The State of New Hampshire
Department of Environmental Services
Thomas S. Burack, Commissioner

Celebrating 25 Years of Protecting New Hampshire's Environment

WATER CONSERVATION PLAN APPROVAL

May 4, 2012

Merrimack Village District
c/o Ronald Miner, Jr.
2 Greens Pond Road
Merrimack, NH

RE: Merrimack– Merrimack Village District (PWS ID: 1531010)
Water Conservation Plan, April 10, 2012, NHDES # 999306

Dear Mr. Miner:

On April 10, 2012, the New Hampshire Department of Environmental Services ("DES") Drinking Water and Groundwater Bureau received a Water Conservation Plan, dated 2012, for Merrimack Village Water District located in Merrimack, New Hampshire (the "Plan"). Pursuant to RSA 485:61 and Env-Wq 2101, community water systems seeking permits from DES for new sources of groundwater shall submit a water conservation plan to DES. Based on review of the Plan, DES has determined the Plan complies with Env-Wq 2101.05, *Requirements for Existing Large Community Water Systems*.

Pursuant to Env-Wq 2101.11, the Town of Merrimack, Nashua Regional Planning Commission, Manchester Water Works, and Pennichuck Water Works were provided the opportunity to comment on the Plan from April 2, 2012 the date of public notification, through April 24, 2012. DES received no comments.

On **May 4, 2015**, and every three years thereafter, the water system shall submit a detailed and completed compliance report form to DES documenting compliance with the Plan. Required information includes contact information for the water-system owner and for the individual responsible for carrying out plan tasks; dates tasks were performed; and data relating to meter reading, water audits, leak detection, and public outreach. A copy of the *Water Conservation Plan Ongoing Compliance Form* may located by going to the DES website, www.des.nh.gov, clicking on the "A-Z List" in the top right corner of the page, and scrolling down to Water Conservation.

Revisions to the Plan shall not be implemented without further approval from DES.

Please feel free to contact me with any questions at (603) 271-6989 or via e-mail at stacey.herbold@des.nh.gov .

Sincerely,

Stacey Herbold
Drinking Water and Groundwater Bureau

ec: Derek Bennett, NHDES
Christine Bowman, NHDES
Town of Merrimack
Kerrie Diers, NRPC

WATER WORKS
www.mvdwater.org

Merrimack Village District
Conservation Plan 2012

I. Introduction

A. Contact Information

1. Name and location of system
   Merrimack Village District
   2 Greens Pond Road
   Merrimack, New Hampshire
2. Owner of system and mailing address.
   Owner/Operator: Ronald Miner, Jr.
   Merrimack Village District
   2 Greens Pond Road
   Merrimack, New Hampshire 03054
3. Name and mailing address of designer of water conservation plan
   Owner/Operator: Ronald Miner, Jr.
   Merrimack Village District
   2 Greens Pond Road
   Merrimack, New Hampshire 03054

B. System Overview

1. Reason for new source.
   The Merrimack Village District (MVD) is in need of additional supply capacity to meet regulatory requirements, primarily to meet maximum demands which generally occur from June through September each year.

2. Number of existing and proposed connections for each of the following classes: *(see attachment 1 - MVD Service Connections Report)*
   a. Residential
      6121 Single Family
      2191 multi family/condo
   b. Industrial/commercial/institutional
      462 ICI
   c. Municipal
      18

d. Fire Service Only
509 Residential
26 Industrial/commercial/institutional

3. Description of any connections that currently receive or will receive more than 20,000 gpd.

- *Merrimack Premium Outlet is scheduled to open September 2012. The average daily flow is projected at 137,000 gpd with a maximum daily flow of 296,000 gpd.*
- *Saint-Gobain Performance Plastics – going back to 2008 we've taken the quarter with the highest usage and found the average daily consumption during that period which is 38,1126 gpd.*
- *Fidelity Investments - going back to 2008 we've taken the quarter with the highest usage and found the average daily consumption during that period which is 73,685 gpd.*
- *GT Solar, Inc has recently expanded its production. The estimated maximum daily usage is 31,680 gpd.*

C. Water Use Trends and Supporting Date / Population Trends:

1. Existing and anticipated seasonal fluctuation in water use and reason for fluctuation.
Seasonal outdoor water use increases during the warmer season from June through September.
2. Anticipated growth in population and seasonal fluctuation in population.
Based on our Water Supply Update prepared by Underwood Engineers Inc. (UEI) UEI reviewed NH Office of Energy and Planning (OEP) population projection for the Town of Merrimack for the period 2010 to 2030. OEP's population projection is 27,870 for 2010 and 33,020 for 2030, an increase of about 18%.
3. Maximum day yield of existing sources based on 24-hour pumping.
5.22 (MGD)
4. Average daily water use.
2.2 to 2.5 (MGD)
5. Maximum daily water use.
4.3 to 5.4 (MGD)
6. Minimum hourly flows (if available)
N/A

II. System Side Management

A. Source Meters

1. Name designation of each water source.
   MVD Wells 2, 3, 4&5, 6, 7&8
2. Meter make, model, size, flow range, and date of last calibration for each existing source meter.
   All MVD wells are metered. See attachment 2 - reports from A&D Instruments
3. Meter make model, size and flow range for each new water source (if known)
   N/A
4. Frequency that source meters will be tested/calibrated.
   Our source meters will continue to be tested twice per year by A&D Instruments (See attachment 2)
5. Frequency that source meters will be read (at least every 30 days)
   Our source meters will continue to be read daily.
6. Statement that source meters will be selected, installed, and maintained in compliance with "Manual of Water Supply Practices M6, Water Meters-Selection, Installation, Testing, and Maintenance," (American Water Works 1999).
   The MVD has been careful to install proper metering and have used American Water Works Association document AWWA M-6 1999 as a guiding reference will continue to do so.

