operations OLarsen@dep.nyc.gov (718) 595-5751

Upstate System and Customer Metering
Paul Aggarwal, Bureau of Water Supply, PAggarwal@dep.nyc.gov (914) 773-4456

Educational Programs
Kim Estes-Fradis, Bureau of Communication
KEstes-Fradis@dep.nyc.gov (718) 595-3506

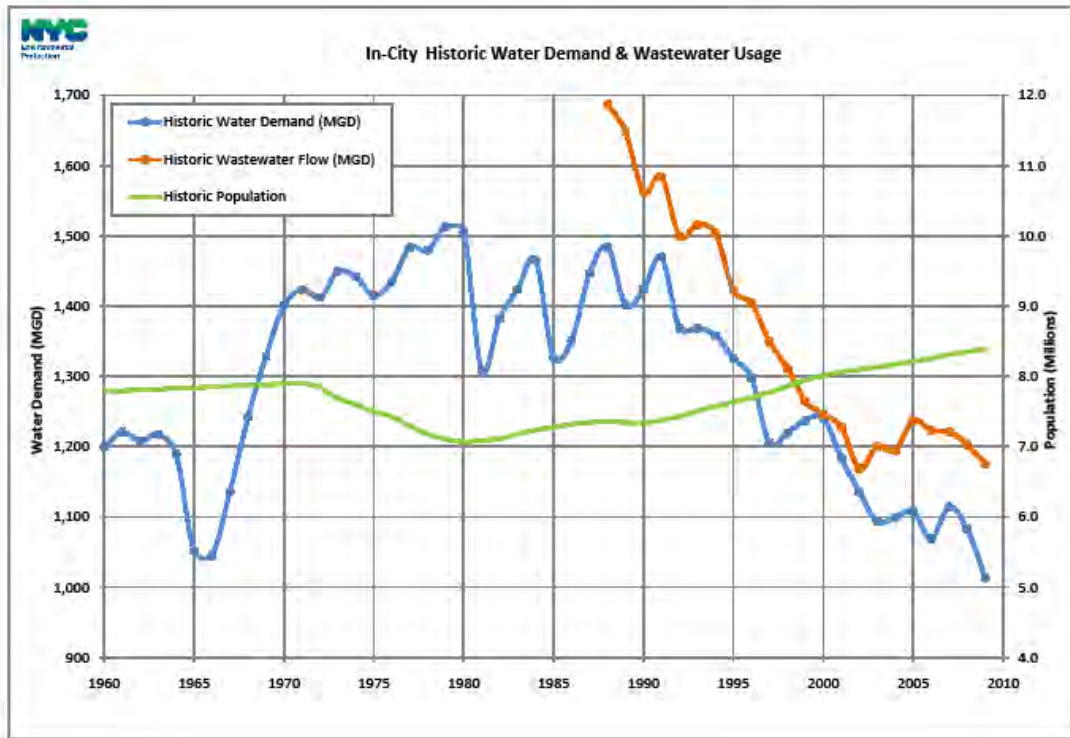
Water Use and Wastewater Flows: Demand Planning

New York City water consumption has continued to decline despite increases in population as shown in Figure 1 (2009 water consumption was 1,008 mgd, lowest since the drought of record). Some of this is attributed to colder and wetter summers in more recent years. It is reasonable to assume that water usage will remain stable or even continue to decline over the near term due to increasing rates combined with the ability for customers to better track usage via Automated Meter Reading (AMR). Volumetric meter-based billing is a water conservation pricing mechanism and water use can continue to decrease in response to the increasing cost of water. This overall trend could be affected by a number of factors including year-to-year temperature swings and potential drought, which tempers consumption through restrictions.

Water demand analysis and projections are used by DEP for many purposes including water supply and wastewater infrastructure planning, revenue analysis, dependability, assessing the effects of new growth and rezoning, and understanding the effects of water demand on agency operations. In this effort, BEPA uses technologies such as Microsoft SQL Server, SAS, and ESRI ArcGIS to create statistical and GIS models.

Upcoming work efforts include, integration of AMR data into the model, integrating new US Census data, and tracking top water users. DEP will review US Census data as they become available; however, it is not expected that there will be significant changes in the estimated water consumption and wastewater flows based on the new US Census data.

Figure 1



Program and Activity Updates

Water Metering - Advanced Metering Infrastructure

Installation of the rooftop Data Collection Units (“DCU’s”) began in November 2008 and was 80% complete by the end of 2009. At report preparation time network completion was 90% with most of the remaining DCU’s to be located in central Staten Island. The network provides close to double redundancy so have coverage has been provided for almost all of Brooklyn, Queens, the Bronx and Manhattan.

