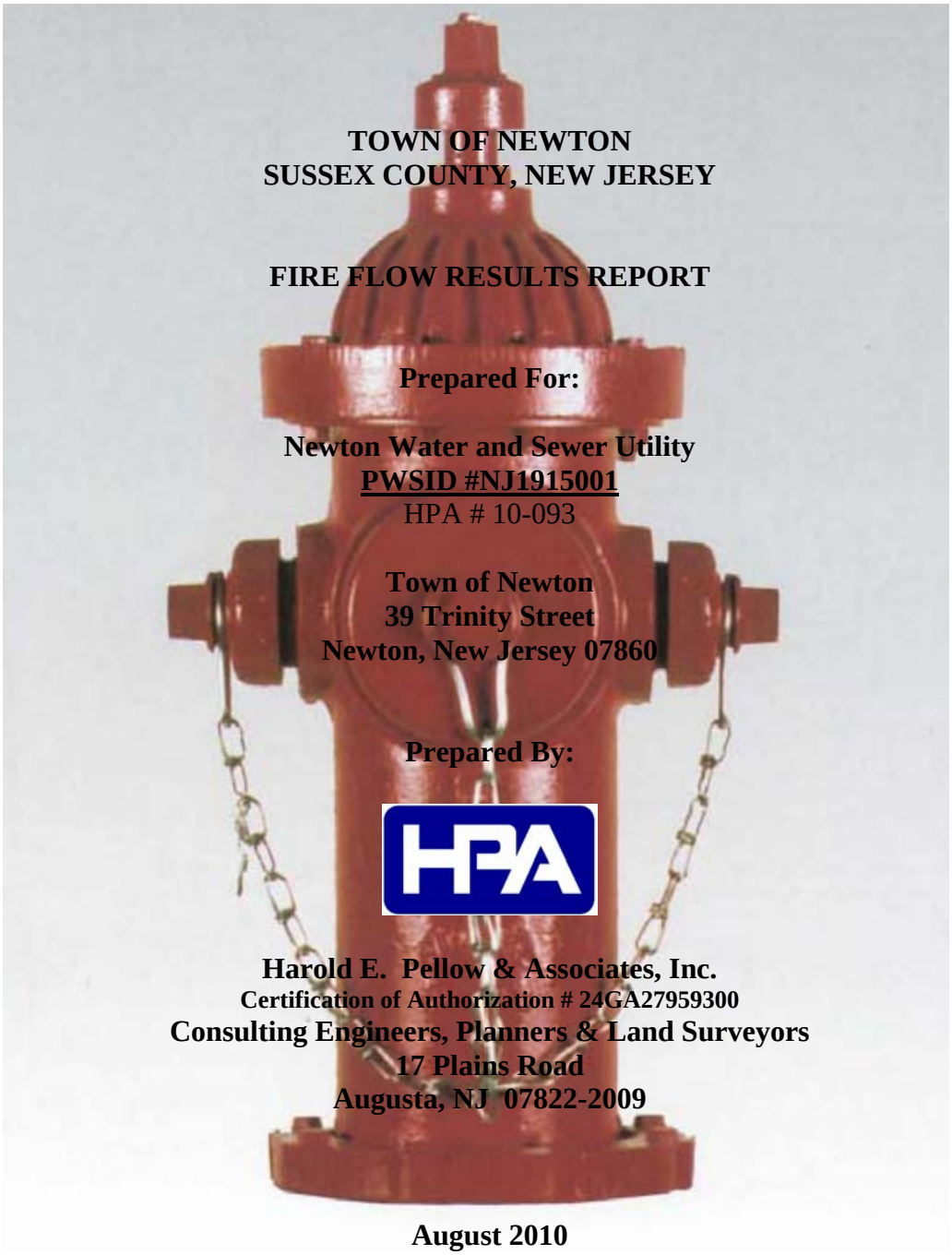
FIRE HYDRANT FLOW TESTING STUDY



TOWN OF NEWTON
SUSSEX COUNTY, NEW JERSEY

FIRE FLOW RESULTS REPORT

Prepared For:

Newton Water and Sewer Utility
PWSID #NJ1915001
HPA # 10-093

Town of Newton
39 Trinity Street
Newton, New Jersey 07860

Prepared By:

Harold E. Pellow & Associates, Inc.
Certification of Authorization # 24GA27959300
Consulting Engineers, Planners & Land Surveyors
17 Plains Road
Augusta, NJ 07822-2009

August 2010

David B. Simmons, Jr., New Jersey Professional Engineer & Land Surveyor #27831

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INTRODUCTION

Harold E. Pellow & Associates Inc. (HPA) was retained by the Town of Newton to conduct fire flow tests in conjunction with Newton Water and Sewer Utility Staff on the existing fire hydrants located within the municipal boundary lines of the Town of Newton, record and analyze the fire flow data and recommend improvements where flows are inadequate. This report has been prepared to describe the testing methodology; analyze the fire flow results obtained through field tests and provide short-, medium- and long-term recommendations to improve the areas where the minimum fire flow rates are below the required standards. All supporting documentation and material is either included with this report or is shown on the enclosed mapping.

Testing Area

The fire flow testing was conducted in various stages during the months of May, June and July 2010. There are a total of 339 fire hydrants located inside the municipal boundary lines of the Town of Newton, including the privately owned and operated fire hydrants. Approximately 263 hydrants were tested as part of this study.

The remaining fire hydrants within the Town were not flow tested for the following reasons:

A. Private fire hydrants on commercial properties.
B. Private fire hydrants located at Newton Memorial Hospital.
C. Private fire hydrants located on the Sussex County Community College Campus, located in the separate college pressure zone.
D. Remaining fire hydrants in the high pressure zone, in order to avoid excessive disruption to the pumping system at the High Street booster pump station.

Testing Procedures

The fire hydrants were tested using the procedures outlined in the following two publications:

A. National Fire Protection Association (NFPA) Manual #291 – Recommended Practice for Fire Flow Testing and Marking of Hydrants, 2010 Edition.

B. American Water Works Association (AWWA) Manual #M17 – Manual of Water Supply Practices – Installation, Field Testing, and Maintenance of Fire Hydrants.

The testing procedure generally utilized two (2) fire hydrants per test. The first fire hydrant is the test hydrant or residual hydrant. The second fire hydrant is the flow hydrant. The two hydrants together form a pair used for the flow test. A typical hydrant test procedure is as follows:

1. The cap covering one of the test hydrant outlets is unscrewed and replaced with a pressure gage. The valve on the test hydrant is opened, allowing water under pressure into the hydrant. This pressure is referred to as the static pressure. This represents the water pressure in the water main as measured at the elevation of the hydrant outlet.
2. One cap on the flow hydrant is opened and the inside diameter and type (smooth or rounded) of the outlet is determined and recorded. A pitot meter equipped with a gauge is screwed on the outlet. The flow hydrant valve is then fully opened to create a steady flow of water from the outlet.
3. The pitot gage is used to measure the flow of the stream discharging from the flow hydrant. While the pitot pressure and flow is being recorded, a second pressure reading is taken at the test hydrant. This is called the residual pressure. The residual pressure records both the domestic and fire flows occurring in the water main.
4. The final step in the flow test involves shutting down the flow hydrant slowly to determine the flow with a residual pressure of at least 20 p.s.i.

Depending on the fire flow results obtained through field testing, the fire hydrants are classified at 20 p.s.i. residual pressure and color coded in accordance with NFPA 291 "Recommended Practices for Fire Flow Testing and Marking of Hydrants (2010 Edition)" as follows:

1. Class AA – Light Blue
   Rated capacity of 1,500 gpm or greater.

2. Class A – Green
   Rated capacity of 1,000 gpm to 1,499 gpm.

3. Class B – Orange

Rated capacity of 500 gpm to 999 gpm.

4. Class C – Red
   Rated capacity of less than 500 gpm.

Additional Data Collected

During the flow testing work, additional data was recorded about each fire hydrant based on best available information, including mapping and knowledge of the Newton Water and Sewer Utility Staff. The data collected included the following:

1. Test Record number.
2. Date of hydrant test.
3. Hydrant location – street name.
4. Time of day the hydrant was tested.
5. Flow hydrant number (number on hydrant tag).
6. Static pressure at the flow hydrant. (the pressure in the system with no flow).
7. Full flow at flow hydrant.
8. Residual pressure at flow hydrant (pressure during “full flow”).
9. Flow at test hydrant with a minimum of 20 p.s.i. at static (pairing) hydrant.
10. Static (pairing) hydrant number (number on hydrant tag).
11. Static pressure at static (pairing) hydrant.
12. Residual pressure at static (pairing) hydrant (pressure during “full flow” at test hydrant).
13. (Blank).
14. Watermain diameter in inches.
15. Hydrant lead diameter.
16. Pressure zone of hydrant location.
17. Test duration in minutes.
18. Gallons of water used during flow test.
19. Bonnet color classification based on flow test results.
20. Hydrant condition/comments.

The additional data collected will be used to help identify problem areas that need to be addressed as part of the maintenance and upgrade of the Newton water distribution system and fire hydrants.

Summary of Hydrant Flow Test Results

The detailed fire hydrant test data has been compiled in the spreadsheet in Appendix 1 – "Hydrant Fire Flow Test Results". In addition, a graph entitled "Summary of Fire Hydrant Color Classification Based on Fire Hydrants Tested" has been prepared, based on the number of hydrants actually flow tested.

The graph shows the following breakdown:

Red Hydrants	– Less than 500 gpm	– 39%
Orange Hydrants	– 500 to 999 gpm	– 26%
Green Hydrants	– 1,000 to 1,499 gpm	– 33%
Light Blue Hydrants	– 1,500 gpm or greater	– 2%
		100%

The following should be noted about the graph data:

1. If the additional fire hydrants in the high service and private areas were tested, it is very probably that the percentages of orange and green hydrants would increase, based on the existing watermain sizes.
2. The four colors listed correspond to a "range" of flow values. Therefore, it is possible, for example, that a fire hydrant flowing at 490 gpm will be classified as "red", and a fire hydrant flowing at 510 gpm will be classified as "orange", each value being just slightly under or over the value separating two different color ranges.

Summary of Road Width Data, Cul-de-sacs and Dead-End Streets

In order to evaluate the ability for emergency vehicles to pass each of the various streets

in Town, the existing road widths have been summarized in Appendix 2. This data was obtained from the information provided in the "Road Master Plan For The Town of Newton", dated December 17, 1985, prepared by Harold E. Pellow & Associates Inc., and from field measurements on roadways constructed after 1985.

There are also some existing streets in Newton that do not have any cul-de-sac turnaround at all, and are basically dead-end streets. These streets have also been summarized in Appendix 3.

Mapping

There are two maps included with the report that provide background data on Newton's water distributions system and fire hydrants. The map entitled "Existing Fire Hydrant Locations and Watermains within Municipal Boundary" in Appendix 4 shows the existing water distribution system. Each line type corresponds to a particular watermain diameter. In addition, there are numbered symbols that correspond to each of the existing fire hydrants. The fire hydrant symbols also reflect the various configuration of each hydrant, including brand, number and type of nozzles, and other data.

The map entitled "Existing Hydrant Locations and Color Classification" in Appendix 5 shows an enlarged colored circle over each of the fire hydrants tested. These enlarged colored circles correspond to the standard colors for flow ranges. The colored circles help graphically define the areas of various ranges of flow.

Analysis and Recommendations

All of the data collected will be reviewed and analyzed to provide a list of recommendations to improve fire flow in those areas of the Town that need flow improvement. The recommended improvements will be placed into the following four categories:

Category 1: Immediate Improvements

This type of improvement will focus on immediate repairs to fire hydrants that were noted as needing repairs/replacement during the testing procedure.

Category 2: Short-Term Improvements

This type of improvement will focus on repairs/construction that can be undertaken in a short term time frame to help increase flow from existing fire hydrants. Examples of this type of improvement include:

A. Replacing older fire hydrants with no steamer ports or undersized ports.

B. Reconstructing fire hydrant leads and valves to replace old 4" leads with 6" leads and valves.

C. Connecting fire hydrants to larger existing watermains in the vicinity where possible.

Category 3: Medium-Term Improvements

This type of improvement will focus on reinforcing water delivery to areas of the distribution system to supplement the water flow to the overall area. An example of this type of improvement is the construction of a new watermain in Merriam Avenue to help supply additional water to larger sections of the Town.

