

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23

DIRECT TESTIMONY
OF
WILLIAM J. MCGLINN, P.E.
ON BEHALF OF THE
PORTSMOUTH WATER AND FIRE DISTRICT

In re: Application for Rate Relief
City of Newport Utilities Department, Water Division
Docket No. 3675

1 **Q. Please state your name and business address.**

2

3 A. My name is William J. McGlinn. My business address is 1944 East Main Road, Portsmouth,
4 Rhode Island.

5

6 **Q. By whom are you employed and in what capacity?**

7

8 A. I am employed by the Portsmouth Water and Fire District (PWFD). My position is General
9 Manager and Chief Engineer.

10

11 **Prior Experience**

12 **Q. Please describe your professional qualifications and experience.**

13

14 A. I have been employed by PWFD as its General Manager and Chief Engineer for seventeen
15 years. My responsibilities include managing the PWFD's staff and day to day operations,
16 performing engineering analysis and design, coordinating the activities of professional
17 consultants, advising the elected Administrative Board ("Board") and implementing the
18 policy decisions of the Board.

19

20 I also served as an engineering consultant to PWFD from May of 1982 to October of 1988.
21 During that time I advised the Administrative Board and the Maintenance Manager on the
22 hydraulic operation and expansion of the water system.

23

24 Prior to being hired by PWFD, I was employed for eleven years by Maguire Group Inc., an
25 engineering consulting firm located in Providence, Rhode Island. I was responsible for
26 project engineering and management in the Environmental Engineering Division. At the
27 time of my departure, I held the title of Senior Principal Engineer. My assignments during
28 that tenure included the design and construction management of municipal and private water
29 systems. In addition, I was responsible for water system hydraulic computer modeling and
30 analysis, as well as water system troubleshooting and testing. While at Maguire, I was also
31 involved in sanitary engineering and resource recovery engineering.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31

I am a graduate of the University of Rhode Island with a bachelor’s degree in Civil and Environmental Engineering. I have been engaged in water supply engineering and civil engineering for over twenty-nine years. My resume is included as Exhibit 1.

Q. Do you have any professional registrations or certifications?

A. Yes. I am a registered professional engineer in the State of Rhode Island. I am also certified by the State of Rhode Island as a Class 4 Drinking Water Distribution Operator and a Class 2 Drinking Water Treatment Operator.

Q. Mr. McGlenn, do you have any professional affiliations?

A. Yes. I am a member of the Rhode Island Water Works Association (RIWWA). I served on RIWWA’s Executive Committee from 1990 to 1998 and as its President from December 1993 to December 1995. I am presently the Chairman of the RIWWA Water for People Committee, serve on the Legislative Committee and am the liaison for RIWWA to the Department of Public Utilities and Carriers (DPUC) on Dig Safe matters.

I am also a member of the New England Water Works Association, the American Water Works Association, the National Society of Professional Engineers, and the American Society of Civil Engineers.

Q. Have you previously presented testimony as an expert witness?

A. Yes. I have testified before the Rhode Island Superior Court and the Portsmouth and Tiverton Zoning Board’s of Review on behalf of PWFD, and in the Rhode Island Superior Court on behalf of the Narragansett Bay Water Quality Management District Commission. I have also appeared as an expert witness before the Rhode Island Public Utilities Commission on behalf of PWFD. These appearances included expert testimony on water supply engineering, sanitary engineering and general civil engineering.

1 **Q. Can you please describe your role in this proceeding?**

2

3 A. My role in this proceeding is to coordinate PWFD's review of and response to the Newport
4 Water Department (NWD) rate filing and to respond to any data requests submitted by the
5 interested parties.

6

7 I will also provide testimony on NWD water quality problems as they affect the island's
8 three water suppliers.

9

10 **Q. Please describe PWFD's legal status and purpose.**

11

12 A. PWFD is a quasi-municipal, governmental agency created by an act of the Rhode Island
13 General Assembly. The purpose of PWFD is to provide drinking water and water for fire
14 protection throughout its legislated service area - approximately ninety percent of Portsmouth
15 on Aquidneck Island. PWFD is governed by a seven-member Administrative Board, which
16 is elected by the registered voters within PWFD's legislated service area.

17

18 **Q. Please describe the PWFD water system.**

19

20 A. PWFD has its own transmission and distribution system, separate and apart from NWD.
21 This system was built and funded by PWFD ratepayers and taxpayers. PWFD has over one
22 hundred twenty-three (123) miles of pipe, four (4) water storage tanks, two (2) pump
23 stations, five hundred forty-three (543) fire hydrants, over six thousand two-hundred fifty
24 (6,250) service connections, and a three thousand (3,000) square foot administration and
25 maintenance building. PWFD provides water service to a population of approximately
26 sixteen thousand three-hundred (16,300).

27

28 In addition to the General Manager and Chief Engineer, PWFD has an Office Manager with a
29 staff of one (1) Senior Accountant and one (1) Senior Clerk and a Maintenance Manager
30 with a staff of four (4) maintenance mechanics and one (1) engineering technician.

31

1 **Q. What are PWFD's water supply needs?**

2

3 A. PWFD does not own any water supplies, but relies on the wholesale purchase of water to
4 supply its system. PWFD buys all of its water from NWD and will continue to rely on NWD
5 for all of its water for the foreseeable future.

6

7 PWFD purchased an average of four hundred forty-one million (441,000,000) gallons of
8 water per year from NWD during the last five (5) years. PWFD estimates that it will
9 purchase approximately four hundred thirty million (430,000,000) gallons of water, or 1.18
10 million gallons per day (MGD), from NWD during NWD FY-06.

11

12 **Q. Can you explain the current contractual arrangements with NWD?**

13

14 A. Yes. The contract between PWFD and NWD expired on December 31, 1995.
15 Negotiations that stretch back as far as 1992 for a new, long-term contract have been
16 unsuccessful. With the exception of water rates, which have been established by the
17 Commission since 2000, PWFD continues to purchase water as it had previously purchased
18 water under the terms of the expired contract.

19

20 **Q. Please explain how PWFD obtains water from NWD.**

21

22 A. All of the water that PWFD purchases from NWD is drawn from the end of NWD's 4.0
23 million gallon underground, treated water reservoir (4.0-MG reservoir) located at the Lawton
24 Valley Water Treatment Plant (LV-WTP). PWFD draws this water through its own pump
25 station and 16-inch suction main.

26

27 In summary, PWFD is drawing water directly from the LV-WTP through the 4.0-MG
28 reservoir, using its own infrastructure.

29

30 **Q. Do any other NWD customers that receive water from the LV-WTP obtain water from**
31 **the end of the 4.0 MG underground reservoir?**

1 A. No. All other customers, including the Navy, Portsmouth retail, Middletown retail and, from
2 time to time, Newport retail, receive water from the 2.0 Million gallon Standpipe at the LV-
3 WTP. This standpipe is supplied by the NWD Lawton Valley Pump Station located on the
4 LV-WTP site, which draws water directly from the plant and from the entrance point or
5 beginning of the 4.0-MG reservoir.
6

7 **Q. In Docket No. 3578, you testified that PWFD was experiencing water quality problems**
8 **with water from NWD. Do these water quality problems still exist?**
9

10 A. Yes. PWFD continues to experience high level of TTHMs in the water it purchases from
11 NWD. In addition, PWFD is experiencing high lead levels at the customer tap, even though
12 PWFD does not have any lead service lines and does not re-treat the water it purchases from
13 NWD.
14

15 **Q. Please describe PWFD's concerns about TTHMs?**
16

17 A. The water that NWD sells to PWFD at its meter pit at the LV-WTP has varying, but
18 frequently high levels of TTHMs. As a result, PWFD has been in violation of the Safe
19 Drinking Water Act standard for TTHMs for five (5) quarters since the third quarter of 2000.
20

21 **Q. What are TTHMs?**
22

23 A. TTHMs are volatile organic compounds that are the by-product of drinking water
24 disinfection. The formation of TTHMs is the result of disinfection chemicals, such as
25 chlorine, chemically combining with organic matter, such as decaying plant and animal
26 materials, during and after the water treatment process. There are four Trihalomethanes
27 (THMs) that make up the EPA regulated TTHMs. These are Bromodichloromethane,
28 Bromoform, Chloroform and Dibromochloromethane. Chloroform is the most prevalent of
29 the four THMs.

