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December 11, 2009

Ms. Luly Massaro, Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

Re: ***City of Newport, Utilities Department, Water Division***
Docket 4128

Dear Ms. Massaro:

Enclosed please find and original and nine copies of Newport Water's response to the Division of Public Utilities and Carriers' First Set of Data Requests. Please note that one of the attachments to Newport's response to Div. 1-16 is a map of the Water System. I have included only one large scale map in this response. The remainder of the maps are smaller. If the Commission requires any further copies of the large map, please do not hesitate to contact me.

Please note that electronic copies of these documents have been provided to the service list.

Thank you for your attention to this matter.

Sincerely,

Joseph A. Keough Jr.

JAK/kf
Enclosures

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div. 1-1: Please explain whether private fire services are normally serviced by service lines similar to water services. If not, please explain the service connection arrangements.

Response: Private fire services tap off the distribution system in the same manner as domestic services but due to the flows required for fighting a fire, they are generally larger than the domestic service. The owner is responsible for the maintenance and repairs of the fire service from the gate valve tapped off from the main, all the way into the structure. Additionally, unlike other retail connections, private fire services are not metered.

Prepared by: K. Mason

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div. 1-2: Please provide Newport's current private fire service meter investment amount.

Response: None of Newport's private fire service accounts are metered. Therefore there is no investment in private fire service meters.

Prepared by: Harold J. Smith

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div. 1-3: Please explain the nature of the metering arrangements for private fire services.

Response: Private fire services are not metered. They are charged a separate annual fee, according to size of the connection, as detailed in the Rate schedule approved by RIPUC.

Prepared by: K. Mason

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div 1-4: Please explain the nature of the billing arrangements for public and private fire.

Response: Public Fire Protection accounts are billed in advance monthly. The City of Newport chooses to pay its entire bill at the beginning of the year.

Private Fire Protection accounts are billed annually in July of each year.

Prepared by: R Esten

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div. 1-5: Please provide a breakdown of T&D pipe by diameter showing the feet or miles of each size, and if available, investment by size.

Response: As detailed in the 2005 Infrastructure Replacement Plan, the following is a breakdown of pipe by diameter and as measured in linear feet. The investment by pipe size is not available.

1" - 600

1.25"- 700

1.5" - 6,000

2.0" - 25,000

3" - 300

4" - 22,000

6" - 131,000

8"- 299,000

10" - 20,000

12" - 218,000

16" - 46,000

18" - 3,500

20" - 43,000

24" - 39,000

Prepared by: K. Mason

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div. 1-6: Please explain which sized pipe Newport generally considers to be transmission pipe and which sized pipe is generally considered to be distribution pipe.

Response: In general, Newport Water considers any pipe size equal to or greater than 12 inches in diameter to be a transmission line, and pipe less than 12 inches, to be a distribution line.

Prepared by: K. Mason

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div. 1-7: Please identify Newport's current service line investment amount and explain or identify and where the investment is reflected in the cost of service study.

Response: In the available fixed asset records, service line investment is combined with meter investment and it is not possible to segregate the two. Therefore, the investment in service lines is not known. Newport's investment in meters & services assets is shown on RFC Schedule B-5 ($2,976,622). This amount is used in the development of allocation factors used to allocate Newport's annual capital spending and debt service to functional categories. These costs are then allocated to base/extra capacity cost categories and to customer classes in the same way as O&M costs for each functional category are allocated.

Prepared by: Harold J. Smith

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div. 1-8: Reference RFC Schedule D-1:

a. Please provide a breakdown of meter investment by size and, if available, class.

b. Please provide the current average or typical cost of purchasing and installing each size meter.

Response:

a. As indicated in the response to Division DR 1-7, in the available fixed asset records Newport's investment in meters and service lines are combined and it is not possible to segregate the two categories. Therefore, the investment in meters by size and class is not available.

b. In accordance with the annual waterworks supplies bid No. 10-02 effective from July 1, 2009 through June 30, 2010 the current material cost for meters including radio read transceivers and miscellaneous materials is detailed below. Labor costs for installation of meters measuring 5/8" through 1-1/2" are costs currently charged under the Radio Read Meter Reading project Contract No. 08-056, currently ongoing with Newport Water. Larger meter labor costs are based upon estimated installation times and current labor costs from Newport Water staff. The typical costs are as follows:

Size	Material Cost	Labor Cost	Total Cost
5/8" -	$160.53	$113.00	$273.53
¾" -	$189.04	$113.00	$320.04
1" -	$226.84	$113.00	$339.84
1 ½"-	$447.85	$113.00	$560.85
2" -	$588.00	$128.00	$701.00
3" -	$1,234.00	$256.00	$1,490.00
4" -	$1,840.00	$256.00	$2,096.00
6" -	$5,187.00	$384.00	$5,571.00
8" -	$8,480.00	$576.00	$9,056.00

It should be noted that these costs are indicative of the costs that Newport Water is incurring as part of the ongoing Radio Read project, but are not necessarily indicative of the costs associated with the installation of meters that have occurred in the past.

Prepared by: K. Mason

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div. 1-9: Please explain why Newport did not propose customer (base) charges based on meter size.

Response: During the preparation of the cost of service study, the development of base charges based on meter size was considered, but rejected for two reasons. First, it was determined that Newport Water had no reliable data pertaining to the historical cost of installing meters and therefore it would be impossible to develop accurate meter cost equivalency ratios. Second, while it would be possible to use meter cost equivalency ratios developed for other utilities or those presented in AWWA Manual M-1, it was recognized that the implementation of base charges by meter size could cause significant bill impact differentials between customers in the same rate class. In light of the lack of good meter cost data and in order to minimize differential bill impacts, it was decided to propose uniform base charges for all customers regardless of meter size in this filing and to further explore the possibility of proposing base charges by meter size in a future rate filing.

Prepared by: H. Smith

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div. 1-10: Reference RFC Schedule B-9. Please explain why it is reasonable to utilize an average day demand for Navy and Portsmouth which is less than their actual average day demand.

Response: It is presumed that the average day demand values that this question refers to are the "Adjusted Average Daily Demand" values shown on the referenced schedule. These adjusted values were developed and used in the development of base/extra capacity cost allocation factors such that the Navy and Portsmouth would not be allocated costs associated with the production of potable water that did not result in rate revenue since it was not sold to customers.

Prepared by: Harold J. Smith

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div. 1-11: Reference RFC Schedule D-4, unaccounted-for water ("UFW") analysis. Please explain how the quantity of water produced is measured, e.g., raw water intake into treatment facilities, effluent from treatment facilities, other.

Response: The water produced figures in RFC Schedule D-4 reflect the total water available for sale from both treatment plants. The process for determining the volume of water available for sale at each plant is different due to the location of where water is taken off at each plant in relation to where plant effluent is measured. The volume of water available for sale at the Lawton Valley treatment plant is determined by measuring the total plant effluent and then subtracting amounts used for wash water, service water, and surface wash water. For Station 1, water available for sale is determined by measuring plant effluent, adding wash water and then subtracting service water.

Prepared by: Harold J. Smith

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div. 1-12: Please provide all studies, documents and analysis examining the causes of UFW on the Newport system.

Response: Newport Water does not have any studies, documents or analysis specifically examining the cause of UFW on the Newport System.

Newport did conduct a system wide leak detection program over 3 years, which was reviewed in a previous Docket. The three reports are provided again with this response. The leaks identified in the reports have been repaired.

We currently have a leak detection program using Newport Water Staff. Attached is the report on this effort. Also attached is the water main repair report that is maintained.

Prepared by: J. Forgue

City of Newport-Docket 4128												
Div 1-12 Data Response												
Date Defect	**Date repair**				**Pipe**	**Pipe**	**FAILED**	**Type of**	**PIPE**	**HRS**	**EST**	**EST.**
Indentified	**Completed**	**TOWN**	**Location**	**#**	**Size**	**Age**	**OR HIT**	**FAILURE**	**TYPE**	**LEAKING**	**GPM**	**LOSS**
No Leaks identified July 2008												
											TOTAL	3,000

City of Newport-Docket 4128												
Div 1-12 Data Response												
Date Defect	**Date repair**				**Pipe**	**Pipe**	**FAILED**	**Type of**	**PIPE**	**HRS**	**EST**	**EST.**
Indentified	**Completed**	**TOWN**	**Location**	**#**	**Size**	**Age**	**OR HIT**	**FAILURE**	**TYPE**	**LEAKING**	**GPM**	**LOSS**
31-Aug	31-Aug	Midd	Valley Road	391	12"	1957	Failed	Corporation tap	AC	6	30	10,800
29-Aug	3-Sep	Newport	Malbone Road		12"	1911	Failed	Abandoned/stress	Tin	120	2	14,400
13-Aug	15-Aug	Newport	Carroll Avenue	17	3/4"	1965	Failed	Curb Stop	Copper	48	0.5	1,440
									TOTAL GALLONS			26,640

City of Newport-Docket 4128												
Div 1-12 Data Response												
Date Defect	**Date repair**				**Pipe**	**Pipe**	**FAILED**	**Type of**	**PIPE**	**HRS**	**EST**	**EST.**
Indentified	**Completed**	**TOWN**	**Location**	**#**	**Size**	**Age**	**OR HIT**	**FAILURE**	**TYPE**	**LEAKING**	**GPM**	**LOSS**
9/10/2008	9/12/2008	NPT	64 Third Street	64	5/8"	1923	Failed	I.P. threads	lead	48	2	5760
								worn thin				
											Total	**5760**

City of Newport-Docket 4128												
Div 1-12 Data Response												
Date Defect	**Date repair**				**Pipe**	**Pipe**	**FAILED**	**Type of**	**PIPE**	**HRS**	**EST**	**EST.**
Indentified	**Completed**	**TOWN**	**Location**	**#**	**Size**	**Age**	**OR HIT**	**FAILURE**	**TYPE**	**LEAKING**	**GPM**	**LOSS**
10/24/2008	10/24/2008	Midd	Bliss Mine Road		12"	1943	Failed	Stress	AC	5	60	18,000
	10/12/2008	Npt	Earl Avenue	28-32	2"		Failed	Stress	I.P.	4	30	7,200
	10/29/2008	Npt	Freebody Street	28	5/8"	1923	Failed	at PVC	lead	4	15	3,600
								union				**28,800**

City of Newport-Docket 4128
Div 1-12 Data Response

Date Defect Indentified	Date repair Completed	TOWN	Location	#	Pipe Size	Pipe Age	FAILED OR HIT	Type of FAILURE	PIPE TYPE	HRS LEAKING	EST GPM	EST. LOSS
11/26/2008	26-Nov	Npt	Sunshine Ct	10	1"	1916	Failed	age	Galvan	4	7	1,680
11/2/2008	11/2/2008	Npt	Eustis Avenue	81	16"	1939	failed	Bell Joint	CI	12	40	28,800
11/21/2008	11/29/2008	Midd	Shore Drive	103	1 1/4"	1935	failed	copper pin	copper	168	1	10,080
								hole				**40,560**

City of Newport-Docket 4128
Div 1-12 Data Response

Date Defect Indentified	Date repair Completed	TOWN	Location	#	Pipe Size	Pipe Age	FAILED OR HIT	Type of FAILURE	PIPE TYPE	HRS LEAKING	EST GPM	EST. LOSS
12/5/2008	12/6/2008	NPT	Hall at Channing		8"	1960	FAILED	GATE BONNET	C. IRON	18	15	16,200
11/28/2008	12/4/2008	MIDD	EAST MAIN ROAD	496	12"	1950	FAILED	SLEEVE LEAK	AC	144	2	17,280
12/4/2008	12/4/2008	MIDD	HILLSIDE AT BEACON		12"	1955	FAILED	BELL JOINT	AC	10	30	18,000
11/30/2008	12/4/2008	NPT	ANNANDALE ROAD	63	5/8"	1923	FAILED	AT STOP	LEAD	96	2	11,520
12/5/2008	12/5/2008	NPT	CHAPEL STREET	55	1"	1945	FAILED	CORPORATION	IRON	6	25	9,000
11/26/2008	12/2/2008	MIDD	E. MAIN@ AQUIDN		8"	1960	FAILED	8" CAP FAILED	AC	144	5	43,200
11/30/2008	12/1/2008	NPT	CHANNING BY DARTM		6"	1960	FAILED	HYDRANT LATER	C. IRON	24	10	14,400
12/2/2008	12/12/2008	NPT	ANNANDALE TERR	6	1"	1953	FAILED	LEAKING STOP	IRON	240	1	14,440
												144,040

City of Newport-Docket 4128												
Div 1-12 Data Response												
Date Defect	**Date repair**				**Pipe**	**Pipe**	**FAILED**	**Type of**	**PIPE**	**HRS**	**EST**	**EST.**
Indentified	**Completed**	**TOWN**	**Location**	**#**	**Size**	**Age**	**OR HIT**	**FAILURE**	**TYPE**	**LEAKING**	**GPM**	**LOSS**
1/4/2009	1/4/2009	NPT	Van Zandt @ Hall		6"	1890	Failed	Full Blow Out	Tin	1.5	4000	360,000
1/6/2009	1/6/2009	NPT	Mem Blvd @ Red Cross		8"	1939	Failed	Stress Crack	CI	8	100	48,000
							Additional water use, emptying, refilling, flushng					100,000
12/31/2009	1/9/2009	NPT	Cranston Ave.	6	5/8"	1917	Failed	Lead split	lead	216	0.5	6,480
1/21/2009	1/22/2009	NPT	Old Fort Road	11	1"		Failed	At curb Stop	Iron	20	2	2,400
1/22/2009	1/27/2009	NPT	Holland Street	22	4"	1900's	Failed	Stress Crack	Iron	120	2	14,400
1/21/2009	1/23/2009	NPT	Npt. Yacht Club		4"		Failed	Bonnet/gate leak	Iron	44	3	7,920
1/20/2009	1/20/2009	NPT	Byrnes Street	15	1"	1898	Failed	At curb Stop	Iron	24	2	2880
1/10/2009	1/10/2009	NPT	Hunter Ave+Champ		6"	1910	Failed	Stress Crack	Iron	5	30	9,000
1/14/2009	1/14/2009	NPT	Hoffman Place		2"	1898	Failed	Valve Broke	Iron	6	10	3,600
1/12/2009	1/14/2009	NPT	Holland Street	26	1"	1916	Failed	failed at union	Iron	48	3	8,280
1/12/2009	1/12/2009	NPT	Cherry Street	16	1"	1928	Failed	At curb Stop	Iron	5	10	3,000
												565,960

Water System Repairs FY2008												
City of Newport-Docket 4128												
Div 1-12 Data Response												
Date Defect	**Date repair**				**Pipe**	**Pipe**	**FAILED**	**Type of**	**TYPE OF**	**HRS**	**EST**	**EST.**
Indentified	**Completed**	**TOWN**	**Location**	**#**	**Size**	**Age**	**OR HIT**	**FAILURE**	**REPAIR**	**LEAKING**	**GPM**	**LOSS**
2/2422009	2/25/2009	NPT.	Bayside Avenue	34	5/8"		FAILED	at stop	Renew/cop	24	5	7,200
2/22/2009	2/23/2009	NPT.	Everett Street	42	2"	1901	FAILED	coupling	coupling	24	4	5,760
2/13/2009	2/13/2009	NPT.	Third Street	13	3/4"	1890	FAILED	fitting	rep/copper	1	5	300
2/4/2009	2/4/2009	NPT.	Second @ Willow		2"	1890's	FAILED	stress cr	coupling	3	10	1,800
2/15/2000	2/16/2009	NPT.	LaSalle Place	6	2"	1905	FAILED	aged failur	coupling	8	15	7,200
2/8/2009	2/8/2009	NPT.	Old Fort Road	53	6"	1905	FAILED	stress cr	sleeve	8	20	9,600

City of Newport-Docket 4128
Div 1-12 Data Response

Date Defect Indentified	Date repair Completed	TOWN	Location	#	Pipe Size	Pipe Age	FAILED OR HIT	Type of FAILURE	TYPE OF REPAIR	HRS LEAKING	EST GPM	EST. LOSS
3/25/2009	3/24/2009	Newport	Summer Street	13	3/4"	1970	FAILED	Corporation	Tap Saddle	5	6	1,800
3/3/2009	3/5/2009	Newport	Poplar Street	6	3/4"			Curb Stop	Replaced	48	2	5,760
3/24/2009	3/24/2009	Middletown	Adelaide/Sherri		2"	1950	FAILED	Stress Crack	Replaced 2'	10	10	6,000
												13,560

Water System Repairs FY2009				City of Newport-Docket 4128								
				Div 1-12 Data Response								
Date Defect	**Date repair**				**Pipe**	**Pipe**	**FAILED**	**Type of**	**TYPE OF**	**HRS**	**EST**	**EST.**
Indentified	**Completed**	**TOWN**	**Location**	**#**	**Size**	**Age**	**OR HIT**	**FAILURE**	**REPAIR**	**LEAKING**	**GPM**	**LOSS**
4/7/2009	4/7/2009	NEWPORT	CHERRY ST	15	4"	1890	FAILED	STRESS	REPAIR SLEEVE	4	20	4,800
4/24/2009	4/28/2009	NEWPORT	ELLERY RD	BRAGA PK	24"		FAILED	BELL JOINT	BELL JOINT CLAMP	120	25	180,000
4/26/2009	4/27/2009	NEWPORT	GIBBS AVE	214	6"	1900'S	FAILED	STRESS	REPAIR SLEEVE	24	7	10,080
4/23/2009	4/23/2009	NEWPORT	GIDLEY ST.		2"	1900'S	FAILED	STRESS	COUPLINGS	5	15	4500
												199,380

City of Newport-Docket 4128												
Div 1-12 Data Response												
Date Defect	**Date repair**				**Pipe**	**Pipe**	**FAILED**	**Type of**	**PIPE**	**HRS**	**EST**	**EST.**
Indentified	**Completed**	**TOWN**	**Location**	**#**	**Size**	**Age**	**OR HIT**	**FAILURE**	**TYPE**	**LEAKING**	**GPM**	**LOSS**
1-May-09	1-May-09	Newport	Maple Ave		12"	1943		Coupling	A.C	2	1500	180,000
April 23. 2009	14-May-09	Newport	Eustis Avenue	242	18"	1920	failed	lead serv.	lead	504	2	60,480
18-May-09	21-May-09	Newport	Cliff Terrace	10	5/8"	1915	failed	lead serv.	lead	36	3	6,480
DRAINING OF THE GOULART LANE TANK ON MARCH 27, 2009												1,500,000
FLUSHING THE GOULART LANE TANK AND HATCH REPAIRS												500,000
DRAINING THE GOULART LANE TANK AFTER VOC FAILURE												1,500,000
												3,746,960

City of Newport-Docket 4128
Div 1-12 Data Response

Date Defect Indentified	Date repair Completed	TOWN	Location	#	Pipe Size	Pipe Age	FAILED OR HIT	Type of FAILURE	PIPE TYPE	HRS LEAKING	EST GPM	EST. LOSS
6/30/2009	6/30/2009	Newport	Elliot Place	9	1"	1896	Broke during	Road wk.	Galvaniz	1	20	1200
6/22/2009	6/22/2009	Middletown	Vernon Avenue	181	6"	1914	FAILED	total	cast iron	??? 6	400	144,000
6/17/2009	6/18/2009	Newport	Bedlow Avenue	#6	5/8"	1913	FAILED	joint	lead	24	10	14,400
6/22/2009	6/22/2009	Newport	Second Street	102	4"	1931	FAILED	stress	cast iron	6	30	7,200
												166800

City of Newport- Docket 4128												
Div 1-12 Data Response												
Date Defect	**Date repair**				**Pipe**	**Pipe**	**FAILED**	**Type of**	**PIPE**	**HRS**	**EST**	**EST.**
Indentified	**Completed**	**TOWN**	**Location**	**#**	**Size**	**Age**	**OR HIT**	**FAILURE**	**TYPE**	**LEAKING**	**GPM**	**LOSS**
		MIDD	**RESERVOIR ROAD**	79	5/8"		FAILED	LEAK AT CORP	LEAD	48	5	14,400
20-Jul-09	22-Jul-09	NPT	SECOND STREET	93	3/4"		FAILED	FITTING	COPPER			
		MIDD	**RESERVOIR ROAD**	79	5/8"	1912	FAILED	LEAK AT CORP	LEAD	4320	15	3,888,000
		FOUND DURING LEAK DETECTION. THE OWNER SUGGESTED THEY HAVE HAD LOW										
		PRESSURE SINCE WINTER. ESTIMATING 6 MONTHS OF LEAKING AT 15 GALLONS										
		PER MINUTE										

City of Newport- Docket 4128												
Div 1-12 Data Response												
Date Defect	**Date repair**				**Pipe**	**Pipe**	**FAILED**	**Type of**	**PIPE**	**HRS**	**EST**	**EST.**
Indentified	**Completed**	**TOWN**	**Location**	**#**	**Size**	**Age**	**OR HIT**	**FAILURE**	**TYPE**	**LEAKING**	**GPM**	**LOSS**
1-Aug-09	2-Aug-09	NPT.	SHERMAN ST.	34	4"	1884	FAILED	STRESS CRACK	CAST	16	15	14,400
8/12/2009	8/14/2009	MIDD	TUCKERMAN AV	262	6"	1951	FAILED	BELL JOINT LEAK	CAST	48	10	28,800
												43,200

City of Newport- Docket 4128												
Div 1-12 Data Response												
Date Defect	**Date repair**				**Pipe**	**Pipe**	**FAILED**	**Type of**	**PIPE**	**HRS**	**EST**	**EST.**
Indentified	**Completed**	**TOWN**	**Location**	**#**	**Size**	**Age**	**OR HIT**	**FAILURE**	**TYPE**	**LEAKING**	**GPM**	**LOSS**
9/14/2009	WATER MAIN FLUSHING PROGRAM											
13 NIGHTS X 3 CREWS PER NIGHT = 39 NIGHTS X 2 HOURS AT 700 GPM AVERAGE = 3,276,000 GALLONS										MG	3,276	
HYDRANT BLOW OFFS RUNNING AT OCEAN AVENUE AND WPC FACILITY ON CONNELL HIGHWAY												
SEPTEMBER 1 THRU SEPTEMBER 3 2 HYDRANTS AT 300 GPM =600 GPM X 2 DAYS = 1,728,000										MG	1,728	
HYDRANT BLOW OFFS RUNNING AT OCEAN AVENUE AND WPC FACILITY ON CONNELL HIGHWAY												
SEPTEMBER 16 THRU SEPTEMBER 30 2 HYDRANTS AT 200 GPM = 400 GPM X 14 DAYS = 8,064,000										MG	8,064	
										MG	**13,068**	
								ESTIMATED TOTAL **13,068,000** GALLONS				

City of Newport- Docket 4128												
Div 1-12 Data Response												
Date Defect	**Date repair**				**Pipe**	**Pipe**	**FAILED**	**Type of**	**PIPE**	**HRS**	**EST**	**EST.**
Indentified	**Completed**	**TOWN**	**Location**	**#**	**Size**	**Age**	**OR HIT**	**FAILURE**	**TYPE**	**LEAKING**	**GPM**	**LOSS**
19-Oct	21-Oct	Npt	SYCAMORE ST	2	5/8"		FAILED	AT STOP	LEAD	48	3	8,640
19-Oct	20-Oct	Npt	VERNON AVENUE	23	5/8"		FAILED	AT STOP	LEAD	24	5	7,200
20-Oct	26-Oct	Npt	13 OLD BEACH RD	13	5/8"	1920	FAILED	AT STOP	LEAD	144	1	8,640
2-Oct	2-Oct	Npt	HAMMERSMITH RD	15	1"	1980	FAILED	AT STOP	COPP	24	2	2,880
30-Oct	30-Oct	Npt	BUTLER STREET	15	1"	1905	FAILED	AT CORP	GALV	6	15	5,400
1-Oct	14-Oct	Npt	THAMES STREET	194	5/8"		FAILED	AT STOP	LEAD	336	2	
HYDRANT BLOW OFFS RUNNING AT OCEAN AVENUE AND WPC FACILITY ON CONNELL HIGHWAY												
OCT 1 THRU OCTOBER 30 2 HYDRANTS AT 200 GPM = 400 GPM X 30 DAYS = 17,280,000												17,280,000
OCT 1 THRU OCT 10 WATER MAIN FLUSHING PROGRAM												
7 NIGHTS X 3 CREWS PER NIGHT = 21 NIGHTS X 2 HOURS AT 700 GPM AVERAGE = 1,764,000 GALLONS												1,764,000
												19,076,760

City of Newport- Docket 4128												
Div 1-12 Data Response												
Date Defect	**Date repair**				**Pipe**	**Pipe**	**FAILED**	**Type of**	**PIPE**	**HRS**	**EST**	**EST.**
Indentified	**Completed**	**TOWN**	**Location**	**#**	**Size**	**Age**	**OR HIT**	**FAILURE**	**TYPE**	**LEAKING**	**GPM**	**LOSS**
1-Nov	1-Nov	Npt	Stevenson Pl.	3	1 1/2"	1909	Failed	Stress Crack	Galv	10	10	6,000
30-Oct	2-Nov	Npt	Wickham Rd			1957	Failed	at Hydrant	Cast	72	2	8,640
23-Nov	24-Nov	Midd	Harbor View	5	1"	1947	Failed	at Coupling	Galv	18	5	5,400
22-Nov	23-Nov	Npt	Third Street	102	1"	1903	Failed	at Curb Stop	Galv	16	3	2,880
												22,920

Heath Consultants Incorporated

File

WATER LEAK DETECTION SURVEY
CONDUCTED FOR
CITY OF NEWPORT
NEWPORT, RI

HEATH CONSULTANTS

HEATH CONSULTANTS 1933 70th Anniversary 2003

Heath Consultants Incorporated

March 7, 2003

Mr. Jay Watts
City of Newport
Water Department
70 Hallsey Street
Newport, RI 02840

Dear Mr. Watts:

Enclosed is your copy of the final report for the Water Leak Detection Survey conducted by Heath Consultants Incorporated.