Category 4: Long-Term Improvements

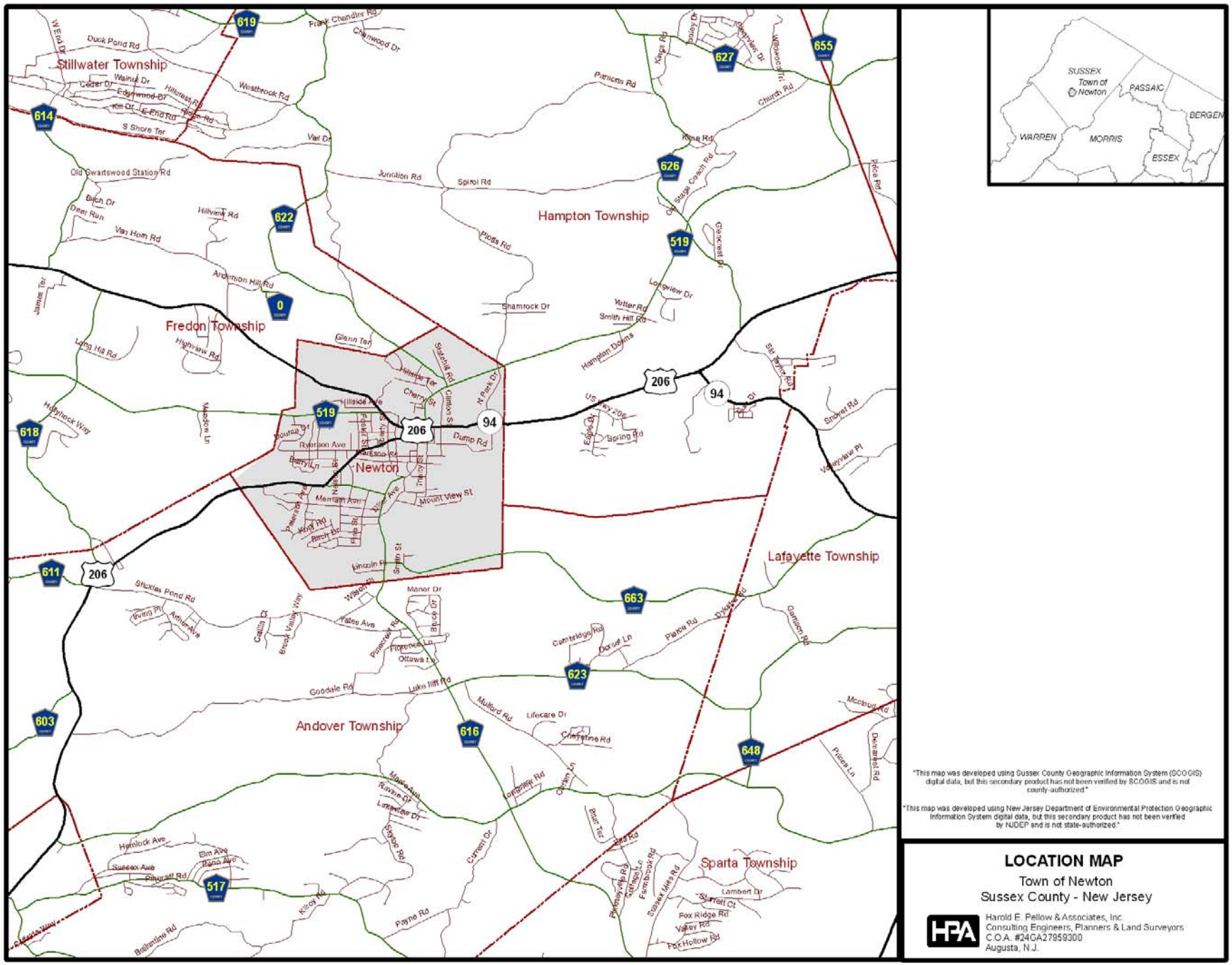
This type of improvement will focus on replacing watermains in miscellaneous areas of neighborhoods that are still deficient in flow even after additional watermains have been constructed to bring additional water into the area.

Acknowledgements

HPA would like to acknowledge the contributions and assistance of the following individuals from various departments of the Town towards the planning and execution of this study:

Town Manager:	Thomas Russo, Jr.
Deputy Town Manager:	Debra Millikin
Water & Sewer Superintendent.:	Paul Baldwin
Fire Subcode Official:	Joseph Inga
Paul Havens:	Senior Water Repairman
Erv Lasso:	Senior Water Repairman
Eric Tompkins	
Dustin McGarry	

Figure 1: Town of Newton Key Map



"This map was developed using Sussex County Geographic Information System (SCOGIS) digital data, but this secondary product has not been verified by SCOGIS and is not county-authorized."

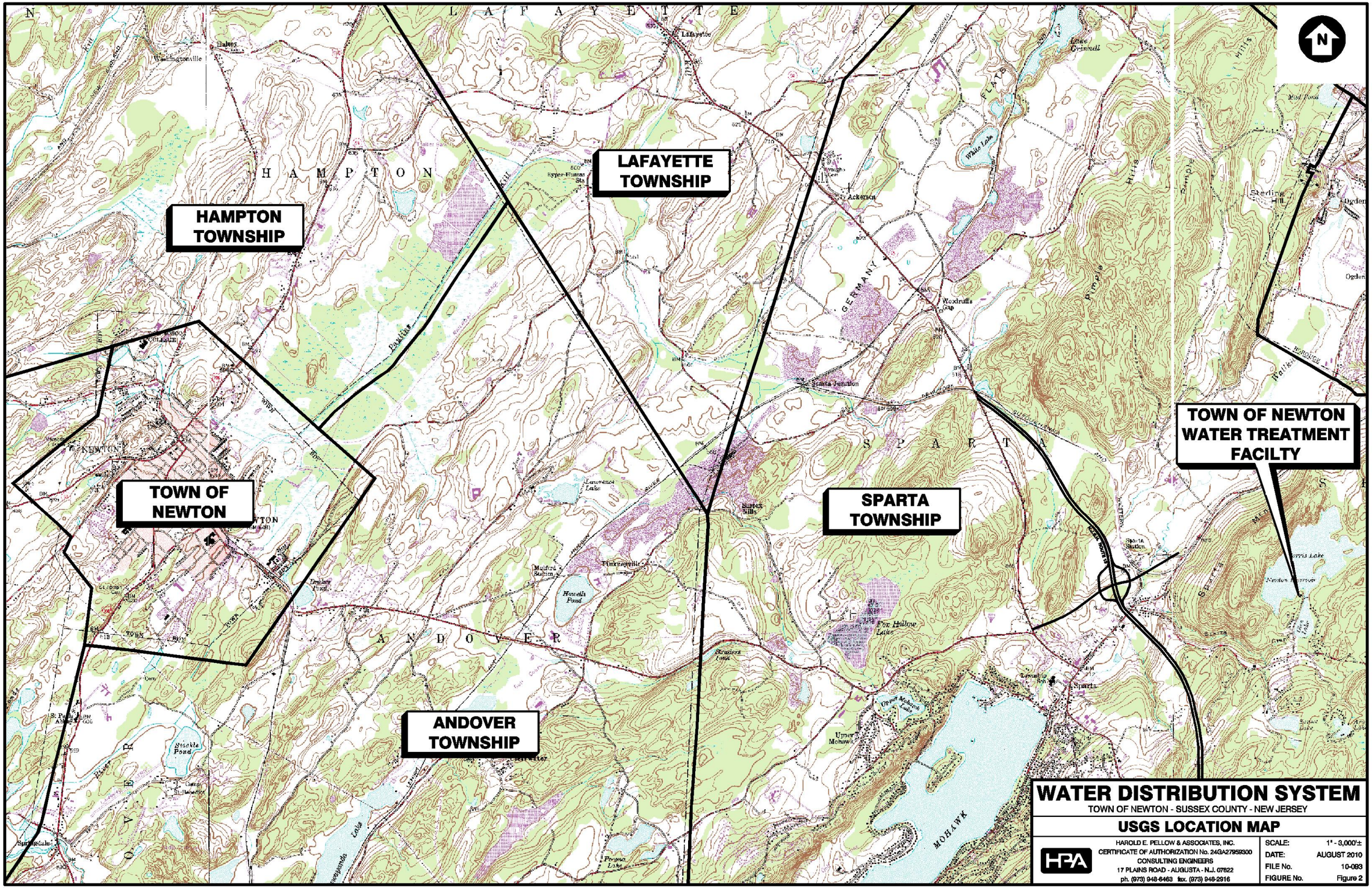
"This map was developed using New Jersey Department of Environmental Protection Geographic Information System digital data, but this secondary product has not been verified by NJDEP and is not state-authorized."

LOCATION MAP

Town of Newton
Sussex County - New Jersey

Harold E. Pellow & Associates, Inc.
Consulting Engineers, Planners & Land Surveyors
C.O.A. #24GA27959300
Augusta, N.J.

Figure 2: USGS MAP



WATER DISTRIBUTION SYSTEM

TOWN OF NEWTON - SUSSEX COUNTY - NEW JERSEY

USGS LOCATION MAP

HAROLD E. PELLOW & ASSOCIATES, INC.
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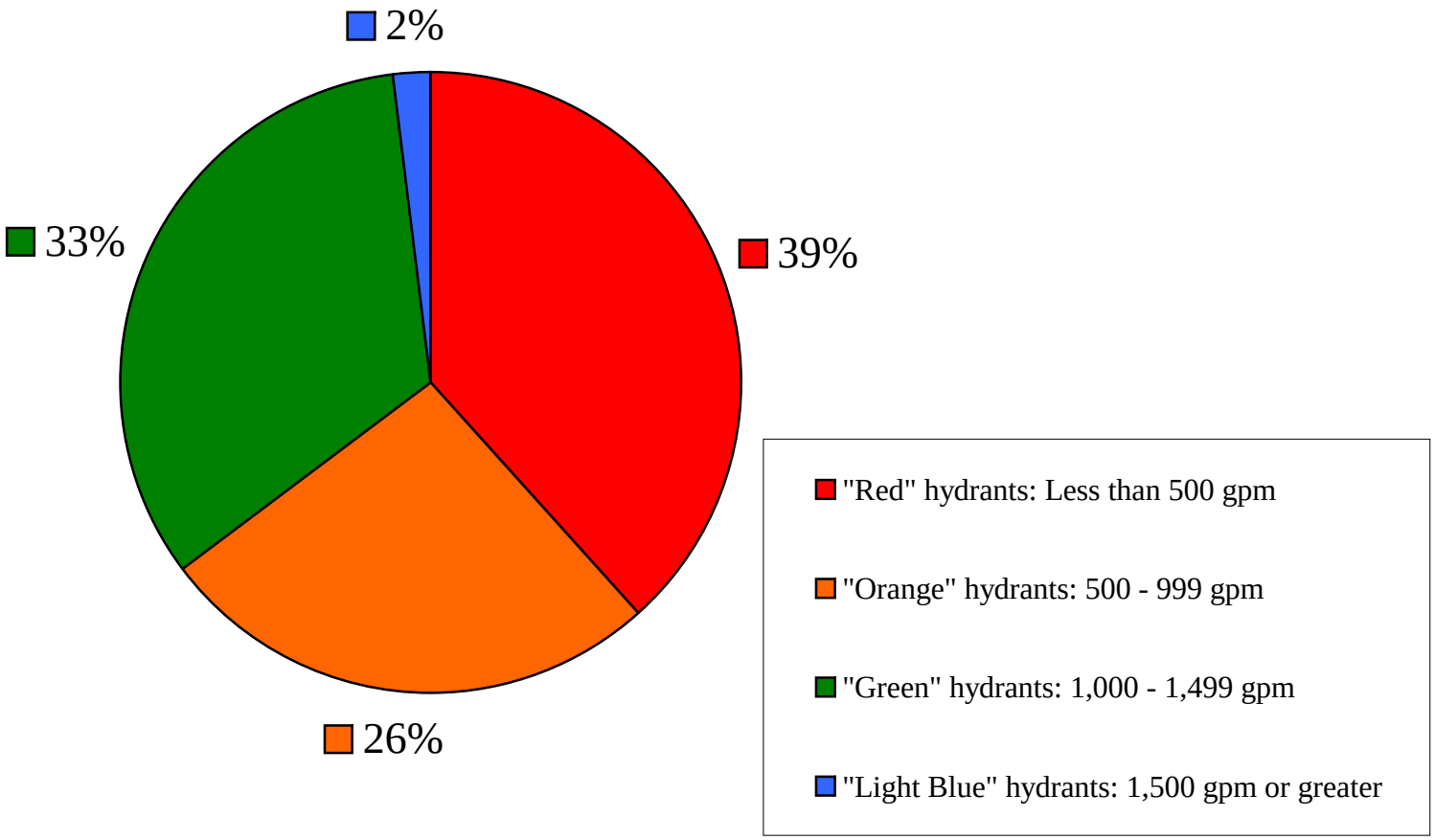
ph. (973) 948-6463 fax. (973) 948-2916