1 **Why does EPA regulate TTHMs?**

2

3 A. EPA regulates TTHMs because of their suspected short and long term health effects.
4 According to EPA, epidemiology and toxicology studies have shown a link between
5 bladder, rectal and colon cancers and TTHM exposure. In addition, according to EPA,
6 human epidemiology and animal toxicology studies report an association between
7 chlorinated drinking water and reproductive and developmental endpoints such as
8 spontaneous abortion, stillbirth, neural tube defects, pre-term delivery, intrauterine growth
9 retardation, and low birth weight.

10

11 EPA's current health effects language for TTHM violation notices states: "Some people who
12 drink water containing Trihalomethanes in excess of the MCL (maximum contaminant
13 level) over many years may experience problems with their liver, kidneys, or central nervous
14 systems, and may have an increased risk of getting cancer." It is expected that the EPA will
15 modify the health effects language to also include specific language on reproductive and
16 developmental health impacts when the Stage 2 DBPR rule goes into effect by late 2005 or
17 early 2006.

18

19 **Q. What is the standard for TTHMs?**

20

21 A. The Stage 1 standard or Maximum Contaminant Level (MCL) for TTHM samples is 80
22 parts per billion (ppb) measured as a four-quarter, running annual average (RAA). Water
23 systems are required to test for TTHMs on a quarterly basis at four locations in their
24 distribution system for each water treatment plant supplying that system. The TTHM test
25 results for the test locations are averaged every quarter to determine the quarterly average
26 (QA). The QA for the current quarter and the three most previous quarters are averaged to
27 determine the RAA for the current quarter. The RAA is compared to the MCL of 80 ppb to
28 determine compliance with the MCL for TTHMs.

29

30 **Q. You testified in Docket #3578 that the water purchased by PWFd frequently exceeded**
31 **80 ppb at the meter pit. Does this continue to be the case?**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31

A. Yes. Since my direct testimony in March of 2004, samples obtained on a weekly basis at the PWFD meter pit have exceeded 80 ppb nine (9%) percent of the time. In addition, thirty (30%) percent of those weekly samples either exceeded or were within twenty (20%) percent of 80 ppb. PWFD’s official TTHM sample results as reported for compliance to the Rhode Island Department of Health, as well as a compilation of all TTHM sample results obtained since 2000 by PWFD for the PWFD and NWD systems, are attached as Exhibit 2.

Q. Is PWFD the only water system on Aquidneck Island still experiencing high levels of TTHMs?

A. No. Both the Navy and NWD are experiencing high levels of TTHMs, as well.

Q. Why is it a problem to have TTHM levels close to the MCL if the system is otherwise in compliance with the standard?

A. It is a problem for two reasons.

First, with an RAA close to the MCL, each water system is susceptible to exceeding the standard at any time based on high TTHM results from any one quarter. The quality of NWD raw water and its organic content are variable from reservoir to reservoir. The raw water quality and organic content in each reservoir also varies from season to season. The LV-WTP is over fifty years old and susceptible to operational problems. Any single event or combination of events with regard to raw water quality or operational problems could result in any or all Aquidneck Island water suppliers exceeding the MCL for TTHMs.

Second, the EPA standards are about to change. The Stage 2 standards are expected to be promulgated in late 2005 or early 2006. The new rule will affect TTHM compliance in two ways:

- Under the current Stage 1 rule, one of the four sites for each treatment plant must represent the longest residence time for the water in the distribution system, which

1 does not necessarily correspond to the location of the highest level of TTHMs in the
2 system. However, under the future Stage 2 rules, the water systems will be required
3 to determine the locations in their distribution system with the highest level of
4 TTHMs and to use one or more of the highest sites as sampling points for
5 compliance.

- 6 • Under Stage 1, the TTHM results for all sampling sites are averaged to determine
7 the RAA, which allows low TTHM sites to compensate for high TTHM sites.
8 However, Stage 2 will require that each of the TTHM sample sites meet the MCL of
9 80 ppb based on a newly defined four quarter RAA for each site.

10
11 In essence, water systems will be testing the distribution system at the locations with the
12 highest level of TTHMs and, for that worst site, the TTHM average for four quarters must
13 meet the MCL of 80 ppb.

14
15 **Q. In Docket No. 3578, the Commission approved a settlement agreement that required**
16 **NWD, PWFD and the Navy to participate in a joint study to examine the most efficient**
17 **way to address on an island-wide basis the TTHM issues facing NWD, PWFD and the**
18 **Navy. Has this study been completed?**

19
20 A. No, however, on September 7th the parties received a draft report *Water System Evaluation:*
21 *Aquidneck Island TTHM Study* from Maguire Group, the engineering consulting firm
22 selected for the study. The parties met with the Maguire Group to review the draft report on
23 September 14th, the day before this testimony was due.

24
25 **Q. Can you comment on the major findings of the draft study?**

26
27 A. Yes, however, I have not had the opportunity to review the study in detail. I will therefore
28 summarize what I find to be the most significant findings of the draft study based on my
29 limited review. Furthermore, I will be able to comment further in my Surrebuttal testimony,
30 as necessary, after the meeting with the consultant on the 14th and the review of their final
31 report.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31

There are four (4) significant findings in the draft report.

- Chloramines

Maguire concludes that conversion to chloramines for secondary disinfection is the most cost-effective solution that is likely to reduce TTHMs for the three water systems.

Maguire cautions, however, that when utilities convert to chloramines for secondary disinfection, they must address the recurring issue of nitrification in their distribution systems. Nitrification is a microbiological process that occurs when the ammonia (added to the water as part of the chloramination process) in the distribution system oxidizes; first to nitrite and then further to nitrate. When nitrite is present, it reduces the amount of chloramines residual. A lower chloramines residual level and a higher nutrient level (caused by the nitrification reaction) can cause heterotrophic bacteria and coliform bacteria to proliferate in the water system.

- Water Age

Maguire indicates that the use of the 4.0-MG reservoir at the LV-WTP increases the TTHM levels and age of the water supplied to PWFD. Maguire reports that the average water age when PWFD purchases the water at its meter pit is approximately 4.2 days (using October operations and water demand). This results in a maximum water age in the north end of PWFD’s distribution system of approximately 9 days. Maguire indicates that water age is an area of concern because of the potential for nitrification with the use of chloramines.

- Corrosion Control and pH

Maguire indicates that the variability of the finished water pH (in particular water from the LV-WTP) places the distribution system area served by this facility at high risk for serious corrosion problems, and the switch to chloramines could create additional corrosion complications, including increased lead levels at the customer tap. Maguire further indicates that the pH variability issue at the LV-WTP should be rectified immediately. Maguire also recommends that if chloramines are employed for secondary disinfection that new, formal system-wide corrosion control strategy should be developed and implemented before the conversion to chloramines.

- Margin of Safety for TTHM’s

1 Maguire recommends a margin of safety goal for TTHM's that is below the MCL, which
2 is consistent with federal rulemaking methodologies. The margin of safety will provide a
3 target that should be met the majority of the time, but can allow a buffer for increased
4 RAA values that can occur based on seasonal quality, analytical variability, and other
5 factors that can impact TTHM formation. Maguire is recommending that this goal should
6 be at least 20% below the standard for TTHMs at all wholesale connection points.
7

8 **Q. Can you comment on the relevance and impact of these major findings in the draft**
9 **report?**

10
11 A. Yes. I will address each item below:

12 • Chloramines

13 Based on the *Water System Evaluation: Aquidneck Island TTHM Study* by Maguire
14 Group and the *WTP Compliance Evaluation* by CDM, it appears that the use of
15 chloramines as a secondary disinfectant may be the most cost-effective, short term
16 solutions to address the island's TTHM problem until the LV-WTP is replaced.
17 However, this finding must be further evaluated and tested by CDM, currently under
18 contract to NWD, and approved by the RI Department of Health before implementation.
19

20 Regardless, any potential for treatment optimization to potentially lower TTHMs as
21 identified by Maguire or CDM should be pursued without delay as it will help the
22 island's water suppliers meet the TTHM standard prior to and after conversion to
23 chloramines. However, before NWD implements the chloramine conversion it must
24 address the serious pH variability issue.