The following summary page will give you further details concerning this survey. If you have any questions, please contact us.

Also included with this report is a Customer Satisfaction Survey. We would appreciate your time in completing this survey. Heath Consultants Incorporated continually strives to improve the level of quality service provided to customers. Upon completion, please return the survey in the enclosed postage paid envelope.

We appreciate this opportunity to be of service to you.

Sincerely,

Donald Keller (mjt)

Donald Keller
Project Manager

DK/mjt

Cc: Ed Miliczki
West Newton

119 North Water Street, West Newton, PA 15089
Phone: (724) 872-3007 • Fax: (724) 872-3177

HEATH CONSULTANTS

339-AQ-20312-025
REFERENCE NUMBER

Summary of

WATER LEAKAGE CONTROL SURVEY

FOR

NEWPORT WATER DEPT	NEWPORT, RI	
COMPANY	CITY AND STATE	DISTRICT OR DIVISION

Conducted by Our Consultant(s) JOHN MERRITT

DATE STARTED 1-21-03 DATE COMPLETED 2-06-03 TOTAL DAYS 13

CLASSIFICATION	NUMBER	ESTIMATED LEAKAGE X GPM	X GPD	X GPY	AF/Y
1	4	105	151,200	55,188,000	
2	2	20	28,800	10,512,000	
3	4	12.5	18,000	6,570,000	
TOTALS	10	137.5	198,000	72,270,000	

GPM = Gallons/Minute GPD = Gallons/Day GPY = Gallons/Year AF/Y = Acre Feet/Year

SOURCE OF LEAKAGE	NUMBER	GPM	% OF TOTAL NO.	% OF TOTAL EST. GPM
MAINS	4	50	40%	36%
SERVICES	4	82	40%	60%
VALVES	0			
HYDRANTS	2	5.5	20%	4%
TOTALS	10	137.5	100%	100%

TYPE OF SURVEY PERFORMED COMPREHENSIVE

MILES OF MAIN INSPECTED 45.0

NUMBER OF SERVICES INSPECTED _____
(If applicable) PINPOINTING HOURS 14

NUMBER OF LEAK INDICATIONS 10

Grade 1 (C) 10.1 to _____ GPM
Grade 2 (B) 5.1 to 10 GPM
Grade 3 (A) .1 to 5 GPM

LEAK INDICATION CLASSIFICATION

Leak indication classification is not an exact science. In spite of the use of the most modern instruments plus complete training and experience by the consultant, it is impossible to determine the exact condition of underground piping without actually exposing same. In view of this limitation, our classification (including estimated volume loss) is intended as an aid in scheduling repairs based upon the information available, the consultant's judgement, and site conditions at the time the report is prepared. Variable factors beyond our control may alter this classification at any time. Once the leak is exposed for repair, the utility may wish to revise the volume loss estimate, in order to establish a more accurate estimate of actual water loss.

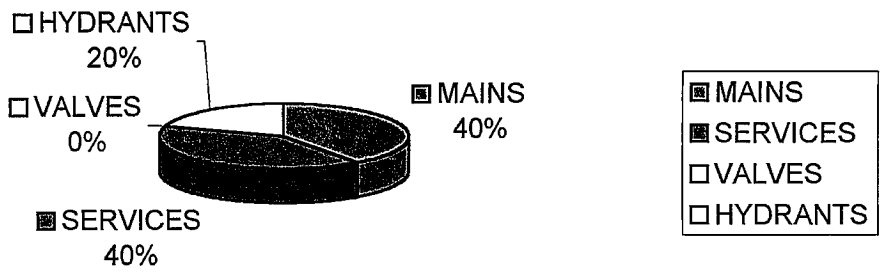
SPECIAL CASES

Contact Heath Consultants Incorporated for further information regarding any Special Case such as: emergency assistance, inspecting river/canal crossings, analysis/audit of in-house leakage programs, third party verification, hands-on training, etc.

Our consultants will be available on a 24-hour notice to assist you.

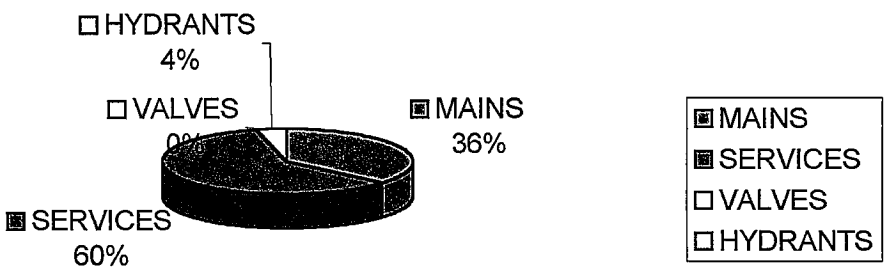
CITY OF NEWPORT
NEWPORT, RI

% NUMBER OF LEAKS PER LEAKAGE SOURCE



Source of Leakage	Number of Leaks
MAINS	4
SERVICES	4
VALVES	0
HYDRANTS	2

% OF TOTAL ESTIMATED GPM PER LEAKAGE SOURCE



Source of Leakage	Estimated GPM
MAINS	50
SERVICES	82
VALVES	0
HYDRANTS	5.5

CITY OF NEWPORT
NEWPORT, RI

POSITIVE STREET REPORTS

I N D E X

AQ-20312

→ = City located & asked for assistance

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 1
Date 28 JANUARY 2003
Ownership (Public) Private Easement
Leak Indication Classification
(I(C)) II(B) III(A)
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company CITY WATER DEPT. District
City NEWPORT State RHODE ISLAND
Nearest Street Address
82 BRIDGE ST

INDICATION OF LEAK

Sonic	X
Surfaced Water	
Other	

LEAKAGE DETECTED AT:

Main Valve	X
Curb Valve	
Meter Box	
Selected Test	X
Hydrant	X
See Remarks	

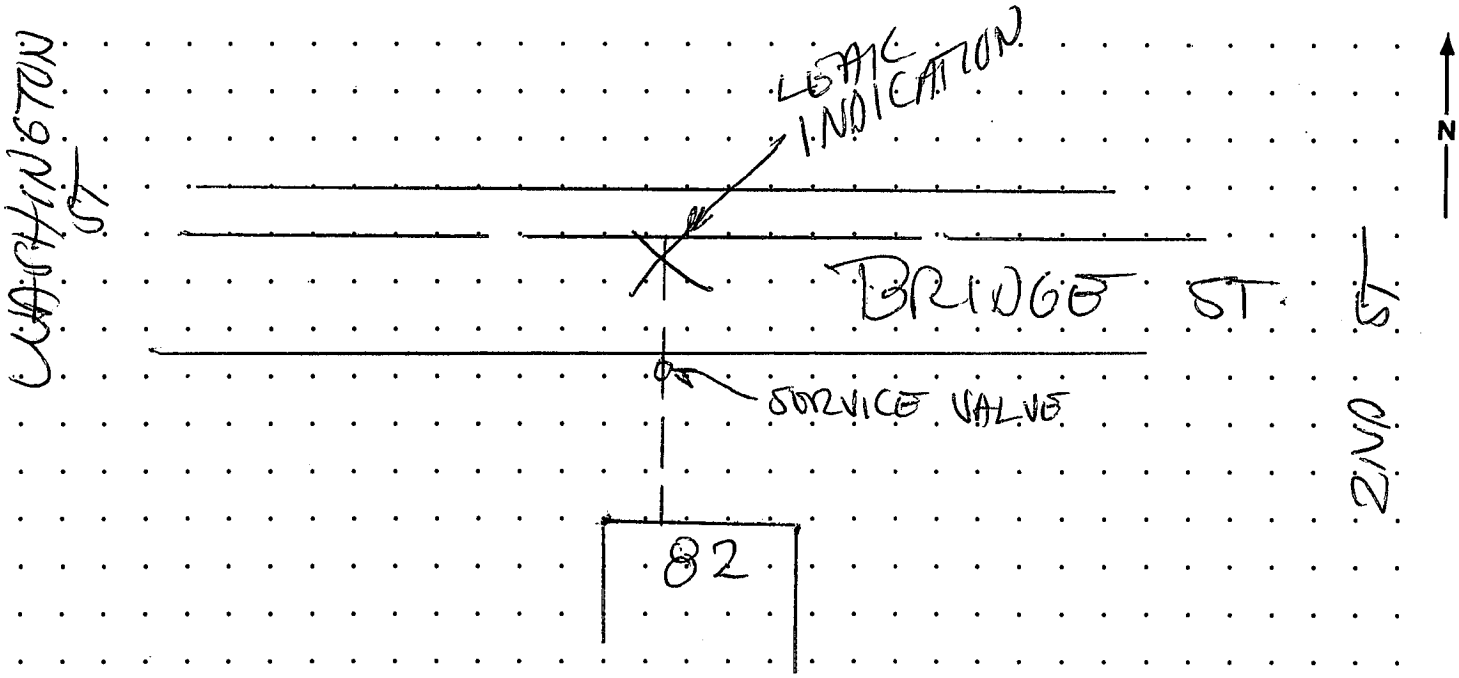
LEAK APPEARS TO BE ON:

Main	
Service	X
Joint Connection	
Hydrant	
Valve	
Misc.	

COVER

Concrete	
Asphalt	X
Brick	
Gravel	
Soil	
Other	

ESTIMATION OF LEAKAGE:
30 GPM



Remarks LEAK APPEARS TO BE ON THIS SERVICE.

Company Representative

Heath Consultant

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 2
Date 30 JANUARY 2003
Ownership (Public) Private Easement
Leak Indication Classification
I(C) II(B) (III(A))
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company CITY WATER DEPT. District
City NEWPORT State RHODE ISLAND

Nearest Street Address
JOHNSON CT AT KINGSTON AVE

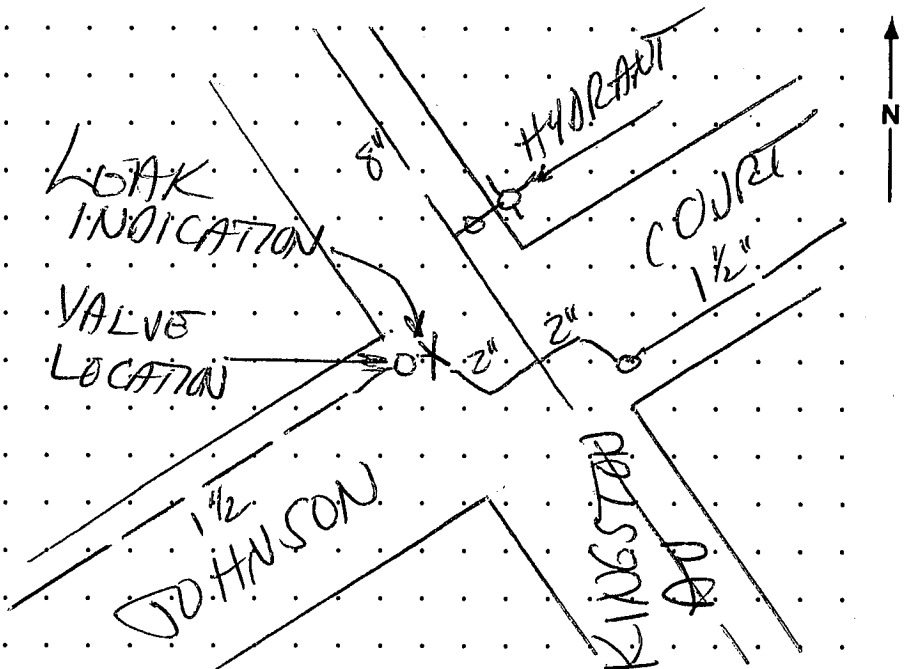
INDICATION OF LEAK	
Sonic	X
Surfaced Water	
Other	

ESTIMATION OF LEAKAGE:
5 6PM

LEAKAGE DETECTED AT:	
Main Valve	X
Curb Valve	
Meter Box	
Selected Test	X
Hydrant	X
See Remarks	

LEAK APPEARS TO BE ON:	
Main	X
Service	
Joint Connection	
Hydrant	
Valve	
Misc.	

COVER	
Concrete	
Asphalt	X
Brick	
Gravel	
Soil	
Other	



Remarks LEAK APPEARS TO BE ON THIS MAIN IN THE NORTH WEST CORNER OF THIS INTERSECTION.

Company Representative

Heath Consultant

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 3
Date 30 JANUARY 2003
Ownership (Public) Private Easement
Leak Indication Classification
(I(C)) II(B) III(A)
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company CITY WATER DEPT. District
City NEWPORT State RHODE ISLAND
Nearest Street Address
5 CONGDON ST

INDICATION OF LEAK

Sonic	X
Surfaced Water	
Other	

LEAKAGE DETECTED AT:

Main Valve	X
Curb Valve	X
Meter Box	
Selected Test	X
Hydrant	X
See Remarks	

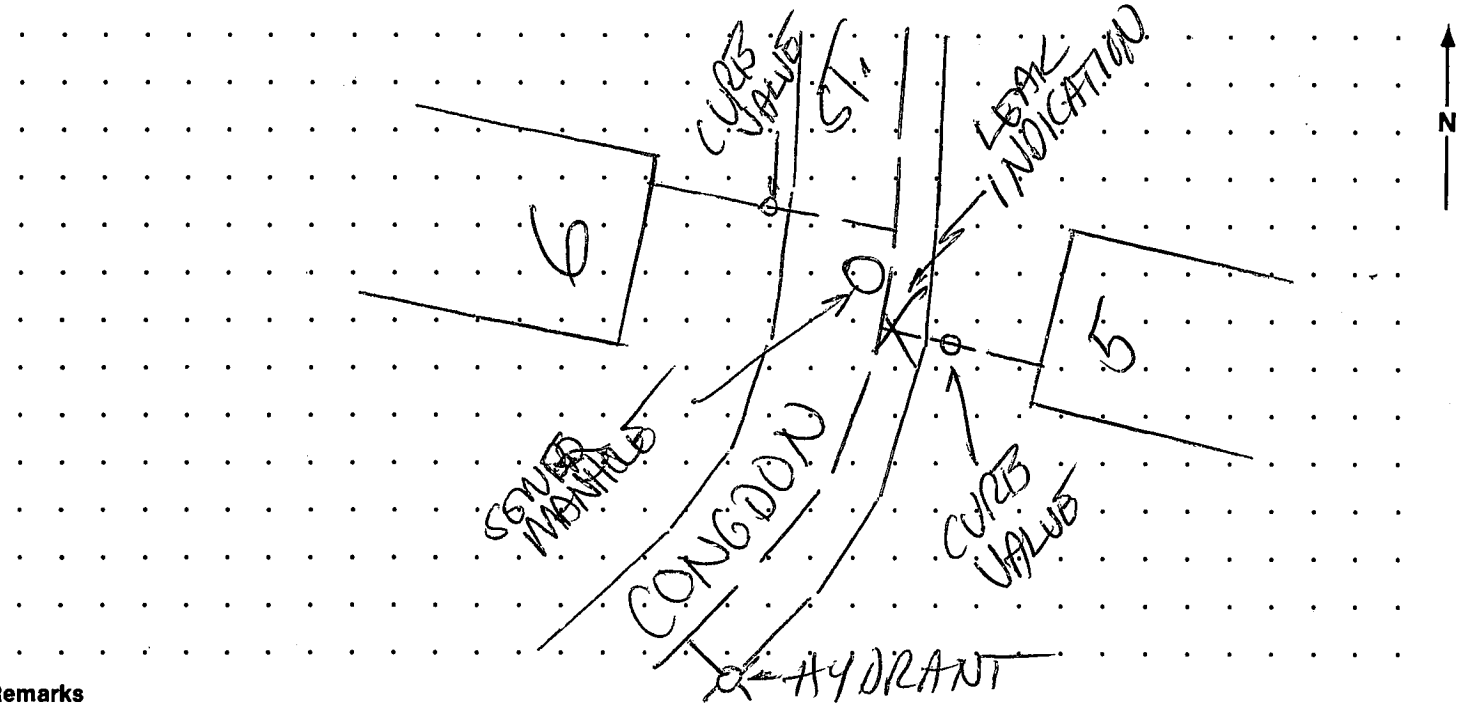
LEAK APPEARS TO BE ON:

Main	
Service	X
Joint Connection	
Hydrant	
Valve	
Misc.	

COVER

Concrete	
Asphalt	X
Brick	
Gravel	
Soil	
Other	

ESTIMATION OF LEAKAGE:
25 GPM



Remarks
LEAK APPEARS TO BE AT OR NEAR THIS SERVICE TAP.

Company Representative

Heath Consultant

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 4
Date 31 JANUARY 2003
Ownership (Public) Private Easement
Leak Indication Classification
(I(C)) II(B) III(A)
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company CITY WATER DEPT District
City NEWPORT State RHODE ISLAND
Nearest Street Address
207 BROADWAY

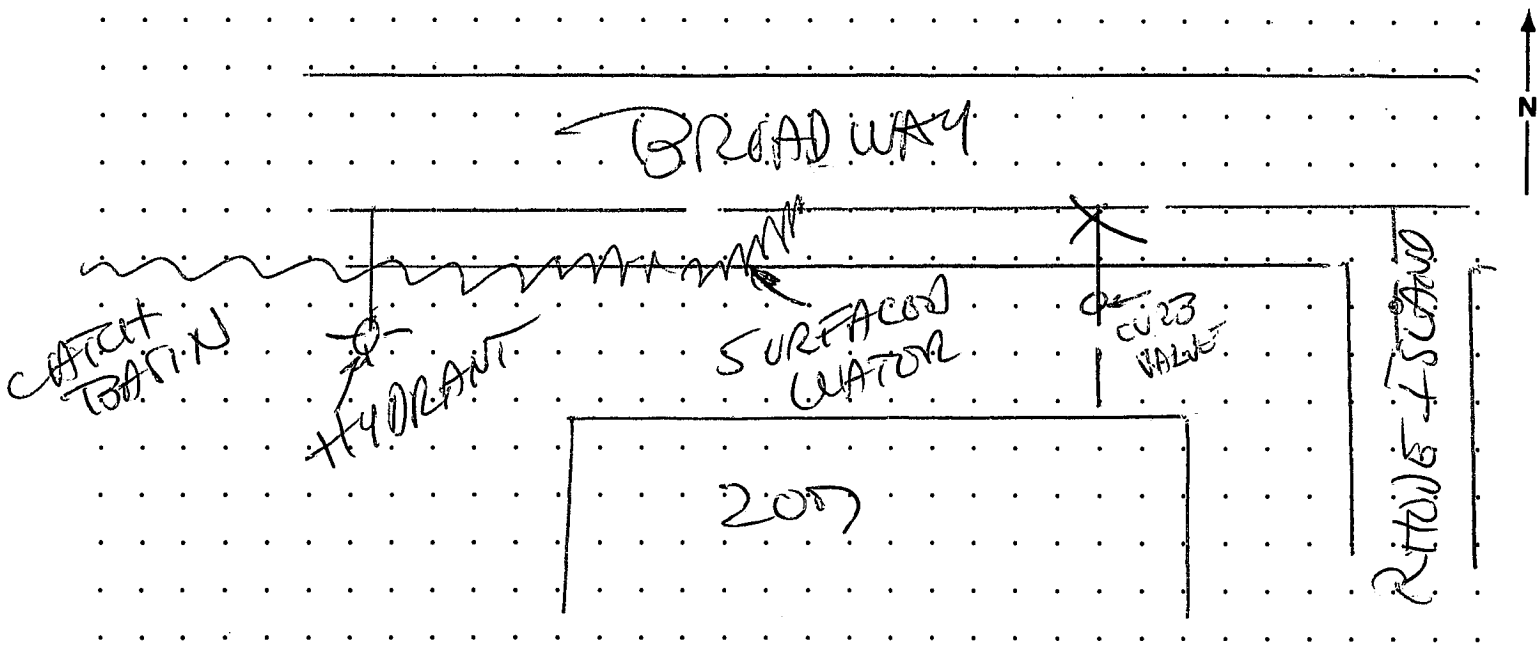
INDICATION OF LEAK	
Sonic	X
Surfaced Water	X
Other	

LEAKAGE DETECTED AT:	
Main Valve	X
Curb Valve	X
Meter Box	
Selected Test	X
Hydrant	X
See Remarks	

LEAK APPEARS TO BE ON:	
Main	
Service	X
Joint Connection	
Hydrant	
Valve	
Misc.	

COVER	
Concrete	
Asphalt	X
Brick	
Gravel	
Soil	
Other	

ESTIMATION OF LEAKAGE:
25 GPM



Remarks LEAK APPEARS TO BE AT THIS SERVICE TAP.