SCALE:	1" - 3,000'±
DATE:	AUGUST 2010
FILE No.	10-093
FIGURE No.	Figure 2

APPENDIX 1

HYDRANT FIRE FLOW TEST RESULTS

Summary Of Fire Hydrant Color ClassificationBased On Fire Hydrants Tested



Town of Newton

List of hydrants tested to date and hydrant results as of 8/04/10

1 Test Record No.	2 Test Date	3 Street Name	4 Time of Test	5 Flow Hyd. Number	6 Static Pressure at Flow Hyd. p.s.i.	7 Full Flow at Flow Hyd. g.p.m.	8 Residual Pressure at Flow Hyd. Full Flow p.s.i.	9 Flow - 20 p.s.i. at Pairing Hyd. g.p.m.	10 Static (Pairing) Hydrant Number	11 Static Pressure at Static Hyd.	12 Residual Pressure at Static (Pairing) Hyd. p.s.i.	13	14 Water Main Diameter inch	15 Hydrant Lead Diameter inch	16 High or Low Pressure Zone	17 Duration of Test minutes	18 Water Used During Test gallons	19 Bonnet Color Coding	20 Fire Hydrant Condition/Comments (Comments in this colomn refers to the physical condition of each fire hydrant and not the flow from the hydrant)
1	05/05/10	Newton-Sparta Ave.	9:00 AM	29	100	< 100	0	< 50	32	100	40		4"	4"	LP	2.75	275	Red	Hydrant too close to retaining wall. Can't "spin" hydrant valve.
2	05/05/10	Lincoln Place	10:10 AM	30	100	< 100	0	< 50	n/a	n/a	n/a		6"	4"	LP	1	50	Red	Good
3	05/05/10	Lincoln Place	10:05 AM	31	100	< 100	0	< 50	30	100	0		6"	4"	LP	2.67	267	Red	Good
4	05/05/10	Newton-Sparta Ave.	8:50 AM	32	100	1140	46	1140	29	100	70		10"	4"	LP	2.17	2474	Green	Good
5	05/05/10	Prospect Court	9:20 AM	34	100	< 100	0	< 50	35	102	100		6"	6"	LP	1.83	183	Red	Good
6	05/05/10	Hicks Ave.	10:00 AM	35	100	< 100	0	< 50	35	102	100		4"	4"	LP	1.5	150	Red	Good
7	05/05/10	Hicks Ave.	9:30 AM	36	118	< 100	0	< 50	35	106	102		4"	4"	LP	1.5	150	Red	Good
8	05/05/10	Hicks Ave.	9:44 AM	37	106	< 100	0	< 50	36	118	0		4"	4"	LP	2.7	270	Red	Good
9	05/05/10	Smith Street	9:52 AM	38	110	< 100	0	< 50	39	110	0		4"	4"	LP	1.88	188	Red	Good
10	05/05/10	Grand Ave.	9:55 AM	39	110	< 100	0	< 50	n/a	n/a	n/a		4"	4"	LP	2	200	Red	Good
11	06/25/10	Newton-Sparta Ave.	2:00 PM	40	118	1550	85	1550	Did not pair.				16"	6"	LP	0.83	1292	Light Blue	Needs new gasket, bottom - To be rebuilt?
12	05/05/10	Newton-Sparta Ave.	12:35 PM	41	114	840	25	840	54	90	72		6"	4"	LP	2	1680	Orange	Good
13	05/05/10	Newton-Sparta Ave.	10:30 AM	42	108	1190	56	1190	41	108	90		10"	4"	LP	1.3	1547	Green	Good
14	05/07/10	Newton-Sparta Ave.	10:50 AM	43	118	920	30	920	42	112	90		10"	6"	LP	25	23000	Orange	Inoperable. Broken stem. Bagged.
15	05/10/10	Newton-Sparta Ave.	8:15 AM	44	110	1190	55	1190	42	112	92		10"	6"	LP	1.75	2083	Green	Good
16	07/26/10	Woodside Ave.	8:50 AM	45	106	1190	50	1190	46	98	66		8"	4"	LP	1.67	1983	Green	Good
17	06/25/10	Woodside Ave.	12:35 PM	46	102	1060	40	1060	Did not pair.				8"	4"	LP	1.33	1410	Green	Good
18	06/25/10	Lawnwood Ave.	1:00 PM	47	98	800	23	800	Did not pair.				6"	6"	LP	0.82	653	Orange	Good
19	05/10/10	Nelson Street	9:35 AM	48	100	Very Low Flow			148	61	48		4"	4"	LP	0.92	92	Red	Good
20	05/10/10	Mason Ave.	10:15 AM	49	101	Very Low Flow			50	100	0		4"	4"	LP	0.5	50	Red	Good
21	05/10/10	Mason Ave.	10:20 AM	50	100	Very Low Flow			n/a	n/a	n/a		4"	4"	LP	0.5	50	Red	Good
22	05/10/10	Pine Street	8:30 AM	51	112	510	9	510	46	112	104		6"	4"	LP	1.5	765	Orange	Good
23	05/05/10	Sussex Street	2:00 PM	52	100	< 50	0	< 50	42	108	104		4"	4"	LP	1.67	84	Red	Good
24	05/05/10	Orchard Street	12:30 PM	54	90	525	8	525	41	114	110		6"	4"	LP	1.1	578	Orange	Hydrant to be replaced? Drip Rod problem.
25	05/05/10	Pine Street	1:15 PM	55	100	225	15	< 100	65	80	3		6"	4"	LP	2.33	524	Red	Good
26	05/06/10	Linmor Ave.	8:45 AM	56	110	+- 400	8	<100	73	100	16		6"	6"	LP	1.75	700	Red	Good
27	05/05/10	Merriam Ave	3:28 PM	57	14	< 50	0	< 50	58	110	72		4"	4"	LP	1.5	75	Red	Good
28	05/05/10	Merriam Ave.	2:55 PM	58	100	< 50	0	< 50	60	92	78		4"	4"	LP	1.1	55	Red	Good
29	05/05/10	Merriam Ave	3:50 PM	59	105	< 50	0	< 50	58	104	10		4"	4"	LP	1	50	Red	Good
30	05/05/10	Merriam Ave. School	2:46 PM	60	82	540	10	530	61	80	20		6"	6"	LP	1.33	718	Orange	Severe drip rod leak.
31	05/05/10	Merriam Ave. School	2:30 PM	61	98	540	10	540	62	98	20		6"	6"	LP	1.85	999	Orange	Good
32	05/05/10	Sussex Street	2:10 PM	62	108	+- 450	8	+- 450	52	100	48		6"	4"	LP	2	900	Red	Good
33	05/05/10	Orchard Street	12:47 PM	63	95	250	5	250	54	90	34		6"	4"	LP	2.25	563	Red	Good
34	05/05/10	Orchard Street	12:55 PM	64	98	500	8	500	63	92	22		6"	4"	LP	1.25	625	Orange	Good
35	05/05/10	Dogwood Drive	1:10 PM	65	80	< 100	0	< 50	55	100	30		6"	6"	LP	1	100	Red	Good
36	05/05/10	Dogwood Drive	1:25 PM	66	82	200	5	< 100	65	82	0		6"	6"	LP	3	600	Red	Good
37	05/05/10	Dogwood Drive	1:30 PM	67	84	+- 150	3	< 50	66	84	12		8"	6"	LP	1.85	278	Red	Good
38	05/05/10	Dogwood Drive	1:40 PM	68	64	+- 200	4	< 100	67	84	4		8"	6"	LP	2.9	580	Red	Severe drip rod leak.
39	05/06/10	Dogwood Drive	8:05 AM	69	52	+- 100	3	n/a	68	50	3		8"	6"	LP	1.67	167	Red	Good
40	05/06/10	Birch Drive	8:25 AM	70	70	+- 300	0	<50	69	64	4		8"	6"	LP	1.5	200	Red	Good
41	05/06/10	Birch Drive	8:55 AM	71	88	+- 200	4	+- 200	72	68	0		8"	6"	LP	2	400	Red	Good
42	05/06/10	Birch Drive	9:05 AM	72	72	+- 200	3	+- 100	71	89	10		8"	6"	LP	2.5	300	Red	Good
43	05/06/10	Linmor Ave.	8:35 AM	73	100	+- 250	4	<100	70	90	16		8"	6"	LP	2	200	Red	Good
44	05/05/10	Trenton Court	3:10 AM	74	100	530	10	510	61	98	20		6"	4"	LP	1	530	Orange	Good
45	05/06/10	Kory Court	10:50 AM	75	90	530	10	<100	78	92	18		6"	6"	LP	2	1060	Red	Bonnet gasket leaking.
46	05/06/10	Kory Road	11:03 AM	76	89	530	10	530	78	90	20		6"	6"	LP	1.42	753	Orange	Good
47	06/25/10	Kory Road	1:30 PM	77	82	Low Flow - +-200 gpm			Did not pair.				6"	6"	LP	0.68	137	Red	Good
48	05/06/10	York Rd.	10:40 AM	78	90	650	16	<100	85	100	30		6"	6"	LP	0.9	585	Red	Good
49	05/06/10	York Rd.	11:20 AM	78	n/a	n/a	n/a	<100	76	n/a			4"	4"	LP	2	200	Red	Good
50	05/07/10	Paterson Ave.	10:15 AM	80	76	< 100	0	< 100	81	100	60		8"	4"	LP	1.83	183	Red	Drip rod leak.
51	05/07/10	Donald Ave.	10:05 AM	81	90	550	11	< 100	80	76	12		8"	6"	LP	2.33	1282	Red	Good
52	05/07/10	Donald Ave.	10:25 AM	82	99	530	10	250	81	99	14		8"	4"	LP	3	1590	Red	Good
53	05/07/10	Merriam Ave.	8:30 AM	83	100	650	15	640	104	98	18		6"	6"	LP	2.57	1671	Orange	Good
54	05/06/10	Paterson Ave.	9:53 AM	84	102	650	15	650	85	104	18		8"	6"	LP	2.33	1515	Orange	Good
55	05/06/10	Paterson Ave.	9:45 AM	85	105	650	15	+- 200	84	102	16		8"	6"	LP	4	1000	Red	Good
56	05/06/10	Paterson Ave.	10:05 AM	85	105	530	n/a	530	84	100	n/a		8"	6"	LP	3.5	1855	Orange	Good
57	05/06/10	Paterson Ave.	12:35 PM	86	90	535	11	535	85	103	25		8"	6"	LP	1.9	1017	Orange	Good
58	05/06/10	Paterson Ave.	12:45 PM	87	85	500	9	500	86	90	20		8"	6"	LP	2	1000	Orange	Good
59	05/06/10	Paterson Place	1:20 PM	88	95	600	14	<100	87	86	0		8"	6"	LP	2.25	1350	Red	Good
60	05/06/10	Windsor Drive	1:30 PM	89	80	580	12	+- 250	88	92	12		8"	6"	LP	2.33	1351	Red	Good
61	05/06/10	Windsor Drive	1:45 PM	90	78	550	11	515	89	78	12		8"	6"	LP	2.1	1155	Orange	Good