25 • Water Age

26 The 4.0-MG reservoir is adding nearly 4.5 days to the age of the water purchased by
27 PWFD and it is increasing the TTHM levels in this water. PWFD is the only customer
28 drawing water from the end of the 4.0 MG reservoir. All other water customers are
29 obtaining fresher water from the LV-WTP or from the beginning of the 4.0-MG reservoir
30 when the plant is not running. This has always been a concern to PWFD. The proposed
31 conversion to chloramines makes water age a critical concern with regard to the potential

1 for nitrification. PWFD will be looking to move its connection to the upstream side of
2 the reservoir or to be serviced from the 2.0 MG standpipe as suggested by Maguire in the
3 draft report.

4 • Corrosion Control and pH

5 As explained in the Maguire draft report, corrosion control is a significant issue when
6 considering the conversion to chloramines. The high lead levels found in Washington,
7 DC area houses after a conversion to chloramines highlights this potential problem.
8 Furthermore, Maguire explained that the variability of the pH levels from the LV-WTP
9 places the distribution systems served by this plant at high risk for corrosion problems.
10 PWFD exceeded the Safe Drinking Water Act lead action level in 2002 and, based on its
11 lead testing in 2005, is likely to exceed the action level once again. In 2002, it was
12 assumed that the jump in lead levels was a result of discontinuing the Stone Bridge water
13 supply to the north end of PWFD and supplying this area with water from Newport. The
14 lead levels gradually returned to normal and PWFD no longer exceeded the action level
15 after two years. The spike in lead levels for 2005, coupled with the information that the
16 pH from the LV-WTP is variable, suggests that there may already be corrosion control
17 issues related to the current treatment. Maguire has indicated that NWD is essentially at
18 the lead action level with its 2004 lead test results. PWFD's lead test results for 2000 to
19 2005 are attached as Exhibit 3.

20
21 The variable pH levels and the potential corrosion control issue must be addressed
22 immediately. This is critical for corrosion control regardless of the possible conversion
23 to chloramines. It is even more critical to address and stabilize pH prior to a conversion
24 of chloramines in order to reduce the potential for additional corrosion problems.

25
26 • Margin of Safety for TTHM's

27 As testified in Docket #3578, PWFD and the Navy must receive water with TTHMs at a
28 level such that the wholesale customers can transport that water throughout their
29 respective distribution systems and still meet TTHM standards. Maguire's draft report
30 recommendation of a margin of safety of at least 20% is prudent and reasonable. As
31 further testified to in Docket #3578, it makes no sense for PWFD or the Navy to re-treat

1 the water produced by NWD. As part of the island-wide approach to water supply,
2 Maguire is recommending in the draft report that the NWD treatment process provide this
3 margin of safety at each wholesale connection point.
4

5 **Q. Do the findings in the draft report relate to NWD's finances and the current rate**
6 **increase?**

7 A. Yes. These are health and safety concerns that the Commission ought to be aware of
8 generally but they have a financial impact as well. The findings of the report require a
9 shifting of capital expenditure priorities. In addition, to the extent that NWD switches to
10 chloramines without first addressing the variability of the pH levels, the resulting corrosion
11 and nitrification problems will not only impact public health and affect the public's
12 confidence in the island's water supply, but will be expensive for all three water systems to
13 resolve. I will be able to comment a bit more on the potential financial impact after
14 reviewing the final Maguire report in detail.
15

16 **Q. What would PWFD like NWD and the Commission to do regarding the findings of the**
17 **island-wide study?**

18 PWFD is requesting that the following actions be taken by NWD and ordered by the
19 Commission to ensure compliance with the Safe Drinking Water Act by the three island
20 water suppliers:

- 21 • Any potential for treatment optimization to potentially lower TTHMs as identified by
22 Maguire or CDM should be pursued without delay as it will help the island's water
23 suppliers meet the TTHM standard prior to and after conversion to chloramines.
- 24 • Authorize PWFD to relocate its connection to the upstream side of the reservoir or to the
25 2.0 MG standpipe to reduce the age of the water purchased by PWFD.
- 26 • The pH variability issue at the LV-WTP should be rectified immediately and be in place
27 for at least one year prior to the implementation of chloramines. NWD's Capital
28 Improvement Plan should be modified to make implementation of system-wide corrosion
29 control a priority before the conversion to chloramines.
- 30 • Establish a margin of safety goal of at least twenty (20%) below the MCL for TTHM's at
31 each wholesale connection point.

1

2 **Q. Does this conclude your testimony?**

3

4 A. It may be necessary for PWFD to further address the issues raised in this testimony, and
5 possibly other treatment issues, in its rebuttal testimony based on information learned in the
6 meeting with Maguire and a detailed review of the final report. Otherwise, this does
7 conclude my testimony.

8

EXHIBIT 1

**RESUME OF
WILLIAM J. MCGLINN, P.E.**

POSITION	General Manager and Chief Engineer Portsmouth Water and Fire District 1944 East Main Road P. O. Box 99 Portsmouth, RI 02871
EDUCATION	B.S. Civil and Environmental Engineering University of Rhode Island, 1976
REGISTRATION	Professional Engineer Rhode Island
CERTIFICATIONS	Class 4 Drinking Water Distribution Operator Class 2 Drinking Water Treatment Operator NEWWA Certificate of Competency in Operation of Water Fluoridation Systems
AWARDS	Operator's Meritorious Service Award from New England Water Works Association in 1999
PROFESSIONAL SOCIETIES	Rhode Island Water Works Association Executive Committee 1990 to 1998 President 1993 to 1995 Chairman - Water for People Committee 1999-2005 Member – Legislative Committee 2004-2005 New England Water Works Association American Water Works Association American Society of Civil Engineers National Society of Professional Engineers American society of Civil Engineers
HONOR SOCIETIES	Tau Beta Pi - National Engineering Honor Society Phi Kappa Phi - National Honor Society
EXPERT TESTIMONY	Expert testimony on water supply engineering, sanitary engineering and general civil engineering before the Rhode Island Superior Court, the Rhode Island Public Utilities Commission, the Portsmouth Zoning Board of Review, the Tiverton Zoning Board of Review

EXHIBIT 1 (continued)

**RESUME OF
WILLIAM J. MCGLINN, P.E.**

PROFESSIONAL EXPERIENCE

Portsmouth Water and Fire District, Portsmouth, RI

Mr. McGlinn has been employed by the Portsmouth Water and Fire District as its General Manager and Chief Engineer since October 10, 1988. His responsibilities include managing the District's staff and day to day operations, performing engineering analysis and design, coordinating the activities of the District's professional consultants, advising the Administrative Board, and implementing the policy decisions of the Administrative Board. Mr. McGlinn served as an engineering consultant to the Portsmouth Water and Fire District from May of 1982 to October of 1988. During that time he advised the Administrative Board and the Maintenance Manager on the hydraulic operation and expansion of the water system.