Company Representative

Heath Consultant

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 15
Date 31 JANUARY 2003
Ownership (Public) Private Easement
Leak Indication Classification
I(C) (II(B)) III(A)
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company CITY WATER DEPT. District
City NEWPORT State RHODE ISLAND
Nearest Street Address
GURNEY CT. N OF CHERRY ST.

INDICATION OF LEAK

Sonic	X
Surfaced Water	
Other	

ESTIMATION OF LEAKAGE:

10 GPM

LEAKAGE DETECTED AT:

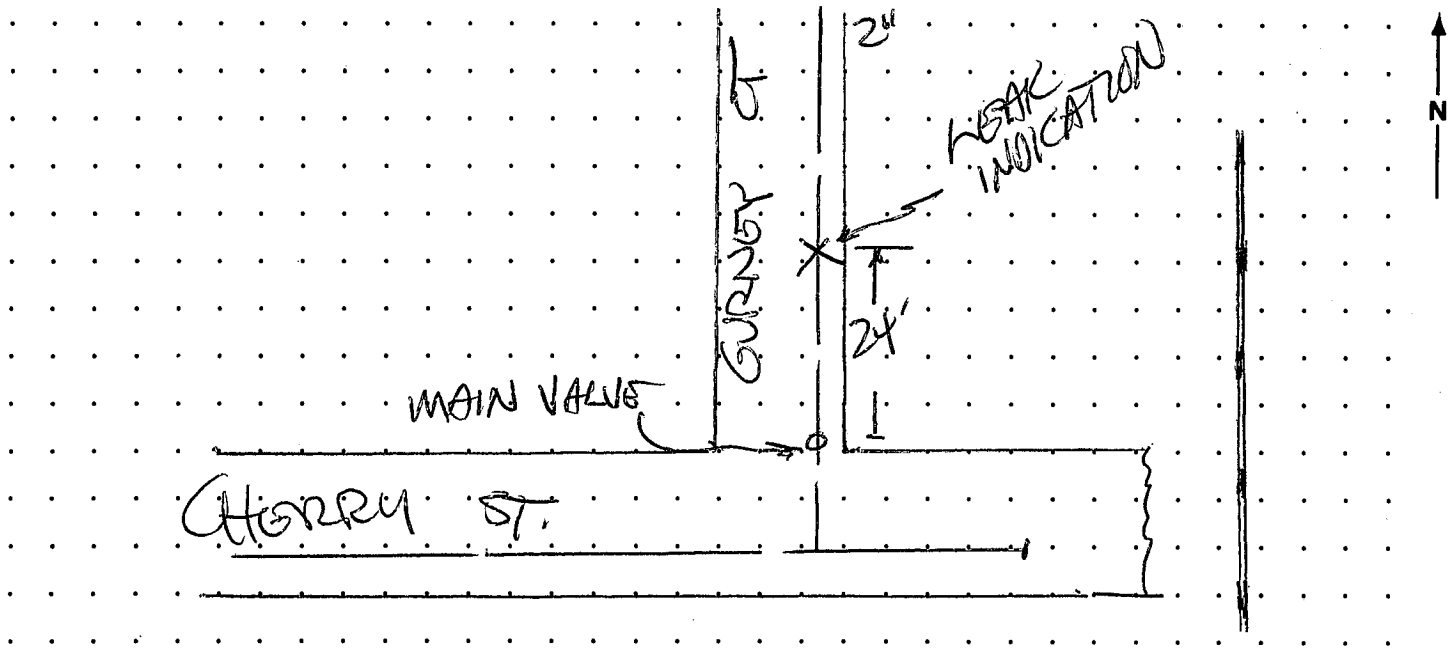
Main Valve	X
Curb Valve	
Meter Box	
Selected Test	X
Hydrant	
See Remarks	

LEAK APPEARS TO BE ON:

Main	X
Service	
Joint Connection	X
Hydrant	
Valve	
Misc.	

COVER

Concrete	
Asphalt	X
Brick	
Gravel	
Soil	
Other	



Remarks LEAK APPEARS TO BE ON THIS MAIN AT A POINT ABOUT 24 FOOT NORTH OF THE VALVE.

Company Representative

Heath Consultant

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 6
Date 31 JANUARY 2003
Ownership Public Private Easement
Leak Indication Classification
I(C) II(B) III(A)
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company CITY WATER DEPT. District
City NEWPORT State RHODE ISLAND
Nearest Street Address
LAWTON VALLEY TREATMENT PLANT

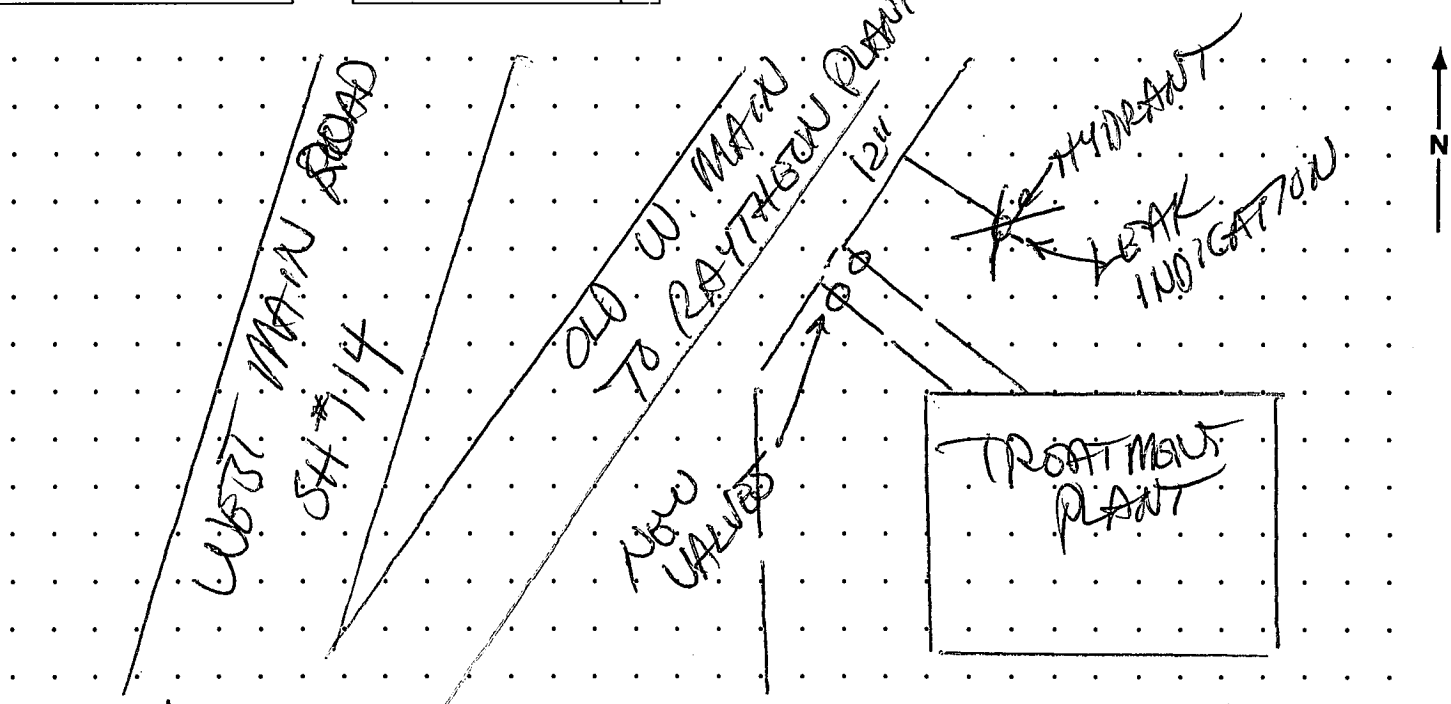
INDICATION OF LEAK	
Sonic	X
Surfaced Water	
Other	

LEAKAGE DETECTED AT:	
Main Valve	
Curb Valve	
Meter Box	
Selected Test	X
Hydrant	X
See Remarks	

LEAK APPEARS TO BE ON:	
Main	
Service	
Joint Connection	
Hydrant	X
Valve	
Misc.	

COVER	
Concrete	
Asphalt	
Brick	
Gravel	
Soil	X
Other	

ESTIMATION OF LEAKAGE:
.5 GPM



Remarks LEAK APPEARS TO BE ON THIS HYDRANT.

Company Representative

Heath Consultant

HEATH CONSULTANTS

Page No. 7

Date 31 JANUARY 2003

Ownership (Public) Private Easement

Leak Indication Classification

I(C) (II(B)) III(A)

(Circle One)

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

LEAKAGE CONTROL REPORT
WATER SURVEY

Company CITY WATER DEPT. District MIDDLETOWN

City NEWPORT State RHODE ISLAND

Nearest Street Address

MEMORIAL BLVD ATLANTIC BEACH CLUB

INDICATION OF LEAK		LEAKAGE DETECTED AT:		LEAK APPEARS TO BE ON:		COVER	
Sonic	X	Main Valve	X	Main	X	Concrete	X
Surfaced Water		Curb Valve		Service		Asphalt	
Other		Meter Box		Joint Connection		Brick	
		Selected Test	X	Hydrant		Gravel	
		Hydrant	X	Valve		Soil	
				Misc.		Other	
		See Remarks					

ESTIMATION OF LEAKAGE:

10 GPM

Remarks LEAK APPEARS TO BE ON THIS MAIN JUST WEST OF THE VALVE IN THE ISLAND.

Company Representative

Heath Consultant

Page No. 8

Date 3 FEBRUARY 2003

Ownership (Public) Private Easement

Leak Indication Classification

I(C) II(B) (III(A)) *(Circle One)*

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

LEAKAGE CONTROL REPORT
WATER SURVEY

Company CITY WATER DEPT. District

City NEWPORT State RHODE ISLAND

Nearest Street Address

294 OCEAN DRIVE

INDICATION OF LEAK

Sonic	X
Surfaced Water	X
Other	

LEAKAGE DETECTED AT:

Main Valve	
Curb Valve	X
Meter Box	X
Selected Test	X
Hydrant	
See Remarks	

LEAK APPEARS TO BE ON:

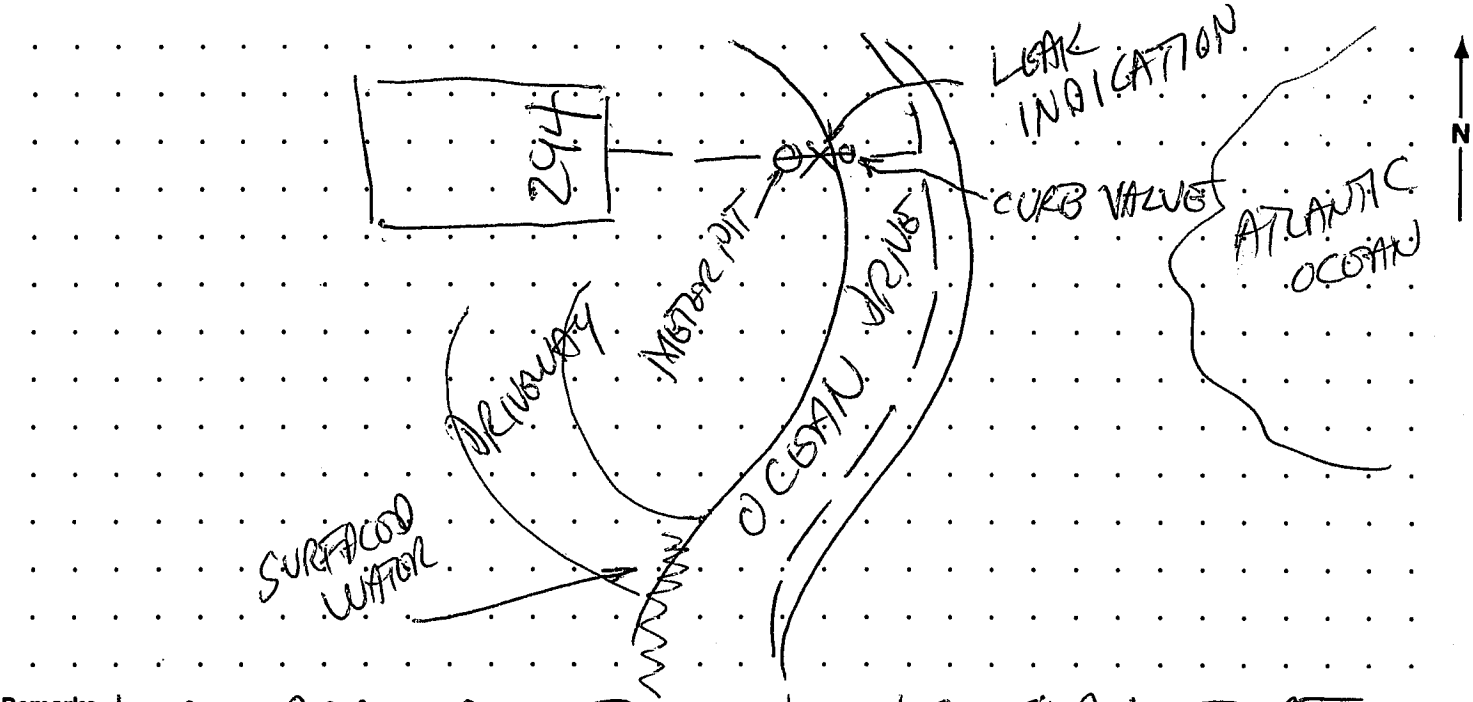
Main	
Service	X
Joint Connection	
Hydrant	
Valve	
Misc.	

COVER

Concrete	
Asphalt	X
Brick	
Gravel	
Soil	X
Other	

ESTIMATION OF LEAKAGE:

2 GPM



Remarks LEAK APPEARS TO BE ON THIS SERVICE AT A POINT BETWEEN THE CURB VALVE AND THE METER PIT.

Company Representative

Heath Consultant

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 9
Date 4 FEBRUARY 2003
Ownership (Public) Private Easement
Leak Indication Classification
(I(C)) II(B) III(A)
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company CITY WATER DEPT. District
City NEWPORT State RHODE ISLAND

Nearest Street Address
SPRING ST AT NARRAGANSETT AVE

INDICATION OF LEAK

Sonic	X
Surfaced Water	X
Other	

ESTIMATION OF LEAKAGE:
25 GPM

LEAKAGE DETECTED AT:

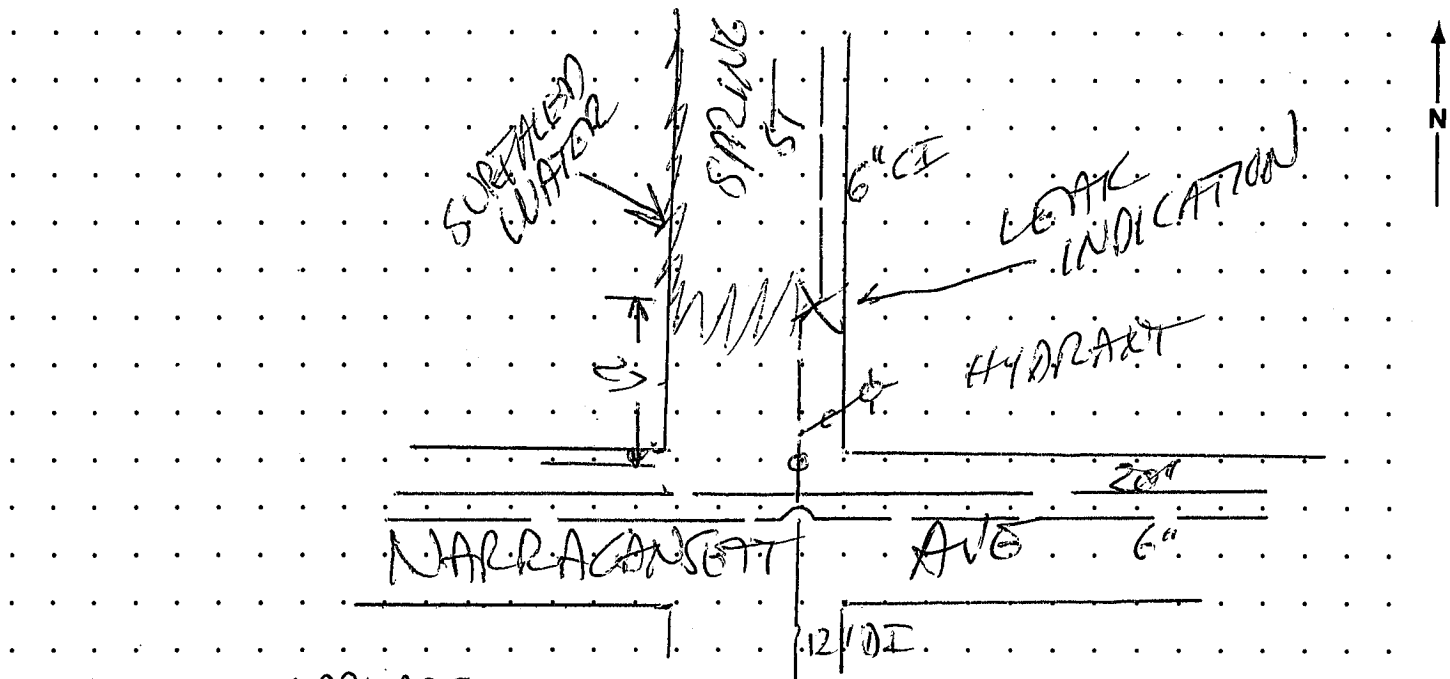
Main Valve	X
Curb Valve	X
Meter Box	
Selected Test	X
Hydrant	X
See Remarks	

LEAK APPEARS TO BE ON:

Main	X
Service	
Joint Connection	X
Hydrant	
Valve	
Misc.	

COVER

Concrete	X
Asphalt	
Brick	
Gravel	
Soil	
Other	



Remarks LEAK APPEARS TO BE ON THE MAIN AT A POINT ABOUT 20 FEET NORTH OF THE VALVE ON THE NPL OF NARRAGANSETT.

Company Representative

Heath Consultant

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 10
Date 4 FEBRUARY 2003
Ownership (Public) Private Easement
Leak Indication Classification
I(C) II(B) (III(A))
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company CITY WATER DEPT. District
City NEWPORT State RHODE ISLAND
Nearest Street Address
BROADWAY AT BEDLOW AVE

INDICATION OF LEAK

Sonic	X
Surfaced Water	
Other	

LEAKAGE DETECTED AT:

Main Valve	X
Curb Valve	
Meter Box	
Selected Test	X
Hydrant	X
See Remarks	

LEAK APPEARS TO BE ON:

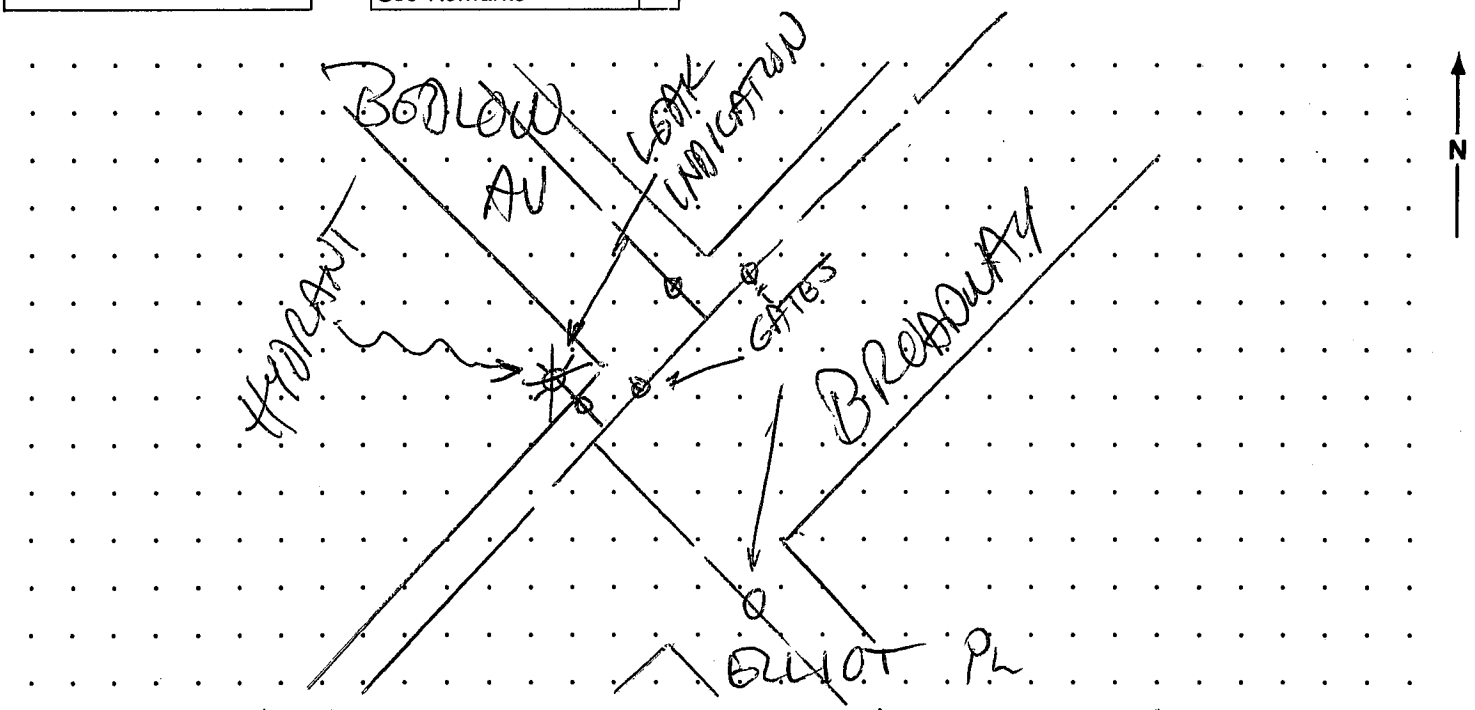
Main	
Service	
Joint Connection	
Hydrant	X
Valve	
Misc.	

COVER

Concrete	X
Asphalt	X
Brick	
Gravel	
Soil	
Other	

ESTIMATION OF LEAKAGE:

5 GPM



Remarks LEAK APPEARS TO BE ON THIS HYDRANT.

Company Representative

Heath Consultant

Heath Consultants Incorporated

File

WATER LEAK DETECTION SURVEY
CONDUCTED FOR
CITY OF NEWPORT
NEWPORT, RI
2005

HEATH CONSULTANTS

Heath Consultants Incorporated

June 6, 2005

Mr. Jay Watts
City of Newport
70 Hallsey Street
Newport, RI 02840

Dear Mr. Watts:

Enclosed is your copy of the final report for the Water Leak Detection Survey conducted by Heath Consultants Incorporated.

The following summary page will give you further details concerning this report. If you have any questions, please contact us.

We appreciate this opportunity to be of service to you.