Large-scale installation of the transmitters (“MTU’s”) on water meters, and the replacement of approximately 50% of pre-1997 small meters began on March 5, 2009 in Brooklyn and Queens and in mid-March in Manhattan. Work in the Bronx began in early April 2009. Staten Island will begin on July 1, 2009. By the end of 2009 170,800 MTU’s had been installed and work was proceeding at about 550 MTU’s per day. By mid-June 2010 362,800 MTU’s (45%) had been installed and work is proceeding by about 1,200 - 1,500 MTU’s per day.

The system is generating a 98+% actual read rate with the remaining 2% attributable mostly to installation errors, defective MTU's and meters that will be corrected. Most MTU's are programmed to read the meter and transmit the read four times a day. Meters 2" and larger will be read once an hour. Installation of the AMR/AMI system will not only improve customer service and collections but will increase the volume of water use data by orders of magnitude. DEP will move from having meters read four times a year with an 85% actual read rate overall, to four times a day (for most customers) or hourly (for larger customers) with a 98%+ actual read rate.

A particular effort is being made to install MTU's in apartment buildings that are physically metered but still billed under the flat-rate or "frontage" system so the building owners or managers can better understand their water use. Those buildings are 60% complete by mid-June 2010.

DEP will be making AMR reads available to customers through its website during summer 2010.

Additional information:

<http://www.waterefficiency.net/january-february-2010/ami-in-nyc.aspx>

http://www.nyc.gov/html/dep/html/water_and_sewer_bills/amr_about.shtml

Water Use and Demand Analysis

The Bureau of Environmental Planning and Analysis ("BEPA") within the DEP has been tasked with tracking and understanding current and past water consumption trends, which are largely based on the consumption data dating from 2001 to the present. This consumption is estimated for each available borough, block and lot and verified through various analytical methods.

Given that New York City consists of over 850,000 lots, and approximately 97+% of New York City accounts are metered, the generated volume of water consumption data requires extensive clean-up and verification. To properly manage and organize the data, Microsoft SQL server software is being used. The statistical analysis portion of the study is performed using SAS® software which is designed specifically for analysis of large databases. Additionally, geographic and spatial analyses are performed using ArcGIS software.

This data is used in conjunction with various planning efforts within the agency, such as emergency preparedness, study of the DEP's rate structure, projecting water use into the future based on past trends and available population projections.

The Water Board hired a consultant in 2008 to examine advantages and disadvantages of several conservation rates, examine practical issues that must be addressed to implement a stormwater rate and research possible incentives for stormwater management BMP's. The study has benchmarked NYC's rate structure against other municipalities across the country, researched the types of stormwater, fixed/variable, and other rate structures implemented elsewhere, and has identified data needs required to more fully understand the implications of potential

implementation in NYC. The study was released in late 2009 can be found through DEP's website:

. http://www.nyc.gov/html/dep/pdf/water_board/waterboard_rate_study_12182009.pdf

Changes in Water Use Rules

DEP has completed revisions in RCNY Title 15 Chapter 20, "Rules Governing the Supply and Use of Water." Which took effect on June 22, 2009 . The proposed changes related to water conservation and quality include the following:

1. A requirement that any lead or galvanized metal service pipe be completely replaced, rather than repaired, if it leaks. This is aimed at speeding the replacement of these types of services both for water quality purposes and to reduce distribution system losses.
2. A requirement that water meters, service pipes and associated valves and fittings be manufactured of a "no lead" alloy.
3. A requirement, or clarification, that public fountains and sprays must have automatic shutoffs.
4. A requirement that the water service pipe to a vacant building be disconnected after one year of vacancy and empowerment of DEP to perform the work and charge the owner if the owner does not act. This is aimed at reducing leakage from service pipes.

Green Code Task Force

In 2008 Mayor Bloomberg established a task force of architects, engineers and design professionals in partnership with the New York City Chapter of the U.S. Green Building Council to develop recommendations for changes in city codes and rules that will improve energy- and water efficiency as well as sustainable construction practices. The Task Force's technical committees submitted recommendations in late 2008 which are now being reviewed by the city and an industry advisory group prior to the introduction of legislation to the Council.