Maguire Group, Inc., Providence, RI

Prior to being hired by the Portsmouth Water in 1988, Mr. McGlinn was employed for eleven years by Maguire Group, Inc., an engineering consulting firm located in Providence, Rhode Island. He was responsible for project engineering and managing projects in the Environmental Engineering Division and, upon his departure held the title of Senior Principal Engineer. His assignments during this tenure included the design and construction management of water systems. In addition, Mr. McGlinn was responsible for water system hydraulic modeling and analysis, as well as water system troubleshooting and testing. While at Maguire he was also involved in sanitary engineering and resource recovery engineering. The clients that Mr. McGlinn served are numerous and include the Providence Water Supply Board, the Kent County Water Authority, the Bristol County Water authority, the Lincoln Water Commission, the State of Rhode Island, the Portsmouth Water and Fire District, and the Town of Cumberland in Rhode Island; and the Prince George's County Government, Maryland, the City of Detroit, Michigan, the Norwich Department of Public Utilities, Connecticut, the City of Gloucester, Massachusetts, and the United States Army Corps of Engineers, Frankfurt, West Germany.

Westcott Construction Company, North Attleboro, Ma

Mr. McGlinn was employed by the Westcott Construction Company for one year prior to working for Maguire Group. Mr. McGlinn performed site layout, surveying and estimating for the construction of the Taunton Wastewater Treatment Plant project. His duties included the layout and monitoring of water and sewer main construction, concrete structure construction, and equipment installation.

YEAR	QTR	DATE	1342 ANTHONY ROAD	ROGER WILLIAMS UNIVERSITY 144 ANTHONY RD	VFW HALL 822 ANTHONY RD Q-SITE	SENIOR CENTER 110 BRISTOL FERRY RD	PORTS. FIRE DEPT 2300 EAST MAIN RD Q-SITE	RI STATE POLICE 838 EAST MAIN RD Q-SITE	METER PIT AT LV WTP	PMS JEPSON LN	98 BRAMANS LANE RES. Q-SITE	GEORGE-TOWN APTS. 20 INDIAN AVE	S&S FABRICS 1 MARITIME DR (NWD RETAIL)	LV-WTP AFTER STANDPIPE (NWD RETAIL)(MS)	D. FOX OFFICE 850 AQUID-NECK AVE (NWD RETAIL)	LV-WTP EFF.
SYSTEM			PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	NWD	NWD	NWD	NWD
		08/30/05							86.8							
		08/23/05							74.2							
		08/16/05							86.4							
		08/09/05							104							
		08/02/05			114				78.8		100		108	80.6	113	13.5
		07/26/05							79.2							
		07/19/05							82.7							
		07/12/05							53.1							
2005	3	07/05/05			93.0		88.7	71.6	66.9		75.7		84.6	77.2	89.7	10.3
		06/28/05							62.3							
		06/21/05							49.0							
		06/14/05							76.5							
		06/07/05			98.4				60.0		73.4		76.3	63.9	123	13.0
		05/31/05							65.0							
		05/24/05							65.3							
		05/17/05							65.9							
		05/10/05							53.6							
		05/03/05							59.7							
		04/26/05							54.2							
		04/19/05							55.9							
		04/12/05							60.0							
2005	2	04/05/05			77.1		56.7	56.9	48.1		59.3		75.7	69.6	61.2	8.5
		03/29/05							56.9							
		03/22/05							52.7							
		03/15/05							48.1							
		03/08/05							42.2							
		03/01/05			62.1				42.4		48.8		69.3	53.5	64.9	8.0
		02/22/05							45.9							
		02/15/05							26.0							
		02/08/05							22.4							
		02/01/05			62.6				30.9		32.8		63.6	40.1	57.0	6.4
		01/25/05							NA							
		01/18/05							43.0							
		01/11/05							40.8							
2005	1	01/04/05			74.2		64.5	49.9	48.7		54.2		76.9	59.3	61.2	24.2
		12/28/04							40.8							
		12/21/04							39.2							
		12/14/04							42.8							
		12/07/04			75.1				39.3		56.8		60.6	48.1	72.2	13.2
		11/30/04							41.6							
		11/23/04							34.7							
		11/16/04							46.5							
		11/09/04							46.6							
		11/02/04			73.4				47.2		70.5		70.4	75.0	82.4	9.90
		10/26/04							42.1							
		10/19/04							46.0							
2004	4	10/14/04			76.0		73.5	76.1			81.2					
		10/12/04							60.8							

YEAR	QTR	DATE	1342 ANTHONY ROAD	ROGER WILLIAMS UNIVERSITY 144 ANTHONY RD	VFW HALL 822 ANTHONY RD Q-SITE	SENIOR CENTER 110 BRISTOL FERRY RD	PORTS. FIRE DEPT 2300 EAST MAIN RD Q-SITE	RI STATE POLICE 838 EAST MAIN RD Q-SITE	METER PIT AT LV WTP	PMS JEPSON LN	98 BRAMANS LANE RES. Q-SITE	GEORGE-TOWN APTS. 20 INDIAN AVE	S&S FABRICS 1 MARITIME DR (NWD RETAIL)	LV-WTP AFTER STANDPIPE (NWD RETAIL)(MS)	D. FOX OFFICE 850 AQUID-NECK AVE (NWD RETAIL)	LV-WTP EFF.
SYSTEM			PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	NWD	NWD	NWD	NWD
		10/05/04			72.2				52.4		58.6		73.6	51.7	65.3	12.9
		09/28/04							56.3							
		09/21/04							49.9							
		09/14/04							60.3							
		09/07/04			94.6				66.5		101		103	73.0	102	17.1
		08/31/04							77.1							
		08/24/04							75.1							
		08/17/04							55.9							
		08/10/04							72.7							
		08/03/04			69				37.1		35.3		44.3	38.2	35.7	16.9
		07/27/04							61.0							
		07/20/04							62.7							
		07/13/04							68.1							
2004	3	07/06/04			92.7		94.3	85.4	80.7		103		93.5	73.0	98.9	11.6
		06/29/04							75.8							
		06/22/04							89.8							
		06/15/04							83.1							
		06/08/04							77.7							
		06/01/04			82.9				62.3		87.4			82.2	84.5	13.4
		05/25/04							67.4							
		05/18/04							65.3							
		05/11/04							62.8							
		05/04/04			89.3				66.4		90.3		91.9	86.4	69.8	10.4
		04/27/04							68.5							
		04/20/04							43.8							
		04/13/04							48.2							
		04/07/04														5.00
2004	2	04/06/04			55.0		46.9	45.7	43.2		52.2		63.3	46.7	54.9	
		03/30/04							41.0							
		03/23/04							39.7							
		03/16/04							52.3							
		03/02/04			61.4				49.4		59.0			57.7	45.6	9.70
		02/24/04							50.6							
		02/17/04							48.3							
		02/10/04							44.6							
		02/03/04			51.0				37.4		53.3			40.5	53.3	4.58
		01/27/04							33.4							
		01/20/04							29.9							
		01/13/04							36.2							
		01/08/04							60.8							
2004	1	01/06/04			52.6		38.8	38.1	35.3		39.2			38.7	57.7	6.05
		12/29/03							33.0							
		12/22/03							31.9							
		12/16/03							32.7							
		12/09/03							39.6							
		12/02/03			73.0				45.3		63.9			47.1	67.1	4.17
		11/24/03							51.8					44.5		4.68
		11/18/03							51.1					47.5		5.23
		11/10/03							48.3							