Sincerely,

Donald Keller (mjt)

Donald Keller
Project Manager

DK/mjt

Cc: Ed Miliczki
West Newton

119 North Water Street, West Newton, PA 15089
Phone: (724) 872-3007 • Fax: (724) 872-3177

344-SAQ-21599-025

REFERENCE NUMBER

HEATH CONSULTANTS

Summary of

WATER LEAK CONTROL SURVEY

FOR

CITY OF NEWPORT	NEWPORT, RI	
COMPANY	CITY AND STATE	DISTRICT OR DIVISION

Conducted by our Consultant(s) RICK WALTER

DATE STARTED 04/18/2005 DATE COMPLETED 05/03/2005 TOTAL DAYS 11

CLASSIFICATION	NUMBER	ESTIMATED LEAKAGE ✗ GPM	✗ GPD	✗ GPY ___ AF/Y
1	2	37	53,280	19,447,200
2	1	7	10.080	3.679.200
3	4	4	5.760	2.102.400
TOTALS	7	48	69,120	25,228,800

GPM = Gallons/Minute GPD = Gallons/Day GPY = Gallons/Year AF/Y = Acre Free/Year

SOURCE OF LEAKAGE	NUMBER	GPM	% OF TOTAL NO.	% OF TOTAL EST. GPM
MAINS	2	37	29%	77%
SERVICES	0	0	0%	0%
VALVES	1	7	14%	15%
HYDRANTS	4	4	57%	8%
TOTALS	7	48	100%	100%

TYPE OF SURVEY PERFORMED COMPREHENSIVE

MILES OF MAIN INSPECTED 45

NUMBER OF SERVICES INSPECTED ___
(If applicable)

NUMBER OF LEAK INDICATIONS 7

Leak Indication Classification

Leak indication classification is not an exact science despite the use of modern instruments as well as training and experience by the Consultant, it is impossible to determine the exact condition of underground piping without actually exposing it. In view of this limitation, our classification (including estimated volume loss) is intended as an aid in scheduling repairs based upon information available, the Consultant's judgment, and site conditions at the time the report is prepared. Variable factors beyond our control may alter this classification at any time. Once the leak is exposed for repair, the Utility may wish to revise the volume loss estimate in order to establish a more accurate estimate of actual water loss.

Grade 1 (C) 15 to + GPM
Grade 2 (B) 5 to 15 GPM
Grade 3 (A) 1 to 5 GPM

SPECIAL CASES

Contact Heath Consultants Incorporated for further information regarding any Special Cases such as emergency assistance, inspecting river/canal crossings, analysis/audit of in-house leakage programs, third party verification, hands-on training, etc.

Our Consultants will be available on a 24 hour notice to assist you.

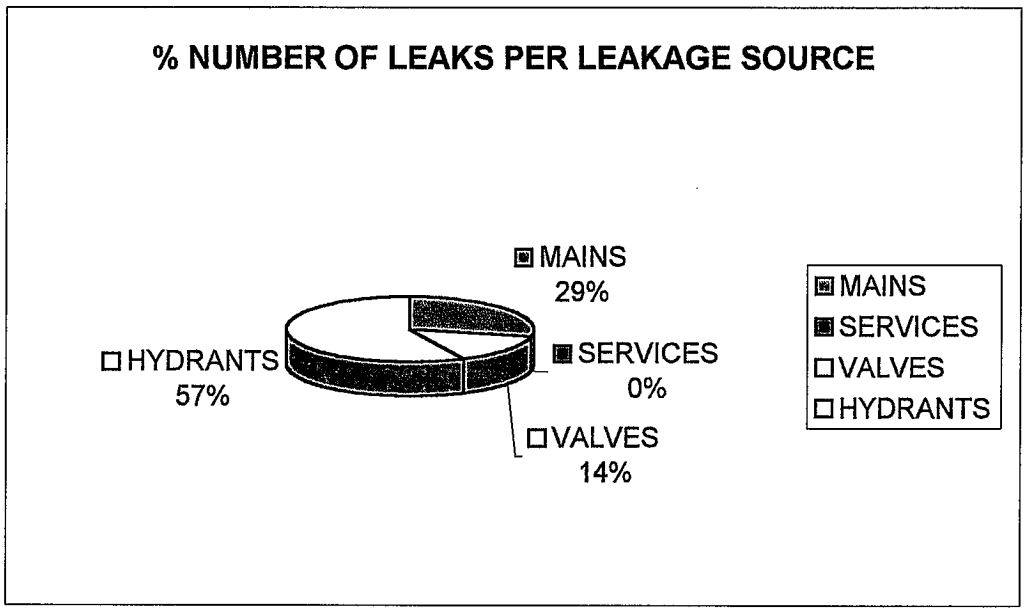
City of Newport
Newport, RI

POSITIVE STREET REPORTS

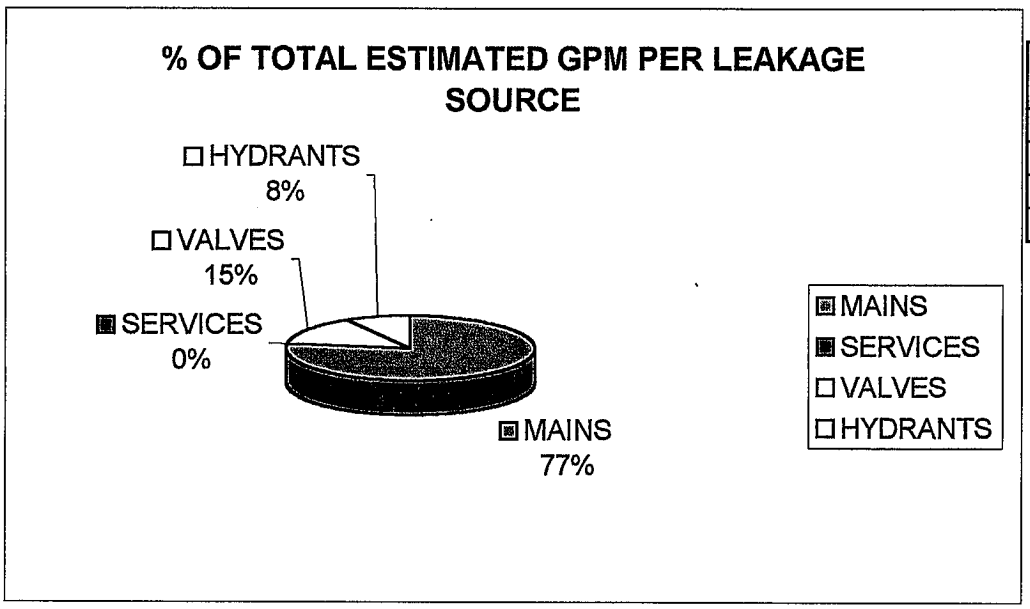
I N D E X

SAQ-21599

City of Newport
Newport, RI



Source of Leakage	Number of Leaks
MAINS	2
SERVICES	0
VALVES	1
HYDRANTS	4



Source of Leakage	Estimated GPM
MAINS	37
SERVICES	0
VALVES	7
HYDRANTS	4

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 1
Date 4-19-05
Ownership (Public) Private Easement
Leak Indication Classification
I(C) II(B) (III(A))
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company City of Newport District
City Middletown State RI
Nearest Street Address

OAK FOREST DR #115

INDICATION OF LEAK

Sonic	X
Surfaced Water	
Other	

ESTIMATION OF LEAKAGE:

1 GPM

LEAKAGE DETECTED AT:

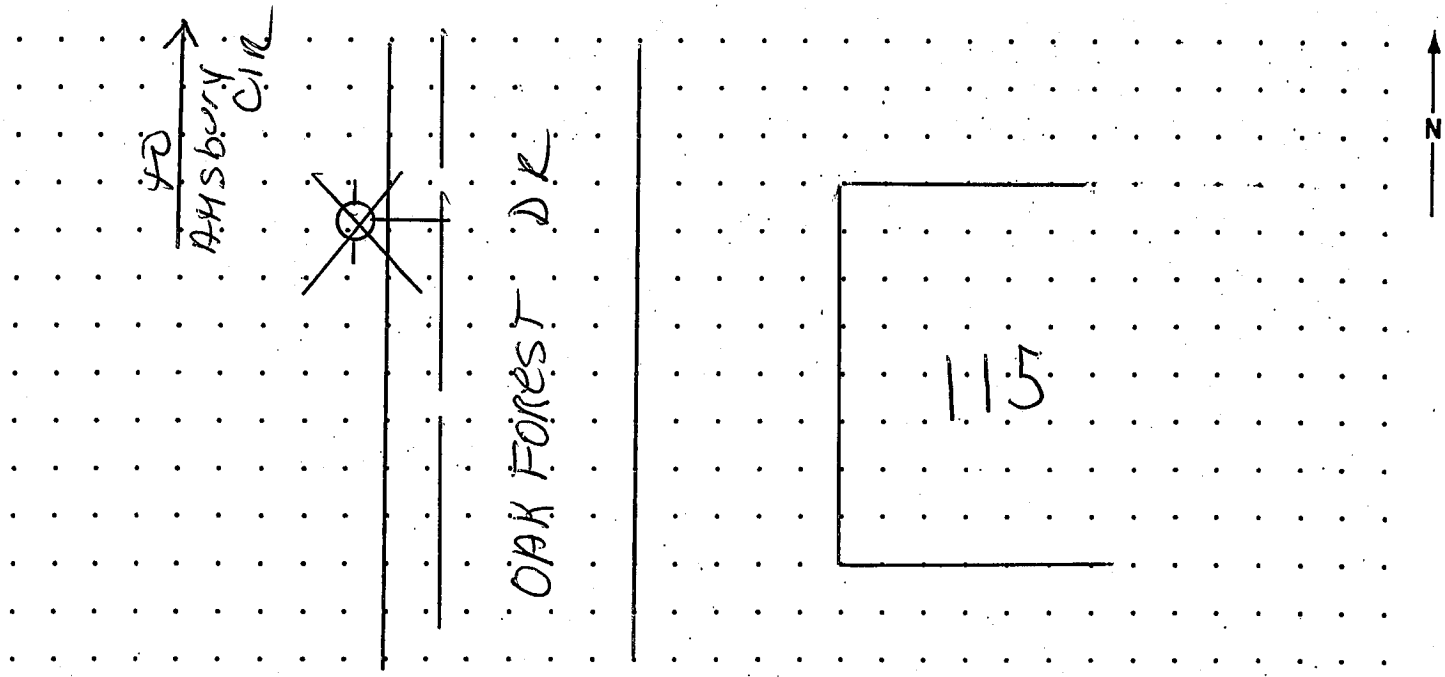
Main Valve	
Curb Valve	
Meter Box	
Selected Test	X
Hydrant	
See Remarks	

LEAK APPEARS TO BE ON:

Main	
Service	
Joint Connection	
Hydrant	X
Valve	
Misc.	

COVER

Concrete	
Asphalt	
Brick	
Gravel	
Soil	X
Other	



Remarks

Leak occurs on hydrant

Company Representative

Rick Walter
Heath Consultant

Page No. 2

Date 4-27-05

Ownership (Public) Private Easement

Leak Indication Classification

I(C) II(B) (III(A)) *(Circle One)*

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

LEAKAGE CONTROL REPORT
WATER SURVEY

Company City of Newport District

City Middletown State RI

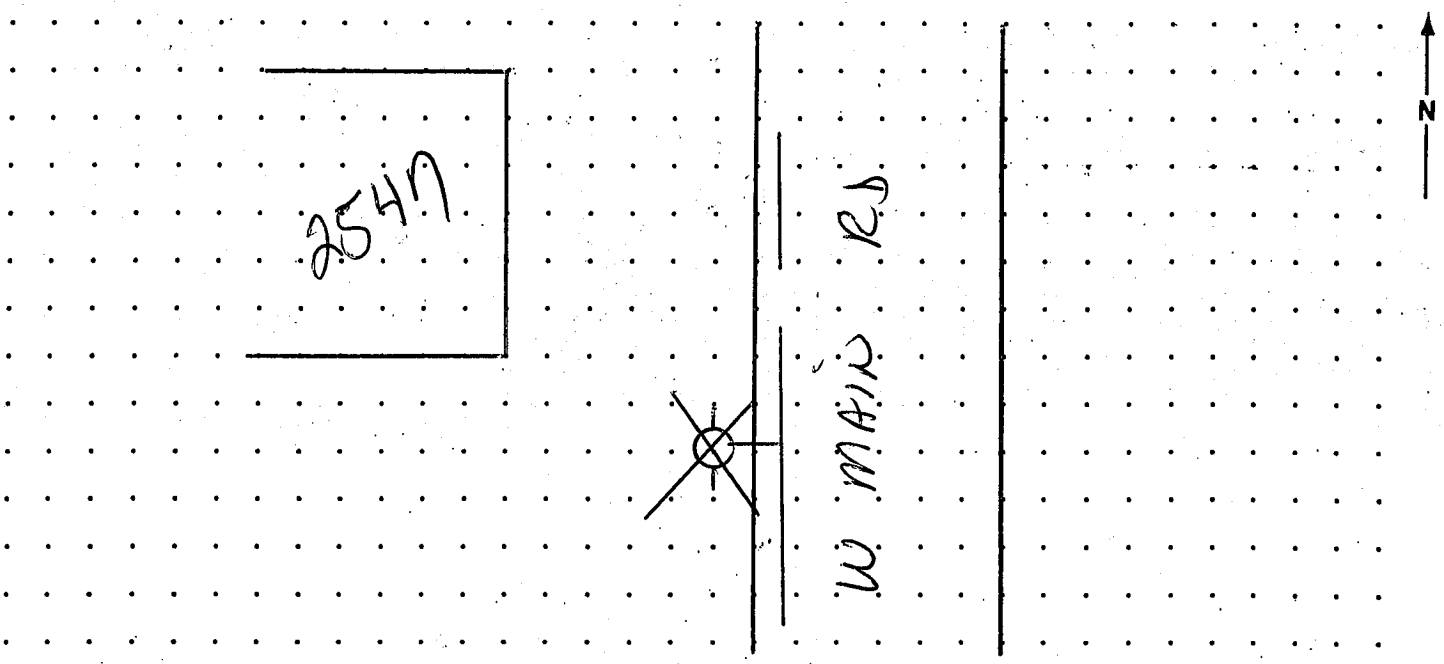
Nearest Street Address

W MAIN RD # 2547

INDICATION OF LEAK		LEAKAGE DETECTED AT:		LEAK APPEARS TO BE ON:		COVER	
Sonic	X	Main Valve		Main		Concrete	
Surfaced Water		Curb Valve		Service		Asphalt	
Other		Meter Box		Joint Connection		Brick	
		Selected Test	X	Hydrant	X	Gravel	X
		Hydrant		Valve		Soil	X
				Misc.		Other	
		See Remarks					

ESTIMATION OF LEAKAGE:

1 GPM



Remarks

leak occurs on hydrant

Company Representative

Rick Walter
Heath Consultant

Page No. 3

Date 4-28-05

Ownership (Public) Private Easement

Leak Indication Classification

I(C) II(B) (III(A)) (Circle One)

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

LEAKAGE CONTROL REPORT
WATER SURVEY

Company City of Newport District

City Portsmouth State RI

Nearest Street Address

Redwood Rd @ Pioneer Lane

INDICATION OF LEAK

Sonic	X
Surfaced Water	
Other Correlator	X

LEAKAGE DETECTED AT:

Main Valve	
Curb Valve	
Meter Box	
Selected Test	X
Hydrant	
See Remarks	

LEAK APPEARS TO BE ON:

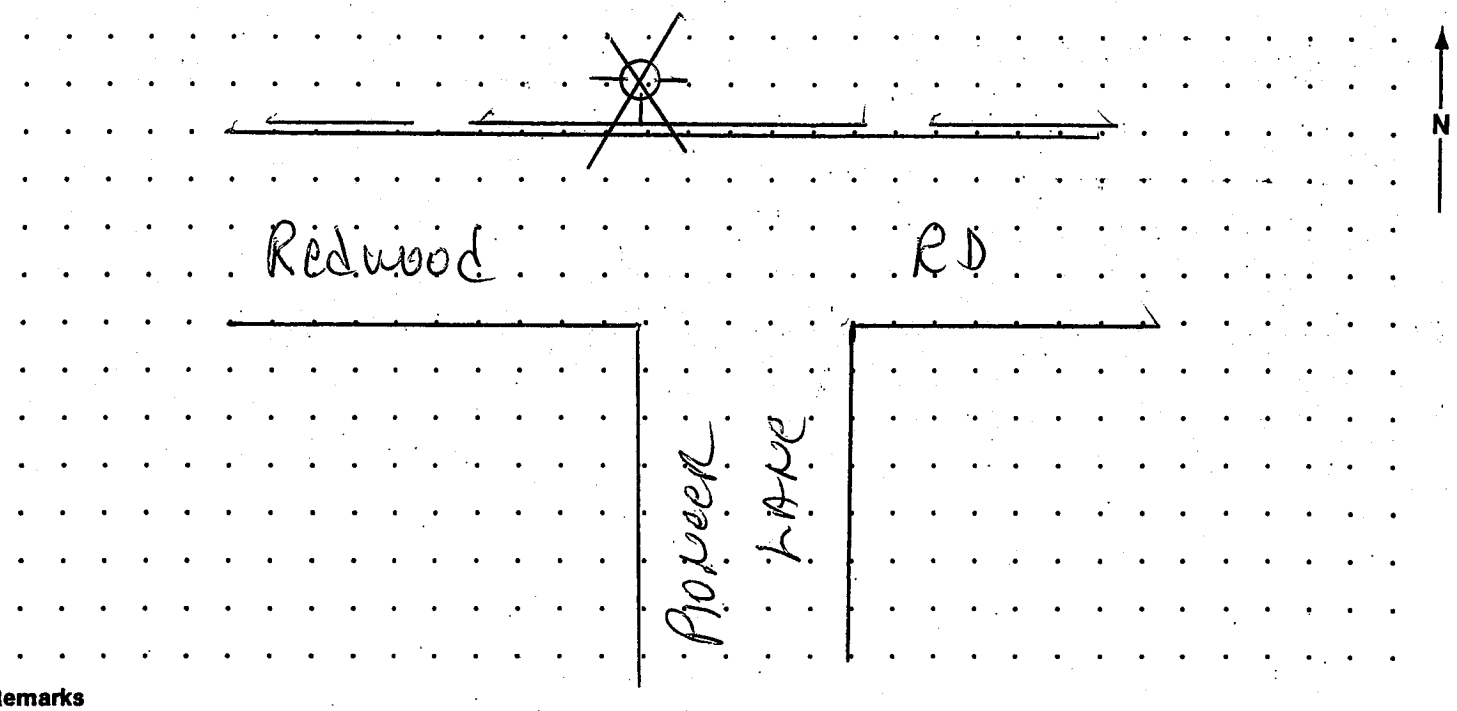
Main	
Service	
Joint Connection	
Hydrant	X
Valve	
Misc.	

COVER

Concrete	
Asphalt	
Brick	
Gravel	
Soil	X
Other	

ESTIMATION OF LEAKAGE:

1 GPM
Repaired



Remarks

Leak occurring on hydrant
has been Repaired

Company Representative

Rick Walter
Heath Consultant

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 4
Date 5-3-05
Ownership (Public) Private Easement
Leak Indication Classification
I(C) (II(B)) III(A)
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company City of Newport District
City Middletown State RI
Nearest Street Address

AQUIDNECK AVE @ GUNNING CT

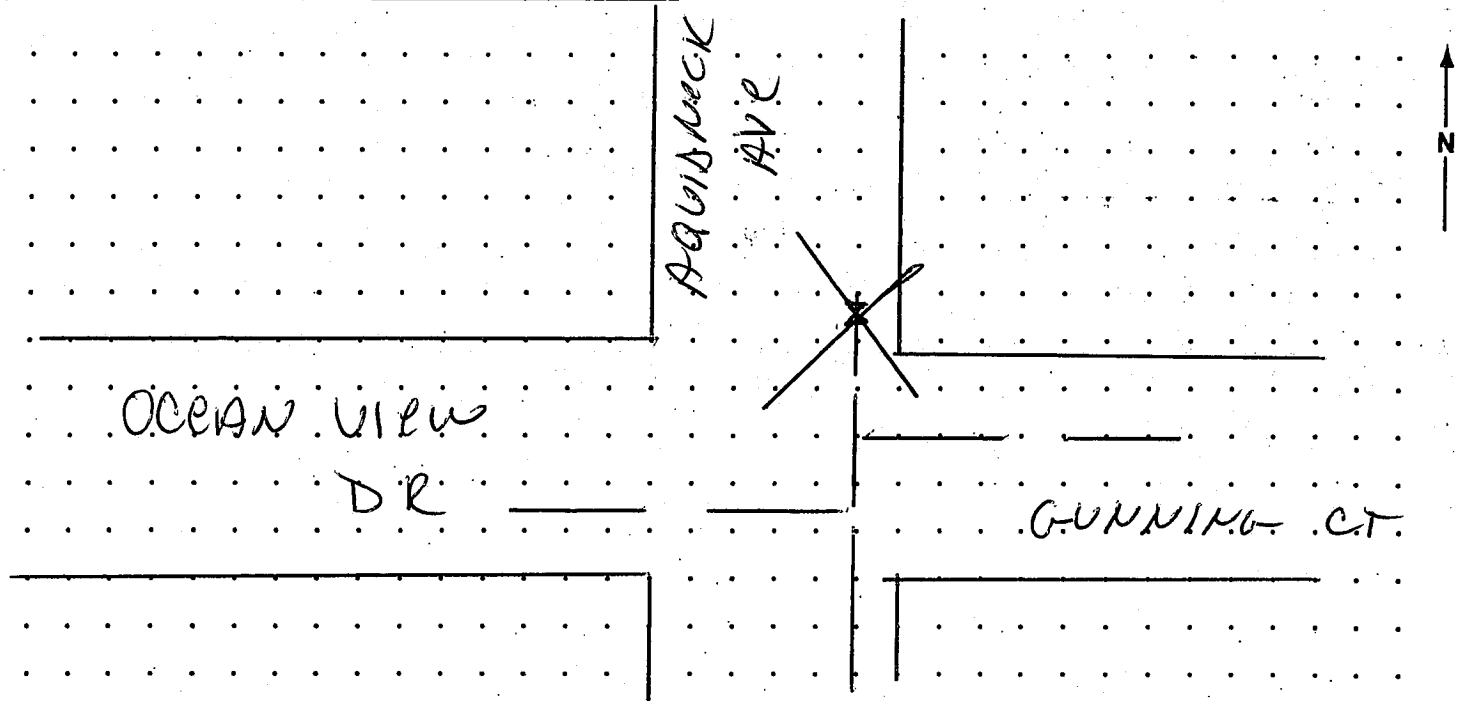
INDICATION OF LEAK	
Sonic	X
Surfaced Water	
Other	

LEAKAGE DETECTED AT:	
Main Valve	
Curb Valve	
Meter Box	
Selected Test	X
Hydrant	
See Remarks	

LEAK APPEARS TO BE ON:	
Main	
Service	
Joint Connection	
Hydrant	
Valve B.O.	X
Misc.	