<http://usgbcny.org/advocacy/>

Mayoral vetting of the Green Code proposals was completed in early 2010. The water efficiency proposals initially being introduced into the Council include:

1. Enhanced efficiency standards for plumbing fixtures sold or installed in New York: 1.28 gpf and "WaterSense" certification for water closets, 0.5 gpf for urinals, 2 gpm for showerheads.
2. Banning once-through water-cooled air condition and refrigeration in new construction with the exception of ice makers producing 500 pounds per day or less of ice.
3. Requirement of make-up water meters for large boilers in buildings exceeding six stories, evaporative cooling towers and other large pieces of commercial water using equipment. Overflow alarms would also be required in roof tanks.

<http://www.urbangreencouncil.org/greencodes/>

Planning for Future Water Conservation Programs

DEP is planning a limited voucher-based toilet replacement program currently scheduled for 2011-2012 targeting apartment buildings that need to have high-efficiency toilets to qualify for the New York City Water Board's "Multifamily Conservation Program" but do not currently meet that qualification. Software to allow online applications for both the MCP and the toilet replacement vouchers was designed in 2008-2009. Phase I of a toilet replacement program open only to MCP applicants is estimated to include 135,000 – 175,000 replacements and savings of 9 – 13 MGD. If continuation or expansion of the effort is desired as part of Dependability – Roudout West Branch repair program, the software can easily be modified to accommodate such an expansion. A Phase II open to all apartment buildings and non-residential properties is currently estimated at additional 350,000 replacements and 13.4 MGD in savings. An additional phase envisioned with a slightly higher incentive for 1-3 family properties and 300,000 replacements is estimated at 11.5 MGD. These potential projects all range between \$3-\$5 per gallon-per-day conserved. This program is not yet funded with the exception of partial funding of Phase I.

During 2010 planning for several other possible programs will be underway:

Substantial Expansion of Large Meter Replacements: The goal will be to replace or rebuild meters 3" and larger to recover lost revenues and prepare for both emergency and non-emergency implementation of new rate structures.

Prepare RFP for Performance-Based Conservation Solicitation: The RFEI issued in 2007 was mentioned in the 2007 and 2008 editions of this report. An RFP will be prepared during 2010 for possible use in a pilot solicitation.

Updating the Drought Management Plan and Drought Emergency Rules for use in a non-hydrological water shortage.

Ongoing Program Metrics for 2009

Water Surveys and Conservation Kits	
Private home water surveys	6167
Apartment surveys	15,893
Small commercial water surveys	456
Home Water Saving Kits distributed	1866
Estimated water savings	0.95 MGD
Estimated annual customer cost savings	\$2,646,913
Distribution System Leak Survey	
Wards Island: Leaks Repaired	54
Wards Island: Estimated Savings	0.5 – 3.3 MGD
Newtown Creek: Leaks Repaired	94
Newtown Creek: Estimated Savings	1.4 – 8.8 MGD
North River: Leaks Repaired	42
North River: Estimated Savings	1.1 – 3.56 MGD
Water Meters Installed, Repaired and Replaced	
Meters Installed (Unmetered properties)	791
Meters replaced	88,091

Completed Plan Accomplishments

Installation of Locking Hydrant Caps

1993: DEP began installing locking caps on approximately 40% of the fire hydrants in the city.

Accelerated Water Metering

1985: The Council passed Local Law 53/1985 that requires metering of all new residential construction and metering during substantial renovation of residential properties.

1985: The New York City Water Board established a requirement of metering as a condition of receiving water and sewer service from the city. Penalties were established for failing to meter and in 1999 and 2000 DEP issued notices to unmetered properties requiring them to either install a meter or be subjected to a 100% surcharge on their annual flat-rate water/sewer bill. Initially, about 35,000 properties are surcharged but that number has dropped to about 8,200 by the end of 2009.

1988: DEP issued the first in a series of meter installation contracts that bring the city to almost 90% metered by 1998.

2003: DEP issues the first in an ongoing series of systematic large meter replacement contracts.

2007: DEP and NYC DoITT issue an RFP for a citywide AMR/AMI system. Work begins in 2009 and is 50% complete by mid-2010.

City-Wide Conservation Program (Toilet Rebate Program)

1994 – 1997: DEP conducts a citywide Toilet Rebate Program that replaces 1.3 million toilets and reduces consumption by approximately 90 MGD.

NYCHA Toilet Replacements

1993 – 2005: The New York City Housing Authority replaced toilets in all developments in the Newtown Creek, Wards Island and North River drainage areas and replaced toilets in “City/State” developments during DEP’s Toilet Rebate Program.