Town of Newton

List of hydrants tested to date and hydrant results as of 8/04/10

1 Test Record No.	2 Test Date	3 Street Name	4 Time of Test	5 Flow Hyd. Number	6 Static Pressure at Flow Hyd. p.s.i.	7 Full Flow at Flow Hyd. g.p.m.	8 Residual Pressure at Flow Hyd. Full Flow p.s.i.	9 Flow - 20 p.s.i. at Pairing Hyd. g.p.m.	10 Static (Pairing) Hydrant Number	11 Static Pressure at Static Hyd.	12 Residual Pressure at Static (Pairing) Hyd. p.s.i.	13	14 Water Main Diameter inch	15 Hydrant Lead Diameter inch	16 High or Low Pressure Zone	17 Duration of Test minutes	18 Water Used During Test gallons	19 Bonnet Color Coding	20 Fire Hydrant Condition/Comments (Comments in this colomn refers to the physical condition of each fire hydrant and not the flow from the hydrant)
62	05/06/10	Windsor Drive	1:54 PM	91	92	530	10	510	90	94	14		8"	6"	LP	3.25	1723	Orange	Good
63	06/25/10	Buckingham Ct.	1:45 PM	92	80	450	8	450	Did not pair.				8"	6"	LP	1.2	540	Red	Good
64	05/06/10	Paterson Place	2:03 PM	93	89	+- 300	5	+- 300	88	94	22		8"	6"	LP	4.1	1200	Red	Good
65	05/06/10	Paterson Place	2:16 PM	94	86	530	10	+- 450	93	92	14		8"	6"	LP	2.37	1256	Red	Good
66	05/06/10	Paterson Place	2:25 PM	95	80	475	8	+- 300	94	80	10		8"	6"	LP	2.25	1069	Red	Good
67	05/06/10	Stratford Lane	3:10 PM	96	88	+- 270	5	+- 270	97	102	20		8"	6"	LP	3.1	837	Red	Good
68	05/06/10	Stratford Lane	3:00 PM	97	101	660	15	540	99	98	10		8"	6"	LP	2	1320	Orange	Good
69	05/06/10	Woodridge Court	2:43 PM	98	91	590	12	<100	99	80	0		8"	6"	LP	3.4	2006	Red	Good
70	05/06/10	Woodridge Court	3:15 PM	98	91	n/a	n/a	+- 510	97	100	20		8"	6"	LP	2	800	Orange	Good
71	05/06/10	Woodridge Court	2:35 PM	99	79	+- 250	5	+- 200	95	79	10		8"	6"	LP	2	500	Red	Good
72	05/06/10	Jersey Place	3:55 PM	100	101	530	10	+- 500	101	102	16		6"	6"	LP	2.25	1193	Orange	Good
73	05/06/10	Jersey Place	3:46 PM	101	100	650	15	580	102	100	14		6"	6"	LP	2.33	1515	Orange	Good
74	05/06/10	Jersey Place	3:24 PM	102	100	600	13	550	97	100	16		6"	6"	LP	1.83	1098	Orange	Good
75	05/06/10	Jersey Place	3:40 AM	103	99	650	15	600	102	100	16		6"	6"	LP	2.17	1411	Orange	Good
76	05/07/10	Merriam Ave.	8:20 AM	104	99	560	11	520	83	101	2		6"	6"	LP	2	1120	Orange	Good
77	05/07/10	Merriam Ave.	8:45 AM	105	92	250	2	250	104	100	20		6"	6"	LP	3.1	775	Red	Good
78	05/07/10	Merriam Ave.	8:55 AM	106	90	320	4	320	105	94	14		6"	6"	LP	3.25	1040	Red	Good
79	05/07/10	Merriam Ave.	9:10 AM	107	91	500	8	400	106	84	8		6"	6"	LP	2.33	1165	Red	Good
80	05/07/10	Merriam Ave.	9:23 AM	108	89	500	9	425	107	96	14		6"	6"	LP	2.25	1125	Red	Good
81	05/10/10	Railroad Ave.	11:40 AM	109	99	920	30	920	163	100	89		10"	6"	LP	1.25	1150	Orange	Good
82	06/25/10	Newton-Sparta Ave.	2:30 PM	110	100	840	25	840	Did not pair.				10"	4"	LP	1	840	Orange	Good
83	07/26/10	Newton-Sparta Ave.	9:10 AM	111	102	950	32	950	114	92	76		10"	6"	LP	1.67	1583	Orange	Good
84	05/11/10	Cedar Street	8:25 AM	112	109	1130	45	1130	122	90	72		10"	6"	LP	1.27	1435	Green	Good
85	05/10/10	Hampton Street	1:00 PM	113	98	1430	72	1430	114	88	70		10"	6"	LP	1	1430	Green	Good
86	07/26/10	Newton-Sparta Ave.	10:10 AM	114	92	1130	45	1130	111	102	88		10"	6"	LP	1.00	1130	Green	Good
87	05/11/10	Madison Street	8:15 AM	115	92	640	14	640	122	92	72		6"	6"	LP	1.57	1005	Orange	Good
88	05/11/10	Washington Street	9:05 AM	116	82	Very Low Flow			n/a	n/a	n/a		4"	4"	LP	0.5	50	Red	Good
89	05/11/10	Spring Street	8:56 AM	117	92	< 100	0	< 50	116	82	50		4"	4"	LP	1	100	Red	Good
90	05/13/10	Moran Street	2:10 PM	118	94	1300	60	1300	176	100	80		12"	6"	LP	1.25	1625	Green	Good
91	05/11/10	Main Street	11:05 AM	119	92	< 100	0	< 50	134	90	88		8"	4"	LP	1.5	150	Red	Good
92	07/26/10	High Street	10:20 AM	120	88	650	15	650	257	82	70		8"	4"	LP	1.2	150	Orange	Good
93	05/19/10	Main Street	8:40 AM	121	109	1000	35	1000	n/a	n/a	n/a		6"	6	LP	0.67	670	Green	Good
94	05/11/10	Madison Street	8:35 AM	122	92	650	15	650	125	84	66		6"	6"	LP	1.5	975	Orange	Good
95	05/11/10	Halsted Street	9:15 AM	123	78	< 100	0	< 100	124	76	20		6"	4"	LP	2.67	267	Red	Good
96	05/11/10	Halsted Street	9:30 AM	124	76	< 150	0	< 100	125	76	66		6"	4"	LP	2.25	225	Red	Severe drip rod leak, very hard to open and close. Replace?
97	05/11/10	Madison Street	8:45 AM	125	84	300	5	300	122	94	78		6"	4"	LP	2.33	699	Red	Good
98	07/26/10	Halsted Street	10:35 AM	126	78	200	5	200	125	76	58		6"	4"	LP	1.2	240	Red	Good
99	05/11/10	Halsted Street	11:35 AM	127	72	600	14	600	135	78	64		6"	4"	LP	1.9	1140	Orange	Leaking at break away joint.
100	05/11/10	Elm Street	10:36 AM	128	82	< 100	0	< 50	129	70	44		6"	6"	LP	0.9	90	Red	Good
101	05/11/10	Elm Street	10:30 AM	129	78	< 100	0	< 50	130	74	32		6"	6"	LP	0.9	90	Red	Good
102	05/11/10	Madison Street	10:05 AM	130	72	< 150	0	< 100	125	78	58		6"	4"	LP	1	100	Red	Good
103	05/11/10	Walker Street	10:10 AM	131	25	Very Low Flow			n/a	n/a	n/a		4"	4"	LP	0.5	50	Red	Good
104	05/11/10	Madison Street	10:20 AM	132	82	< 100	0	< 50	130	70	48		6"	4"	LP	1.05	105	Red	Overgrown with brush. Hydrant not visible.
105	05/11/10	Maple Ave.	10:40 AM	133	79	< 100	0	< 50	129	76	54		4"	4"	LP	0.67	67	Red	Good
106	05/11/10	Main Street	10:55 AM	134	90	630	14	630	119	92	72		8"	4"	LP	1.33	838	Orange	Good
107	05/11/10	Church Street	11:15 AM	135	80	950	32	950	134	84	62		8"	6"	LP	1.15	1093	Orange	Good
108	05/11/10	Church Street	11:25 AM	136	80	920	30	920	135	80	40		8"	6"	LP	1.5	1380	Orange	Good
109	05/11/10	Division Street	11:40 AM	137	72	1130	45	1130	135	80	54		8"	6"	LP	0.9	1017	Green	Good
110	06/25/10	Liberty Street	11:15 AM	139	54	1130	45	1130	140	56	50		16"	6"	LP	1.25	1413	Green	Good
111	06/25/10	Liberty Street	11:00 AM	140	56	1100	44	1100	139	54	50		16"	6"	LP	1.33	1467	Green	Good
112	05/11/10	Main Street	12:40 PM	141	72	650	15	650	142	80	50		8"	4"	LP	1.22	793	Orange	Good
113	05/11/10	Main Street	12:30 PM	142	72	350	2	350	141	72	50		8"	4"	LP	1.25	438	Red	Good
114	05/11/10	Main Street	12:50 PM	145	100	650	15	650	142	80	40		8"	4"	LP	2.1	1365	Orange	Good
115	05/10/10	Main Street (Rt.206)	9:00 AM	146	82	Very Low Flow			147	104	92		8"	6"	LP	1.5	75	Red	Severe drip rod leak.
116	05/10/10	Lawnwood Ave.	9:05 AM	147	92	800	24	800	146	82	39		6"	6"	LP	1.75	1400	Orange	Good
117	05/10/10	Nelson Street	9:30 AM	148	68	Very Low Flow			48	100	66		4"	4"	LP	1	100	Red	Drip rod leak.
118	05/10/10	Main Street (Rt.206)	9:45 AM	149	98	Very Low Flow			48	98	80		4"	4"	LP	1	100	Red	Good
119	05/10/10	Main Street (Rt.206)	9:55 AM	150	94	Very Low Flow			149	98	60		4"	4"	LP	1	100	Red	Good
120	05/10/10	Main Street (Rt.206)	10:00 AM	151	91	< 100	0	< 50	150	98	14		4"	4"	LP	1	100	Red	Drip rod leak.
121	07/26/10	Diller Ave..	10:50 AM	152	110	1150	85	1150	157	106	86		16"	6"	LP	1.5	1725	Green	Good
122	07/26/10	Diller Ave..	11:00 AM	155	110	650	15	650	157	110	54		6"	4"	LP	0.9	585	Orange	Good

Town of Newton

List of hydrants tested to date and hydrant results as of 8/04/10

1 Test Record No.	2 Test Date	3 Street Name	4 Time of Test	5 Flow Hyd. Number	6 Static Pressure at Flow Hyd. p.s.i.	7 Full Flow at Flow Hyd. g.p.m.	8 Residual Pressure at Flow Hyd. Full Flow p.s.i.	9 Flow - 20 p.s.i. at Pairing Hyd. g.p.m.	10 Static (Pairing) Hydrant Number	11 Static Pressure at Static Hyd.	12 Residual Pressure at Static (Pairing) Hyd. p.s.i.	13	14 Water Main Diameter inch	15 Hydrant Lead Diameter inch	16 High or Low Pressure Zone	17 Duration of Test minutes	18 Water Used During Test gallons	19 Bonnet Color Coding	20 Fire Hydrant Condition/Comments (Comments in this colomn refers to the physical condition of each fire hydrant and not the flow from the hydrant)
123	05/05/10	Diller Ave..	10:54 AM	157	106	535	11	535	155	108	76		4"	4"	LP	1.5	803	Orange	Good
124	07/26/10	New Hampshire Street	12:40 PM	158	100	< 100	0	< 100	159	90	0		4"	4"	LP	0.83	83	Red	Good
125	07/26/10	New Hampshire Street	12:50 PM	159	90	< 50	0	< 50	158	100	60		4"	4"	LP	1.5	83	Red	Good
126	05/13/10	Diller Ave.	1:55 AM	160	108	1500	80	1500	Did not pair.				12"	6"	LP	1	1500	Light Blue	Good
127	05/10/10	South Spring Street	10:50 AM	162	102	1500	80	1500	164	100	85		12"	6"	LP	1.5	2250	Light Blue	Good
128	05/10/10	Railroad Ave.	11:50 AM	163	100	800	23	800	109	100	92		4"	4"	LP	1.33	1064	Orange	Good
129	05/10/10	Stuart Street	10:40 AM	164	101	1405	70	1405	162	102	90		12"	6"	LP	1	1405	Green	Good
130	05/05/10	Mount View Road	11:35 AM	165	90	Very Low Flow			n/a	n/a	n/a		4"	4"	LP	1	100	Red	Drip rod leak.
131	05/05/10	Mount View Road	n/a	166		Very Low Flow			n/a	n/a	n/a		4"	4"	LP	n/a	0	Red	Good
132	05/05/10	Mount View Road	n/a	167		Very Low Flow			n/a	n/a	n/a		4"	4"	LP	n/a	0	Red	Good
133	05/10/10	East Stuart Street	10:55 AM	168	105	530	10	530	170	108	92		4"	4"	LP	2.5	1325	Orange	Good
134	05/10/10	Kelsey Street	11:20 AM	169	109	700	19	700	170	108	96		4"	4"	LP	1.33	931	Orange	Good
135	05/10/10	Trinity Street	11:10 AM	170	108	< 100	0	< 100	169	109	100		4"	4"	LP	1.5	150	Red	Good
136	07/26/10	Trinity Street	1:15 PM	171	110	1460	76	1460	347	108	82		12"	6"	LP	1	1460	Green	Drip rod leak.
137	05/13/10	Trinity Street	12:35 PM	172	98	1250	55	1250	175	90	76		4"	4"	LP	1.2	1500	Green	Good
138	05/13/10	Union Place	1:35 PM	173	110	700	17	700	172	98	80		8"	6"	LP	1.18	826	Orange	Good
139	05/13/10	Union Place	1:45 PM	174	120	1130	45	1130	173	110	100		8"	6"	LP	0.67	757	Green	Severe drip rod leak. Hard to open and close.
140	05/13/10	Trinity Street	12:45 PM	175	90	600	13	600	172	98	90		6"	4"	LP	1	600	Orange	Good
141	05/13/10	Moran Street	2:20 PM	176	100	1350	65	1350	118	94	70		12"	6"	LP	1.5	2025	Green	Severe drip rod leak. Heaved pavement.
142	05/13/10	Trinity Street	12:55 PM	177	105	530	10	530	175	92	84		6"	6"	LP	1.58	837	Orange	Good
143	05/13/10	Townsend Street	1:05 PM	178	109	550	11	550	175	92	68		4"	4"	LP	2	1100	Orange	Hard to open and close.
144	05/13/10	Sewer Plant	1:20 PM	180	120	1060	40	1060	181	120	104		6"	4"	LP	1.1	1166	Green	Good
145	05/13/10	Sewer Plant	1:15 PM	181	108	300	5	300	182	110	12		6"	4"	LP	2	600	Red	Good
146	05/13/10	Sewer Plant	1:10 PM	182	110	Very Low Flow		125	181	108	16		6"	4"	LP	1	125	Red	Good
147	05/14/10	Hamilton Street	8:40 AM	183	110	920	30	920	188	115	102		4"	4"	LP	1	920	Orange	Good
148	05/13/10	Moran Street	3:10 PM	184	110	1550	82	1550	349	108	80		12"	6"	LP	2.03	3147	Light Blue	Hard to open and close.
149	05/20/10	Moran Street	8:05 AM	185	119	1475	77	1475	186	122	90		8"	6"	LP	0.75	1106	Green	Good
150	05/20/10	Moran Street	8:10 AM	186	118	1190	50	1190	185	119	100		8"	6"	LP	0.87	1035	Green	Good
151	05/19/10	"Dump Road"	12:40 PM	187	118	1405	70	1405	n/a	n/a	n/a		8"	6"	LP	0.55	773	Green	Good
152	05/14/10	Hamilton Street	8:30 AM	188	115	1190	50	1190	183	108	86		8"	6"	LP	1.5	1785	Green	Good
153	05/19/10	Main Street	10:10 AM	189	112	1455	75	1455	190	114	80		8"	6"	LP	1.1	1601	Green	Good
154	05/19/10	Main Street	10:20 AM	190	114	1405	70	1405	189	112	82		8"	6"	LP	2.33	3274	Green	Good
155	05/19/10	Main Street	10:30 AM	191	119	1405	70	1405	190	114	80		8"	6"	LP	1.1	1546	Green	Good
156	06/22/10	Weis Market	1:30 PM	192	116	500	112	500	195	118	112		8"	6"	LP	1.67	833	Orange	
157	05/19/10	Weis Market	11:25 AM	193	118	550	12	550	192	118	98		8"	6"	LP	0.83	457	Orange	Very hard to open and close hydrant valve
158	05/19/10	Weis Market	11:40 AM	194	112	Very Low Flow -		<100 gpm	192	114	112		8"	6"	LP	0.83	83	Red	Good
159	06/22/10	Weis Market	1:50 PM	195	118	1350	65	1350	192	110	86		8"	6"	LP	1.75	2363	Green	Good
160	05/19/10	South Park Drive	11:10 AM	196	108	1350	65	1350	197	118	84		8"	6"	LP	1	1350	Green	Good
161	05/19/10	South Park Drive	11:00 AM	197	118	1325	62	1325	191	112	82		8"	6"	LP	1.25	1656	Green	Good
162	05/19/10	Main Street	10:45 AM	198	114	750	20	750	191	112	86		8"	6"	LP	0.75	563	Orange	Good
163	05/19/10	All Access Staging (Factory)	1:20 PM	199	112	1405	70	1405	n/a	n/a	n/a		8"	6"	LP	0.75	1054	Green	Good
164	06/22/10	Home Depot	11:30 AM	200	88	1130	45	1130	204	84	58		8"	6"	LP	1.58	1789	Green	
165	06/22/10	Home Depot	11:15 AM	201	84	1060	40	1060	204	82	58		8"	6"	LP	1.08	1148	Green	Very hard to open and close hydrant valve.
166	06/22/10	Home Depot	11:05 AM	202	85	1130	45	1130	204	84	60		8"	6"	LP	1	1130	Green	Good
167	06/22/10	Home Depot	10:50 AM	203	88	1130	45	1130	204	88	58		8"	6"	LP	0.95	1074	Green	Good
168	06/22/10	Home Depot	10:10 AM	204	88	1130	55	1130	n/a	n/a	n/a		8"	6"	LP	1.92	2166	Green	Hydrant lost internal part. Inoperable. Bagged.
169	06/22/10	Home Depot	10:30 AM	205	96	1250	55	1250	204	88	58		8"	6"	LP	1.5	1875	Green	Good
170	06/22/10	Holiday Express	8:30 AM	206	98	1130	45	1130	207	98	56		8"	6"	LP	0.95	1074	Green	Good
171	05/19/10	Holiday Express	2:00 PM	207	96	1190	50	1190	206	98	60		8"	6"	LP	1	1190	Green	Good
172	06/22/10	Holiday Express	8:50 AM	208	98	1190	50	1190	207	98	60		8"	6"	LP	1.18	1404	Green	Good
173	06/22/10	Holiday Express	8:40 AM	209	98	1190	50	1190	207	98	58		8"	6"	LP	1.33	1583	Green	Good
174	05/18/10	East Clinton Street	8:10 AM	210	120	1500	80	1500	n/a	n/a	n/a		12"	6"	LP	1	1500	Light Blue	Good
175	05/14/10	Fire House on Mill Street	9:00 AM	211	110	1130	45	1130	351	112	88		6"	6"	LP	0.83	938	Green	Good
176	05/17/10	High Rise Apartment	8:05 AM	212	110	1120	75	1120	213	118	92		6"	6"	LP	1.33	1490	Green	Good
177	05/17/10	High Rise Apartment	8:15 AM	213	118	1080	65	1080	212	118	90		6"	6"	LP	1.2	1296	Green	Hydrant not shutting fully
178	05/17/10	High Rise Apartment	8:40 AM	214	119	1250	55	1250	215	120	80		6"	6"	LP	2.22	2775	Green	Severe drip rod leak. Hard to open and close.
179	05/17/10	High Rise Apartment	8:30 AM	215	118	1070	65	1070	213	118	90		6"	6"	LP	1	1070	Green	Good
180	06/22/10	High Rise Apartment	2:30 PM	216	116	1300	60	1300	212	112	90		6"	6"	LP	0.78	1018	Green	Good
181	06/25/10	High Rise Apartment	8:30 AM	217	110	1350	65	1350	212	104	90		6"	6"	LP	2.75	3713	Green	Good
182	06/25/10	High Rise Apartment	8:55 AM	218	108	1405	70	1405	212	104	86		6"	6"	LP	1.42	1995	Green	Good
183	05/17/10	Cherry Street	2:15 PM	220	80	1130	45	1130	355	78	50		8"	6"	LP	1.5	1695	Green	Good