COVER	
Concrete	
Asphalt	X
Brick	
Gravel	
Soil	
Other	

ESTIMATION OF LEAKAGE:
NOPM



Remarks

Leak occurs at or near blow off valve, valve is in off position

Company Representative

Ron Walter
Heath Consultant

HEATH CONSULTANTS

Page No. 5

Date 5-3-05

Ownership (Public) Private Easement

Leak Indication Classification

I(C) II(B) (III(A))

(Circle One)

HEATH CONSULTANTS INCORPORATED

9030 Monroe Road, Houston, TX 77061

LEAKAGE CONTROL REPORT
WATER SURVEY

Company City of Newport District

City Middletown State RI

Nearest Street Address

Briarwood Ave @ Warren Ave

INDICATION OF LEAK

Sonic	X
Surfaced Water	
Other	

ESTIMATION OF LEAKAGE:

10PM

LEAKAGE DETECTED AT:

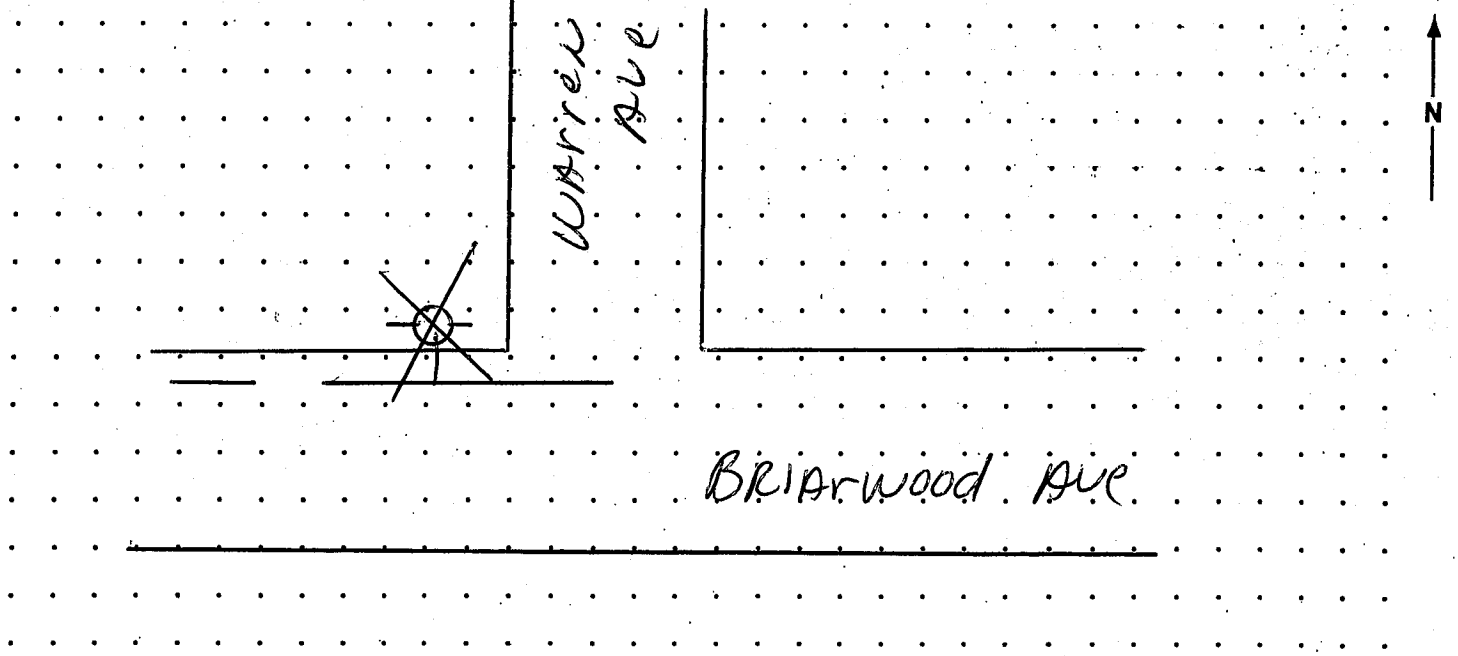
Main Valve	
Curb Valve	
Meter Box	
Selected Test	X
Hydrant	
See Remarks	

LEAK APPEARS TO BE ON:

Main	
Service	
Joint Connection	
Hydrant	X
Valve	
Misc.	

COVER

Concrete	
Asphalt	
Brick	
Gravel	
Soil	X
Other	



Remarks

Leak occurs on hydrant

Company Representative

Rick Walter

Heath Consultant

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 6
Date 5-3-05
Ownership (Public) Private Easement
Leak Indication Classification
(I(C)) II(B) III(A)
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company City of Newport District
City Middletown State RI
Nearest Street Address
Aquidneck Ave # 227

INDICATION OF LEAK

Sonic	X
Surfaced Water	
Other	

ESTIMATION OF LEAKAGE:

20 GPM

LEAKAGE DETECTED AT:

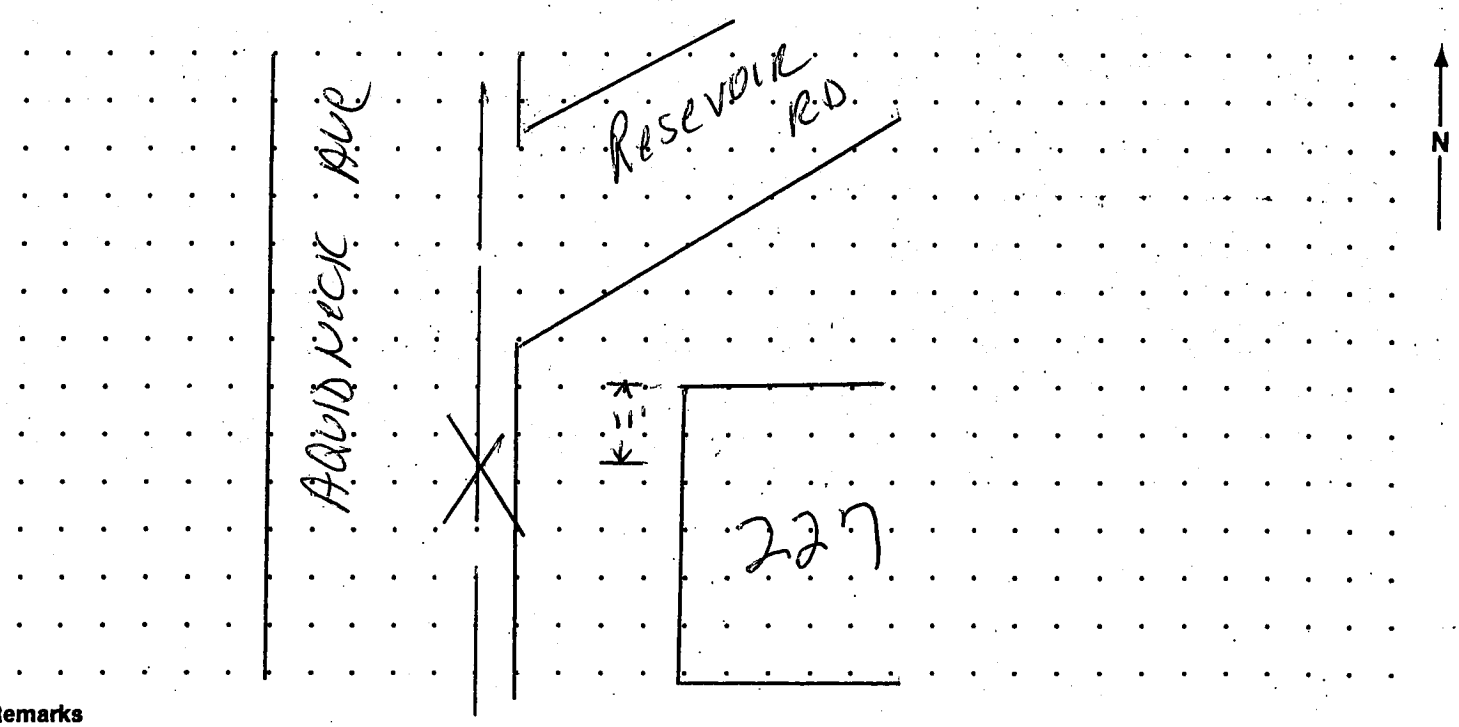
Main Valve	
Curb Valve	
Meter Box	
Selected Test	X
Hydrant	
See Remarks	

LEAK APPEARS TO BE ON:

Main	X
Service	
Joint Connection	
Hydrant	
Valve	
Misc.	

COVER

Concrete	
Asphalt	X
Brick	
Gravel	
Soil	
Other	



Remarks

Leak occurs on main 11 Feet South of #227 North house Line

Company Representative

Rick Walter
Heath Consultant

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 1
Date 5-3-05
Ownership (Public) Private Easement
Leak Indication Classification
(I(C)) II(B) III(A)
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company City of Newport District
City Middletown State RI
Nearest Street Address

Purgatory RD @ ALLSTON AVE

INDICATION OF LEAK

Sonic	X
Surfaced Water	
Other Correlator	X

ESTIMATION OF LEAKAGE:

17 GPM

LEAKAGE DETECTED AT:

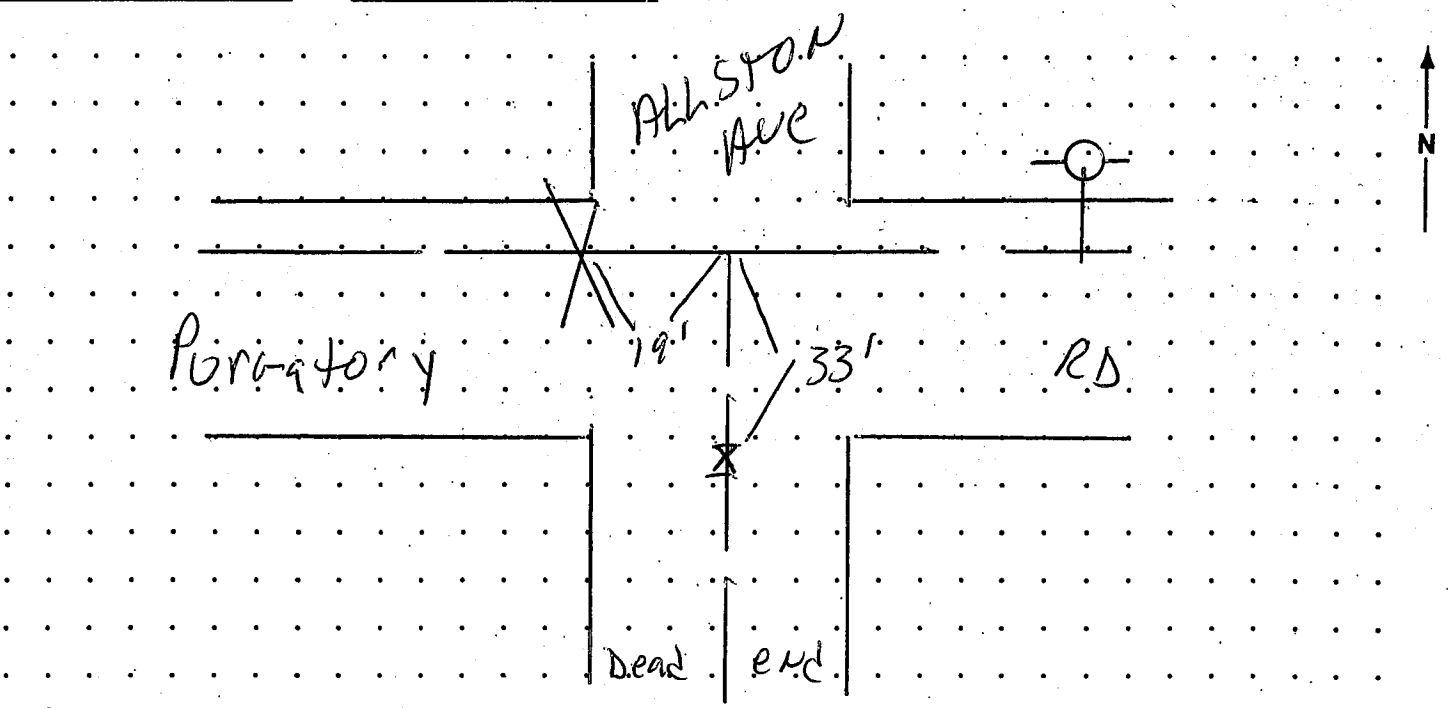
Main Valve	
Curb Valve	
Meter Box	
Selected Test	X
Hydrant	
See Remarks	

LEAK APPEARS TO BE ON:

Main	X
Service	
Joint Connection	
Hydrant	
Valve	
Misc.	

COVER

Concrete	
Asphalt	X
Brick	
Gravel	
Soil	
Other	



Remarks

Leak occurs on main 19 Feet from corporation of main to Dead end side of Allston Ave

Company Representative

Rick Walter
Heath Consultant

Heath Consultants Incorporated

HEATH CONSULTANTS

DAILY LISTING OF STREETS SURVEYED

TYPE OF SURVEY: AQ-COMP-CORR YEAR: 2005

COMPANY: City of Newport CONSULTANT: Rick Walter

DATE	TOWN Middletown	STREET (FROM ____ TO ____)
4-18-05	Navel Garden DR	
	Chases LN	
	Casey DR	
	Donald DR	
	Murphy CIR	
	Orville DR	
	Admiralty DR	
	Gate 17 access RD	
	Commerce DR	
	Corporate DR	
	Vaudeic Ave	
	Forest Ave	W main to airport access RD
	Wilson RD	
	Champlin Ter	
	Bluegrass DR	
	Francisco DR	
	Sullivan ST	
	Woolsey RD	
	Ludlow RD	
	Buck RD	
	Sundown LN	
	Bristol RD	

Form #871

4.3 Miles

HEATH CONSULTANTS

DAILY LISTING OF STREETS SURVEYED

TYPE OF SURVEY: AQ - COMP - CORR YEAR: 2005

COMPANY: City of Newport CONSULTANT: Rick Walter

DATE	TOWN Middletown	STREET (FROM ____ TO ____)
W-19-05	Oliphant LN	W main to Oak Forest
	Swan DR	
	Oak Forest DR	
	Amesbury CIR	
	Arruda TER	
	West View RD	
	Cows Path	
	High Meadow	
	Old Farm Way	
	Harvest RD	
	Roosters Way	
	Colony DR	
	Lakoma S	
	Squantum CT	
	Squantum DR	
	Pocano RD	
	Namquid DR	
	Aspinet DR	
	Algonquin DR	
	Pocahontas DR	
	Pequot LN	
	Osage DR	

HEATH CONSULTANTS

DAILY LISTING OF STREETS SURVEYED

TYPE OF SURVEY: AQ Comp Corr YEAR: 2005

COMPANY: City of Newport CONSULTANT: Rick Walter

DATE	TOWN	STREET (FROM ____ TO ____)
	Middletown	
4-19-05	Brooks LN	
	Fairway DR	
		4.15 Miles

HEATH CONSULTANTS

DAILY LISTING OF STREETS SURVEYED

TYPE OF SURVEY: AQ - Comp - Corr YEAR: 2005

COMPANY: City of Newport CONSULTANT: Rick Walter

DATE	TOWN Middletown	STREET (FROM ____ TO ____)
4-20-05	Pasture Farm DR	
	Bosher DR	
	Debbie DR	
	Laura DR	
	Christine DR	
	John Hesson LN	
	Evelin CIR	
	Greene LN	
	Samson LN	
	Olives Way	
	Gossets Turn DL	
		2.4 Miles
		Correlate Ellery RD & Old Fort RD
		areas in Newport

HEATH CONSULTANTS

DAILY LISTING OF STREETS SURVEYED

TYPE OF SURVEY: AQ COMP CORK YEAR: 2005

COMPANY: City of Newport CONSULTANT: Rick Walker

DATE	TOWN Middletown	STREET (FROM ____ TO ____)
4-21-05	Valley RD	E main to W main
	W main RD	Valley to E main
	E main RD	W main to Enterprise CT
	Enterprise CT	
	Brookdale RD	
	Reno RD	
	wood terr	
	wood RD	
	maplewood RD	
	OAKwood RD	
	Ridewood RD	
	Chestnut hill RD	
	old airport RD	
	Rogers LN	
	Unity DR	
	Jean ST	
	Ruth ST	
	Roy AVE	
	Philips AVE	
	Burton LN	
	Marshall LN	
	JH Dwyer DR	

Form #871

4.8 Miles

HEATH CONSULTANTS

Heath Consultants Incorporate

DAILY LISTING OF STREETS SURVEYED

TYPE OF SURVEY: AQ Comp Corr YEAR: 2005

COMPANY: City of Newport CONSULTANT: Rick Walter

DATE	TOWN Middletown	STREET (FROM ____ TO ____)
4-22-05	WABASSO TER	
	E Main RD	Enterprise Ct to FOREST AVE
	Forest AVE	airport access to E Main
	Airport access RD	
	OAKview TER	
	Sepson LN	
	Moy Ct	
	Cogeshall DR	
	Cogeshall CIR	
	Cogeshall Way	
	Oliphant LN	Sepson LN to E Main
	Island DR	
	Paddock LN	
	Mitchells LN	
	Turner RD	
	E main RD	Oliphant LN "N" to TANK
	Johnson TER	
	4.4 Miles	

HEATH CONSULTANTS

DAILY LISTING OF STREETS SURVEYED

TYPE OF SURVEY: AA Comp Corr YEAR: 2005

COMPANY: City of Newport CONSULTANT: Rick Walter

DATE 4-26-05	TOWN	STREET (FROM ____ TO ____)
middletown	Meadow LN	
S	E Main RD	Oliphant LN to Forest Ave
middletown	Wyatt RD	
Portsmouth	Mailcoach RD	
	Stagecoach RD	
	Harborview RD	
	Galley LN	
	Pioneer LN	
	Slate LN	
	Lawton's valley apts	
Portsmouth	Bayview estates	
	Redwood DR	
		4.8 miles

HEATH CONSULTANTS

DAILY LISTING OF STREETS SURVEYED

TYPE OF SURVEY: AQ comp corr YEAR: 2005

COMPANY: City of Newport CONSULTANT: Rick Walter

DATE 4-27-05	TOWN	STREET (FROM ____ TO ____)
Portsmouth & middletown	W Main RD	Stonepipe to Valley RD
Portsmouth	Union ST	
		3.0 Miles

HEATH CONSULTANTS

DAILY LISTING OF STREETS SURVEYED

TYPE OF SURVEY: AQ comp corr YEAR: 2005

COMPANY: City of Newport CONSULTANT: Rick Walker

DATE	TOWN	STREET (FROM ____ TO ____)
4-28-05	Middletown	
	Berkeley RD	
	DR to whitehorse mobile	
	Wyndam DR	
	Beagle DR	
	Hunt LN	
	Tally Ho CT	
	whitehall Farms	
	AQUEDUCK AVE	
	Reardon TER	
	Park DR	
	aqueduck DR	
	Jude DR	
		4.1 Miles

HEATH CONSULTANTS

DAILY LISTING OF STREETS SURVEYED

TYPE OF SURVEY: AG comp corr YEAR: 2005

COMPANY: City of Newport CONSULTANT: Rick Walter

DATE	TOWN	STREET (FROM ____ TO ____)
4-29-05	Middletown	
	Paradise Ave	
	Prospect Ave	
	Reservoir RD	
	Paradise Ct	
	Sherman Kirby	
	Paradise Pump station	
	Tuckerman Ave	Purgatory RD to Kane Ave
	Ashurst Ave	
	Kent RD	
	Kane Ave	Purgatory RD to Tuckerman Ave
	White Tern	
	Sunset Hill RD	
	James St	
	O Donnell RD	
	Wolcott Ave	Purgatory RD to Tuckerman Ave
	Hoover Dr	
	Crest St	
	Stimpson St	
		4.3 Miles

HEATH CONSULTANTS

DAILY LISTING OF STREETS SURVEYED

TYPE OF SURVEY: AQ. Corp Corr YEAR: 2005

COMPANY: City of Newport CONSULTANT: Rick Walker

DATE	TOWN Middletown	STREET (FROM ____ TO ____)
5-2-05	Tuckerman Ave	Kane Ave to Purgatory Rd
	Crest ST	
	esplanade	
	Easton Ave	
	Center Ave	
	Auston Ave	
	Ellery Ave	
	Briarwood Ave	Ellery to Wolcott
	orchard Ave	
	Newport Ave	Ellery to Wolcott
	Purgatory Rd	Tuckerman to Tuckerman
	DR to ST Georges School	
	Purgatory LN	(Abe meyer LN on map)
	Renfrew Ave	Newport to Briarwood
		4.4 Miles

HEATH CONSULTANTS

DAILY LISTING OF STREETS SURVEYED

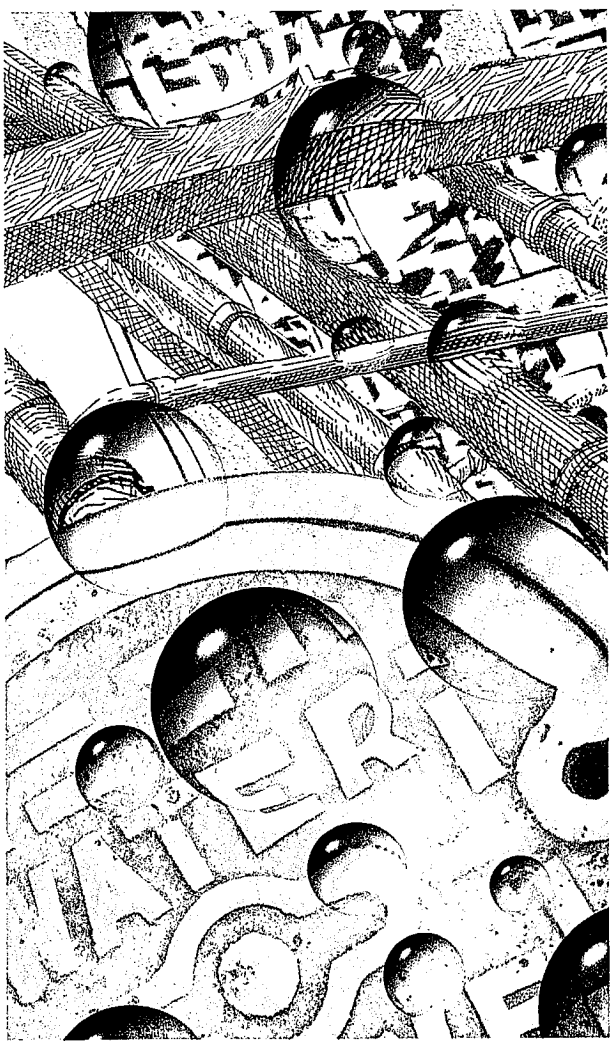
TYPE OF SURVEY: AQ COMP CORR YEAR: 2005

COMPANY: City of Newport CONSULTANT: Rick Walter

DATE	TOWN Middletown	STREET (FROM ____ TO ____)
5-3-05	Wolcott Ave.	Aquidneck Ave to Purgatory RD
	Maloney LN	
	Perry RD	
	Beachview Terr	
	Seascape Ave	
	Reservoir RD	
	Toni Lynn TR	
	Lorna ST	
	Hillside ST	
	Draper St	
	Harold LN	
	Cunning RD	
	Ocean View	
	Warren Ave	
	Aquidneck Ave	Purgatory RD to Ocean View
	Purgatory RD	Tuckerman to Newport line
	Valley RD	aquidneck Ave to YMCA
	Newport Ave	aquidneck to Ellery
	Briarwood Ave	aquidneck to Ellery
		4.0 Miles

LEAK DETECTION SURVEY

City of Newport, RI
Winter 2004



Flow Metrix, Inc.
Two Clock Tower Place
Suite 425
Maynard, MA 01754
978.897.2033

Introduction

The City of Newport water system comprises approximately 180 miles of water mains with fire hydrants, related valves, tie-ins and pumps. The mains are composed primarily of asbestos cement, lined and unlined cast iron, and ductile iron. The size of the mains pipes range from 1½" to 24". There are approximately 15,000 service connections. Flow Metrix, Inc. was contracted to survey a quarter of the total system or approximately 45 miles of main..