YEAR	QTR	DATE	1342 ANTHONY ROAD	ROGER WILLIAMS UNIVERSITY 144 ANTHONY RD	VFW HALL 822 ANTHONY RD Q-SITE	SENIOR CENTER 110 BRISTOL FERRY RD	PORTS. FIRE DEPT 2300 EAST MAIN RD Q-SITE	RI STATE POLICE 838 EAST MAIN RD Q-SITE	METER PIT AT LV WTP	PMS JEPSON LN	98 BRAMANS LANE RES. Q-SITE	GEORGE-TOWN APTS. 20 INDIAN AVE	S&S FABRICS 1 MARITIME DR (NWD RETAIL)	LV-WTP AFTER STANDPIPE (NWD RETAIL)(MS)	D. FOX OFFICE 850 AQUID-NECK AVE (NWD RETAIL)	LV-WTP EFF.
SYSTEM			PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	NWD	NWD	NWD	NWD
		11/04/03			84.0				66.9		74.0			60.4	71.3	14.7
		10/28/03							54.8							
		10/21/03							54.2							
2003	4	10/14/03			81.2	80.5	76.3	75.3	64.0	73.0	81.7				86.6	
		10/07/03				79.2		59.5	53.8	59.2				53.6		8.09
		09/30/03				90.9		70.6	64.6	82.0				68.9		10.2
		09/23/03							61.3					74.8		12.2
		09/16/03							65.9					74.9		9.81
		09/09/03							72.0					81.1		8.74
		09/02/03	118	125					83.8		117	128		91.6	134	10.8
		08/26/03							107					98.2		15.1
		08/19/03							99.8					101		19.2
		08/12/03							66.0					74.1		17.3
		08/05/03	102	106					68.8		110	121		78.2	112	12.3
		07/29/03							69.5					76.4		12.2
		07/22/03							69.1					79.5		11.6
		07/15/03							86.7					80.0		14.5
		07/08/03							78.6					79.3		11.7
2003	3	07/01/03	93.1	91.6			91.7		81.8		88.1	104		68.1	96.9	16.4
		06/24/03							70.4							
		06/17/03							63.5							
		06/10/03							66.2							
		06/03/03	72.7	77.3			71.4		73.4		75.7	79.3			74.2	
		05/27/03							68.9							
		05/20/03							63.7							
		05/13/03							58.1							
		05/06/03	62.1	64.6			66.5		54.9		61.3	62.3			71.2	
		04/29/03							48.2							
		04/22/03							60.7							
		04/15/03							42.4							
		04/08/03	66.3	70.3			71.6		54.2		61.0	76.7	79.6		63.7	
2003	2	04/01/03							51.8							
		03/25/03							50.1							
		03/18/03							34.1							
		03/11/03							34.6							
		03/04/03	53.6	48.3					29.1		29.1	31.7	60.6		48.9	
		02/25/03							43.1							
		02/19/03							63.0							
		02/11/03							56.0							
2003	1	02/06/03	74.2	71.3			62.1		60.2		64.3	74.1	76.6		60.2	
		01/28/03							58.1		72.7	84.8				
		01/21/03	66.9	63.2					58.2							
		01/14/03							55.7		64.5	79.2				
		01/07/03	67.0	67.7					56.6							
		12/30/02							59.1				89.9		72.8	
		12/23/02							54.2				87.8		64.3	
		12/17/02							38.2				81.7		46.7	
		12/10/02							34.3				62.7		51.8	
		12/03/02							47.5				66.0		64.4	

YEAR	QTR	DATE	1342 ANTHONY ROAD	ROGER WILLIAMS UNIVERSITY 144 ANTHONY RD	VFW HALL 822 ANTHONY RD Q-SITE	SENIOR CENTER 110 BRISTOL FERRY RD	PORTS. FIRE DEPT 2300 EAST MAIN RD Q-SITE	RI STATE POLICE 838 EAST MAIN RD Q-SITE	METER PIT AT LV WTP	PMS JEPSON LN	98 BRAMANS LANE RES. Q-SITE	GEORGE-TOWN APTS. 20 INDIAN AVE	S&S FABRICS 1 MARITIME DR (NWD RETAIL)	LV-WTP AFTER STANDPIPE (NWD RETAIL)(MS)	D. FOX OFFICE 850 AQUID-NECK AVE (NWD RETAIL)	LV-WTP EFF.
SYSTEM			PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	NWD	NWD	NWD	NWD
		11/26/02							57.4				75.3		75.1	
		11/19/02							46.6				76.2		81.3	
	4	11/13/02		74.0			64.2		50.8		74.4					
		11/07/02							59.8				79.6		62.1	
		10/29/02							57.1				72.5		67.9	
		10/22/02							48.2				56.9		54.2	
		10/15/02							45.9				52.9		58.3	
		10/08/02							52.1				59.1		63.4	
		10/01/02							50.9				58.2		67.9	
		09/24/02							83.6				105		100	
		09/17/02							86.3				98.3		101	
		09/10/02							83.2				121		119	
		09/03/02							90.1				120		130	
		08/27/02							80.8				125		118	
		08/20/02							87.2				114		130	
		08/13/02							136				183			
		08/06/02							117				170		132	
		07/30/02							148				161		166	
	3	07/23/02		129			139		138		141		154		155	
		07/16/02							101				117		119	
		07/09/02							195				85.7		227	
		07/02/02							178				168		218	
		06/25/02							116				128		86.2	
		06/19/02							132				135		94.3	
		06/11/02							137				130		136	
		06/04/02							110				139		157	
		05/28/02							108				215		226	
		05/21/02							110				168		157	
		05/14/02							116				169		156	
2002	2	05/07/02		86.2			76.4		98.6		108		117		127	
		04/30/02							74.6							
		04/23/02							103				103			
		04/16/02							75.5							
		04/09/02							83.7				117			
		04/02/02							65.7							
2002	1	03/26/02		61.8			67.5		50.0		64.1		74.3			
		03/19/02							52.7				67.1			
		03/12/02							63.4				63.4			
		03/05/02							48.3							
		02/20/02		68.7			18.7		51.6		60.1					
		02/12/02							44.1							
		02/05/02							60.5							
		01/29/02							75.6							
		01/22/02							104							
		01/15/02							93.4							
		01/08/02							74.3							
		01/02/02							75.0							
		12/27/01							40.0							
		12/18/01							48.0							

YEAR	QTR	DATE	1342 ANTHONY ROAD	ROGER WILLIAMS UNIVERSITY 144 ANTHONY RD	VFW HALL 822 ANTHONY RD Q-SITE	SENIOR CENTER 110 BRISTOL FERRY RD	PORTS. FIRE DEPT 2300 EAST MAIN RD Q-SITE	RI STATE POLICE 838 EAST MAIN RD Q-SITE	METER PIT AT LV WTP	PMS JEPSON LN	98 BRAMANS LANE RES. Q-SITE	GEORGE-TOWN APTS. 20 INDIAN AVE	S&S FABRICS 1 MARITIME DR (NWD RETAIL)	LV-WTP AFTER STANDPIPE (NWD RETAIL)(MS)	D. FOX OFFICE 850 AQUID-NECK AVE (NWD RETAIL)	LV-WTP EFF.
SYSTEM			PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	PWFD	NWD	NWD	NWD	NWD
		12/11/01							77.2							
		12/04/01							72.0							
		11/27/01							56.2							
		11/20/01							51.2							
		11/15/01						66.6								
2001	4	11/15/01		86.7			74.8		49.8		78.3					
		11/06/01							39.1							
		10/30/01							66.1							
		10/23/01							46.0							
		10/16/01							48.1							
		10/09/01							2.32							
		10/02/01							14.5							
2001	3	09/25/01		10.7			2.03		2.43		2.82					
		09/11/01							31.8							
		08/21/01							94.4							
		06/12/01							50.5							
2001	2	04/26/01		65.8			62.1		51.7		58.5					
		04/17/01							47.4							
		03/20/01							46.5							
		02/27/01							44.9							
		02/20/01							175							
		02/06/01							103							
		01/30/01							65.8							
		01/26/01							22.4							
2001	1	01/09/01		53.7			39.8	-	35.5		39.7					
		12/27/00							19.1							
		12/19/00							33.8							
		12/12/00							67.4							
		12/06/00							118							
2000	4	11/27/00		113			104		108		121					
	4	11/17/00		43.2			35.8				38.9					
	4	11/08/00							31.3							
		10/10/00							37.8							
		09/26/00							53.1							
		09/12/00							82.5							
		08/29/00							73.0							
		08/10/00							103							
2000	3	07/11/00		106			92.6	98.2			103					
2000	2	06/21/00		77.1			76.2	67.0			65.8					
	2	04/21/00		183			192	179			202					
2000	1	03/23/00		160			160	130			140					
1999	4	10/12/99		87.0			94.0	52.0			56.0					
1999	3	09/13/99		74.0			36.0	39.0			34.0					