B. Service Meters

1. How many un-metered connections exist?
   There are no un-metered connections that MVD is aware of.
2. Proposed timeframe for installing meter on un-metered connections (no later than three years from source water approval).
   If an un-metered connection is discovered the service will be severed until a meter is installed.
3. Will separate irrigation meters be installed?
   This is not an MVD requirement however; some customers prefer to have this billed separately.
4. Frequency that service meters will be read (at lead every 90 days).
   Service meters are/will be read and billed on a quarterly basis.
5. Description of all methods that will be used to read service meters.

All meters are read via a drive by radio read metering reading system. Should the device not pick up a read a manual read will be done.

6. Expected number of days needed to read all service meters.
   Service meters are divided into 3 routes. Depending on the route it may take anywhere from one to three days to complete the reads. Therefore, to read all meters it may take anywhere from three to nine days.
7. Proposed rate of meter testing and/or meter change out.
   The MVD began the installation of meters in 2002. A formal policy was adopted in 2004 (see attachment 3- MVD Meter Exchange Program policy # 04-03-A) with several revisions thereafter. All MVD connections are metered at this time. All meters except the Aquamaster will be tested and/or replaced every 10 years. The Aquamaster is a magmeter with no moving parts with the manufacturer's life expectancy of approximately 20 years. As we near the 20 year mark the meters will be evaluated for accuracy and replaced as needed. Our billing system allows us to pull meter information by installation date for us to schedule inspections with the property owner.
8. Statement that service meters will be selected, installed, and maintained in accordance with "Manual of Water Supply Practices M6, Water Meters-Selection, Installation, Testing, and Maintenance," (American Water Works 1999). The report must reflect the recommendations of this manual and <u>include the rate of service meter change out.</u>
   The MVD has been careful to install proper metering and have used American Water Works Association document AWWA M-6 1999 as a guiding reference and will continue to do so. Also see attachment 3 - MVD Meter Exchange Program policy # 04-03-A

C. Water Audit

1. Most recent water audit, differentiating between apparent and real losses, and estimate of non-revenue water and the year it was estimated.
   The MVD has a Lost Water Study report dated February 23, 2007 prepared by Underwood Engineers Inc. at that time our lost water was at 17.25%. Working with UEI's recommendations the MVD implemented a leak detection program and utilized a leak detection grant to bring that number down to 13.2% in 2009 Re: Water Rate Study Update – FY 2011 Recommendations

2. Frequency that water audit will be conducted (at least annually).
   At this time the MVD looks at our rates and revenues along with non-revenue water every couple of years. We are in the process of developing a data system to conduct the audits annually beginning July 1, 2012.
3. Statement that the water audit will be calculated in accordance with "Manual of Water Supply Practices M36, Water Audits and Loss Control Programs" (American Water Works Association, 2009)
   The Merrimack Village District water audit will be calculated in accordance with "Manual of Water Supply Practices M36, Water Audits and Loss Control Programs" (American Water Works Association, 2009)
4. Statement that the water system shall prepare and submit a response plan to the department within 60 days if the percentage of non-revenue water exceeds 15 percent of the total water introduced to the water system. The response plan shall identify how the water system intends to reduce the percentage of non-revenue water to below 15 percent within two years.
   The MVD will prepare and submit a response plan to the department within 60 days if the percentage of non-revenue water exceeds 15 percent of the total water introduced to the water system. The plan shall identify how the MVD will reduce the percentage of non-revenue water to below 15 percent within two years.

D. Leak Detection

1. Summary of findings for the most recent leak detection surveys including the following information
   a. Year(s) conducted.
      The MVD has an ongoing program that consists of using ZCorr Loggers daily. This was started back in 2007-2008. The software allows us to track all correlations (see attachment 4B). Then as part of a grant in August of 2010 we had a section of Town that we haven't been in awhile done by Heath Consultants (see attachment 4A)
   b. Number of leaks found.
      8 leaks
   c. Estimated losses recovered.
      84 gallons per minute
   d. Percent of system surveyed.
      18.26 (8.76%) miles of main were inspected.

2. Are pipe locations known? If not, include a statement that a pipe location survey will be conducted in order to perform leak detection.
   Yes
3. Breakdown of pipe material, age and length.
   See attached Bob's Humongous Spreadsheet (attachment 5)
4. Availability of contact points and adequacy of spacing.
   N/A
5. Is pipe material non-metallic? If yes, as leaks are difficult to acoustically detect in non-metallic systems, what additional measure will be taken to detect leaks?
   The Merrimack Village District uses Zcorr Loggers daily for our leak detection. The loggers are programmable to type and size of pipe. If we think a leak has been detected we then go out with ground microphones to further investigate.
6. Will zone meters be installed to assist with leak detection identification and location?
   No
7. Will future leak detection surveys be conducted in-house or contracted out?
   In-house and possibly some contracted out
8. If in-house, what equipment will be used and what training will be required?
   The MVD uses Zcorr Loggers and Ground microphones in our leak locating. When the MVD purchased the loggers and ground microphone we were trained on each.
9. If in-house, describe the leak detection method to be used.
   First we choose an area to survey on our Distribution map. The loggers are then pre-programmed and placed out into the system utilizing valves and hydrants. The loggers that were loaded with information like pipe type, size and length are set to listen at 2:30am and 3:00am. Then retrieved the next day at some point, downloaded and then re-deployed. Streets are then highlighted on the map as to where we have been. This continues until town is done and then we start again in the first area.
   Note: If ZCorr detects a leak the software will give us a percentage of the severity along with footage to the leak when main size and material is entered.
10. Statement that a comprehensive leak detection survey will be conducted every two years.
    Each week night the correlelators are set out surveying 1000 feet of main per night.
    The Merrimack Village is very concerned about lost water therefore our leak detection program is continuous.
11. Will leak detection be done all at one time or staggered throughout the two years? If staggered, what is the timeline

The MVD utilizes Zcorr loggers within the high and main services daily searching for any leaks.

F. Intentional Water Loss

1. Are there "bleeders" used within the system at dead ends to improve water quality or prevent freeze-up? If yes, what looping opportunities exist?
   No however, the MVD does use a couple of blow offs within the system during our annual Unidirectional Flushing Program.