The Leak Detection Survey

Flow Metrix, Inc. has completed a comprehensive water leak detection survey of this quarter section of the City of Newport water distribution system. The survey was completed using a 'DigiCorr' digital correlator and 'DigiCorr Pro' leak management software. Embedded leak signal processing provided optimally filtered high resolution data, resulting in fast and accurate detection of both developed and emerging leaks.

Findings

The following table shows the leakage identified during the survey. Eight leak locations were pinpointed – 2 mains, 1 service, 5 hydrants – totaling an estimated 63 gallons per minute (33,112,800 gallons annually). The annual value of this recovered leakage is approximately $33,113 assuming a cost of $1/1000 gal. Individual leak reports for each leak are also included in Appendix A. All correlation files made during the survey are provided on the accompanying CD-ROM and may be viewed using the program provided *(please see Appendix B for installation and viewing instructions).* A computer fitted with any standard "Sound Blaster" compatible sound card will allow the leak sounds to be listened to with CD quality.

File Name	Street Ref.	Source of Leak	Type of Pipe	Est. Loss (GPM)
Y@Nwpt boulevard52 B@Nwpt clayton v	Boulevard	Hydrant	Cast Iron	1
Y@H063 B@H005	Boulevard	Hydrant	Cast Iron	1
Y@Nwprt Briarwood Renfrew B@Nwprt Renfrew hyd	Briarwood	Hydrant	Asbestos Cement	1
Y@H141 B@H072	Briarwood	Hydrant	Asbestos Cement	2
Y@Nwpt reservoir hyd B@Nwpt Wolcott v3	Wolcott	Main	Asbestos Cement	40
Y@Nwpt tuckerman v B@Nwpt tuckerman v2	Tuckerman	Main	Cast Iron	5
Y@H013 B@H002	West Main	Hydrant	Cast Iron	3
Y@KS at Meter Box B@KS at House	Ashhurst	Service	Steel	10*

*Repaired

Appendix A

DigiCorr Correlation Report

User: JF

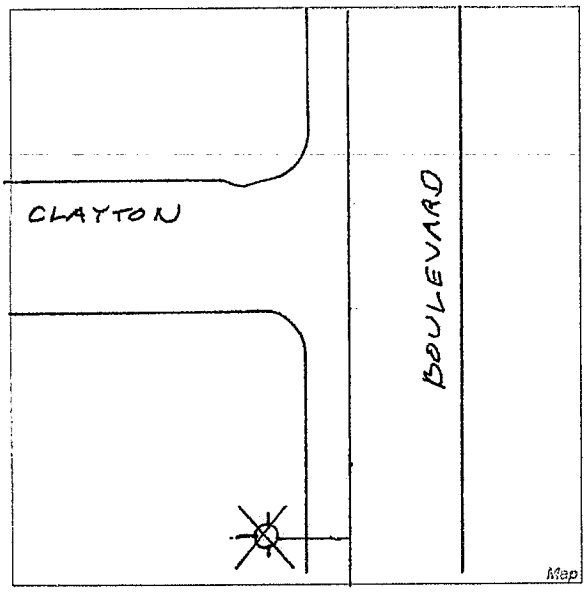
Location: #52 Boulevard, Middletown

Date: 3/2/2004 8:35:22 AM

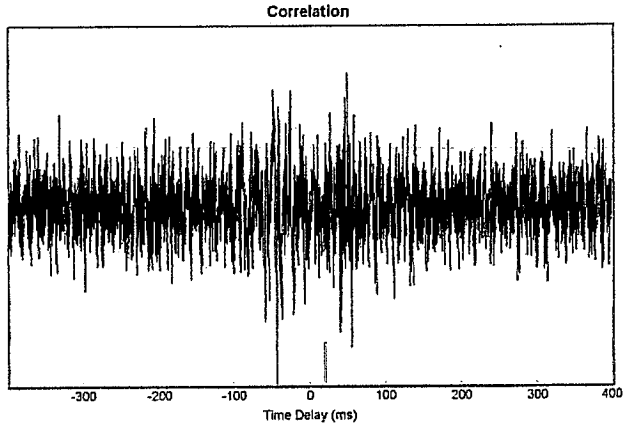
YELLOW FSU Nwpt boulevard52

BLUE FSU Nwpt clayton v

Result: L1



Correlation



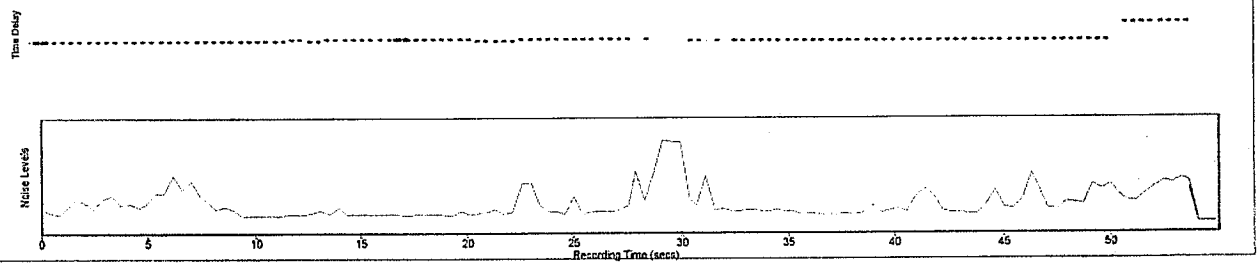
Sensor Distance: 80.0 ft
Cast Iron, 6 inches

Comments

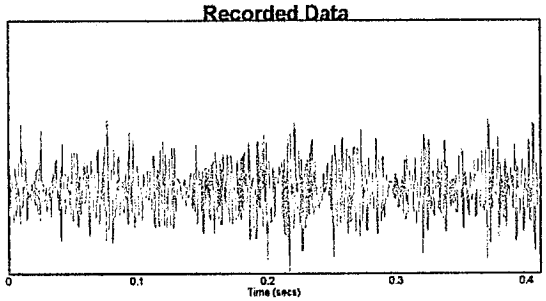
Leakage occurs at Matthews hydrant.

Repair Action:

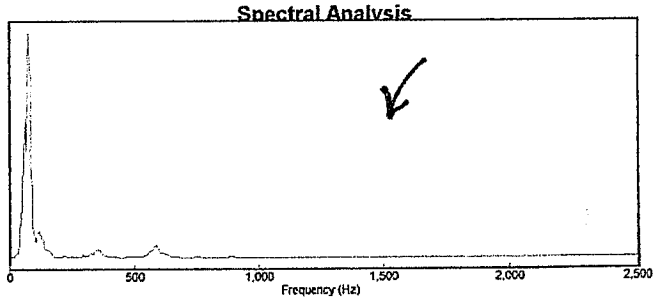
Correlation Tracker & Noise Trend



Recorded Data



Spectral Analysis

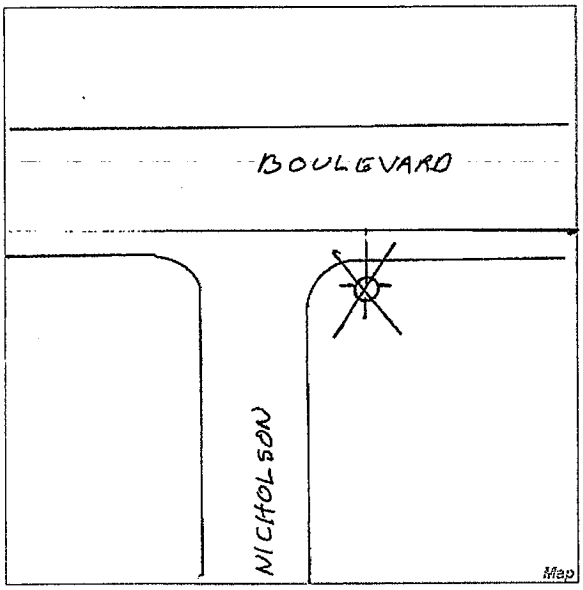


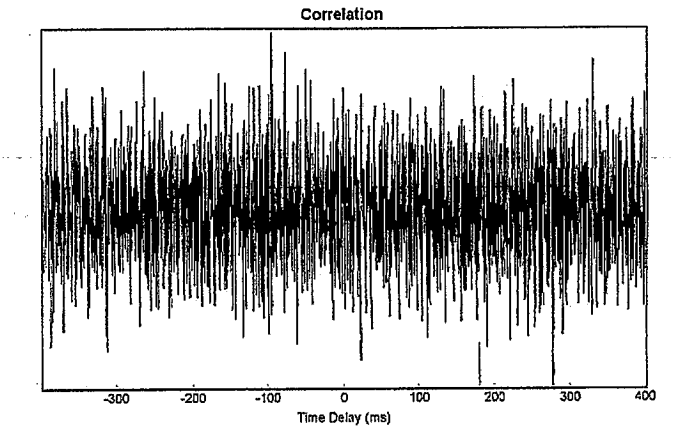
c:\data\Data--Y@Nwpt boulevard52 B@Nwpt clayton v_L1_A.dat

DigiCorr Correlation Report

User: Allan
Location: Boulevard at Nicholson, Middletown
Date: 1/27/2004 11:40:18 AM

YELLOW FSU H063
BLUE FSU H005
Result: L0





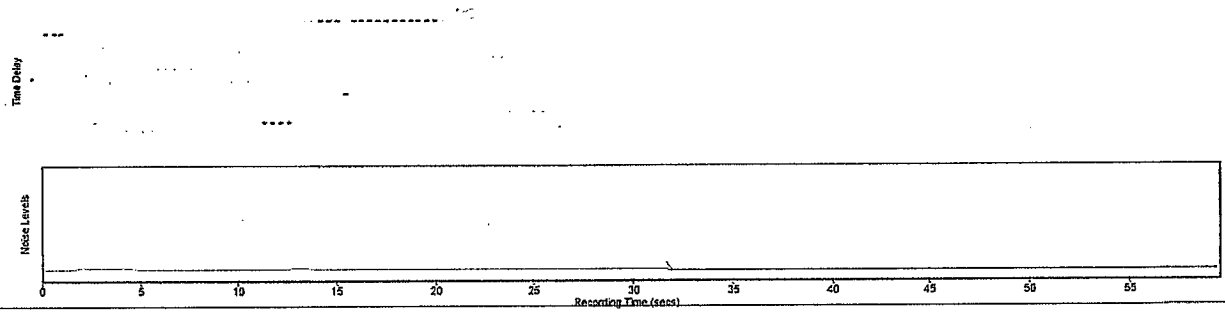
Sensor Distance: 700.0 ft
Cast Iron, 6 inches

Comments

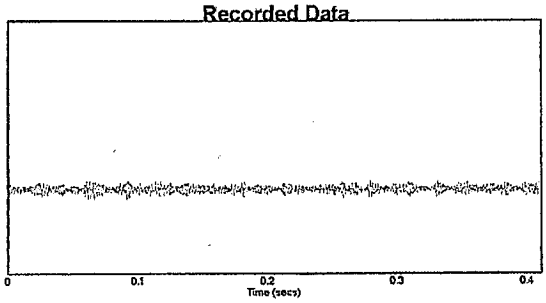
Leakage occurs at Matthews hydrant.

Repair Action:

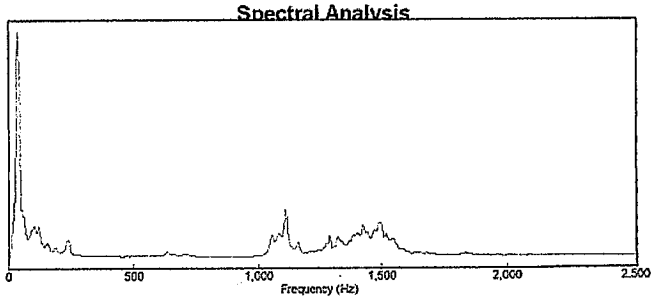
Correlation Tracker & Noise Trend



Recorded Data

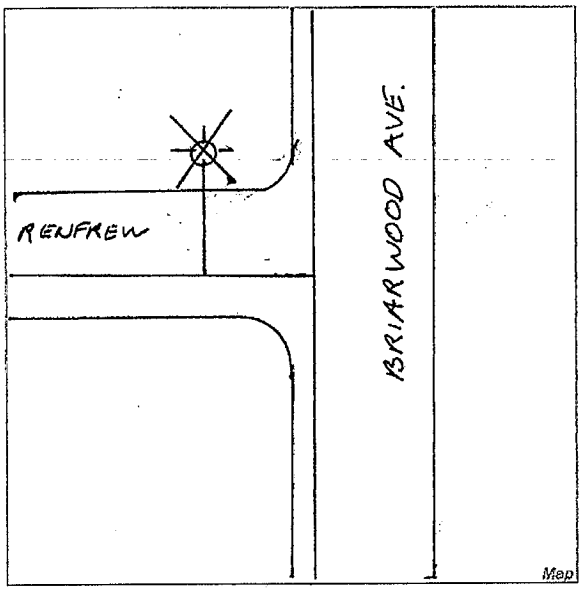


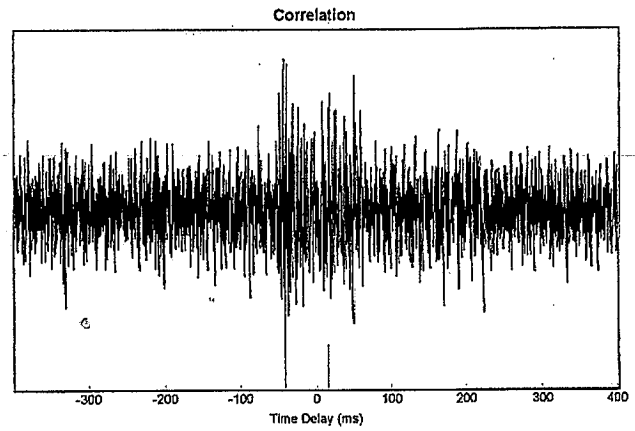
Spectral Analysis



DigiCorr Correlation Report

User:	JF	**YELLOW FSU**	Nwprt Briarwood Renfrew ...
Location:	Briarwood Ave. at Renfrew Ave., Middletowr	**BLUE FSU**	Nwprt Renfrew hyd
Date:	3/2/2004 7:39:20 AM	**Result:**	L1





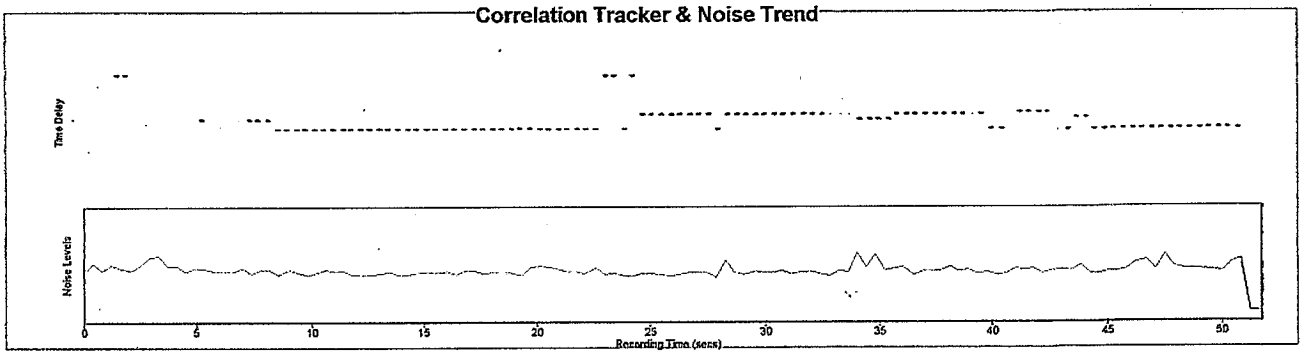
Sensor Distance: 60.0 ft
Asbestos Cement, 6 inches

Comments

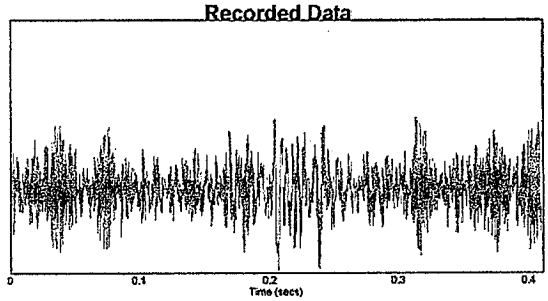
Leakage occurs at Matthews hydrant.

Repair Action:

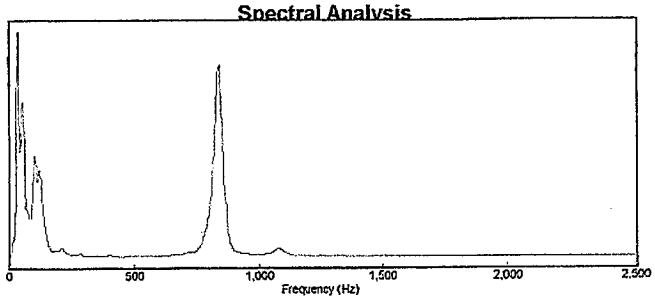
Correlation Tracker & Noise Trend



Recorded Data



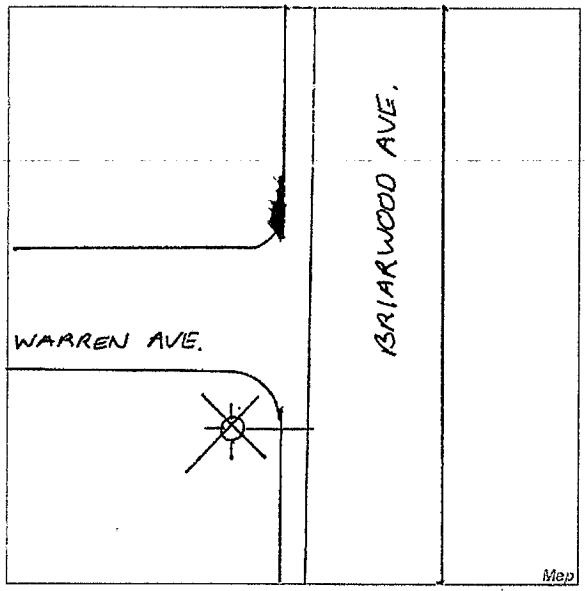
Spectral Analysis

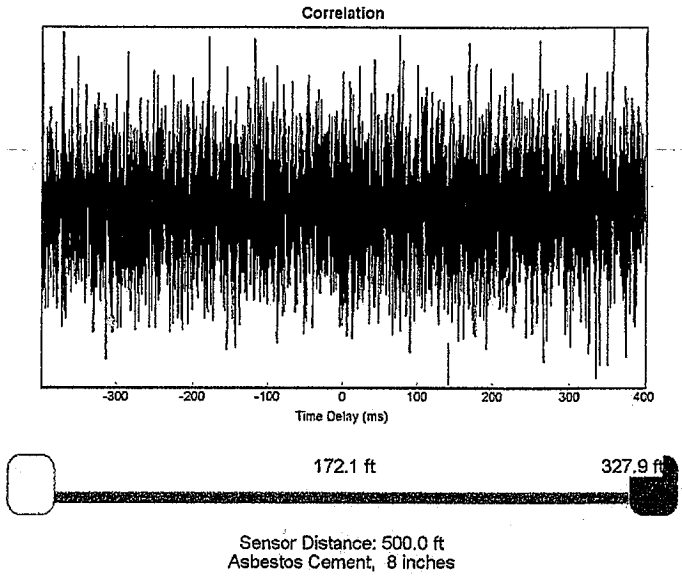


DigiCorr Correlation Report

User: Allan
Location: Briarwood Ave. at Warren, Middletown
Date: 1/22/2004 12:53:07 PM

YELLOW FSU H141
BLUE FSU H072
Result: L0

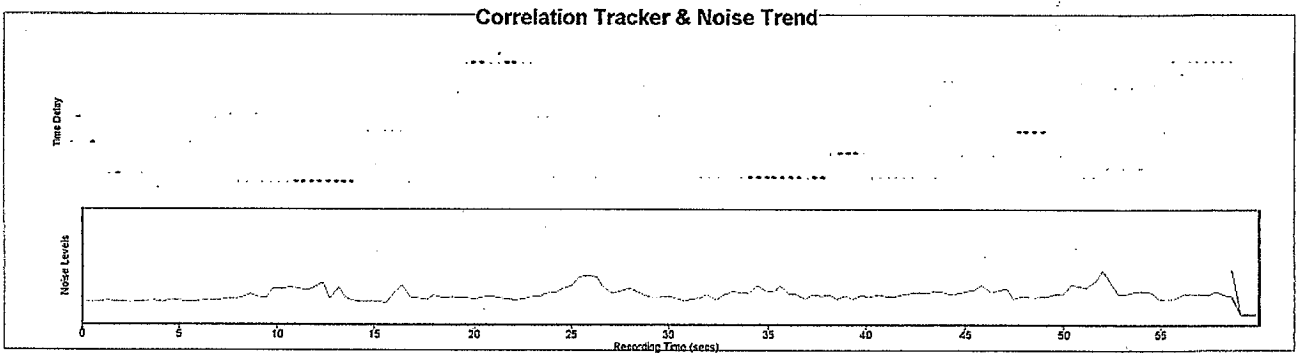


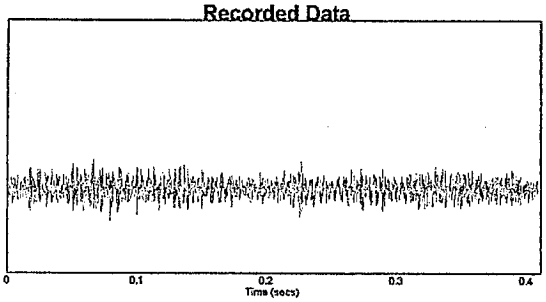


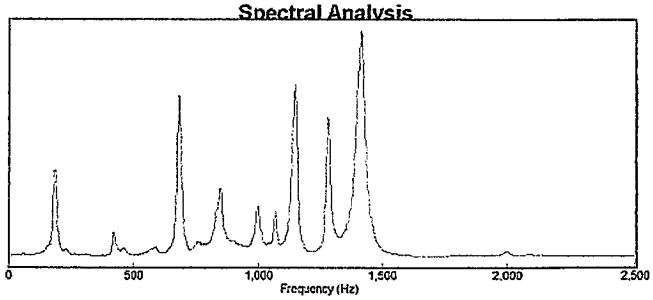
Comments

Leakage occurs at Kennedy hydrant.