Town of Newton

List of hydrants tested to date and hydrant results as of 8/04/10

1 Test Record No.	2 Test Date	3 Street Name	4 Time of Test	5 Flow Hyd. Number	6 Static Pressure at Flow Hyd. p.s.i.	7 Full Flow at Flow Hyd. g.p.m.	8 Residual Pressure at Flow Hyd. Full Flow p.s.i.	9 Flow - 20 p.s.i. at Pairing Hyd. g.p.m.	10 Static (Pairing) Hydrant Number	11 Static Pressure at Static Hyd.	12 Residual Pressure at Static (Pairing) Hyd. p.s.i.	13	14 Water Main Diameter inch	15 Hydrant Lead Diameter inch	16 High or Low Pressure Zone	17 Duration of Test minutes	18 Water Used During Test gallons	19 Bonnet Color Coding	20 Fire Hydrant Condition/Comments (Comments in this colomn refers to the physical condition of each fire hydrant and not the flow from the hydrant)
184	06/25/10	Mill Street	10:00 AM	223	104	1350	65	1350	227	40	38		6"	6"	LP	0.97	1305	Green	Good
185	06/25/10	Emmons Street	10:40 AM	224	86	200	4-5	200	225	100	64		4"	4"	LP	0.83	167	Red	Good
186	05/19/10	Clinton Street	10:00 AM	225	117	Low Flow - +-200 gpm			226	114	78		6"	4"	LP	0.87	174	Red	Good
187	05/19/10	Clinton Street	9:40 AM	226	114	530	10	530	225	117	60		6"	4"	LP	1.17	620	Orange	Good
188	07/26/10	Mill Street	1:45 PM	227	42	< 100	0	< 100	Did not pair.				6"	4"	LP	1	100	Red	Drip Rod Leak
189	05/19/10	Mill Street	1:00 PM	228	96	840	25	840	n/a	n/a	n/a		6"	4"	LP	0.75	630	Orange	Good (Did not pair, Erv & Eric on another assignment)
190	05/19/10	Mill Street	12:50 PM	229	78	530	10	530	n/a	n/a	n/a		6"	4"	LP	0.75	398	Orange	Good (Did not pair, Erv & Eric on another assignment)
191	06/22/10	Mill Street	9:00 AM	230	70	1060	40	1060	366	84	54		12"	6"	LP	1.25	1325	Green	Good
192	05/11/10	Hillside Terrace	3:15 PM	231	105	1060	40	1060	232	106	44		6"	4"	LP	1.33	1410	Green	Good
193	05/11/10	Hillside Terrace	3:25 PM	232	106	530	10	530	231	110	90		6"	4"	LP	1.42	753	Orange	Good
194	05/11/10	Hillside Terrace	3:45 PM	233	86	100	0	100	232	112	110		6"	4"	LP	1.37	137	Red	Good
195	05/13/10	Lake Ave.	8:45 AM	234	90	1130	45	1130	248	99	70		10"	6"	LP	1.5	1695	Green	Good
196	05/13/10	Hillside Terrace	8:15 AM	235	79	950	32	950	233	84	54		10"	6"	LP	1.67	1587	Orange	Good
197	05/11/10	Ferndale Ave.	3:35 AM	236	102	150	2	150	232	106	68		6"	4"	LP	1.45	218	Red	Drip rod leak.
198	05/13/10	Park Ave.	8:55 AM	237	78	Very Low Flow			236	100	90		4"	4"	LP	1.25	125	Red	Drip rod leak.
199	05/13/10	Slate Hill Road	11:40 AM	243	70	920	30	920	244	60	22		4"	4"	LP	2.05	1886	Orange	Slight leaks at nipples and bonnet.
200	05/13/10	Slate Hill Road	11:50 AM	244	60	700	17	700	243	70	50		4"	4"	LP	2	1400	Orange	Good
201	05/13/10	Swartswood Road	9:10 AM	245	106	1350	65	1350	247	98	74		8"	6"	LP	1.5	2025	Green	Slight leak at break away joint.
202	05/13/10	Swartswood Road	10:00 AM	246	100	Very Low Flow		50	247	100	0		4"	4"	LP	0.5	25	Red	Good
203	05/13/10	Swartswood Road	9:40 AM	247	98	1070	70	1070	245	106	85		8"	6"	LP	1	1070	Green	Good
204	05/13/10	Lake Ave.	8:35 AM	248	99	1250	55	1250	234	90	52		10"	6"	LP	1.2	1500	Green	Good
205	07/26/10	Swartswood Road	2:00 PM	249	96	< 100	0	< 100	Did not pair.				4"	4"	LP	0.5	50	Red	Good
206	05/13/10	Landmark West Apt.	10:50 AM	251	86	1050	36	1050	254	80	38		8"	6"	LP	1.5	1575	Green	Good
207	05/13/10	Landmark West Apt.	11:20 AM	252	89	1000	35	1000	253	76	38		8"	6"	LP	1.4	1400	Green	Good
208	05/13/10	Landmark West Apt.	11:10 AM	253	79	920	30	920	254	74	40		8"	6"	LP	1.1	1012	Orange	Good
209	05/13/10	Landmark West Apt.	10:59 AM	254	80	840	25	840	251	92	50		8"	6"	LP	1	840	Orange	Good
210	05/19/10	High Street	8:50 AM	257	91	540	11	540	258	84	60		10"	6"	LP	1.03	556	Orange	Good
211	05/19/10	High Street	9:00 AM	258	84	700	18	700	257	84	68		10"	6"	LP	0.93	651	Orange	Good
212	05/19/10	High Street	9:10 AM	259	78	800	23	800	258	84	62		10"	6"	LP	0.88	704	Orange	Drip rod leak.
213	05/19/10	High Street	9:20 AM	260	72	Low Flow - <150 gpm			n/a	n/a	n/a		6"	6"	LP	1.25	125	Red	Very hard to open and close hydrant valve
214	06/25/10	West End Ave./Thompson	11:30 AM	294	90	Very Low Flow - <100 gpm							4"	4"	HP	2	200	Red	New hydrant w/ new 6" GV and 6" lead, but still connected to exist. 4" main and 4" lead.
215	05/19/10	West End Ave.	3:40 AM	295	90	1465	75	1465	Did not pair.				8"	6"	HP	2.25	1778	Green	Good
216	05/20/10	West End Ave.	8:40 AM	302	86	650	15	650	295	92	74		6"	4"	HP	1	650	Orange	Good
217	05/20/10	West End Ave.	8:50 AM	310	72	490	8	490	302	86	70		6"	4"	HP	3.75	1838	Red	Very hard to open and close hydrant valve.
218	05/20/10	West End Ave.	9:05 AM	314	66	675	12	675	310	68	58		6"	4"	HP	1.72	1161	Orange	Good
219	05/20/10	West End Ave.	9:15 AM	315	65	750	20	750	314	66	34		6"	4"	HP	1.88	1410	Orange	Good
220	05/20/10	West End Ave.	9:25 AM	316	62	490	8	490	315	60	38		4"	4"	HP	2.17	1063	Red	Good
221	05/20/10	Valley View Court	9:40 AM	319	78	950	32	950	321	86	54		6"	6"	HP	2.4	2280	Orange	Good
222	05/11/10	Ryerson Ave.	2:40 PM	326	100	Abandoned test. High pressure zone. Unknown to Town of Newton officials. Severe leaking hydrant. Bagged hydrant.											50	Green	Inoperable
223	05/11/10	Ryerson Ave.	2:30 PM	327	109	Abandoned test. High pressure zone. Unknown to Town of Newton officials.											50	Green	Good
224	05/11/10	Ryerson Ave.	2:20 PM	328	105	Abandoned test. High pressure zone. Unknown to Town of Newton officials.											50	Green	Good
225	05/11/10	Ryerson Ave.	2:15 PM	329	85	150	1	150	333	86	24		6"	4"	LP	1.15	173	Red	Good
226	05/11/10	Ridgewood Ave.	2:05 PM	332	88	Very Low Flow		< 100	339	70	0		4"	4"	LP	0.75	75	Red	Good
227	05/11/10	Plainfield Ave.	1:10 PM	333	90	Very Low Flow		< 200	334	85	0		6"	4"	LP	1.3	195	Red	Good
228	05/11/10	Plainfield Ave.	1:15 PM	334	90	Very Low Flow		< 100	333	90	34		6"	4"	LP	0.9	90	Red	Good
229	05/11/10	Plainfield Ave.	1:30 PM	335	72	Very Low Flow		< 100	334	74	20		6"	4"	LP	1.1	110	Red	Good
230	05/11/10	Plainfield Ave.	1:35 PM	336	70	Very Low Flow		< 100	335	70	5		6"	4"	LP	1	100	Red	Good
231	05/11/10	Carriage Lane	1:45 PM	337	65	Very Low Flow		< 100	336	70	5		8"	6"	LP	0.8	80	Red	Good
232	05/11/10	Carriage Lane	1:50 PM	338	70	Very Low Flow		< 100	337	64	0		8"	6"	LP	0.6	60	Red	Good
233	05/11/10	Carriage Lane	1:55 PM	339	70	Very Low Flow		< 100	338	72	0		8"	6"	LP	0.5	50	Red	Good
234	05/11/10	Carriage Lane	2:00 PM	340	72	Very Low Flow		< 100	339	70	0		8"	6"	LP	0.5	50	Red	Bonnet leak. Needs new gasket.
235	05/13/10	Swartswood Road	10:40 AM	346	82	700	17	700	No Pair - Single hydrant test.				4"	4"	LP	0.5	350	Orange	Good
236	05/13/10	Trinity Street	2:30 PM	347	103	1120	75	1120	348	105	84		12"	6"	LP	1.17	1310	Green	Good
237	05/13/10	Trinity Street	2:40 PM	348	105	1405	70	1405	347	103	80		12"	6"	LP	1.1	1546	Green	Good
238	05/13/10	Trinity Street	2:50 PM	349	104	1405	70	1405	348	106	80		12"	6"	LP	1.25	1756	Green	Good
239	05/13/10	Trinity Street	3:00 PM	350	108	1405	70	1405	349	108	72		12"	6"	LP	0.93	1307	Green	Good
240	05/14/10	Mill Street	8:50 AM	351	102	1455	75	1455	350	110	86		12"	6"	LP	1.23	1790	Green	Good
241	05/17/10	Harrison Street	10:20 AM	352	100	1405	70	1405	353	86	65		8"	6"	LP	1.88	2641	Green	Good
242	05/17/10	Harrison Street	10:30 AM	353	94	1300	60	1300	352	96	80		8"	6"	LP	2.25	2925	Green	Good
243	05/17/10	Center Street	2:05 PM	354	78	1025	37	1025	355	78	50		8"	6"	LP	1.1	1128	Green	Good
244	05/17/10	Center Street	10:40 AM	355	72	1060	40	1060	353	88	26		8"	6"	LP	2.1	2226	Green	Good