2. Are storage tank intentionally allowed to overflow because of system hydraulics or water quality concerns? If yes, what opportunities exist for the installation of altitude valves or tank mixing systems?
   No we don't intentionally overflow our tanks.

III. Consumption Side Management

A. Conservation Rate Structure and Billing

1. Description of proposed rate structure and timeline for implementation (no later than 5 years from source water approval). If unknown, provide a statement that the water system will adopt a rate structure that complies with 2101.05(o) and that DES will be notified of the new structure no later than the first billing cycle after source water approval.
   A uniform rate structure is already in place and is updated approximately every two years. The MVD charges a flat rate per 100 cubic fee regardless of how much water is consumed.
2. If irrigation meters are installed, will irrigation water be billed at a different rate?
   No.
3. Will a seasonal rate structure be utilized in addition to the general rate structure?
   Not at this time.
4. Proposed billing frequency (minimum is quarterly).
   MVD bills on a quarterly basis.
5. Informative billing practices to be used (ex. Water use in gallons/usage history).
   MVD bills detail charges by category: water usage, meter charge, hydrant charge, sprinkler charge and late charge. Customers can request a printed copy of their water usage history at any time by contacting customer service at the MVD

B. Educational Outreach Initiative

1. Informational materials that will be used
2. Rate of dissemination.
3. Does the water system intend on becoming a WaterSense partner? http://www.epa.gov/watersense/
4. Will a rebate program be offered to replace older fixtures with WaterSense certified fixtures?
5. Will customer audits be offered?
6. Other outreach plans?

It is the goal of the MVD to provide education as well as assistance to the community with respect to water and conservation efforts. We have a rotating stock of materials available free of charge including products from Culver Company such as:

1. *The "water wheel" which offers ways to reduce water usage and "Green Living: Everyday tips to live by".*
2. *The 6" rulers have 4 different size holes representing leak sizes. The table next to the holes gives customers an idea of how much water is lost over a 3 month period of time.*
3. *Toilet leak detection tablets for customers to check for unseen leaks.*

During our required lead and copper sampling, participants were given "I Save Water" kits that include: a water saving showerhead, kitchen swivel, 2 bathroom faucet aerators, toilet water saver (fill cycle diverter), toilet leak detection tablets, flow meter bag and water conservation wheel. These kits are also offered to customers calling with concerns about their water usage or those looking for conservation ideas.

The MVD has an "Alternative Landscape Project" consisting of native and near native plantings. High school classes come to tour the property guided by a brochure that explains the various types of growth – from flowering plants to trees. We have rain barrels that can be used to water during drought conditions at the front and rear of the office building.

MVD has been a Groundwater Guardian since 1999. We complete annual entries in August of each year and progress reports in February that detail projects and plans as they are implemented. The designation is inscribed in a plaque displayed at the MVD office. Each year that we earn recognition an official plate with the current year is added to the plaque showing our commitment to our local groundwater resources.

In May of each year New England Water Works hosts the "Water Week Festival". Water providers submit coolers of

water for sampling for the Best Tasting Water contest. MVD consistently participates and was awarded first place in 2001, 2005 and 2008.

Additional conservation tips and helpful links are listed on the MVD website www.mvdwater.org.

As part of the our DES "Best Management Program" we mailed an information letter and the "Got Clean Drinking Water" DES brochure. There are several fact sheets available on the DES website that promote water conservation and preservation ie: "Water Efficiency Practices for Domestic Indoor Water Use". They discuss outdoor water use, agricultural use, xeriscaping and waterwise landscaping, institutional use and water audits for residents and businesses. Currently the MVD send the Consumer Confidence report annually to customers. The above fact sheets will be utilized on a semi- annual basis to bring customers fresh information on conservation and new techniques to prevent water waste.

IV. Zoning Ordinance/Bylaws

A. Are connections to the water system subject to any of the following water efficiency ordinances or bylaws?

1. Indoor
   a. Water efficient fixtures beyond the existing plumbing code.
      Nothing beyond the existing plumbing code.
2. Landscaping
   a. Minimum topsoil requirements.
      Section 10.01(1)(f) Not less than 6 inches of loam (min. 8% organic content) shall be provided on disturbed areas intended for lawns, planting beds or for natural re-growth.
   b. Use of native/drought tolerant plants and grasses.
      Section 10.01(1)(e) Native plant species, or plant species that have been well established in Merrimack... Plant species should be hardy, drought and salt-resistant...
   c. Slope restrictions for turf grass.
3. Irrigation System
   a. Prohibition or restrictions to irrigation systems. *N/A*
   b. Require soil moisture sensors. *N/A*
   c. Require rain sensors. *N/A*
4. Other water efficiency ordinances?
   N/A

V. Water Use Restrictions

A. What is the water system's plan relative to implementing water restrictions?

B. Who is responsible for enforcing restrictions?

The Merrimack Village District currently has a policy/By-Law regarding outside watering. See attachment 6 - Policy #05-01A and 1.D. of the Merrimack Village District By-Laws. To summarize, we have an odd/even outside watering restriction in place year round. Odd numbered homes/businesses water on odd days of the month and even numbered homes/business water on even days of the month. The restriction may become more stringent by requiring watering in the mornings and/or evenings or there may be a full outside watering ban depending on drought conditions. The Superintendent, with input from the Treatment Supervisor and Distribution Foreman, will make the decision as to the level of the restriction/ban.

At the beginning of each spring MVD posts banners on the MVD building and throughout town at well traveled intersections to remind customers about the restriction. If these restrictions are elevated we post notices in public areas around town, publish details in local newspapers and contact the local TV station to have the notice placed on their rolling banner. Notification of removal or change in restrictions is done in the same manner. (see attachment 6 for MVD By-law and policy regarding disciplinary measures)

VI. Reporting and Implementation

A. Include the following statements:

1. "The water system will submit a form supplied by DES once every three years documenting how compliance with the requirements of Env-Wq 2101 is being achieved."
   Item noted
2. "Activities outlined in the water conservation plan will be completed by water system personnel under the supervision of a certified water system operator."
   Item noted

Public Notification Instructions

Within seven days of submitting the conservation plan to DES, the applicant shall provide a copy of the application and report via certified mail to the governing board of the municipality in which a proposed source is located, all municipalities that will receive water from the water system (if any), all wholesale customers (if any), and the regional planning commission serving the location of the proposed source. In most cases, only the municipality and the regional planning commission will require notification. The notified entities may provide the department with written comments regarding the application within 21 days of

receipt. All signed copies of the Certified Mail Return Receipt (the green card) must be forwarded to DES.