Repair Action:







C:\SurveyData\Y@H141 B@H072_L0_A.dat

DigiCorr Correlation Report

User: JF

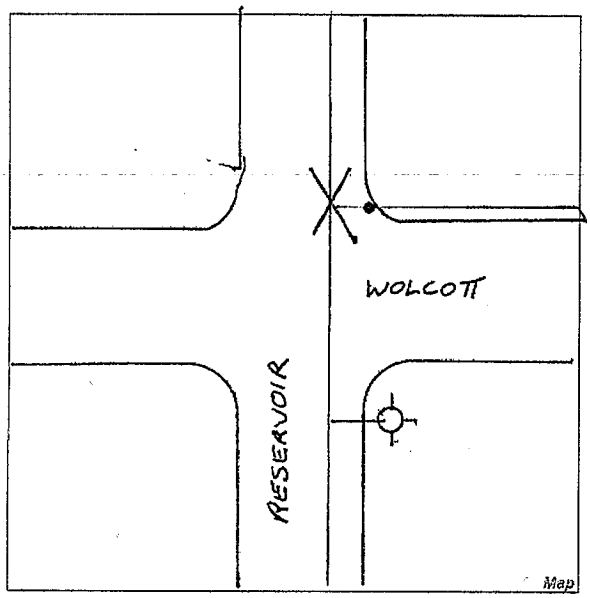
Location: Reservoir at Wolcott, Middletown

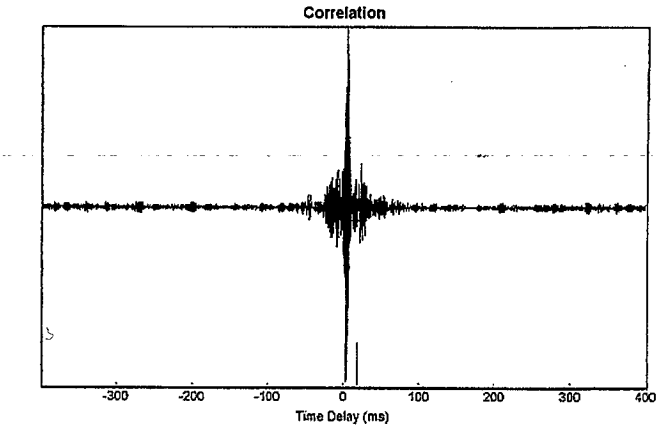
Date: 3/1/2004 11:25:32 AM

YELLOW FSU Nwpt reservoir hyd

BLUE FSU Nwpt wolcott v3

Result: L3





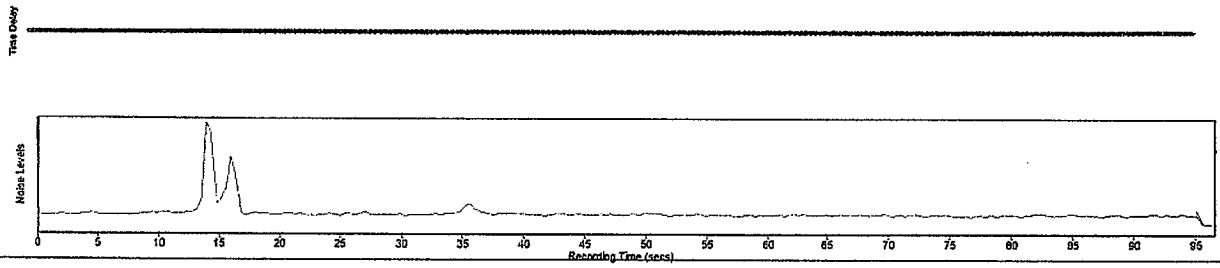
Sensor Distance: 66.0 ft
Multiple sections,

Comments

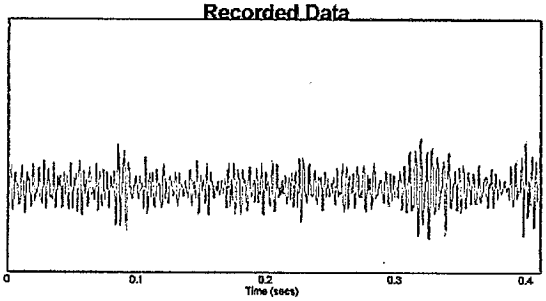
Leakage occurs on 8-inch main near connection with transmission main.

Repair Action:

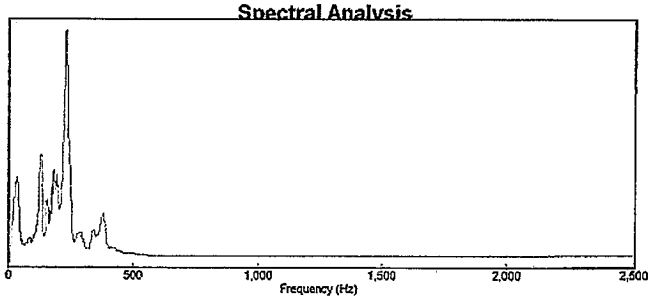
Correlation Tracker & Noise Trend



Recorded Data



Spectral Analysis



C:\data\Data-Y@Nwpt reservoir hyd B@Nwpt wolcott v3_L3_A.dat

DigiCorr Correlation Report

User: JF

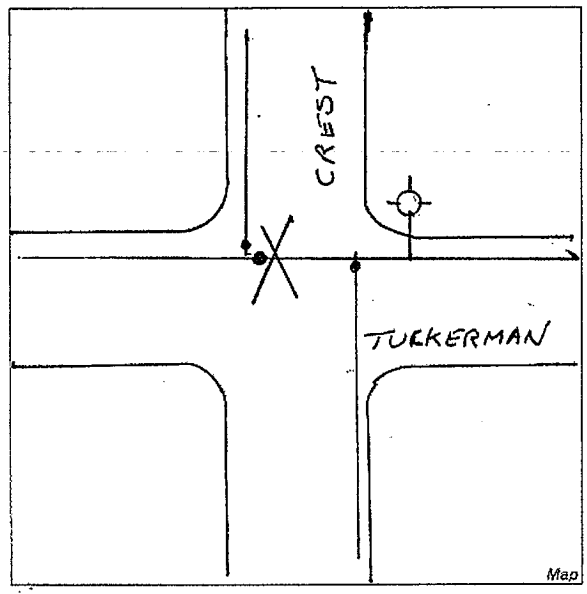
Location: Tuckerman at Crest, Middletown

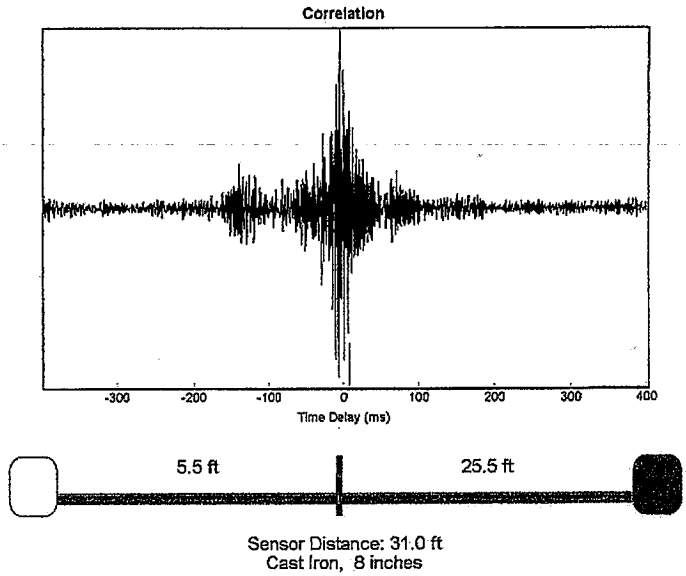
Date: 3/1/2004 9:35:20 AM

YELLOW FSU Nwpt tuckerman v

BLUE FSU Nwpt tuckerman v2

Result: L3





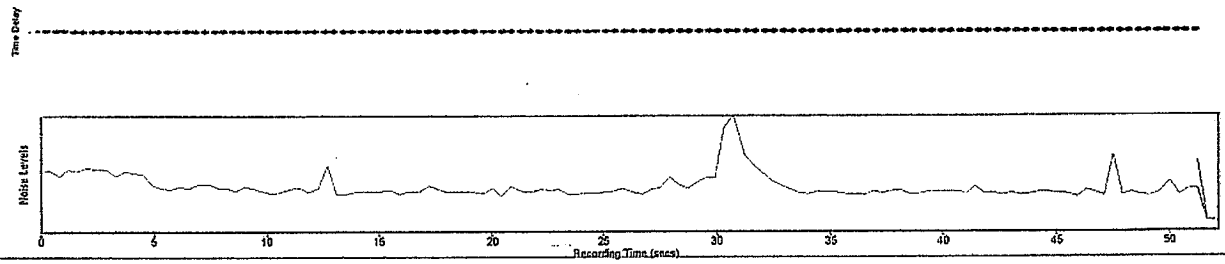
Sensor Distance: 31.0 ft
Cast Iron, 8 inches

Comments

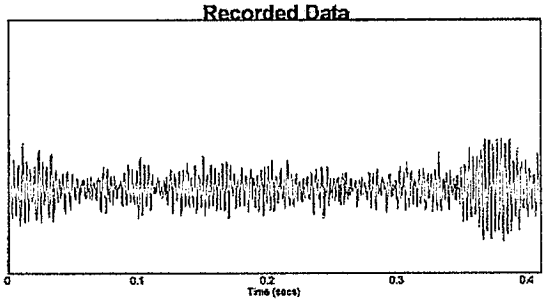
Leakage occurs approximately 5 feet east of marked valve.

Repair Action:

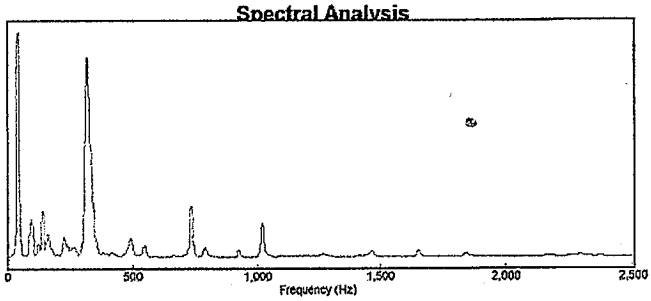
Correlation Tracker & Noise Trend



Recorded Data

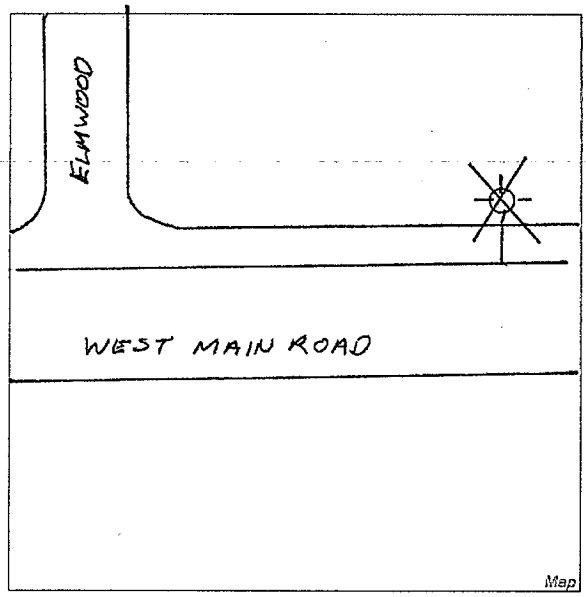


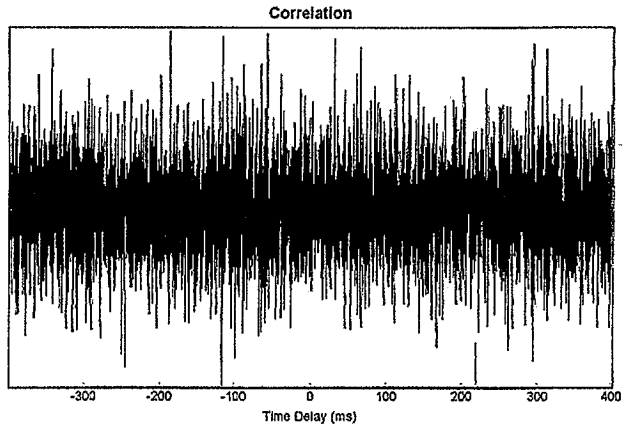
Spectral Analysis



DigiCorr Correlation Report

User:	Allan	**YELLOW FSU**	H013
Location:	West Main Rd. near Elmwood, Middletown	**BLUE FSU**	H002
Date:	1/27/2004 11:03:19 AM	**Result:**	L0



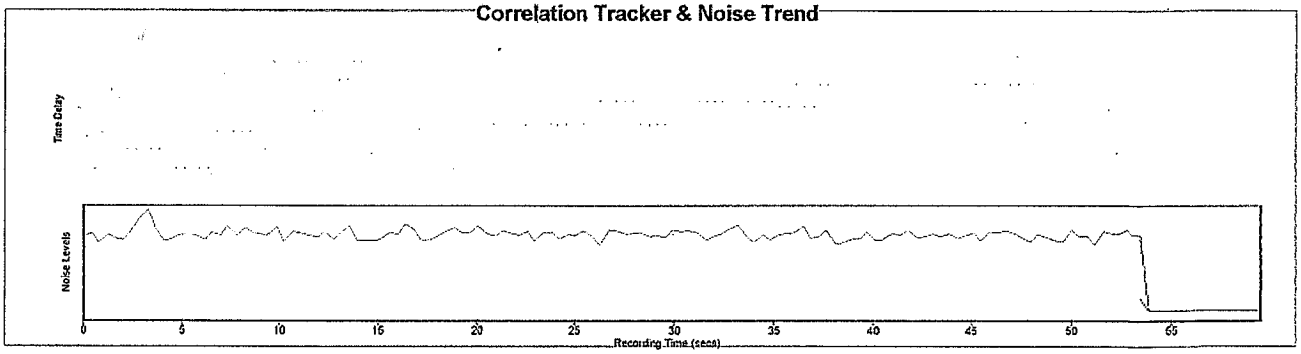


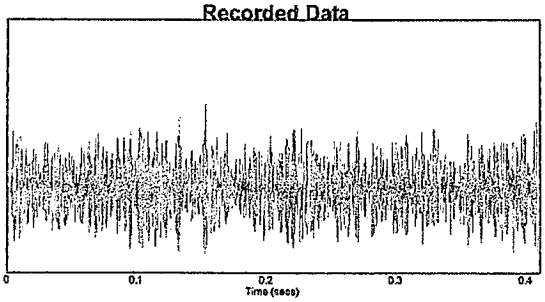
Sensor Distance: 700.0 ft
Cast Iron, 24 inches

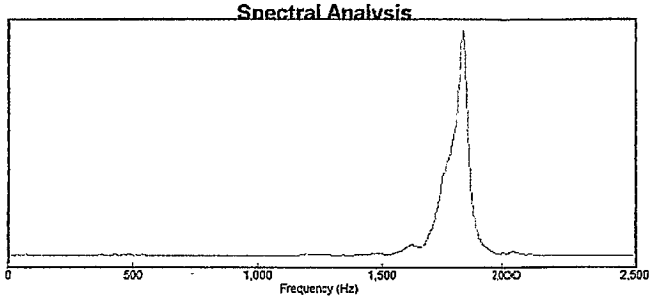
Comments

Leakage occurs at Matthews hydrant.

Repair Action:







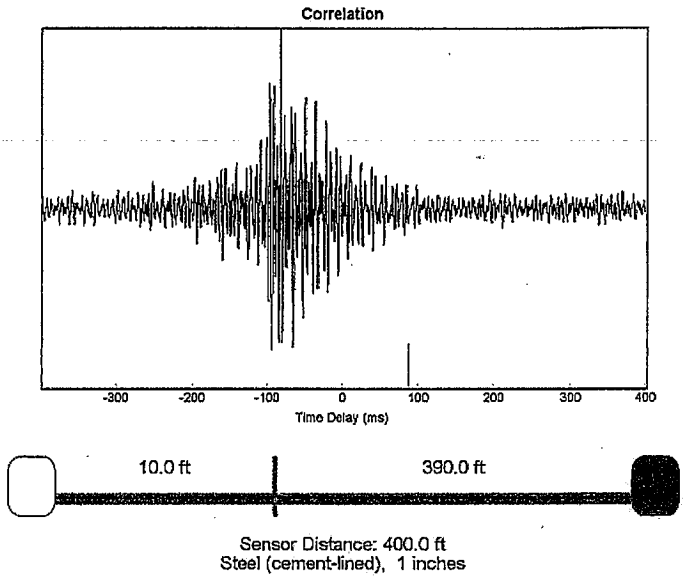
C:\SurveyData\Y@H013 B@H002_L0_A.dat

DigiCorr Correlation Report

User: Allan
Location: Ashhurst Avenue, Middletown
Date: 1/20/2004 11:40:37 AM

YELLOW FSU KS at Meter Box
BLUE FSU KS at House
Result: L2

Map

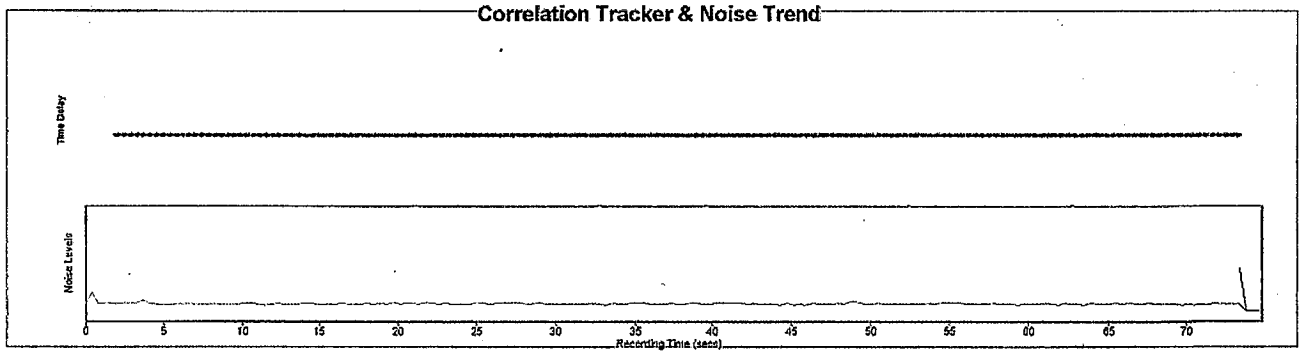


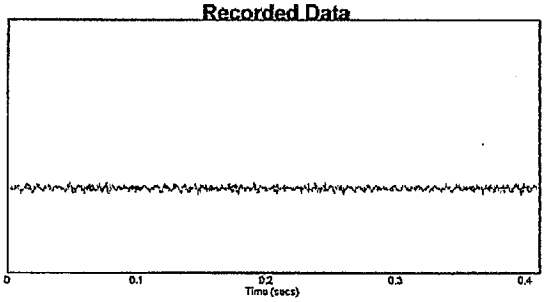
Sensor Distance: 400.0 ft
Steel (cement-lined), 1 inches

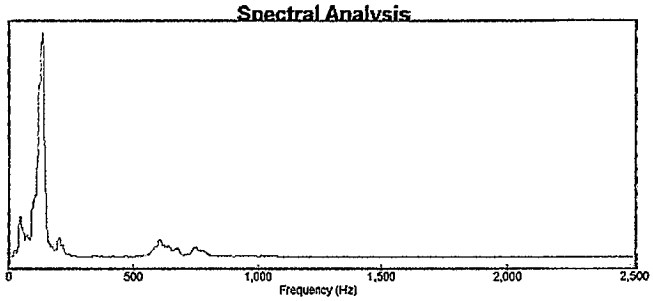
Comments

Leakage was pinpointed and repaired.

Repair Action:







Appendix B – Installation and Viewing Instructions

1. Place CD in Computer. Double click on the folder labeled "DC Pro", then double click on the file "Setup.exe" and the DigiCorr Program will now be installed on your computer and will be stored in a folder labeled "Flow Metrix." When the installation software prompts you for a serial number type "Demo."

   Go back to the CD and double click on the file "Data.exe." Then Click "OK" then "Unzip" then "OK" then "Close." This is a self-inflating zip file containing the individual survey recordings.

   All of the files have now been downloaded to your computer.

2. To start DigiCorr Pro click on the DigiCorr Pro icon on your desktop. Within the program, you will now be able to review any of the survey recordings which are located at c:\Data. Click on the yellow folder marked "Stored Data." The default folder "c:\data" is opened.

If you have any trouble with this installation please call Flow Metrix, Inc. at 978.897.2033.

CITY OF NEWPORT
DEPARTMENT OF UTILITIES
WATER DIVISION
IN-HOUSE LEAK DETECTION PROGRAM

The City of Newport Water Division recognizes that a formal and organized leak detection program can significantly reduce operational costs associated with the treatment and distribution of water. As stated in the City's Water Supply Systems Management Plan, the City has devoted time and resources to develop a leak detection program in order to reduce unaccounted for water as much as possible. The City's service area includes, in addition to the City of Newport, the Town of Middletown and a small section of the Town of Portsmouth. The original water works in Newport was started in 1876. Since 1936, the City of Newport has owned and operated the system. The size of mains maintained in the distribution system ranges from 1 ½" to 24". Pipe materials include asbestos cement pipe, tin, lined and unlined cast iron, galvanized piping, PVC, and ductile iron. The system consists of approximately 15,000 service connections. There are approximately 166 miles of NWD water mains throughout the system. The NWD schedule is to conduct the leak detection survey for the entire system over a three year period whereby the survey is conducted on approximately one third of the system each year. Distribution personnel will utilize electro-sonic devices with frequency filters, (sonic method of leak detection), geophones, and a radio frequency correlator. The Distribution crew will adhere to the following protocol while performing leak detection:

A. In using the sonic method of leak detection, the direct contact microphone shall be used to listen on every fire hydrant, every accessible valve, and accessible curb stops on each side of the street. The ground microphone shall be used to listen over every main at intervals of 8 feet to 10 feet.