Town of Newton

List of hydrants tested to date and hydrant results as of 8/04/10

1 Test Record No.	2 Test Date	3 Street Name	4 Time of Test	5 Flow Hyd. Number	6 Static Pressure at Flow Hyd. p.s.i.	7 Full Flow at Flow Hyd. g.p.m.	8 Residual Pressure at Flow Hyd. Full Flow p.s.i.	9 Flow - 20 p.s.i. at Pairing Hyd. g.p.m.	10 Static (Pairing) Hydrant Number	11 Static Pressure at Static Hyd.	12 Residual Pressure at Static (Pairing) Hyd. p.s.i.	13	14 Water Main Diameter inch	15 Hydrant Lead Diameter inch	16 High or Low Pressure Zone	17 Duration of Test minutes	18 Water Used During Test gallons	19 Bonnet Color Coding	20 Fire Hydrant Condition/Comments (Comments in this colomn refers to the physical condition of each fire hydrant and not the flow from the hydrant)
245	06/25/10	Cherry Street	9:35 AM	356	62	920	30	920	220	70	50		8"	6"	LP	3	2760	Orange	Good
246	05/17/10	Mill Street	2:30 PM	357	110	1405	70	1405	358	118	90		12"	6"	LP	0.93	1307	Green	Good
247	05/17/10	Mill Street	2:40 PM	358	118	1455	75	1455	357	110	82		12"	6"	LP	1.33	1935	Green	Good
248	05/17/10	Mill Street	2:50 PM	359	110	1455	75	1455	358	112	86		12"	6"	LP	1	1455	Green	Good
249	05/17/10	Swartswood Road	3:00 PM	360	110	1455	75	1455	359	109	85		12"	6"	LP	1.28	1862	Green	Good
250	05/17/10	Swartswood Road	3:10 PM	361	114	1405	70	1405	360	110	80		12"	6"	LP	0.83	1166	Green	Good
251	05/17/10	Mill Street	3:15 PM	362	100	1300	60	1300	361	118	84		12"	6"	LP	0.83	1079	Green	Good
252	06/22/10	Project Self Sufficiency	12:45 PM	363	94	1250	55	1250	364	96	76		8"	6"	LP	0.80	1000	Green	Good
253	06/22/10	Project Self Sufficiency	1:00 PM	364	96	1300	60	1300	363	94	70		8"	6"	LP	1.67	2167	Green	Good
254	06/22/10	Project Self Sufficiency	1:10 PM	365	100	1300	60	1300	364	96	76		8"	6"	LP	1.08	1408	Green	Drip rod part dislodged from hydrant
255	06/22/10	Kohl's	9:10 AM	366	84	1060	40	1060	230	74	40		12"	6"	LP	0.87	922	Green	Good
256	06/22/10	Kohl's	9:35 AM	367	88	1060	40	1060	366	84	50		12"	6"	LP	1.37	1452	Green	Hydrant not draining
257	06/22/10	Kohl's	9:25 AM	368	90	1060	40	1060	366	86	52		8"	6"	LP	1.45	1537	Green	Good
258	06/22/10	Kohl's	9:20 AM	369	90	1130	45	1130	366	84	50		8"	6"	LP	0.87	983	Green	Good
259	05/19/10	Walgreens	1:10 PM	370	102	1300	60	1300	371	100	68		8"	6"	LP	1	1300	Green	Good
260	05/19/10	Wachovia	1:15 PM	371	100	1250	55	1250	370	102	72		8"	6"	LP	0.75	938	Green	Good
														Total gallons used to date:			**270,160**		

APPENDIX 2

HYDRANT LOCATION AND ROAD WIDTH DATA

Town of Newton
Complete list of all fire hydrants, location (street name), road widths and hydrant test status as of 8/04/10

Count	Hydrant No.	Location	**Road Width (Feet)**	Status Description	Comments
	1 - 28	Outside Newton Municipal Boundary		Outside Municipal Boundary - did not test.	
1	29	Newton-Sparta Ave.	28 - 32	Tested	
2	30	Lincoln Place	24	Tested	
3	31	Lincoln Place	24	Tested	
4	32	Newton-Sparta Ave.	28 - 32	Tested	
5	**33**	**Prospect Street**	**24**	**Private hydrant - did not test.**	
6	34	Hicks Ave.	26	Tested	
7	35	Hicks Ave.	26	Tested	
8	36	Hicks Ave.	26	Tested	
9	37	Smith Street	28	Tested	
10	38	Grand Ave.	24	Tested	
11	39	Grand Ave.	24	Tested	
12	40	Newton-Sparta Ave.	28 - 32	Tested	Needs new "bottom"-gaskets. To be rebuilt?
13	41	Newton-Sparta Ave.	28 - 32	Tested	
14	42	Newton-Sparta Ave.	28 - 32	Tested	
15	43	Newton-Sparta Ave.	28 - 32	Tested	
16	44	Newton-Sparta Ave.	28 - 32	Tested	
17	45	Woodside Ave.	28 - 32	Tested	
18	46	Woodside Ave.	28	Tested	
19	47	Lawnwood Ave.	30	Tested	
20	48	Nelson Street	30	Tested	
21	49	Mason Ave.	30	Tested	
22	50	Mason Ave.	30	Tested	
23	51	Pine Street	30	Tested	
24	52	Sussex Street	30	Tested	
25	**53**	**Sussex Street**	**30**	**Dedicated 8" Gardner Ave. well watermain, did not test.**	
26	54	Orchard Street	28 - 33	Tested	Hydrant to be replaced?
27	55	Pine Street	30	Tested	
28	56	Linmor Ave.	30	Tested	
29	57	Merriam Ave	30 - 32	Tested	

30	58	Merriam Ave.	30 - 32	Tested	
31	59	Merriam Ave	30 - 32	Tested	
32	60	Merriam Ave. School	30 - 32	Tested	Severe drip rod leak.
33	61	Merriam Ave. School	30 - 32	Tested	
34	62	Sussex Street	30	Tested	
35	63	Orchard Street	28 - 33	Tested	
36	64	Orchard Street	28 - 33	Tested	
37	65	Dogwood Drive	30	Tested	
38	66	Dogwood Drive	30	Tested	
39	67	Dogwood Drive	30	Tested	
40	68	Dogwood Drive	30	Tested	Severe drip rod leak.
41	69	Dogwood Drive	30	Tested	
42	70	Birch Drive	30	Tested	
43	71	Birch Drive	30	Tested	
44	72	Birch Drive	30	Tested	
45	73	Linmor Ave.	30	Tested	
46	74	Trenton Court	81	Tested	
47	75	Kory Court	81	Tested	Bonnet gasket leak.
48	76	Kory Road	30	Tested	
49	77	Kory Road	30	Tested	
50	78	York Rd.	30	Tested	
51	**79**	**York Rd.**	**30**	**To be tested.**	Severe leaking bonnet. Replace gasket.
52	80	Paterson Ave.	26.5 - 36	Tested	Drip rod leak.
53	81	Donald Ave.	30	Tested	
54	82	Donald Ave.	30	Tested	
55	83	Merriam Ave.	30 - 32	Tested	
56	84	Paterson Ave.	26.5 - 36	Tested	
57	85	Paterson Ave.	26.5 - 36	Tested	
58	86	Paterson Ave.	26.5 - 36	Tested	
59	87	Paterson Ave.	26.5 - 36	Tested	
60	88	Paterson Place	31.5	Tested	
61	89	Windsor Drive	30	Tested	Hard to open/close hydrant. Drip rod/valve repair.
62	90	Windsor Drive	30	Tested	Needs new drip rod assembly.
63	91	Windsor Drive	30	Tested	
64	92	Buckingham Ct.	30	Tested	
65	93	Paterson Place	31.5	Tested	
66	94	Paterson Place	31.5	Tested	
67	95	Paterson Place	31.5	Tested	

68	96	Stratford Lane	30	Tested	
69	97	Stratford Lane	30	Tested	
70	98	Woodridge Court	30	Tested	
71	99	Woodridge Court	30	Tested	
72	100	Jersey Place	30	Tested	
73	101	Jersey Place	30	Tested	
74	102	Jersey Place	30	Tested	
75	103	Jersey Place	30	Tested	
76	104	Merriam Ave.	30 - 32	Tested	
77	105	Merriam Ave.	30 - 32	Tested	
78	106	Merriam Ave.	30 - 32	Tested	
79	107	Merriam Ave.	30 - 32	Tested	
80	108	Merriam Ave.	30 - 32	Tested	
81	109	Railroad Ave.	24	Tested	
82	110	Newton-Sparta Ave.	30 - 32	Tested	
83	111	Newton-Sparta Ave.	30 - 32	Tested	Severe leak at breakaway joint.
84	112	Cedar Street	20	Tested	
85	113	Hampton Street	24	Tested	
86	114	Spring Street	38	Tested	
87	115	Madison Street	22	Tested	Drip rod leak.
88	116	Washington Street	17	Tested	
89	117	Spring Street	36	Tested	
90	118	Moran Street	26	Tested	
91	119	Main Street	38	Tested	
92	120	High Street	26	Tested	Severe drip rod leak.
93	121	Main Street	38	Tested	
94	122	Madison Street	22	Tested	
95	123	Halsted Street	27	Tested	
96	**124**	**Halsted Street**	**27**	**To be re-tested**	Severe drip rod leak, hard to open/close. Replace?
97	125	Madison Street	22	Tested	
98	**126**	**Halsted Street**	**27**	**To be re-tested**	Inoperable.
99	127	Halsted Street	27	Tested	
100	128	Elm Street	30	Tested	
101	129	Elm Street	30	Tested	
102	130	Madison Street	22	Tested	
103	131	Walker Street	19	Tested	
104	132	Madison Street	22	Tested	
105	133	Maple Ave.	24	Tested	
106	134	Main Street	38	Tested	

107	135	Church Street	30	Tested	
108	136	Church Street	30	Tested	
109	137	Division Street	19	Tested	
110	**138**	**Liberty Street**	**24.5**	**To be tested.**	Hydrant inoperable - Bagged. To be abandoned?
111	139	Liberty Street	25	Tested	
112	140	Liberty Street	25	Tested	
113	141	Main Street	30	Tested	
114	142	Main Street	30	Tested	
115	**143**	**Clarkson Street**	**14.5**	**High pressure zone - did not test.**	
116	**144**	**Ryerson Avenue**	29	**High pressure zone - did not test.**	
117	145	Main Street	30	Tested	
118	146	Main Street (Rt.206)	30	Tested	
119	147	Lawnwood Ave.	30	Tested	
120	148	Nelson Street	30	Tested	
121	149	Main Street (Rt.206)	30	Tested	
122	150	Main Street (Rt.206)	30	Tested	
123	151	Main Street (Rt.206)	30	Tested	
124	152	Diller Avenue	26	Tested	
125	**153**	**E.J.Brooks**	**n/a**	**Private hydrant - did not test.**	
126	**154**	**E.J.Brooks**	**n/a**	**Private hydrant - did not test.**	
127	155	Diller Avenue	26	Tested	
128	156	Oak Street	17	Tested	Replace bonnet gasket. Severe leaks.
129	157	Diller Avenue	26	Tested	
130	158	New Hampshire Street	22	Tested	
131	159	New Hampshire Street	22	Tested	
132	160	Diller Avenue	26	Tested	
133	162	Lower Spring Street	38	Tested	
134	163	Railroad Ave.	24	Tested	
135	164	Stuart Street	26	Tested	
136	165	Mount View Road	25 - 32	Tested	
137	166	Mount View Road	25 - 32	Tested	
138	167	Mount View Road	25 - 32	Tested	
139	168	East Stuart Street	18 - 26	Tested	
140	169	Kelsey Avenue	20	Tested	
141	170	Trinity Street	31.5	Tested	
142	171	Trinity Street	31.5	Tested	
143	172	Trinity Street	31.5	Tested	
144	173	Union Place	26	Tested	