RANK	HOUSE	STREET	SAMP #	TOTAL LEAD	SAMPLE DATE	REMARKS
1	20	Baldwin Rd.	01	ND	06/23/05	
2	48	Caiger Ln.	43	ND	06/29/05	
3	126	Cherokee Dr.	04	ND	06/23/05	
4	36	Cornell Dr.	16	ND	06/23/05	
5	133	Emmanuel Dr.	21	ND	06/23/05	
6	6	Friends St.	06	ND	06/23/05	
7	100	Heidi Dr.	25	ND	06/29/05	
8	164	Hilltop Dr.	64	ND	06/23/05	
9	170	Hummock Ave.	26	ND	06/24/05	
10	35	Islington Ave.	03	ND	06/23/05	
11	64	Lambie Cir.	27	ND	06/29/05	
12	78	Middle Rd.	61	ND	06/25/05	
13	5	Old Pier Rd.	54	ND	06/23/05	
14	41	Pear St.	07	ND	06/23/05	
15	75	Soares Dr.	47	ND	06/24/05	
16	39	Warcam Way	66	ND	07/02/05	
17	208	Willow Ln.	39	0.0050	06/23/05	See note below
18	85	Canton Ave.	38	0.0052	06/23/05	
19	46	King Philip St.	02	0.0057	06/23/05	
20	50	Sagamore St.	15	0.0113	06/23/05	
21	45	Cherokee Dr.	65	0.0121	06/23/05	
22	378	Water St.	05	0.0159	06/23/05	
23	127	Massasoit Ave.	24	0.0170	06/23/05	
24	38	Peleg Rd.	63	0.0199	06/27/05	
25	246	Fairview Ln.	32	0.0211	06/23/05	
26	23	Hope Ave.	10	0.0227	06/23/05	
27	226	Hilltop Dr.	58	0.0237	06/23/05	<===== 90th Percentile
28	214	Heritage Dr.	22	0.0418	06/23/05	
29	118	Union St.	34	0.1310	06/23/05	
30	1094	East Main Rd.	36	0.1360	06/23/05	

NOTE:

RANK	HOUSE #	STREET	LEAD mg/l	SAMPLE #	SAMPLE DATE	COMPLIANCE
1	30	Anselmo Dr.	ND	57	06/17/04	
2	394	Bristol Ferry Rd.	ND	33	06/18/04	
3	33	Camara Dr.	ND	51	06/17/04	
4	115	Carter Dr.	ND	53	06/17/04	
5	27	Col. Chris. Green Rd.	ND	60	06/17/04	
6	45	Cottontail Dr.	ND	49	06/17/04	
7	211	Fairview Ln.	ND	18	06/16/04	
8	30	Franklin Ter.	ND	23	06/17/04	
9	140	Gideon Lawton Ln.	ND	42	06/17/04	
10	36	Greenfield Ave.	ND	46	06/17/04	
11	96	Hilltop Dr.	ND	30	06/17/04	
12	188	Hilltop Dr.	ND	09	06/17/04	
13	38	Independence Ct.	ND	45	06/17/04	
14	36	Jepson Ln.	ND	14	06/16/04	
15	15	Kirduglyn Rd.	ND	19	06/17/04	
16	64	Lambie Circle	ND	27	06/29/04	
17	33	Lauren Dr.	ND	40	06/17/04	
18	20	Mill Ln.	ND	37	06/17/04	
19	119	Pear St.	ND	55	06/17/04	
20	95	Robin Rd.	ND	31	06/17/04	
21	515	Sandy Point Ave.	ND	35	06/18/04	
22	85	Soares Dr.	ND	12	06/16/04	
23	162	Viking Dr.	ND	11	06/18/04	
24	456	Water St.	ND	17	06/17/04	
25	245	Sea Meadow Dr.	0.005	13	06/17/04	
26	78	Middle Rd.	0.006	61	06/22/04	
27	78	Church Ln.	0.009	59	06/17/04	90TH Percentile
28	28	Edwards Dr.	0.011	28	06/17/04	
29	115	Islington Ave.	0.039	44	06/17/04	
30	24	Camara Dr.	0.041	29	06/18/04	

RANK	HOUSE #	STREET	COPPER mg/l	SAMPLE #	SAMPLE DATE	
1	48	Caiger Ln.	ND	43	11/07/03	
2	45	Cherokee Dr.	ND	65	11/17/03	
3	45	Cottontail Dr.	ND	49	11/17/03	
4	133	Emmanuel Dr.	ND	21	11/07/03	
5	211	Fairview Ln.	ND	18	11/07/03	
6	64	Lambie Cir.	ND	27	11/06/03	
7	41	Pear St.	ND	07	11/06/03	
8	95	Robin Rd.	ND	31	11/06/03	
9	75	Soares Dr.	ND	47	11/07/03	
10	162	Viking Dr.	ND	11	11/06/03	
11	126	Cherokee Dr.	0.02	04	11/06/03	
12	28	Edwards Dr.	0.02	28	11/06/03	
13	38	Independence Ct.	0.02	45	11/06/03	
14	456	Water St.	0.02	17	11/07/03	
15	20	Baldwin Rd.	0.03	01	11/06/03	
16	24	Camara Dr.	0.03	29	11/06/03	
17	33	Camara Dr.	0.03	51	11/06/03	
18	27	Col. Chris. Green Rd.	0.03	60	11/06/03	
19	36	Cornell Dr.	0.03	16	11/06/03	
20	1094	East Main Rd.	0.03	36	11/05/03	
21	96	Hilltop Dr.	0.03	30	11/06/03	
22	164	Hilltop Dr.	0.03	64	11/06/03	
23	188	Hilltop Dr.	0.03	09	11/18/03	
24	226	Hilltop Dr.	0.03	58	11/17/03	
25	23	Hope Ave.	0.03	10	11/06/03	
26	35	Islington Ave.	0.03	03	11/05/03	
27	115	Islington Ave.	0.03	44	11/06/03	
28	15	Kirduglyn Rd.	0.03	19	11/06/03	
29	78	Middle Rd.	0.03	61	11/06/03	
30	119	Pear St.	0.03	55	11/06/03	
31	515	Sandy Point Ave.	0.03	35	11/06/03	
32	118	Union St.	0.03	34	11/06/03	
33	394	Bristol Ferry Rd.	0.04	33	11/06/03	
34	85	Canton Ave.	0.04	38	11/06/03	
35	115	Carter Dr.	0.04	53	11/06/03	
36	78	Church Ln.	0.04	59	11/06/03	
37	246	Fairview Ln.	0.04	32	11/06/03	
38	6	Friends St.	0.04	06	11/06/03	
39	36	Greenfield Ave.	0.04	46	11/07/03	
40	170	Hummock Ave.	0.04	26	11/06/03	
41	36	Jepson Ln.	0.04	14	11/06/03	
42	38	Oliver Haz. Perry Rd.	0.04	48	11/09/03	
43	38	Peleg Rd.	0.04	63	11/06/03	
44	378	Water St.	0.04	05	11/06/03	
45	208	Willow Ln.	0.04	39	11/07/03	
46	30	Anselmo Dr.	0.05	57	11/06/03	
47	100	Heidi Dr.	0.05	25	11/05/03	
48	68	Holman St.	0.05	50	11/17/03	
49	127	Massasoit Ave.	0.05	24	11/06/03	
50	20	Mill Ln.	0.05	37	11/06/03	
51	48	Oakdale Ave.	0.05	20	11/17/03	
52	5	Old Pier Rd.	0.05	54	11/06/03	
53	245	Sea Meadow Dr.	0.05	13	11/06/03	
54	140	Gideon Lawton Ln.	0.06	42	11/07/03	90th Percentile
55	46	King Philip St.	0.06	02	11/06/03	
56	33	Lauren Dr.	0.06	40	11/17/03	
57	50	Sagamore St.	0.06	15	11/06/03	
58	30	Franklin Ter.	0.07	23	11/06/03	
59	85	Soares Dr.	0.11	12	11/06/03	
60	214	Heritage Dr.	0.15	22	11/06/03	