Additional Attachments
The applicant must provide the governing boards with a summary of the requirements of Env-Wq 2101 (attachment 7) , which may be found at http://des.nh.gov/organization/divisions/water/dwgb/water_conservation/index.htm, and request that the governing board amend local site planning requirements to reflect the requirements of the Env-Wq 2101 or to promote water efficiency.

Certification
I certify that I have read this Water Conservation Plan, understand the responsibilities of the water system as referenced in the plan, and that all information provided is complete, accurate, and not misleading.

Signature Owner Name (print):
Ronald Miner Jr.

System Owner Signature:
Ronald Miner Jr. Date: 3/26/12

Contact
Stacey Herbold, Water Conservationist
New Hampshire Department of Environmental Services
Drinking Water and Groundwater Bureau
29 Hazen Drive, P.O. Box 95
Concord, NH 03302-0095
Stacey.herbold@des.nh.gov
Ph: (603) 271-0659
FAX: (603) 271-0656

Attachment 1

MERRIMACK VILLAGE DISTRICT
SERVICE CONNECTIONS

SINGLE UNIT ONLY													
	6/1/2008	9/1/2008	12/1/2008	3/1/2009	6/1/2009	9/1/2009	12/1/2009	3/1/2010	9/1/2010	12/1/2010	3/31/2011	6/30/2011	9/30/2011
Domestic	6,034	6,046	6,056	6,065	6,076	6,088	6,100	6,103	6,109	6,113	6,115	6,115	6,121
Mercantile	437	437	439	439	439	438	439	438	439	439	440	440	439
Industrial	23	23	23	23	23	23	23	23	23	23	23	23	23
TOTAL	6,494	6,506	6,518	6,527	6,538	6,549	6,562	6,564	6,571	6,575	6,578	6,578	6,583

HYDRANT ONLY													
	6/1/2008	9/1/2008	12/1/2008	3/1/2009	6/1/2009	9/1/2009	12/1/2009	3/1/2010	9/1/2010	12/1/2010	3/31/2010	6/30/2011	9/30/2011
Domestic	505	526	523	522	519	519	516	515	514	513	511	511	509
Mercantile	18	19	19	20	20	21	23	24	24	24	23	23	24
Industrial	2	2	2	2	2	2	2	2	2	2	2	2	2
TOTAL	525	547	544	544	541	542	541	541	540	539	536	536	535

TOTAL CUSTOMERS WITHOUT CONDOS													
TOTAL	7,019	7,053	7,062	7,071	7,079	7,091	7,103	7,105	7,111	7,114	7,114	7,114	7,118

CONDO/MULTI-UNIT CUSTOMERS													
TOTAL	2,191	2,191	2,191	2,191	2,191	2,191	2,191	2,191	2,191	2,191	2,191	2,191	2,191

TOTAL MVD CUSTOMERS													
TOTAL	9,210	9,244	9253	9262	9,270	9,282	9,294	9,296	9,302	9,305	9,305	9,305	9,309

DIFFERENCE FROM PRIOR QUA													
	0	34	9	9	8	12	12	2	6	3	3	0	4

Attachment 2

AD Instruments
Field Service for Water and Wastewater Instruments

23B S. Main Street, Newton, NH 03858
(603) 382-4667 FAX (603) 382-4608
EMAIL: adinstruments@comcast.net

CUSTOMER	MVD	CAL. DATE	7/13/2011
ITEM CALIBRATED:	Well #2	DATE DUE:	01/2012
MANUFACTURER:	Foxboro	TECH:	STM
Model #	IMT25		
SERIAL #	0526001		
Calibration Value	0-1500 GPM Cf=.218247		
REF. MATERIAL	A1DCP.1		

INSTRUMENT CALIBRATION REPORT

TEST #	Function Tested	Standard	Before Cal.	After Cal.	Deviation	Cal. Tolerance
1	Input	GPM	GPM	GPM		
2	0.0	0	0	0		
3	.25	365	365	365		
4	.5	730	729	730		
5	1.0	1461	1460	1460		
6						
7						

Comments:

X

AD Instruments
Field Service for Water and Wastewater Instruments

23B S. Main Street, Newton, NH 03858
(603) 382-4667 FAX (603) 382-4608
EMAIL: adinstruments@comcast.net

CUSTOMER	MVD	CAL. DATE	7/13/2011
ITEM CALIBRATED:	Well #3	DATE DUE:	01/2012
MANUFACTURER:	Foxboro	TECH:	STM
Model #	IMT25		
SERIAL #	05240785		
Calibration Value	0-1500 GPM Cf=.347119		
REF. MATERIAL	A1DCP.1		

INSTRUMENT CALIBRATION REPORT

TEST #	Function Tested	Standard	Before Cal.	After Cal.	Deviation	Cal. Tolerance
1		GPM	GPM	GPM		
2	0.0	0.0	0.0	0.0		
3	.25	229	228	228		
4	.5	459	458	458		
5	1.0	918.7	917	917		
6						
7						

Comments:

X

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Field Service for Water and Wastewater Instruments

23B S. Main Street, Newton, NH 03858
(603) 382-4667 FAX (603) 382-4608
EMAIL: adinstruments@comcast.net

CUSTOMER	MVD	CAL. DATE	7/13/2011
ITEM CALIBRATED:	Well #4	DATE DUE:	01/2012
MANUFACTURER:	Foxboro	TECH:	STM
Model #	IMT25		
SERIAL #	10280874		
Calibration Value	0-500 GPM Cf=1.327392		
REF. MATERIAL	A1DCP.1		