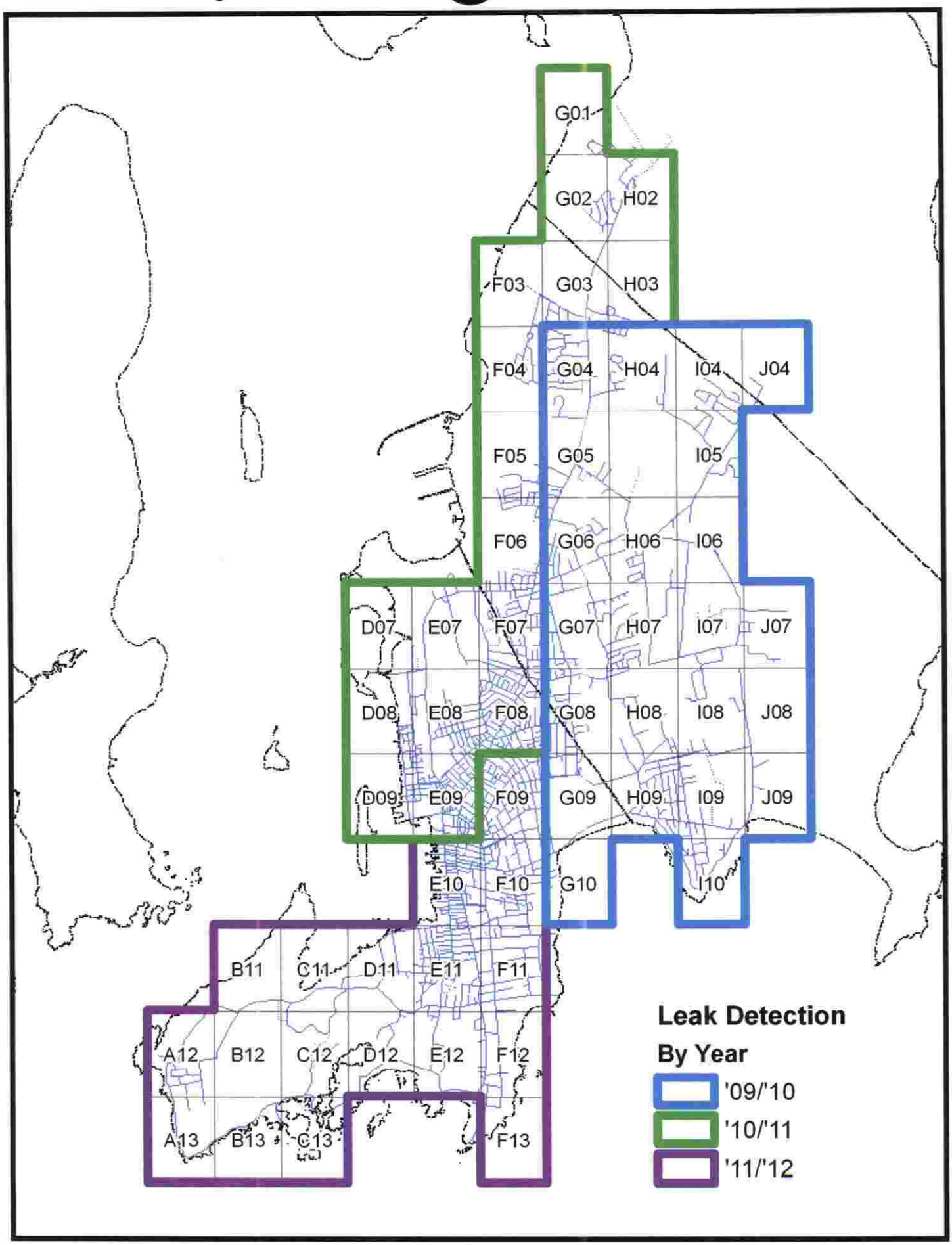
B. Distribution personnel shall use the sound survey as the primary method for pinpointing a leak. When the sound of leakage is detected a ground microphone shall determine the location. A correlator shall be used when the location of the leak cannot be defined by the sound survey.

C. The Director shall be provided with monthly reports including the percentage of the distribution system leak detected Additionally a formal report will be turned in identifying the location of each located leak, the estimated leakage, and the measures taken to finalize a repair.

This in-house leak detection will be dynamic. The variables include present work load, the season as it is difficult to adequately perform leak-detection in some areas during Aquidneck Island's summer tourism periods. Some areas regardless of the season will require very early morning leak detection depending on the amount of traffic in congested areas. There may be several months during the year where a minimum of leak detection has taken place, or none at all, however we are confident we will ultimately perform leak detection on 1/3 of the distribution system (approximately 55 miles) each year

July 30, 2009

Newport Water Division
Leak Detection Program



CITY OF NEWPORT, RHODE ISLAND
DEPARTMENT OF UTILITIES
WATER DIVISION

MEMORANDUM

TO: Julia

FROM: Jay

DATE: December 8, 2009

RE: Monthly Report-Leak Detection November 09

CC: Ken

There was system leak detection performed during the month of November.
Distribution is primarily focusing on the winterization of the water systems approximately 1000 fire hydrants.
Proposed Leak Detection areas for December include sections H-4, and Sections G-4 thru G-10.

CITY OF NEWPORT, RHODE ISLAND
DEPARTMENT OF UTILITIES
WATER DIVISION

MEMORANDUM

TO: Julia

FROM: Jay

DATE: November 2, 2009

RE: Monthly Report-Leak Detection October 09

CC: Ken

There was no leak detection performed during the month of October.
Proposed Leak Detection areas for November include sections H-4, and Sections G-4 thru G-10.

CITY OF NEWPORT, RHODE ISLAND
DEPARTMENT OF UTILITIES
WATER DIVISION

MEMORANDUM

TO: Julia

FROM: Jay

DATE: October 6, 2009

RE: Monthly Report-Leak Detection September 09

CC: Ken

During the month of September, 2009 the distribution crew has performed leak detection on approximately 5.2 miles of water main representing approximately 2.97% of the Distribution system. To date, 36.8 miles of mains have been surveyed, accounting for 21.13% of the distribution system. Sections I-4, I-5, and J-4 were completed this month. No leakage was detected in this area. Proposed Leak Detection areas for October include sections H-4, and Sections G-4 thru G-10.

CITY OF NEWPORT, RHODE ISLAND
DEPARTMENT OF UTILITIES
WATER DIVISION

MEMORANDUM

TO: Julia

FROM: Jay

DATE: September 4, 2009

RE: Monthly Report-Leak Detection August 09

CC: Ken

During the month of August, 2009 the distribution crew has performed leak detection on approximately18 miles of water main representing approximately 10% of the Distribution system. To date, 31.6 miles of mains have been surveyed, accounting for 18.16% of the distribution system. Sections H-6, 7, 8, and I-6, 7 and 8 were completed this month. No significant leakage was found in this area; however 3 hydrants were leaking by, and repaired. One repair each at Green End and Berkley, Aquidneck Avenue at Park Drive, and John Clarke Road. Proposed Leak Detection areas for September include sections H-4, I-4, I-5, J-4, and the "G" sections.

CITY OF NEWPORT, RHODE ISLAND
DEPARTMENT OF UTILITIES
WATER DIVISION

MEMORANDUM

TO: Julia

FROM: Jay

DATE: July 31, 2009

RE: Monthly Report-Leak Detection July 09

CC: Ken

Up to and including the month of July, 2009 the distribution crew has performed leak detection on 13.2 miles of water main representing approximately 8% of the Distribution system. Grid sections H-9, I-9, I-10, J-7, J-8, AND J-9 have been completed. A significant leak, Grid H-9, was located on Reservoir Road and since repaired with an estimated 3, 888,000 gallons of water lost. Distribution will continue North in the FY10 area.

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div. 1-13: Reference page 4, lines 24-25, of Ms. Forgue's testimony.

a. Please explain how backwash is reflected into the calculation of UFW.

b. Please provide an estimate of the annual quantity of water discharged into Lawton Brook.

Response:

a. Please see response to Division 1-11.

b. The amount of washwater discharged from the Lawton Valley WTP into Lawton Brook is dependent upon the amount of water produced at the plant and the amount of washwater that is diverted to the residuals tank. In calendar year 2008 approximately 44 MG of washwater from the Lawton Valley WTP was discharged into Lawton Brook. In June of 2009 Newport Water began diverting twenty five percent of the washwater to the residuals tank such that an average of approximately 3.2 MG of washwater was discharged into the brook each month from June 2009 through November 2009. Assuming that Lawton Valley continues to produce the same amount of water and that twenty five percent of the washwater is diverted to the residuals tank, it is estimated that approximately 39 MG of washwater would be discharged into Lawton Brook during the course of a year.

Prepared by: Harold J. Smith

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div. 1-14: Reference page 17, lines 18-23, of Mr. Smith's testimony. Please provide the complete basis for Mr. Smith's position that the Navy and PWFD should bear no responsibility for unaccounted-for water.

Response: The position reflected in my testimony and in the proposed rates is based on the premise that the Navy and PWFD, as wholesale customers, should only pay for the production of water that they demand and use and not for water that is treated, but then lost, in Newport's transmission and distribution system. Since the water production values shown on RFC Schedule D-4 take into account water that is used in the treatment process and therefore reflect water available for sale, the volume of unaccounted for water shown on the same schedule must be water that is lost, either through leaks or unbilled usage, in Newport's transmission and distribution system.

Prepared by: Harold J. Smith

STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div. 1-15: Please provide a detailed description of all facilities utilized to deliver water from treatment plant(s) to the Navy and PWFD.

Response:

As set forth in Ms. Forgue's direct testimony, Newport Water's system is one of the most complex systems in the state with two (2) water treatment plants, nine (9) raw water reservoirs of varying quality (two of which are on the mainland and serviced with the Sakonnet River crossing), and a significant demand fluctuation between seasons. Newport operates its two treatment plants in concert to meet the average day and peak day demands placed on the system, including those placed on the system by the Navy and PWFD. A description of the facilities utilized to deliver water from the treatment plants to these two wholesale customers is set forth herein below:

Navy – Newport Water delivers water to the Navy through nine metered connections which tap off the existing City owned transmission/distribution system. Five of these connections come off the Low Service Area of the system, and four connections tap off the Medium Service area of the system. The Newport Water distribution system is separated into three pressure zones, or service areas, low, medium and high as described below:

> Low Service Area -The low service area is serviced by the Station 1 WTP via its three 3 MGD pumps and one 6 MGD pump. There are also two booster pumps located at Station 1 WTP, each rated at 2.5 MGD, which can supply water from the low to the medium pressure zones if necessary. Storage for this zone is provided by the 3 MG Reservoir Road Tank in Middletown, and the 0.2 MG clearwell at Station 1. The Reservoir Road Tank maintains system pressure and also provides fire flows to the low service area. It has an overflow elevation of 175 feet.
>
> Medium Service Area -The medium service area is supplied by both the Lawton Valley WTP and the Station 1 WTP. Treated water from the plant is discharged through a 24-inch main to the 4 MG Lawton Valley Finished Water Reservoir (overflow elevation of 201 feet) via three pumps (2, 4, and 6 MGD). Water is then pumped from the 4 MG reservoir to the adjacent 2 MG Lawton Valley Standpipe via two alternately operated 6 MGD high lift pumps. The tank has an overflow elevation of 251 feet and supplies the medium pressure zone along with setting the hydraulic gradient in the distribution system. The medium pressure zone is also supplemented by two booster pumps, each rated at 2.5 MGD, located at Station.

High Service Area -The high service area is supplied via the 1 MGD Forest Avenue Pump Station. Water is drawn from the 24-inch main on West Main Road which supplies the medium pressure zone and pumped through a 12-inch main along Forest Avenue and East Main Road to the 1.5 MG Goulart Lane Standpipe. The tank has an overflow elevation of 333.5 feet and the water level is typically maintained to within 6 feet of that elevation. Although not a direct connection, the High Service Area can be supplemented through the Medium Service Area by the Station 1 booster pumps.

Portsmouth Water and Fire District - There are three available connections maintained by NWD with the Portsmouth Water and Fire District (PWFD). The first and primary connection is located at the 4.0 MG Lawton Valley Finished Water Reservoir from where the PWFD normally draws water to supply its Union Street Pump Station from which it is pumped into the Portsmouth distribution system. The second connection is located at the 2MG Lawton Valley Standpipe. The gate valve at the 2MG Standpipe is normally kept in a closed position, but water can be provided through this connection if circumstances dictate. These two connections are part of the Medium Service Area (see description above). The third connection is located on Mitchell's Lane in the High Service Area (see description above) and is only used in emergency conditions. This is a two-way interconnection where water can flow and be measured in either direction. As previously described above, these connections can and are supplemented by the 2.5 MGD booster pumps located at Station 1, which allows Newport Water the needed flexibility to operate its system in the most efficient and regulatory compliant manner to produce potable water for the system.

Prepared by: K. Mason

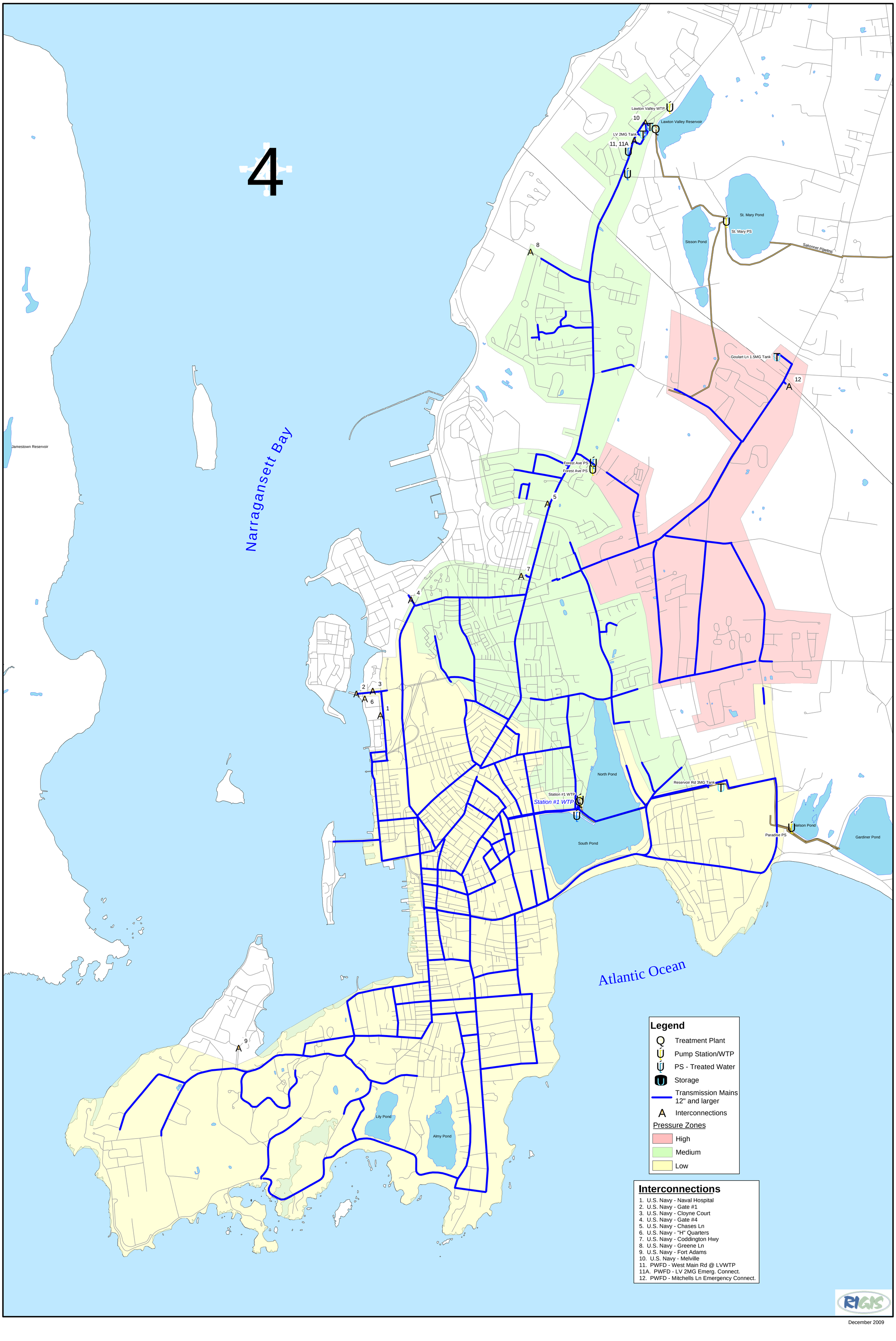
STATE OF RHODE ISLAND PUBLIC UTILITIES COMMISSION
DOCKET NO. 4128
City Of Newport - Utilities Division - Water Department
Response to
The Division Of Public Utilities and Carriers' Data Requests
Set 1

Div. 1-16: Please provide a large scale map of the NWD's water utility facilities, showing treatment plants, major transmission lines, large customers, etc.

Response: Attached is the map of the Newport Water System. The PWFD and NSN connections are indicated on the map. Our available mapping does not identify locations of individual customers. The list of the top ten water consumers for 2008 which is provided as part of the annual report to the RI Water Resources Board is also attached.

Prepared by: J. Forgue

Newport Water Division
System Map
December 2009



December 2009

Dkt. # 4128 Data Response Div 1-16 Top Ten Major Users for 2008	
COMPANY NAME	**MG/YR**
1 US Navy	234.5
2 Housing Authority of Newport	34.8
3 Salve Regina University	21.7
4 Rolling Green Associates, L.P.	20.8
5 Newport Marriot	17.4
6 Trinity Newport limited Partnership	17.2
7 Oxbow Farms Apts	15.8
8 Newport Hospital	15.7
9 Landings Real Estate Group	13.2
10 Middletown Associates Inc.	10.87

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DOCKET NO. 4128
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Div 1-17: Does Newport provide free water service to any customers? If yes, please identify the customers and their annual volume.

Response: Newport does not provide free water service to any customers.

Prepared by: R Esten

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Div 1-18: Does NWD have a significant number of customers with no consumption during the winter? If yes, identify the number of customers and explain whether these customers continue to be billed monthly or quarterly customer charges.

Response: In FY 2008, NWD had 111 customers with seasonal shut offs for the winter. These customers were not billed monthly or quarterly charges during the period they were shut off. There were an additional 506 customers that were not on seasonal shut off that had no consumption during the winter of 2008-2009. These customers continued to be billed monthly or quarterly customer charges.

Prepared by: R Esten

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Div. 1-19: Reference the "Status of Physical Plant" included with Newport's filing. Please provide a summary for the past three years detailing the extent to which water flowed through the normally closed connections between the low, medium and high service areas.

Response: During the past three years water has flowed through only one normally closed connection between the different pressure service areas. The normally closed interconnection between the medium service area and the high service area was opened on March 27, 2009 and closed on June 5, 2009. The connection was opened to allow a section of the high service area to be supplied by the medium service area during the painting of the Goulart Lane water storage tank.

Prepared by: J. Forgue

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Div. 1-20: Reference the "Maintenance Policy" included with Newport's filing. Please provide a copy of the 2005 Infrastructure Replacement Plan and any updates of the Plan.

Response: The 2005 Infrastructure Replacement Plan is attached. The Five Year update is scheduled to be submitted to the RIDOH in January 2010 for review and approval by the various state agencies.

Prepared by: J. Forgue

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Div. 1-21: Reference page 14, lines 27-31, and page 15, lines 1-7 of Mr. Smith's testimony. Please provide the basis for each assumption discussed by Mr. Smith.

Response: Since Newport Water has no data pertaining to its customers' hourly demand patterns it was necessary to develop assumptions regarding the way in which each customer class demands water during the course of a day such that hourly peaking factors could be estimated. For the Residential class it was assumed that very little, if any water, is consumed during a four hour period between midnight and 4:00 AM. For the Commercial class it was assumed that no water would be consumed during a six hour period between midnight and 6:00 AM. While it is obvious that some customers, both Residential and Commercial, will indeed consume water during these periods at some time during the year, these assumptions seem to be reasonable for the purpose of estimating hourly peaking factors for these two classes.

Similarly, Newport has no data pertaining to the hourly demands of the Navy or PWFD nor does it have access to billing data form each of these wholesale customers if such data even exists. Therefore, it was once again necessary to use assumptions regarding the composition of the Navy's and PWFD's customer bases to develop hourly peaking factors for these two customers. For PWFD and the Navy hourly peaking factors were developed using assumptions about the composition of each wholesale customers respective customer base. As stated in my testimony, it was assumed that fifty percent of the consumption by the Navy was consumed by facilities with hourly demand patterns similar to those of Newport's Residential class and the other fifty percent was consumed by facilities that have hourly consumption patterns similar to those of Newport's Commercial class. For PWFD, it was assumed that PWFD's customer base was similar to that of Newport's for which approximately sixty percent of the annual consumption is by the Residential class and forty percent is by the Commercial class.

Prepared by: Harold J. Smith

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Div. 1-22: Reference the "Maintenance Policy" included with NWD's filing.

a. Please explain the purpose and benefits associated with NWD's hydrant flushing and exercising programs.

b. Identify where the costs associated with these programs are reflected in the cost of service study.

Response:

a. The hydrant or water main flushing program is part of the water system's maintenance program. Besides the benefits of exercising and inspecting the distribution system's fire hydrants, the flushing removes impurities or sediment that may have accumulated in the distribution pipelines. Routine flushing of water mains and dead-end water mains is often necessary to avoid taste and odor complaints from our customers. The deposits which settle out and accumulate in pipelines can result in taste, odor, and /or turbidity problems. Most water utilities have at a minimum an annual flushing program and more so if required based on the specifics of their distribution system.

Prepared by: J. Forgue

b. The majority of the costs associated with the hydrant flushing and exercising programs are captured primarily within the Transmission & Distribution account. These costs and the other Transmission & Distribution related costs are allocated to Base/Extra Capacity cost categories based on Maximum Hour demand patterns as shown on RFC Schedule B-1 and to the Commodity Charges for each customer class as shown on RFC Schedule B-2.

Additionally, the costs associated with treating the water that is used for hydrant flushing is captured in the accounts for the two treatment plants and to a lesser degree in the two Source of Supply accounts. Since water used for flushing is not measured or billed for, it is included in the unaccounted for water volumes shown on RFC Schedule D-4. The costs associated with producing this unaccounted for water are allocated to Newport Water's retail customer classes.

Prepared by: H. Smith

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Div. 1-23: Please explain how the maximum day and hour demands for fire service were selected.

Response: Maximum day and maximum hour demands for fire service were based on an assumed 4,000 gallon per minute (gpm) flow rate and a six hour fire event duration. Since representatives of Newport's fire department were unable to provide information pertaining to required fire flows, the assumptions used in the cost of service study were developed based on fire flow assumptions approved in Providence Water's last full rate filing. (Docket No. 3832). In that Docket fire flow requirements were assumed to be 6,000 gpm with a fire event duration of six hours. For the Newport model the assumed fire flow was reduced to 4,000 gpm since structures in the Newport service area are generally smaller than those in area served by Providence Water.

Prepared by: Harold J. Smith

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Div 1-24: Reference RFC Schedule A-1, Page 2. Please provide a description or breakdown of the consultant fees and data processing costs.

Response: Consultant fees of $201,500 per RFC Schedule A-1, Page 2 are the approved Consultant Fees from Docket 4025 broken down as follows:

Rate Case Expenses	$116,500
Cost of Service Study	$ 25,000
Risk Management Study	$ 10,000
Other Fees	$ 50,000
Total	$201,500

Data Processing costs of $137,000 per RFC Schedule A-1, Page 2 are the allocation of the City of Newport Data Processing costs approved in Docket 4025 as follows:

	City Total	%	NWD Allocation
Communication Costs	$328,960	7.90%	$ 25,988
Other MIS Costs	$841,172	13.21%	$111,080
Total			$137,068
Rounded to			$137,000

Prepared by: R Esten

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Div. 1-25: Please explain why it is appropriate to allocate Station One costs to PWFD but none of the costs associated with the facilities which would be used to deliver water from Station One to PWFD.

Response: While it may indeed be appropriate to allocate some of the costs associated with delivering water from Station 1 to PWFD, due to the nature of the available data with respect to both the value of the assets used to deliver water from Station 1 to PWFD and the O&M costs incurred as a result of delivering said water, it would be very difficult to accurately identify these costs such that they could be appropriately allocated between PWFD and Newport's other customers.

Prepared by: Harold J. Smith

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Div. 1-26: Please provide an estimate of the quantity of water used for fire-fighting during each of the last three years.

Response: Estimated quantities of water used for firefighting in the Newport system are estimated at 5,900,000 gallons per year. The estimated quantities are based on training quantities estimated at 3,500,000 gallons per year and structure fires utilizing an approximate 2,400,000 gallons per year.

Prepared by: K. Mason

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CERTIFICATION

I hereby certify that on December 11, 2009, I sent a copy of the within to all parties set forth on the attached Service List by electronic mail and copies to Luly Massaro, Commission Clerk, by electronic mail and regular mail.

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