Quarterly Water/Sewer Billing

1995: DEP assumes responsibility of water/sewer billing from the Department of Finance and commissions a new billing system instituting quarterly billing for all metered customers. In 2010 DEP is working on the design of a new billing system.

TOWN OF WINDHAM

371 STATE ROUTE 296
P.O. BOX 96
HENSONVILLE, NEW YORK 12439
(518) 734-4170 FAX (518) 734-6058

STEPHEN J. WALKER, SUPERVISOR
JAMES D. MILTENBERGER, COUNCILMAN

WAYNE E. VAN VALIN, COUNCILMAN
DONALD E. MURRAY, COUNCILMAN
CAROLYN J. GARVEY, TOWN CLERK

TOWN BOARD RESOLUTION #89 OF 2009

RESOLUTION ADOPTING HAMLET EXTENSION AREAS WITHIN THE NEW YORK CITY WATERSHED

At the Town Board meeting on December 29, 2009, Councilman Murray offered the following resolution and moved its adoption:

WHEREAS, the Town Board of the Town of Windham in a resolution dated December 29, 2009 adopted the hamlet extension areas within the New York City Watershed identified in Exhibit A; and

WHEREAS, the New York State Department of Environmental Conservation (DEC) has identified four parcels identified in Exhibit A as suitable for cluster development; and

WHEREAS, these four parcels are identified by Tax Map #77.00-3-2.21; 77.00-3-4; 77.00-3-12; and 78.00-6-1; and

WHEREAS, the Town Board agrees that if these lots were to be developed, it may make sense to cluster The Development.

NOW, THEREFORE BE IT RESOLVED, that under Town Law Section 278, the Town Board authorizes the Planning Board as part of any subdivision approval to allow cluster development, although cluster development is not required on those parcels, it should be an alternative considered by the property owner.

A motion to adopt this resolution was made by Councilman Murray and seconded by Councilman Van Valin.

In Favor 3, Opposed 0, Absent 1, Vacant 1.

ADOPTED: DECEMBER 29, 2009

Supervisor:	Walker	Aye
Councilmen:	Miltenberger	Absent
	Murray	Aye
	Van Valin	Aye

TOWN BOARD RESOLUTION #89 OF 2009

PAGE 2

STATE OF NEW YORK)

)S.S:

COUNTY OF GREENE)

I, the undersigned,

DO HEREBY CERTIFY that I have compared the above copy of a resolution adopted Dec. 29, 2009 with the original record in this office and that the same is a correct transcript thereof and of the whole of said original record.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the official seal of said Town of Windham this 31st day of Dec. 2009.



Carolyn J. Garvey
Town Clerk

TOWN OF WINDHAM
P.O. BOX 96
HENSONVILLE, NEW YORK 12439

FACSIMILE TRANSMITTAL SHEET

TO: *Kevin Young* FROM: *Caryn J. Harvey, Town Clerk*
COMPANY: *Young, Sommer, LLC* DATE: *Dec. 31, 2009*
FAX NUMBER: *518-438-9914* TOTAL NO. OF PAGES INCLUDING COVER: *3*
RE: *Town Board Resolution #89 of 2009*

☒ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

*Attached is a copy of Resolution
Adopting Hamlet Extension Areas*

T.B. Res. #89 of 2009

At a Meeting of the
Town Board of the Town of
Windham held on
December 29, 2009 at 8:00 p.m.

RESOLUTION OF THE TOWN BOARD FOR THE TOWN OF WINDHAM
ADOPTING HAMLET EXTENSION AREAS
WITHIN THE NEW YORK CITY WATERSHED

WHEREAS, the Town Board of the Town of Windham in a resolution dated _____, adopted the hamlet extension areas within the New York City Watershed identified in Exhibit A; and

WHEREAS, the New York State Department of Environmental Conservation ("DEC") has identified four parcels identified in Exhibit A as suitable for cluster development; and

whereas these parcels are identified as tax map #

WHEREAS, the Town Board agrees that if these lots were to be developed, it may make sense to cluster The development; and

NOW THEREFORE, BE IT RESOLVED AS FOLLOWS BY THE
TOWN BOARD OF WINDHAM, GREENE COUNTY, NEW YORK:

THAT under Town Law Section 278, the Town Board authorizes the Planning Board as part of any subdivision approval to allow cluster development under Section 278 of the Town Law. Although cluster development is not required on those parcels, it should be an alternative considered by the property owner.