145	174	Union Place	26	Tested	Drip rod leak. Hard to open/close
146	175	Trinity Street	31.5	Tested	
147	176	Moran Street	26	Tested	Severe drip rod leak. Heaved pavement.
148	177	Trinity Street	31.5	Tested	
149	178	Townsend Street	30	Tested	
150	**179**	**Sewer Plant**	**n/a**	**To be tested. Inoperable. Out of order - did not test.**	Inoperable.
151	180	Sewer Plant	n/a	Tested	
152	181	Sewer Plant	n/a	Tested	
153	182	Sewer Plant	n/a	Tested	
154	183	Hamilton Street	20.5	Tested	
155	184	Moran Street	26	Tested	
156	185	Moran Street	26	Tested	
157	186	Moran Street	26	Tested	
158	187	"Dump Road"	20	Tested	
159	188	Hamilton Street	20.5	Tested	
160	189	Water Street	58	Tested	
161	190	Water Street	58	Tested	
162	191	Water Street	58	Tested	
163	192	Weis Market	n/a	Tested	
164	193	Weis Market	n/a	Tested	
165	194	Weis Market	n/a	Tested	
166	195	Weis Market	n/a	Tested	
167	196	South Park Drive	40 - 44	Tested	
168	197	South Park Drive	40 - 44	Tested	
169	198	Water Street	58	Tested	
170	199	All Access Staging (Factory)	n/a	Tested	
171	200	Home Depot	n/a	Tested	
172	201	Home Depot	n/a	Tested	
173	202	Home Depot	n/a	Tested	
174	203	Home Depot	n/a	Tested	
175	204	Home Depot	n/a	Tested	Hydrant lost internal part. Inoperable. Bagged.
176	205	North Park Drive	44	Tested	
177	206	Holiday Express	n/a	Tested	
178	207	Holiday Express	n/a	Tested	
179	208	Holiday Express	n/a	Tested	
180	209	Holiday Express	n/a	Tested	
181	210	East Clinton Street	28 - 30	Tested	
182	211	Fire House on Mill Street	n/a	Tested	

183	212	High Rise Apartment	n/a	Tested	
184	213	High Rise Apartment	n/a	Tested	
185	214	High Rise Apartment	n/a	Tested	Sever drip rod leak. Hard to open/close.
186	215	High Rise Apartment	n/a	Tested	
187	216	High Rise Apartment	n/a	Tested	
188	217	High Rise Apartment	n/a	Tested	
189	218	High Rise Apartment	n/a	Tested	Hydrant not shutting completely.
190	220	Cherry Street	19	Tested	
191	**221**	**Mill Street**	**40 - 44**	**Lawn hydrants/Private hydrants?**	
192	**222**	**Mill Street**	**40 - 44**	**Lawn hydrants/Private hydrants?**	**Lawn hydrants/Private hydrants?**
193	223	Mill Street	40 - 44	Tested	
194	224	Emmons avenue	29	Tested	
195	225	Clinton Street	29	Tested	
196	226	Clinton Street	29	Tested	
197	227	Mill Street	40 - 44	Tested	
198	228	Mill Street	40 - 44	Tested	
199	229	Mill Street	40 - 44	Tested	
200	230	Mill Street	40 - 44	Tested	
201	231	Hillside Terrace	29	Tested	
202	232	Hillside Terrace	29	Tested	
203	233	Hillside Terrace	29	Tested	
204	234	Lake Ave.	30	Tested	
205	235	Hillside Terrace	29	Tested	
206	236	Ferndale Ave.	30	Tested	
207	237	Park Ave.	28	Tested	
208	**238**	**SCCC**	**n/a**	**Private hydrant - did not test.**	
209	**239**	**SCCC**	**n/a**	**Private hydrant - did not test.**	
210	**240**	**SCCC**	**n/a**	**Private hydrant - did not test.**	
211	**241**	**SCCC**	**n/a**	**Private hydrant - did not test.**	
212	**242**	**SCCC**	**n/a**	**Private hydrant - did not test.**	
213	243	Slate Hill Road	16.5	Tested	
214	244	Slate Hill Road	16.5	Tested	
215	245	Swartswood Road	22 - 24	Tested	
216	246	Swartswood Road	22 - 24	Tested	
217	247	Swartswood Road	22 - 24	Tested	
218	248	Lake Ave.	30	Tested	
219	249	Swartswood Road	22 - 24	Tested	
220	251	Landmark West Apt.	n/a	Tested	

221	252	Landmark West Apt.	n/a	Tested	
222	253	Landmark West Apt.	n/a	Tested	
223	254	Landmark West Apt.	n/a	Tested	
224	**255**	**Court House - Inside secure area**	**n/a**	**To be tested?**	
225	**256**	**Court House - Inside secure area**	**n/a**	**To be tested?**	**Hydrants inside the secure area**
226	257	High Street	26	Tested	
227	258	High Street	26	Tested	
228	259	High Street	26	Tested	
229	260	High Street	26	Tested	
230	**261**	**Academy Street**	**16**	**High pressure zone - did not test.**	
231	**262**	**High Street**	**26**	**High pressure zone - did not test.**	
232	**263**	**High Street**	**26**	**High pressure zone - did not test.**	
233	**264**	**Shady Lane**	**20**	**High pressure zone - did not test.**	
234	**265**	**Shady Lane**	**20**	**High pressure zone - did not test.**	
235	**266**	**Shady Lane**	**20**	**High pressure zone - did not test.**	
236	**267**	**Shady Lane**	**20**	**High pressure zone - did not test.**	
237	**268**	**High Street**	**26**	**High pressure zone - did not test.**	
238	**269**	**High Street**	**26**	**High pressure zone - did not test.**	
239	**270**	**High Street**	**26**	**High pressure zone - did not test.**	
240	**271**	**Summit Avenue**	**23**	**High pressure zone - did not test.**	
241	**272**	**Summit Avenue**	**23**	**High pressure zone - did not test.**	
242	**273**	**High Street Pump Station**	**n/a**	**High pressure zone - did not test.**	
243	**274**	**High Street Pump Station**	**n/a**	**High pressure zone - did not test.**	
244	**275**	**High Street**	**26**	**High pressure zone - did not test.**	
245	**276**	**High Street**	**26**	**High pressure zone - did not test.**	
246	**277**	**Hospital**	**n/a**	**High pressure zone - did not test.**	
247	**278**	**Hospital**	**n/a**	**High pressure zone - did not test.**	
248	**279**	**Hospital**	**n/a**	**High pressure zone - did not test.**	
249	**280**	**Hospital**	**n/a**	**High pressure zone - did not test.**	
250	**281**	**Hospital**	**n/a**	**High pressure zone - did not test.**	
251	**282**	**Hospital**	**n/a**	**High pressure zone - did not test.**	
252	**283**	**Hospital**	**n/a**	**High pressure zone - did not test.**	
253	**284**	**Hospital**	**n/a**	**High pressure zone - did not test.**	
254	**285**	**Hospital**	**n/a**	**High pressure zone - did not test.**	
255	**286**	**Hospital**	**n/a**	**High pressure zone - did not test.**	
256	**287**	**High Street**	**n/a**	**High pressure zone - did not test.**	
257	**288**	**Barn Hill**	**n/a**	**High pressure zone - did not test.**	
258	**289**	**High Street**	**n/a**	**High pressure zone - did not test.**	
259	**290**	**Medical Bldg**	**n/a**	**High pressure zone - did not test.**	

260	**291**	**Medical Bldg**	**n/a**	**High pressure zone - did not test.**	
261	**292**	**Hillside Avenue**	**30**	**High pressure zone - did not test.**	
262	**293**	**Hillside Avenue**	**30**	**High pressure zone - did not test.**	
263	294	West End Ave.	24	Tested	
264	295	West End Ave.	24	Tested - High pressure zone.	
265	**296**	**Williams Street**	**27**	**High pressure zone - did not test.**	
266	**297**	**Williams Street**	**27**	**High pressure zone - did not test.**	
267	**298**	**Linwood Avenue**	**20**	**High pressure zone - did not test.**	
268	**299**	**Linwood Avenue**	**20**	**High pressure zone - did not test.**	
269	**300**	**Foster Street**	**28**	**High pressure zone - did not test.**	
270	**301**	**Foster Street**	**28**	**High pressure zone - did not test.**	
271	302	West End Ave.	24	Tested - High pressure zone.	
272	**303**	**Newtonian Gardens**	**n/a**	**High pressure zone - did not test.**	
273	**304**	**Ridgeview Road**	**30**	**High pressure zone - did not test.**	
274	**305**	**Ridgeview Road**	**30**	**High pressure zone - did not test.**	
275	**306**	**Jimland Terrace**	**30**	**High pressure zone - did not test.**	
276	**307**	**Condit Street**	**29**	**High pressure zone - did not test.**	
277	**308**	**Condit Street**	**29**	**High pressure zone - did not test.**	
278	**309**	**Condit Street**	**29**	**High pressure zone - did not test.**	
279	310	West End Ave.	24	Tested - High pressure zone.	
280	**311**	**Fairview Avenue**	**28**	**High pressure zone - did not test.**	
281	**312**	**Fairview Avenue**	**28**	**High pressure zone - did not test.**	
282	**313**	**Fairview Avenue**	**28**	**High pressure zone - did not test.**	
283	314	West End Ave.	24	Tested - High pressure zone.	
284	315	West End Ave.	24	Tested - High pressure zone.	
285	316	West End Ave.	24	Tested - High pressure zone.	
286	**317**	**Douma Court**	**30**	**High pressure zone - did not test.**	
287	**318**	**Douma Drive**	**30**	**High pressure zone - did not test.**	
288	319	Valley View Court	30	Tested - High pressure zone.	
289	**320**	**Valley View Court**	**30**	**High pressure zone - did not test.**	
290	**321**	**Douma Drive**	**30**	**High pressure zone - did not test.**	
291	**322**	**Douma Drive**	**30**	**High pressure zone - did not test.**	
292	**323**	**Babbit Court**	**30**	**High pressure zone - did not test.**	
293	**324**	**Ryerson Avenue**	29	**High pressure zone - did not test.**	
294	**325**	**Ryerson Avenue**	29	**High pressure zone - did not test.**	
295	326	Ryerson Ave.	29	Tested - Not to be re-tested. (HP Zone)	Inoperable.
296	327	Ryerson Ave.	29	Tested - High pressure zone.	
297	328	Ryerson Ave.	29	Tested - High pressure zone.	
298	329	Ryerson Ave.	29	Tested	

299	**330**	**Ryerson Avenue**	29	**High pressure zone - did not test.**	
300	**331**	**Ashford Street**	**26**	**High pressure zone - did not test.**	**Hydrants in the High Pressure Zone**
301	332	Ridgewood Ave.	25	Tested	
302	333	Plainfield Ave.	30	Tested	
303	334	Plainfield Ave.	30	Tested	
304	335	Plainfield Ave.	30	Tested	
305	336	Plainfield Ave.	30	Tested	
306	337	Carriage Lane	30	Tested	
307	338	Carriage Lane	30	Tested	
308	339	Carriage Lane	30	Tested	
309	340	Carriage Lane	30	Tested	Bonnet gasket leak.
310	**341**	**Bristol Glen**	**n/a**	**Private hydrant - did not test.**	
311	**342**	**Bristol Glen**	**n/a**	**Private hydrant - did not test.**	
312	**343**	**Bristol Glen**	**n/a**	**Private hydrant - did not test.**	
313	**344**	**Bristol Glen**	**n/a**	**Private hydrant - did not test.**	
314	**345**	**Bristol Glen**	**n/a**	**Private hydrant - did not test.**	**Private Hydrants**
315	346	Swartswood Road	22 - 24	Tested	
316	347	Trinity Street	31.5	Tested	
317	348	Trinity Street	31.5	Tested	
318	349	Trinity Street	31.5	Tested	
319	350	Trinity Street	31.5	Tested	
320	351	Mill Street	40 - 44	Tested	
321	352	Harrison Street	25	Tested	
322	353	Harrison Street	25	Tested	
323	354	Center Street	20	Tested	
324	355	Center Street	20	Tested	
325	356	Cherry Street	19	Tested	
326	357	Mill Street	40 - 44	Tested	
327	358	Mill Street	40 - 44	Tested	
328	359	Mill Street	40 - 44	Tested	
329	360	Swartswood Road	22 - 24	Tested	
330	361	Swartswood Road	22 - 24	Tested	
331	362	Mill Street	40 - 44	Tested	
332	363	Project Self-Sufficiency	n/a	Tested	
333	364	Project Self-Sufficiency	n/a	Tested	
334	365	Project Self-Sufficiency	n/a	Tested	
335	366	Kohl's	n/a	Tested	
336	367	Kohl's	n/a	Tested	
337	368	Kohl's	n/a	Tested	

338	369	Kohl's	n/a	Tested	
339	370	Walgreens	n/a	Tested	
340	371	Wachovia	n/a	Tested	

161	Inoperable hydrant, not to be replaced.	There is an existing fire hydrant (#160) within 15 feet of this hydrant.
219	Fire hydrant number was retired.	Old hydrant was removed during the Mill Street watermain construction project and replaced with a new FH.
250	Damaged hydrant number.	Replaced no. 250 with no. 346

Notes:

1. Existing Road widths taken from "Road Master Plan for Town of Newton", prepared by Harold E. Pellow & Associates, Inc. dated December 17, 1985 and supplemented with field measurements as needed for roadways constructed after 1985.