RANK	LOCATION		LEAD mg/l	SAMPLE #	SAMPLE DATE
1	35 Islington Ave.		ND	3	06/07/03
2	126 Cherokee Dr.		ND	4	06/05/03
3	41 Pear St.		ND	7	06/05/03
4	91 Roger Williams Ct.		ND	8	06/06/03
5	188 Hilltop Dr.		ND	9	06/09/03
6	23 Hope Ave.		ND	10	06/05/03
7	162 Viking Dr.		ND	11	06/05/03
8	85 Soares Dr.		ND	12	06/04/03
9	36 Cornell Dr.		ND	16	06/05/03
10	456 Water St.		ND	17	06/05/03
11	211 Fairview Ln.		ND	18	06/05/03
12	15 Kirduglyn Rd.		ND	19	06/06/03
13	133 Emmanuel Dr.		ND	21	06/11/03
14	100 Heidi Dr.		ND	25	06/05/03
15	170 Hummock Ave.		ND	26	06/06/03
16	64 Lambie Cir.		ND	27	06/05/03
17	24 Camara Dr.		ND	29	06/05/03
18	394 Bristol Ferry Rd.		ND	33	06/05/03
19	118 Union St.		ND	34	06/05/03
20	515 Sandy Point Ave.		ND	35	06/05/03
21	1094 East Main Rd.		ND	36	06/05/03
22	20 Mill Ln.		ND	37	06/04/03
23	33 Lauren Dr.		ND	40	06/11/03
24	48 Caiger Ln.		ND	43	06/05/03
25	36 Greenfield Ave.		ND	46	06/05/03
26	75 Soares Dr.		ND	47	06/05/03
27	38 Oliver Hazard Perry Rd.		ND	48	05/31/03
28	45 Cottontail Dr.		ND	49	06/05/03
29	33 Camara Dr.		ND	51	06/05/03
30	115 Carter Dr.		ND	53	06/06/03
31	119 Pear St.		ND	55	06/05/03
32	27 Col. C. Green Rd.		ND	60	06/06/03
33	78 Middle Rd.		ND	61	06/15/03
34	38 Peleg Rd.		ND	63	06/06/03
35	164 Hilltop Dr.		ND	64	06/11/03
36	245 Sea Meadow Dr.		0.005	13	06/05/03
37	96 Hilltop Dr.		0.005	30	06/06/03
38	140 Gideon Lawton Ln.		0.005	42	06/05/03
39	226 Hilltop Dr.		0.005	58	06/05/03
40	30 Franklin Terr.		0.006	23	06/05/03
41	28 Edwards Dr.		0.006	28	06/06/03
42	6 Friends St.		0.007	6	06/05/03
43	36 Jepson Ln.		0.007	14	06/05/03
44	95 Robin Rd.		0.007	31	06/05/03
45	20 Baldwin Road		0.008	1	06/05/03
46	50 Sagamore St.		0.008	15	06/05/03
47	214 Heritage Dr.		0.008	22	06/05/03
48	127 Massasoit Ave.		0.008	24	06/05/03
49	78 Church Ln.		0.008	59	06/05/03
50	38 Independence Ct.		0.009	45	06/05/03
51	46 King Philip St.		0.010	2	06/05/03
52	30 Anselmo Dr.		0.010	57	06/05/03
53	378 Water St.		0.011	5	06/06/03
54	85 Canton Ave.	<----->	0.011	38	06/05/03
55	68 Holman St.	90 th	0.012	50	06/06/03
56	5 Old Pier Rd.	Percentile	0.014	54	06/05/03
57	48 Oakdale Ave.		0.016	20	06/04/03
58	246 Fairview Ln.		0.029	32	06/05/03
59	115 Islington Ave.		0.103	44	06/10/03
60	208 Willow Ln.		0.352	39	06/05/03

RANK		LEAD mg/l	LOCATION	SAMPLE #	PICK UP DATE
1		0.002	20 Baldwin Road	1	6/15/2001
2		0.002	35 Islington Ave.	3	6/13/2002
3		0.002	126 Cherokee Dr.	4	6/13/2002
4		0.002	378 Water St.	5	6/13/2002
5		0.002	6 Friends St.	6	6/13/2002
6		0.002	41 Pear St.	7	6/13/2002
7		0.002	188 Hilltop Dr.	9	6/13/2002
8		0.002	162 Viking Dr.	11	6/13/2002
9		0.002	85 Soares Dr.	12	6/13/2002
10		0.002	456 Water St.	17	6/13/2002
11		0.002	211 Fairview Ln.	18	6/13/2002
12		0.002	100 Heidi Dr.	25	6/13/2002
13		0.002	64 Lambie Cir.	27	6/13/2002
14		0.002	95 Robin Rd.	31	6/13/2002
15		0.002	394 Bristol Ferry Rd.	33	6/13/2002
16		0.002	118 Union St.	34	6/13/2002
17		0.002	515 Sandy Point Ave.	35	6/13/2002
18		0.002	1094 East Main Rd.	36	6/13/2002
19		0.002	20 Mill Ln.	37	6/13/2002
20		0.002	85 Canton Ave.	38	6/13/2002
21		0.002	140 Gideon Lawton Ln.	42	6/15/2001
22		0.002	140 Gideon Lawton Ln.	42	6/13/2002
23		0.002	48 Caiger Ln.	43	6/13/2002
24		0.002	36 Greenfield Ave.	46	6/13/2002
25		0.002	75 Soares Dr.	47	6/15/2001
26		0.002	75 Soares Dr.	47	6/13/2002
27		0.002	38 Oliver Hazard Perry Rd.	48	6/13/2002
28		0.002	45 Cottontail Dr.	49	6/13/2002
29		0.002	68 Holman St.	50	6/13/2002
30		0.002	115 Carter Dr.	53	6/13/2002
31		0.002	119 Pear St.	55	6/13/2002
32		0.002	60 Almy Knoll Ter.	56	6/15/2001
33		0.002	60 Almy Knoll Ter.	56	6/13/2002
34		0.002	226 Hilltop Dr.	58	6/15/2001
35		0.002	27 Col. C. Green Rd.	60	6/13/2002
36		0.002	45 Child St.	62	6/13/2002
37		0.002	38 Peleg Rd.	63	6/15/2001
38		0.002	38 Peleg Rd.	63	6/13/2002
39		0.002	35 Islington Ave.	3	6/27/2002
40		0.002	126 Cherokee Dr.	4	6/27/2002
41		0.002	378 Water St.	5	6/27/2002
42		0.002	6 Friends St.	6	6/27/2002
43		0.002	188 Hilltop Dr.	9	6/27/2002
44		0.002	162 Viking Dr.	11	6/27/2002
45		0.002	85 Soares Dr.	12	6/27/2002
46		0.002	36 Cornell Dr.	16	6/27/2002
47		0.002	211 Fairview Ln.	18	6/27/2002
48		0.002	100 Heidi Dr.	25	6/27/2002
49		0.002	64 Lambie Cir.	27	6/27/2002
50		0.002	394 Bristol Ferry Rd.	33	6/27/2002