INSTRUMENT CALIBRATION REPORT

TEST #	Function Tested	Standard	Before Cal.	After Cal.	Deviation	Cal. Tolerance
1	Input	GPM	GPM	GPM		
2	0.0	0.0	0.0	0.0		
3	.25	60	60	60		
4	.5	120	120	120		
5	1.0	240	239	239		
6	2.0	480	480	480		
7						

Comments:

X

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Field Service for Water and Wastewater Instruments

23B S. Main Street, Newton, NH 03858
(603) 382-4667 FAX (603) 382-4608
EMAIL: adinstruments@comcast.net

CUSTOMER	MVD	CAL. DATE	7/13/2011
ITEM CALIBRATED:	Well #5	DATE DUE:	01/2012
MANUFACTURER:	Foxboro	TECH:	STM
Model #	IDP10		
SERIAL #	NA		
Calibration Value	0-1142GPM=0-72.61"		
REF. MATERIAL			

INSTRUMENT CALIBRATION REPORT

TEST #	Function Tested	Standard	Before Cal.	After Cal.	Deviation	Cal. Tolerance
1		MA	MA	MA		
2	0"	4.00	4.00	4.00		
3	18.15	8.00	7.98	7.98		
4	36.3	12.00	12.01	12.01		
5	72.61	16.00	16.01	16.01		
6	72.61	20.00	20.02	20.02		
7						

Comments:

X

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(603) 382-4667 FAX (603) 382-4608
EMAIL: adinstruments@comcast.net

CUSTOMER	MVD	CAL. DATE	7/13/2011
ITEM CALIBRATED:	Well #7	DATE DUE:	01/2012
MANUFACTURER:	Foxboro	TECH:	STM
Model #	IMT25		
SERIAL #	07222685		
Calibration Value	0-600 GPM Cf=.57		
REF. MATERIAL	A1DCP.1		

INSTRUMENT CALIBRATION REPORT

TEST #	Function Tested	Standard	Before Cal.	After Cal.	Deviation	Cal. Tolerance
1		GPM	GPM	GPM		
2	0.0	0.0	0.0	0.0		
3	.25	139.8	139	139		
4	.5	279.7	280	280		
5	1.0	559.4	559.6	559.6		
6						
7						

Comments:

X

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Field Service for Water and Wastewater Instruments

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(603) 382-4667 FAX (603) 382-4608
EMAIL: adinstruments@comcast.net

CUSTOMER	MVD	CAL. DATE	7/13/2011
ITEM CALIBRATED:	Well #8 flow	DATE DUE:	01/2012
MANUFACTURER:	Foxboro	TECH:	STM
Model #	IMT25		
SERIAL #	07222686		
Calibration Value	0-1000 GPM Cf=.329600		
REF. MATERIAL	A1DCP.1		

INSTRUMENT CALIBRATION REPORT

TEST #	Function Tested	Standard	Before Cal.	After Cal.	Deviation	Cal. Tolerance
1		GPM	GPM	GPM		
2	0.0	0.0	0.0	0.0		
3	.25	241	241	241		
4	.5	483	482	482		
5	1.0	967	966	966		
6						
7						

Comments:

X

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Field Service for Water and Wastewater Instruments

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(603) 382-4667 FAX (603) 382-4608
EMAIL: adinstruments@comcast.net

CUSTOMER	MVD	CAL. DATE	7/13/2011
ITEM CALIBRATED:	Turkey Hill Booster	DATE DUE:	01/2012
MANUFACTURER:	badger	TECH:	STM
Model #	Prop		
SERIAL #	15434622		
Calibration Value	0-2000 GPM=0-2.5Hz		
REF. MATERIAL			

INSTRUMENT CALIBRATION REPORT

TEST #	Function Tested	Standard	Before Cal.	After Cal.	Deviation	Cal. Tolerance
1		GPM	GPM	GPM		
2	0 Hz	0	0	0		
3	2 Hz	1600	1596	1596		
4	2.5 Hz	2000	1998	1998		
5						
6						
7						

Comments:

X

Attachment 3

WATER WORKS
www.mvdwater.org

MEMORANDUM

DATE: December 7, 2006
Revised: January 1, 2007
Revised: November 19, 2007

TO: MVD Staff

FROM: James A. McSweeney, Business Manager/Superintendent

RE: Policy Memorandum #04-03-A

Meter Exchange Program

Policy Number 04-03-A EFFECTIVE DATE – JANUARY 1, 2008

Purpose: Meters that register water usage will, over a period of time, wear certain internal parts that will cause or amplify irregularities in readings of customer water bills. To minimize possible loss of revenue from this situation, meters need changing on a periodic basis. Therefore, a schedule for the replacement/repair of District meters is established.

Procedure: For the purposes of meter exchanging, the category of "meters" is divided into two classes namely: large and small. The large meters are 1½" or larger – the small meters are ⅝" and 1" meters.

In the large meter category we feature Aquamaster meters. These meters have no moving parts. Life span is approximately 20 years. The batteries in the ERTs on meter heads have a 3 year life span and should be checked on a yearly basis and replacement when needed as a result of checkings. We read on a quarterly basis so ITRON expectations of 10-15 years are not compatible with our pattern of use.

The ERTs on the Aquamaster meters are both of series 40 and 50 in District use. They are used in a bubble up mode to preclude need to obtain a FCC license. These ERTs are mounted on the head of an Aquamaster unit and do have an operational life of between 13 and 20 years.

Small meters of 5/8" – 1" can have 40W and 50W series depending on installation date locally. The 50W series has proven to be operationally better for us so 40W series are being replaced by the 50W units as needed.

1 ½" – 2" Amco T-3000 that we have need 40W series module due to the construction of the unit.

1 ½" – 2" Amco C-700 with plastic lens encoder (meter top) uses same ERTs as small meters and could be with a 40W or 50W module. The 50W module eliminates problems we have now with 40W series tops and ERTs.

So using handheld and mobile reading systems the battery life is up to 17 years as per Itron, 2750 mAh lithium batteries in a 40 series ERT or 3350 mAh battery in a 50 series ERT modules in a bubble up mode is common usage since 2001. The local demand use will result in a minimum of 10 years.