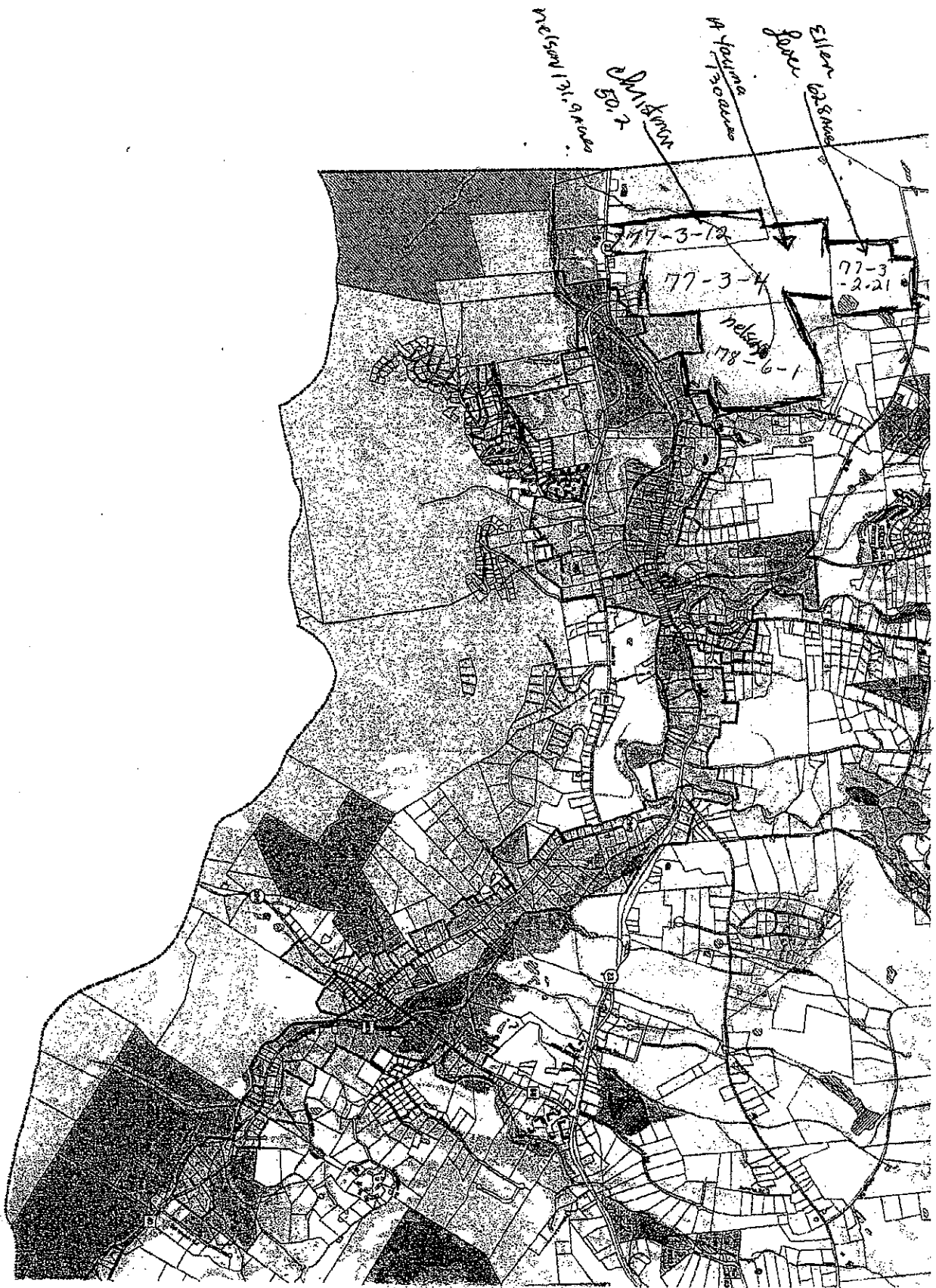
IT IS RESOLVED, that the Town Clerk and the Attorney for the Town are hereby directed to take such actions as are necessary to implement this resolution.

Town Board Member

so moved; Town Board Member

Seconded, and the Town Board voted as follows:

Town Board Member _____
Town Board Member _____
Town Board Member _____
Town Board Member _____
Supervisor WALKER _____



At a Meeting of the
Town Board of the Town of
Hamden held on
December 2, 2009 at 7:00 p.m.