APPENDIX 3

CUL-DE-SAC AND DEAD-END STREETS

Town of Newton

List of cul-de-sac (turn around) streets in the Town of Newton:

No.	Street Name	Cul-de-sac Pavement Radius	Nearest Hydrant #	Flow gpm	Pressure Zone
1	Babbit Court	40	323	Did not test	HP
2	Buckingham Court	40	92	450	LP
3	Center Street *	20	354	1025	LP
4	Donald Avenue	21	82	250	LP
5	Douma Court	40	317	Did not test	HP
6	Emmons Ave.	27	224	200	LP
7	Grand Avenue *	25	39	< 50	LP
8	Jersey Place	40	100	500	LP
9	Kory Court	40	75	< 100	LP
10	Kory Road *	28	77	200	LP
11	Oak Street **	30	156	< 100	LP
12	Paterson Place	40	95	300	LP
13	Slate Hill Road	35	244	700	LP
14	Sussex Court	40	84	650	LP
15	Trenton Court	40	74	510	LP
16	Union Place *	33	174	1130	LP
17	Valley View Court	40	320	Did not test	HP
18	Windsor Drive	40	91	510	LP
19	Woodbridge Court	42	99	200	LP

Notes:

*Portion of pavement beyond ROW (No deeded cul-de-sac bulb right of way)

**Turn around with grass island. (Tree)

***Gated at Route 206

Town of Newton

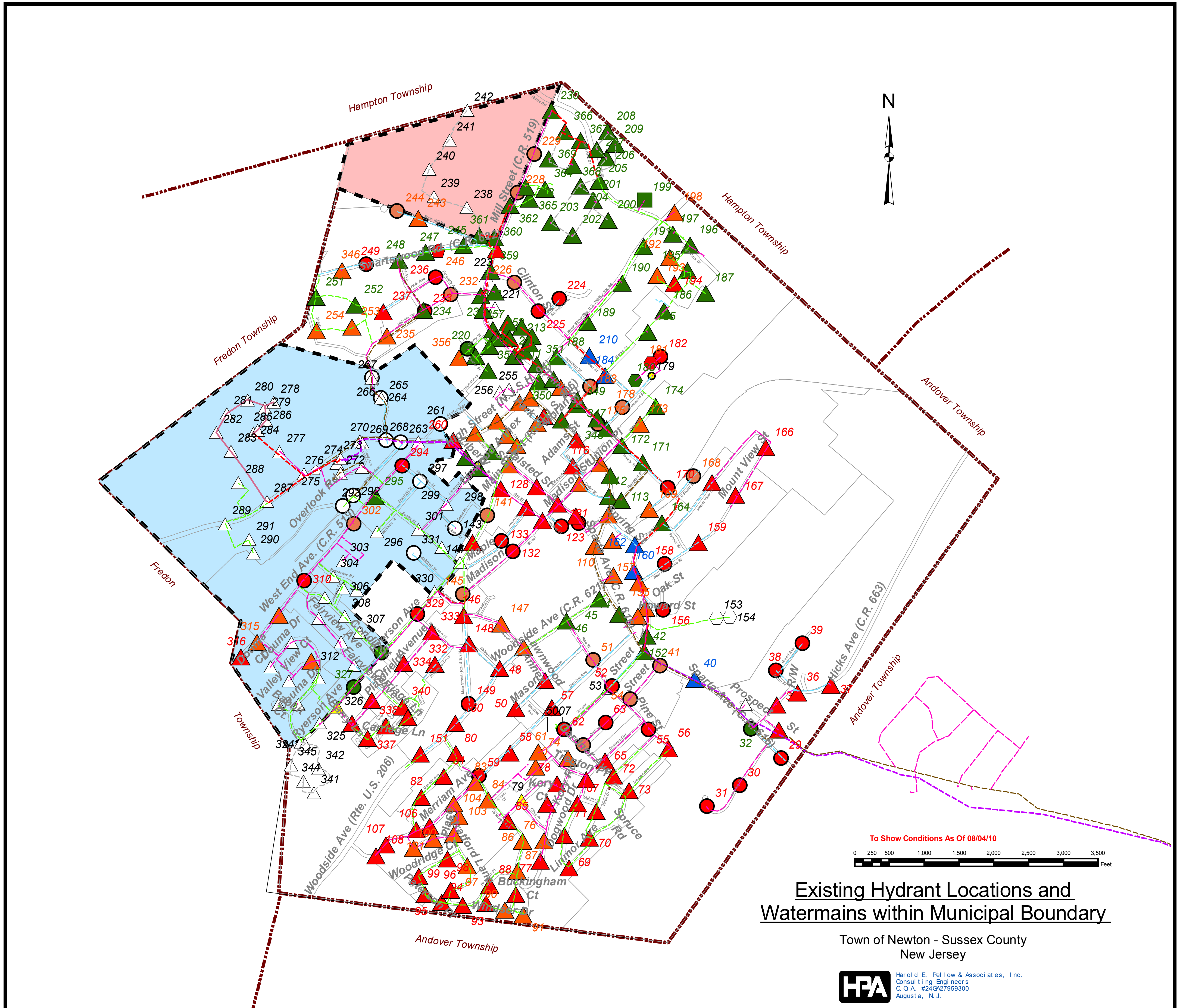
List of dead-end streets (no turn around cul-de-sac) in the Town of Newton:

8/4/2010

No.	Street Name	Nearest Hydrant #	Flow gpm	Pressure Zone
1	Ashford Street	331	Did not test	HP
2	Cherry Street	356	920	LP
3	East Stuart Street	168	530	LP
4	Hillside Avenue	293	Did not test	HP
5	Hillside Terrace	235	950	LP
6	Howard Street	155	650	LP
7	Kelsey Drive	169	700	LP
8	Lincoln Place	31	< 50	LP
9	Mason Ave.	50	< 50	LP
10	Merriam Ave. ***	108	425	LP
11	Mount View Street	167	< 50	LP
12	New Hampshire Street	159	< 50	LP
13	Park Avenue	237	< 50	LP
14	Prospect Street	34	< 50	LP
15	Railroad Avenue	44	1190	LP
16	Ridgeview Road	305	Did not test	HP
17	Ridgewood Ave.	332	< 100	LP
18	Smith Street	38	< 50	LP
19	Townsend Street	179	Did not test	LP
20	Walker Street	131	< 50	LP
21	Williams Street	296	Did not test	HP

APPENDIX 4

WATER DISTRIBUTION MAP



Existing Hydrant Locations and Watermains within Municipal Boundary

Town of Newton - Sussex County
New Jersey

HPA
Harold E. Pellow & Associates, Inc.
Consulting Engineers
C.O.A. #24GA27959300
Augusta, N.J.

Legend

BRAND, NOZZLES, FLOW

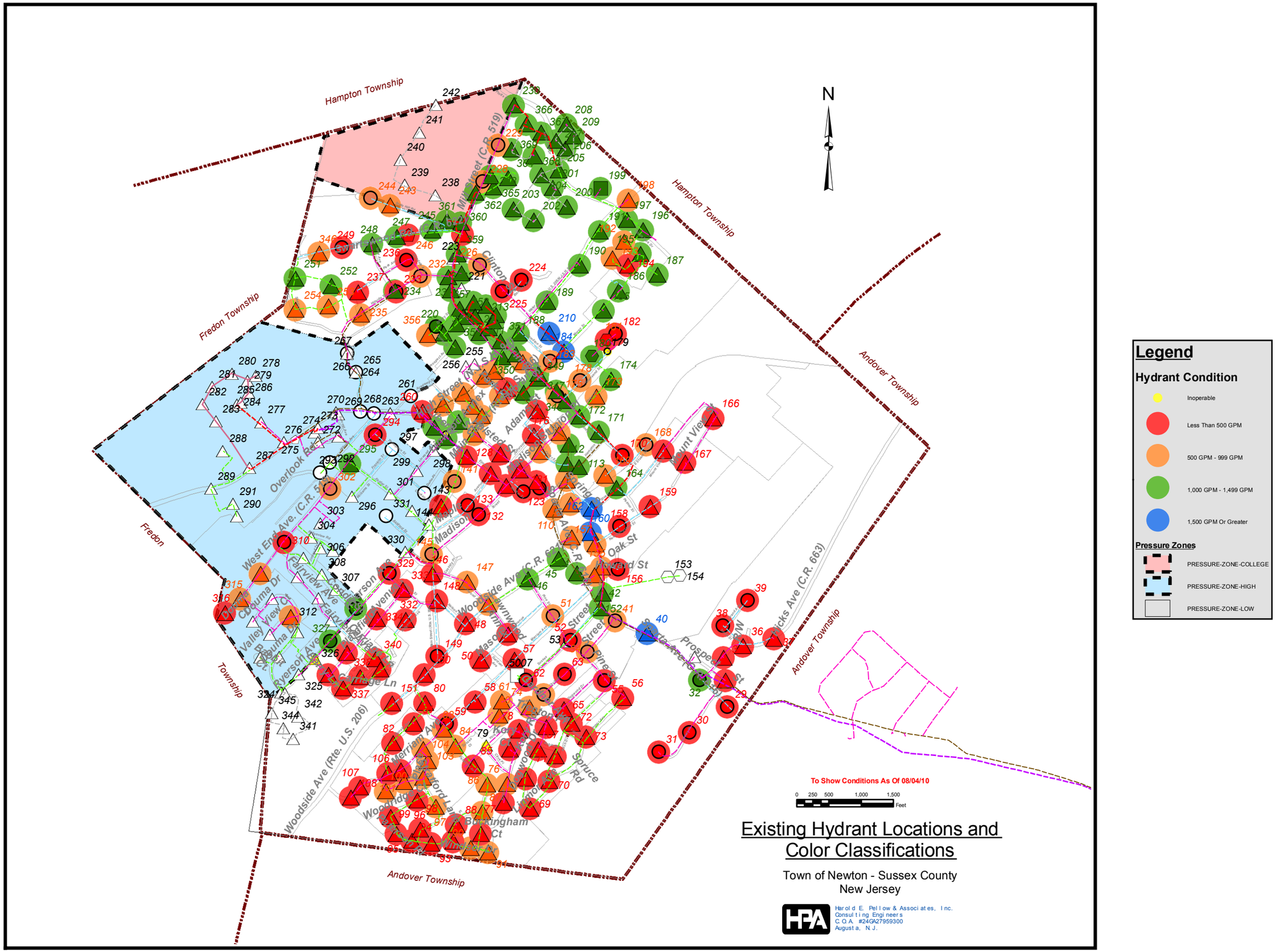
- Eddie Clow, 2, Not Tested
- Eddie Clow, 2, Inoperable
- Eddie Clow, 2, Less Than 500 GPM
- Eddie Clow, 2, 500 GPM - 999 GPM
- Eddie Clow, 2, 1,000 GPM - 1,499 GPM
- Eddie Clow, 3, Not Tested
- Eddie Clow, 3, Inoperable
- Eddie Clow, 3, Less Than 500 GPM
- Eddie Clow, 3, 500 GPM - 999 GPM
- Eddie Clow, 3, 1,000 GPM - 1,499 GPM
- Eddie Clow, 3, 1,500 GPM Or Greater
- Kennedy, 3, Not tested
- Kennedy, 3, Less Than 500 GPM
- Kennedy, 3, 1,000 GPM - 1,499 GPM
- Darling, 3, 1,000 GPM - 1,499 GPM
- Pony, 2, Less Than 500 GPM
- Yard Hydrant, 2, Not Tested
- Hhd Fndtn, 0, Not Tested
- 4" dia. Watermain
- 6" dia. Watermain
- 8" dia. Watermain
- 10" dia. Watermain
- 12" dia. Watermain
- 16" dia. Watermain
- 20" dia. Watermain
- 6" dia. Watermain (Private)
- 8" dia. Watermain (Private)
- 10" dia. Watermain (Private)
- 12" dia. Watermain (Private)
- Abandoned Waterline (at Morris Lake)

Pressure Zones

- PRESSURE-ZONE-COLLEGE
- PRESSURE-ZONE-HIGH
- PRESSURE-ZONE-LOW

APPENDIX 5

EXISTING HYDRANT LOCATIONS AND COLOR CLASSIFICATION MAP


Hampton Township
Hampton Township
Andover Township
Andover Township
Fredon Township
Fredon Township
Andover Township
N
Legend
Hydrant Condition
Inoperable
Less Than 500 GPM
500 GPM - 999 GPM
1,000 GPM - 1,499 GPM
1,500 GPM Or Greater
Pressure Zones
PRESSURE-ZONE-COLLEGE
PRESSURE-ZONE-HIGH
PRESSURE-ZONE-LOW
To Show Conditions As Of 08/04/10
0 250 500 1,000 1,500
Feet
Existing Hydrant Locations and Color Classifications
Town of Newton - Sussex County New Jersey
Harold E. Pellow & Associates, Inc.
Consulting Engineers
C.O.A. #24GA27959300
Augusta, N.J.