Other untitled meters in this class shall fall under the five-year requirement.

Disposal of discarded batteries and other meter components will be in accordance with local waste disposal procedures. Officials at the Transfer Station will provide necessary methodology.

To facilitate meter exchanges certain guidelines are proposed but are variable due to any temporary operational demand. Meters are read according to routes established for gathering water consumption data for billing – so changes needed for meters along either of the routes: (1), (2) or (3) can occur on a yearly basis in accordance with the 10 year rule.

Certain ERTs being purchased would allow for meeting unanticipated situations that occur.

Appointments must be made for changes of large meters due to their locations and positioning in these locations.

Records of changes, numbering or ERT accounting will have to be determined when change program is officially started and assignments are formulated. This will serve as a base line for all future activities in accordance with "Meter Exchange Program".

This program shall be started _____ and replacements as needed.

Revise Policy 04-03A dated July 1, 2004

Attachment 4A

HEATH CONSULTANTS

2010 Leak Reports

Heath Consultants Incorporated

September 1, 2010

Mr. Derek Bennett
Water Use & Conservation
Drinking Water & Groundwater Bureau
29 Hazen Drive
P.O. Box 95
Concord, NJ 03302-0095

Dear Mr. Bennett:

This is your final report of the results obtained during your recently completed Water Leakage Detection Survey conducted August 12 thru August 18, 2010, by Heath Consultants Incorporated for Water Use & Conservation – Merrimack Village District.

Should you have any questions or comments regarding the survey or this report, please contact us at 724-836-7830.

We appreciate this opportunity to be of service to you.

Sincerely,

Donald Keller, mh

Donald Keller
Project Manager

DK/mh

Cc: File
James McSweeney

1051 Garden Street, Greensburg, PA 15601
Phone: (724) 724-836-7830 • Fax: (724) 836-7835

Survey Summary

For

MERRIMACK VILLAGE DISTRICT

MERRIMACK, NH

The survey was conducted by Mr. Donald Keller, Heath Consultants, with the assistance of the Merrimack Village District personnel from August 12, 2010 to August 18, 2010. A total of approximately 18.26 miles of main were inspected, as indicated on the progression maps. The survey was conducted using the Heath Aqua Scope by listening to all available direct contact points and by listening as close as possible over the main with the ground microphone at intervals of 6 to 10 feet.

This survey consisted of the inspection of primarily areas service by AC pipe and areas where they have had problems with water hammer and customer complaints. Eight leak locations were identified and written up on Water Leakage Reports #1 through #8, with an estimated total loss of 84 gallons per minute.

339-AQ-23753-025

REFERENCE NUMBER

HEATH CONSULTANTS

Summary of

WATER LEAK CONTROL SURVEY

FOR

Water Use & Conservation	MERRIMACK, NH	Merrimack Village Dist.
COMPANY	CITY AND STATE	DISTRICT OR DIVISION

Conducted by our Consultant(s) Donald Keller

DATE STARTED 08/12/2010 DATE COMPLETED 08/18/2010 TOTAL DAYS 5

CLASSIFICATION	NUMBER	ESTIMATED LEAKAGE		
		X GPM	X GPD	X GPY	AF/Y
1	1	25	36,000	13,140,000
2	5	53	76,320	27,856,800
3	2	6	8,640	3,153,600
TOTALS	8	84	120,960	44,150,400

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	3	55	37	65
SERVICES	5	29	63	35
VALVES	0	0	0	0
HYDRANTS	0	0	0	0
TOTALS	8	84	100	100

TYPE OF SURVEY PERFORMED Comprehensive

MILES OF MAIN INSPECTED 18.26

NUMBER OF SERVICES INSPECTED _____
(If applicable)

NUMBER OF LEAK INDICATIONS 8

Grade 1 (C) >15 to _____ GPM
Grade 2 (B) 5 to 15 GPM
Grade 3 (A) < 5 to _____ GPM

Leak Indication Classification

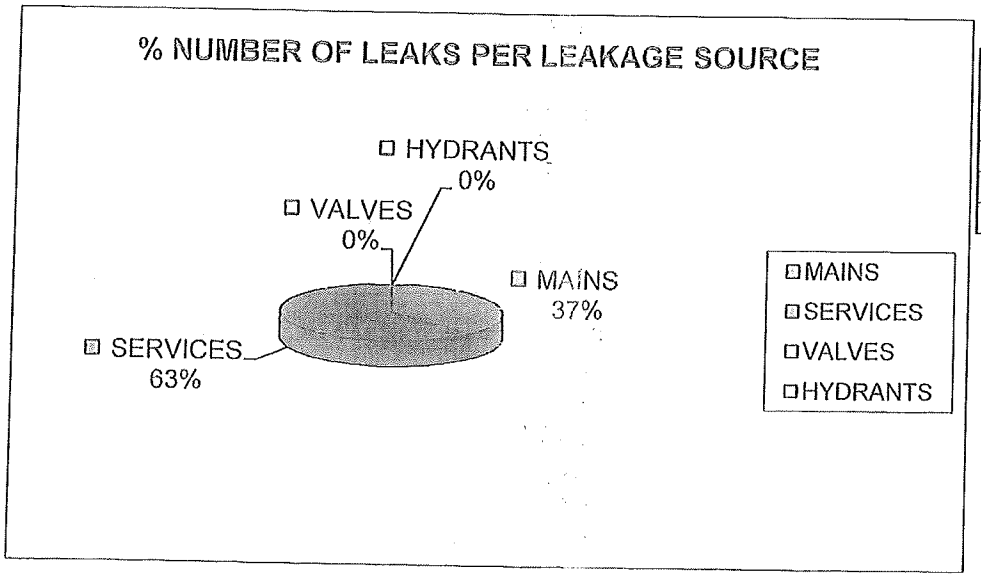
Leak indication classification is not an exact science despite the use of modern instruments as well as training and experience by the Consultant, it is impossible to determine the exact condition of underground piping without actually exposing it. In view of this limitation, our classification (including 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.