RESOLUTION OF THE TOWN BOARD FOR THE TOWN OF HAMDEN
ADOPTING HAMLET EXTENSION AREAS
WITHIN THE NEW YORK CITY WATERSHED

WHEREAS, the Town Board of the Town of Hamden in a resolution dated _____, adopted the hamlet extension areas within the New York City Watershed identified in Exhibit A; and

WHEREAS, the New York State Department of Environmental Conservation ("DEC") has identified four parcels identified in Exhibit A as suitable for cluster development; and

WHEREAS, the Town Board agrees that if these lots were to be developed, it may make sense to cluster the development on the flat land along the road; and

NOW THEREFORE, BE IT RESOLVED AS FOLLOWS BY THE
TOWN BOARD OF HAMDEN, DELAWARE COUNTY, NEW YORK:

THAT under Town Law Section 278, the Town Board authorizes the Planning Board as part of any subdivision approval to allow cluster development under Section 278 of the Town Law. Although cluster development is not required on those parcels, it should be an alternative considered by the property owner.

IT IS RESOLVED, that the Town Clerk and the Attorney for the Town are hereby directed to take such actions as are necessary to implement this resolution.

Town Board Member

so moved; Town Board Member

Seconded, and the Town Board voted as follows:

Town Board Member _____

Town Board Member _____

Town Board Member _____

Town Board Member _____

Supervisor Marshfield

STATE OF NEW YORK }

COUNTY OF DELAWARE }
TOWN OF HAMDEN }

I have compared the preceding copy with the original Resolution on file in this office adopted by the Town Board of Hamden at a regular meeting held December 2, 2009, and I DO HEREBY CERTIFY the same to be a correct transcript therefrom and of the whole of the original.

I further certify the vote thereon was as follows:

MEMBERS PRESENT	MEMBERS ABSENT	VOTE
-----------------	----------------	------

Witness my hand and the seal of the Town of Hamden, this _____ day of _____, 20____.

LINDA SHEPARD, TOWN CLERK
TOWN OF HAMDEN

List of Exhibits

1. Map of Catskill and Delaware Water Supply and Watershed and Map of Croton Water Supply and Watershed [4c]
2. Catskill and Delaware Watershed Priority Areas West-of-Hudson [6a]
3. Catskill, Delaware and Croton Watershed Priority Areas East-of-Hudson [6a]
4. List of Tax Parcels in West of Hudson Designated Hamlets Areas
5. Maps of West of Hudson Designated Hamlet Areas [10.a.ii]
6. Defined West of Hudson Roads Eligible for Land Acquisition Exemption [10.a.iv]
7. 2007 Solicitation Schedule [14]
8. 2008-2010 Solicitation Plan [14]
9. Model Conservation Easement to be Held by NYSDEC on City Fee Lands [16c]
10. Model WAC Conservation Easement [16.d.2.b]
11. Draft Legislation to Amend Article 5, Title 4-a of the RPTL for Taxation of Watershed Conservation Easements [19]
12. City's Water Conservation Program dated xx/yy/yyyy [23]
13. Cluster Development Resolutions [10.h]
14. Watershed Memorandum of Agreement [25] [incorporated by reference]
15. Notice Addresses

Exhibit 12

City's Water Conservation Program dated December, 2006 with Annual Updates through June, 2010

December, 2006 Water Conservation Plan.....	Page 2
Annual Update, June 2007.....	Page 56
Annual Update, June 2008.....	Page 86
Annual Update, June 2009.....	Page 92
Annual Update, June 2010.....	Page 121

Exhibit 5

Maps of West of Hudson Designated Hamlet Areas

See Accompanying Set of 11 x 17 maps

Exhibit 14

Watershed Memorandum of Agreement

The Watershed Memorandum of Agreement, dated January 21, 1997,
is incorporated by Reference

That document can be viewed in its entirety at the following web site:

<http://www.nysefc.org/home/index.asp?page=294>

Exhibit 15

NOTICE ADDRESSES

Town of Kent
531 Route 52
Carmel, New York 10512
Attention: Town Supervisor

Town of Putnam Valley
265 Oscawana Lake Road
Putnam Valley, New York 10579
Attention: Town Supervisor

Village of Brewster
208 E. Main Street
Brewster, New York 10509
Attention: Mayor

New York City Law Department
Environmental Law Division
100 Church Street
New York, New York 10007
Attention: Chief, Environmental Law Division

Governor's Office
Executive Chamber, Room 214
Albany, New York 12224
Attention: Counsel to the Governor

NYS Department of Health
Empire State Plaza
Corning Tower
Albany, New York 12237
Attention: Commissioner