RANK		LEAD mg/l	LOCATION	SAMPLE #	PICK UP DATE
51		0.002	118 Union St.	34	6/27/2002
52		0.002	515 Sandy Point Ave.	35	6/27/2002
53		0.002	1094 East Main Rd.	36	6/27/2002
54		0.002	20 Mill Ln.	37	6/27/2002
55		0.002	85 Canton Ave.	38	6/27/2002
56		0.002	140 Gideon Lawton Ln.	42	6/27/2002
57		0.002	48 Caiger Ln.	43	6/27/2002
58		0.002	75 Soares Dr.	47	6/27/2002
59		0.002	45 Cottontail Dr.	49	6/27/2002
60		0.002	115 Carter Dr.	53	6/27/2002
61		0.002	119 Pear St.	55	6/27/2002
62		0.002	60 Almy Knoll Ter.	56	6/27/2002
63		0.002	27 Col. C. Green Rd.	60	6/27/2002
64		0.002	45 Child St.	62	6/27/2002
65		0.002	38 Peleg Rd.	63	6/27/2002
66		0.003	91 Roger Williams Ct.	8	6/27/2002
67		0.003	214 Heritage Dr.	22	6/27/2002
68		0.003	28 Edwards Dr.	28	6/27/2002
69		0.003	96 Hilltop Dr.	30	6/27/2002
70		0.003	33 Lauren Dr.	40	6/27/2002
71		0.003	36 Greenfield Ave.	46	6/27/2002
72		0.003	33 Camara Dr.	51	6/27/2002
73		0.004	245 Sea Meadow Dr.	13	6/27/2002
74		0.004	30 Franklin Terr.	23	6/27/2002
75		0.004	38 Oliver Hazard Perry Rd.	48	6/27/2002
76		0.004	30 Anselmo Dr.	57	6/27/2002
77		0.005	91 Roger Williams Ct.	8	6/13/2002
78		0.005	50 Sagamore St.	15	6/27/2002
79		0.005	15 Kirduglyn Rd.	19	6/13/2002
80		0.005	15 Kirduglyn Rd.	19	6/27/2002
81		0.005	48 Oakdale Ave.	20	6/15/2001
82		0.005	48 Oakdale Ave.	20	6/13/2002
83		0.005	30 Franklin Terr.	23	6/13/2002
84		0.005	30 Anselmo Dr.	57	6/15/2001
85		0.006	20 Baldwin Road	1	6/27/2002
86		0.006	245 Sea Meadow Dr.	13	6/13/2002
87		0.006	50 Sagamore St.	15	6/13/2002
88		0.006	48 Oakdale Ave.	20	6/27/2002
89		0.006	133 Emmanuel Dr.	21	6/27/2002
90		0.006	30 Franklin Terr.	23	6/15/2001
91		0.006	170 Hummock Ave.	26	6/13/2002
92		0.006	96 Hilltop Dr.	30	6/13/2002
93		0.006	38 Oliver Hazard Perry Rd.	48	6/15/2001
94		0.006	30 Anselmo Dr.	57	6/13/2002
95		0.007	46 King Philip St.	2	6/27/2002
96		0.007	245 Sea Meadow Dr.	13	6/15/2001
97		0.007	394 Bristol Ferry Rd.	33	6/15/2001
98		0.007	85 Canton Ave.	38	6/15/2001
99		0.007	68 Holman St.	50	6/15/2001
100		0.008	20 Baldwin Road	1	6/13/2002
101		0.008	36 Jepson Ln.	14	6/13/2002

RANK		LEAD mg/l	LOCATION	SAMPLE #	PICK UP DATE
102		0.008	36 Jepson Ln.	14	6/27/2002
103		0.008	456 Water St.	17	6/27/2002
104		0.008	133 Emmanuel Dr.	21	6/13/2002
105		0.008	170 Hummock Ave.	26	6/27/2002
106		0.008	115 Carter Dr.	53	6/15/2001
107		0.008	27 Col. C. Green Rd.	60	6/15/2001
108		0.009	126 Cherokee Dr.	4	6/15/2001
109		0.009	456 Water St.	17	6/15/2001
110		0.009	33 Lauren Dr.	40	6/13/2002
111		0.009	226 Hilltop Dr.	58	6/13/2002
112		0.010	33 Camara Dr.	51	6/13/2002
113		0.011	5 Old Pier Rd.	54	6/15/2001
114		0.012	46 King Philip St.	2	6/13/2002
115		0.012	127 Massasoit Ave.	24	6/27/2002
116		0.012	96 Hilltop Dr.	30	6/15/2001
117		0.013	246 Fairview Ln.	32	6/27/2002
118		0.013	115 Islington Ave.	44	6/27/2002
119		0.013	226 Hilltop Dr.	58	6/27/2002
120		0.013	78 Church Ln.	59	6/27/2002
121		0.014	91 Roger Williams Ct.	8	6/15/2001
122		0.014	36 Cornell Dr.	16	6/13/2002
123		0.014	28 Edwards Dr.	28	6/15/2001
124		0.014	38 Independence Ct.	45	6/27/2002
125		0.015	23 Hope Ave.	10	6/27/2002
126		0.015	246 Fairview Ln.	32	6/13/2002
127		0.015	208 Willow Ln.	39	6/27/2002
128		0.015	78 Church Ln.	59	6/13/2002
129		0.017	5 Old Pier Rd.	54	6/27/2002
130		0.018	95 Robin Rd.	31	6/27/2002
131		0.020	378 Water St.	5	6/15/2001
132		0.022	208 Willow Ln.	39	6/13/2002
133		0.023	127 Massasoit Ave.	24	6/13/2002
134		0.024	24 Camara Dr.	29	6/15/2001
135	<----->	0.025	23 Hope Ave.	10	6/13/2002
136	90th	0.025	50 Sagamore St.	15	6/15/2001
137	Percentile	0.025	38 Independence Ct.	45	6/15/2001
138		0.029	214 Heritage Dr.	22	6/13/2002
139		0.029	38 Independence Ct.	45	6/13/2002
140		0.035	36 Jepson Ln.	14	6/15/2001
141		0.037	28 Edwards Dr.	28	6/13/2002
142		0.042	24 Camara Dr.	29	6/13/2002
143		0.045	214 Heritage Dr.	22A	6/27/2002
144		0.045	100 Heidi Dr.	25	6/15/2001
145		0.045	24 Camara Dr.	29	6/27/2002
146		0.046	5 Old Pier Rd.	54	6/13/2002
147		0.048	115 Islington Ave.	44	6/13/2002
148		0.074	68 Holman St.	50	6/27/2002
149		0.113	214 Heritage Dr.	22	6/15/2001
150		0.126	170 Hummock Ave.	26	6/15/2001

RANK	LEAD mg/l	HOUSE #	STREET	SAMPLE #	
1	<0.002	96	Hilltop Dr.	30	
2	<0.002	85	Canton Ave.	38	
3	<0.002	75	Soares Dr.	47	
4	<0.002	68	Holman St.	50	
5	<0.002	60	Almy Knoll Terr.	56	
6	<0.002	50	Sagamore St.	15	
7	<0.002	48	Oakdale Ave.	20	
8	<0.002	456	Water St.	17	
9	<0.002	394	Briston Ferry Rd.	33	
10	<0.002	38	Peleg Rd.	63	
11	<0.002	378	Water St.	5	
12	<0.002	36	Jepson Ln.	14	
13	<0.002	30	Franklin Terr.	23	
14	<0.002	28	Edwards Dr.	28	
15	<0.002	27	Co. Crhis. Green Rd.	60	
16	<0.002	20	Baldwin Rd.	1	
17	<0.002	140	Gideon Lawton Ln.	42	
18	<0.002	115	Carter Ln.	53	
19	0.0028	24	Camara Dr.	29	
20	0.0028	38	Oliver Haz. Perry Rd.	48	
21	0.0032	100	Heidi Dr.	25	
22	0.0033	126	Cherokee Dr.	4	
23	0.0044	38	Independence Ct.	45	
24	0.0045	170	Hummock Ave.	26	
25	0.0045	5	Old Pier Rd.	54	
26	0.0046	30	Anselmo. Dr.	57	
27	0.0052	214	Heritage Dr.	22	90th Percentile
28	0.0094	226	Hilltop Dr.	58	
29	0.0158	245	Sea Meadow Dr.	13	
30	0.0406	91	Roger Williams Ct.	8	