NYS Environmental Facilities Corporation
50 Wolf Road
Albany, New York 12205
Attention: President

Town of Patterson
Route 163 & 411
Patterson, New York 12563
Attention: Town Supervisor

Town of Southeast
Southeast Town Hall
1 Main Street
Brewster, New York 10509
Attention: Town Supervisor

NYC Department of Environmental
Protection
465 Columbus Avenue
Valhalla, New York 10595
Attention: Deputy Commissioner, BWSQP

NYC Department of Environmental
Protection
59-17 Junction Boulevard, 19th Floor
Corona, New York 11368
Attention: General Counsel

NYS Department of Environmental
Conservation
50 Wolf Road
Albany, New York 12233-1010
Attention: Commissioner

New York Department of State
41 State Street
Albany, New York 12231
Attention: Secretary of State

Westchester County
432 Michaelian Office Building
White Plains, New York 10601
Attention: County Executive

Westchester County
432 Michaelian Office Building
White Plains, New York 10601
Attention: County Attorney

New York Public Interest Research Group
9 Murray Street
New York, New York 10007-2272
Attention: Executive Director

Open Space Institute
666 Broadway, 9th Floor
New York, New York 10012

COALITION OF WATERSHED TOWNS
BOX 367
DELHI, NY 13753

CHAIRMAN
DELAWARE COUNTY BOARD OF
SUPERVISORS
111 MAIN ST
DELHI NY 13753

TOWN OF BOVINA
TOWN HALL
BOVINA CENTER NY 13740

TOWN OF DELHI
5 ELM STREET
DELHI NY 13753

TOWN OF FRANKLIN
NYS RT 357
FRANKLIN NY 13775

TOWN OF HARPERSFIELD
HC 83 BOX 178
HARPERSFIELD NY 13786

Hudson Riverkeeper Fund, Inc.
Castle Rock Field Station
Rt. 9D
P.O. Box 130
Garrison, New York 10524-0130
Attention: Executive Director

Trust for Public Land
666 Broadway, 9th Floor
New York, New York 10012

Catskill Center for Conservation &
Development
Route 28
Arkville, New York 12406-1010
Attention: Executive Director

CATSKILL WATERSHED
CORPORATION
P.O. BOX 569
MARGARETVILLE, NY 12455

TOWN OF ANDES
MAIN ST - BOX 205
ANDES NY 13731

TOWN OF COLCHESTER
P O BOX 321
DOWNSVILLE NY 13755

TOWN OF DEPOSIT
3 ELM ST
DEPOSIT NY 13754

TOWN OF HAMDEN
RD #1 BOX 165
HAMDEN NY 13752

TOWN OF KORTRIGHT
ROUTE 10 - P O BOX 6
BLOOMVILLE NY 13739

TOWN OF MASONVILLE
P O BOX 275
MASONVILLE NY 13804

TOWN OF MIDDLETOWN
MAIN ST - P O BOX 577
MARGARETVILLE NY 12455

TOWN OF SIDNEY
21 LIBERTY ST
SIDNEY NY 13838

TOWN OF TOMPKINS
P O BOX 139
TROUT CREEK NY 13847

VILLAGE OF ANDES
P O BOX 85
ANDES NY 13731

VILLAGE OF FLEISCHMANN'S
P O BOX 1-3
FLEISCHMANN'S NY 12430

VILLAGE OF MARGARETVILLE
P O BOX 228
MARGARETVILLE NY 12455

VILLAGE OF WALTON
P O BOX 29 - 21 NORTH ST
WALTON NY 13856

TOWN OF ASHLAND
BOX 129 - MAIN ST
ASHLAND NY 12407

TOWN OF HUNTER
P O BOX 70
TANNERSVILLE NY 12485

TOWN OF MEREDITH
P O BOX 116
MERIDALE NY 13806

TOWN OF ROXBURY
MAIN ST - P O BOX 185
ROXBURY NY 12474

TOWN OF STAMFORD
P O BOX M
HOBART NY 13788

TOWN OF WALTON
129 NORTH ST
WALTON NY 13856

VILLAGE OF DELHI
P O BOX 328 COURT ST
DELHI NY 13753

VILLAGE OF HOBART
P O BOX 53
HOBART NY 13788

VILLAGE OF STAMFORD
P O BOX 68 - 84 MAIN ST
STAMFORD NY 12167

CHAIRMAN
GREENE COUNTY LEGISLATURE
P O BOX 467
CATSKILL NY 12414

TOWN OF HALCOTT
HCR 2 - TURK HOLLOW RD
HALCOTT NY 12430

TOWN OF JEWETT
P O BOX 987
HUNTER NY 12442

TOWN OF LEXINGTON
P O BOX 28
LEXINGTON NY 12452

TOWN OF WINDHAM
371 STATE RT 296 - P O BOX 96
HENSONVILLE NY 12439

VILLAGE OF TANNERSVILLE
P O BOX 967
TANNERSVILLE NY 12485

TOWN OF BROOME
RD 1 - BOX 437B
MIDDLEBURGH NY 12122

TOWN OF GILBOA
RD 1 - BOX 80
GILBOA NY 12076

CHAIRMAN
SULLIVAN COUNTY LEGISLATURE
P O BOX 5012
MONTICELLO NY 12701-5192

TOWN OF LIBERTY
120 N MAIN
LIBERTY NY 12754

CHAIRMAN
ULSTER COUNTY LEGISLATURE
P O BOX 1800
KINGSTON NY 12402

TOWN OF HARDENBURGH
P O BOX 671
MARGARETVILLE NY 12455

TOWN OF MARBLETOWN
P O BOX 217
STONE RIDGE NY 12484

TOWN OF PRATTSVILLE
P O BOX 418
PRATTSVILLE NY 1246

VILLAGE OF HUNTER
P O BOX 441
HUNTER NY 12442

CHAIRMAN
SCHOHARIE COUNTY BOARD OF
SUPERVISORS
RD 1 - BOX 80
GILBOA NY 12076

TOWN OF CONESVILLE
RD 1 - BOX 328
GILBOA NY 12076

TOWN OF JEFFERSON
RD 2 - BOX 277A
JEFFERSON NY 12093

TOWN OF FALLSBURG
P O BOX 830 - 37 RAILROAD PLZ
S FALLSBURG NY 12779

TOWN OF NEVERSINK
273 MAIN ST - P O BOX 307
GRAHAMSVILLE NY 12740

TOWN OF DENNING
SUNDOWN NY 12782

TOWN OF HURLEY
P O BOX 569 - LUCAS AVE EXT
HURLEY NY 12443

TOWN OF OLIVE
P O BOX 180
WEST SHOKAN NY 12494

TOWN OF ROCHESTER
P O BOX 65
ACCORD NY 12404

TOWN OF WAWARSING
P O BOX 671
ELLENVILLE NY 12428

Town of Bedford
321 Bedford road
Bedford Hills, New York 10507
Attention: Supervisor

Town/Village of Harrison
1 Heineman Place
Harrison, New York 10528
Attention: Supervisor

Town/Village of Mount Kisco
194 Main Street
Mount Kisco, New York 10549
Attention: Mayor

Town of New Castle
200 South Greeley Avenue
Chappaqua, New York 10514
Attention: Supervisor

Town of North Salem
Town Hall, Route 116
North Salem, New York 10560
Attention: Supervisor

Town of Somers
PO Box 284
Somers, New York 10589
Attention: Supervisor

Town of East Fishkill
370 Route 376
Hopewell Junction, New York 12533
Attention: Supervisor

Putnam County Executive
40 Gleneida Avenue
Carmel, New York 10512

TOWN OF SHANDAKEN
P O BOX 134
SHANDAKEN NY 12480

TOWN OF WOODSTOCK
81 TINKER ST
WOODSTOCK NY 12498

Town of Cortlandt
1 Heady Street
Cortlandt Manor, New York 10566
Attention: Supervisor

Town of Lewisboro
Main Street, PO Box 500
South Salem, New York 10590
Attention: Supervisor

Town of Mount Pleasant
One Town Hall Plaza
Valhalla, New York 10595
Attention: Supervisor

Town of North Castle
15 Bedford Road
Armonk, New York 10504
Attention: Supervisor

Town of Pound Ridge
179 Westchester Avenue
Pound Ridge, New York 10576
Attention: Supervisor

Town of Yorktown
363 Underhill Avenue, Box 703
Yorktown Heights, New York 10598
Attention: Supervisor

Town of Pawling
160 Charles Colman Blvd.
Pawling, New York 12564
Attention: Supervisor

Putnam County Attorney
40 Gleneida Avenue
Carmel, New York 10512

Town of Carmel
McAlpin Avenue
Mahopac, New York 10541
Attention: Supervisor

Town of Kingston
906 Saw Kill Road
Kingston, New York 12409
Attention: Supervisor