SPECIAL CASES

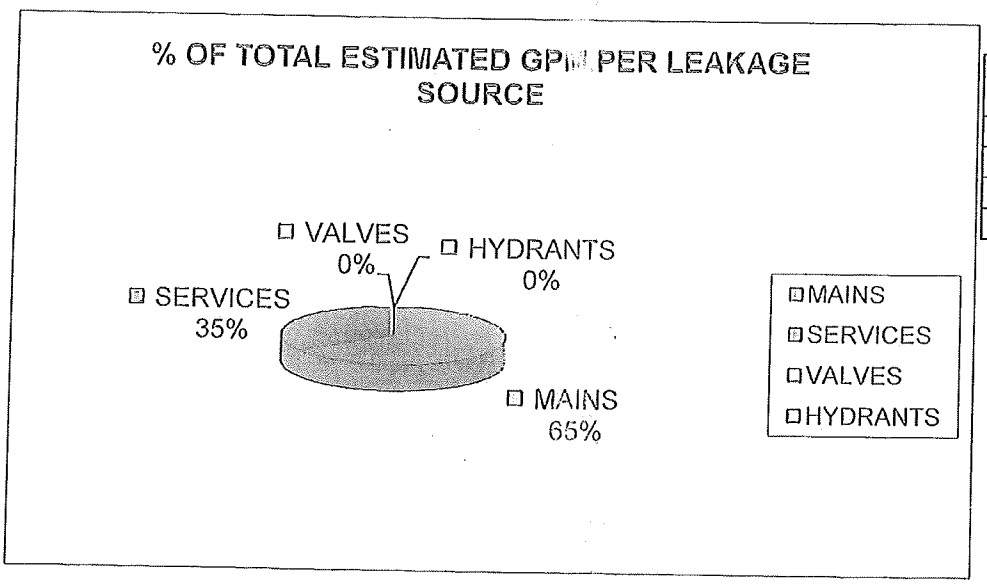
Contact Heath Consultants Incorporated for further information regarding any Special Cases such as emergency assistance, inspecting river/canal crossings, analysis/audit of in-house leakage programs, third party verification, hands-on training, etc.

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

WATER USE & CONSERVATION
MERRIMACK VILLAGE DISTRICT



Source of Leakage	Number of Leaks
MAINS	3
SERVICES	5
VALVES	0
HYDRANTS	0



Source of Leakage	Estimated GPM
MAINS	55
SERVICES	29
VALVES	0
HYDRANTS	0

WATER USE & CONSERVATION
MERRIMACK VILLAGE DISTRICT

POSITIVE STREET REPORTS

INDEX
2010
AQ-23753

STREET	LOCATION	PAGE NO.	GRADE
BAMBI TRAIL	@ #9	8	2
BREK DRIVE	@ #46	4	3
BREK DRIVE	@ #43	5	3
HAWTHORN DRIVE	@ #9	3	2
INGHAM ROAD	@ #9	2	1
LAMSON DRIVE	@ WESTBORN DRIVE	1	2
OLD KINGS ROAD	@ #15	6	2
OLD KINGS ROAD	@ #27	7	2

HEATH CONSULTANTS

Client MERRIMACK VILLAGE DISTRICT
Location MERRIMACK, NH

CONSULTANT'S WEEKLY RESUME

WATER SURVEY

Order Number AO-23753
Week Ending 8-14-10
Type of Survey Coral
Days to Complete Survey 2

			UNDERGROUND LEAKS CLASSIFICATION				ESTIMATED LEAKAGE GPM				NUMBER OF LEAKS BY SUSPECTED LOCATION				Billable Hours
Date	Town	Miles	1	2	3	Reports	Total	1	2	3	Mains	Services	Valves	Hydrants	
8-12-10	MERRIMACK	4.62	0	1	0	1	15	0	15	0	1	0	0	0	8
8-12-10	"	5.21	1	1	1	3	39	25	10	4	1	2	0	0	8
	TOTAL FOR WEEK	9.83	1	2	1	4	54	25	25	4	2	2	0	0	16
	TOTAL THRU LAST WEEK														
	TOTAL TO DATE	9.83	1	2	1	4	54	25	25	4	2	2	0	0	16

Original: Regional Office With Time Sheet
1st Copy: Client
2nd Copy: Consultant
Note: Some Offices May Require An Additional Copy

REMARKS:

Consultant [signature]

Page No. _____

Date 8-12-10

Ownership (Public) Private Easement

Leak Indication Classification

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

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

LEAKAGE CONTROL REPORT
WATER SURVEY

Company MERRIMACK VILLAGE DISTRICT District _____

City MERRIMACK State NH

Nearest Street Address

LAMSON DRIVE AT WESTBORN DRIVE

INDICATION OF LEAK

Sonic	✓
Surfaced Water	
Other	

ESTIMATION OF LEAKAGE:

15 GPM

LEAKAGE DETECTED AT:

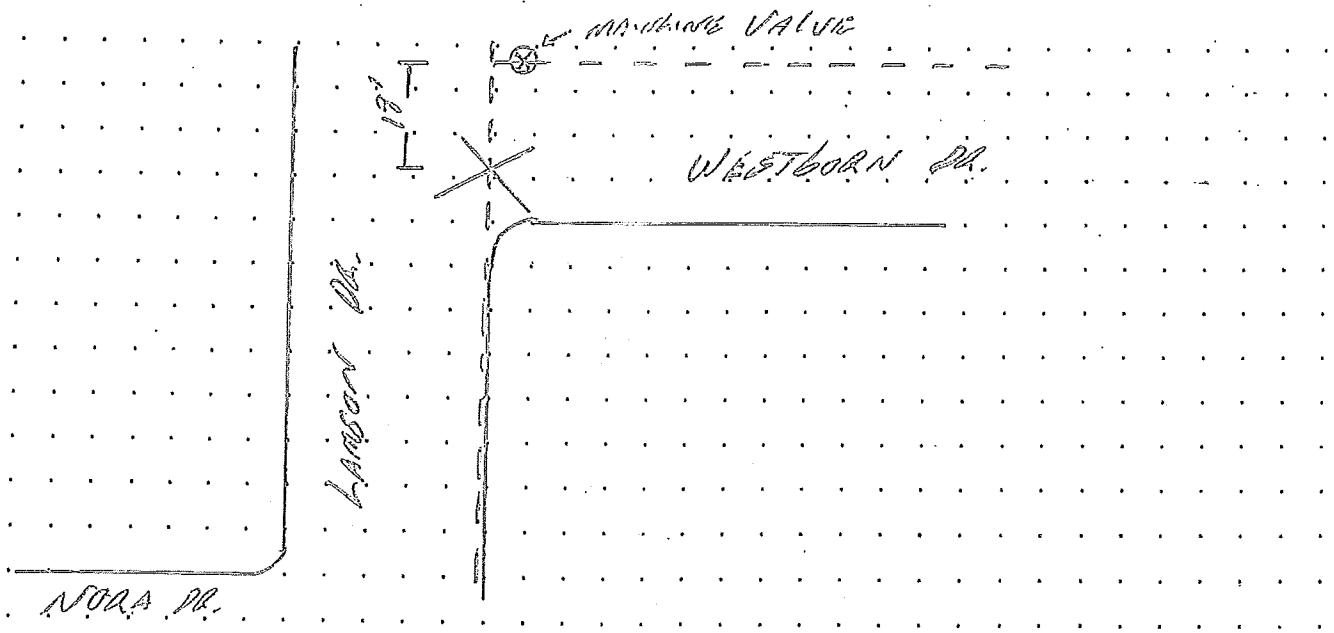
Main Valve	✓
Curb Valve	
Meter Box	
Selected Test	✓
Hydrant	
See Remarks	✓

LEAK APPEARS TO BE ON:

Main	✓
Service	
Joint Connection	
Hydrant	
Valve	
Misc.	

COVER

Concrete	
Asphalt	✓
Brick	
Gravel	
Soil	
Other	



Remarks

LEAK IS ON 8" AC MAIN IN LAMSON DRIVE
18' SOUTH OF MAINLINE VALVE TO WESTBORN DR.

Company Representative

Heath Consultant

FORM E-004

Page No. _____

Date 8-13-10

Ownership (Public) Private Easement

Leak Indication Classification

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

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

LEAKAGE CONTROL REPORT
WATER SURVEY

Company MERRIMACK VILLAGE DISTRICT District _____

City MERRIMACK State NH

Nearest Street Address

INGHAM ROAD #9

INDICATION OF LEAK	
Sonic	✓
Surfaced Water	
Other	

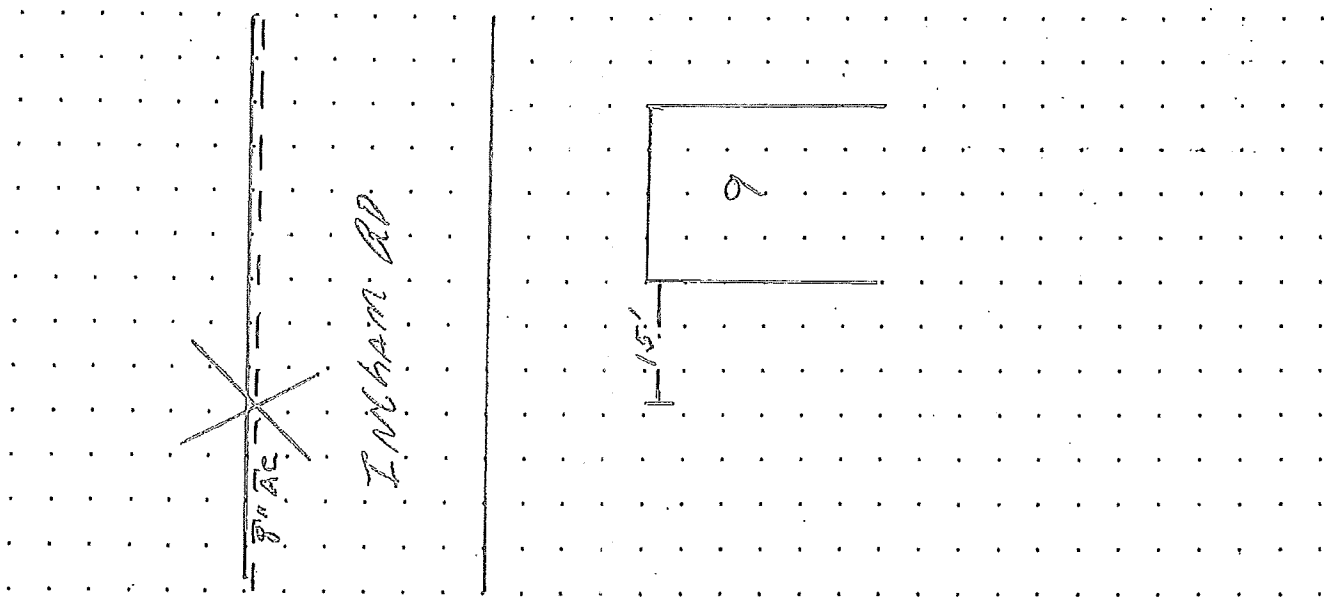
ESTIMATION OF LEAKAGE:

25 GPM

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

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

COVER	
Concrete	
Asphalt	✓
Brick	
Gravel	
Soil	
Other	



Remarks

LEAK IS ON 8" AC MAIN IN INGHAM RD.
15' SOUTH OF SOUTH BUILDING LINE OF #9.

Company Representative

Heath Consultant

FORM C-004

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 3
Date 8-13-10
Ownership (Public) Private Easement
Leak Indication Classification
I(C) (II(B)) III(A)
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company MERRIMACK V. HALE DIST. District
City MERRIMACK State NH
Nearest Street Address
HAWTHORNE DRIVE #9

INDICATION OF LEAK

Sonic	✓
Surfaced Water	
Other	

ESTIMATION OF LEAKAGE:

10 GPM

LEAKAGE DETECTED AT:

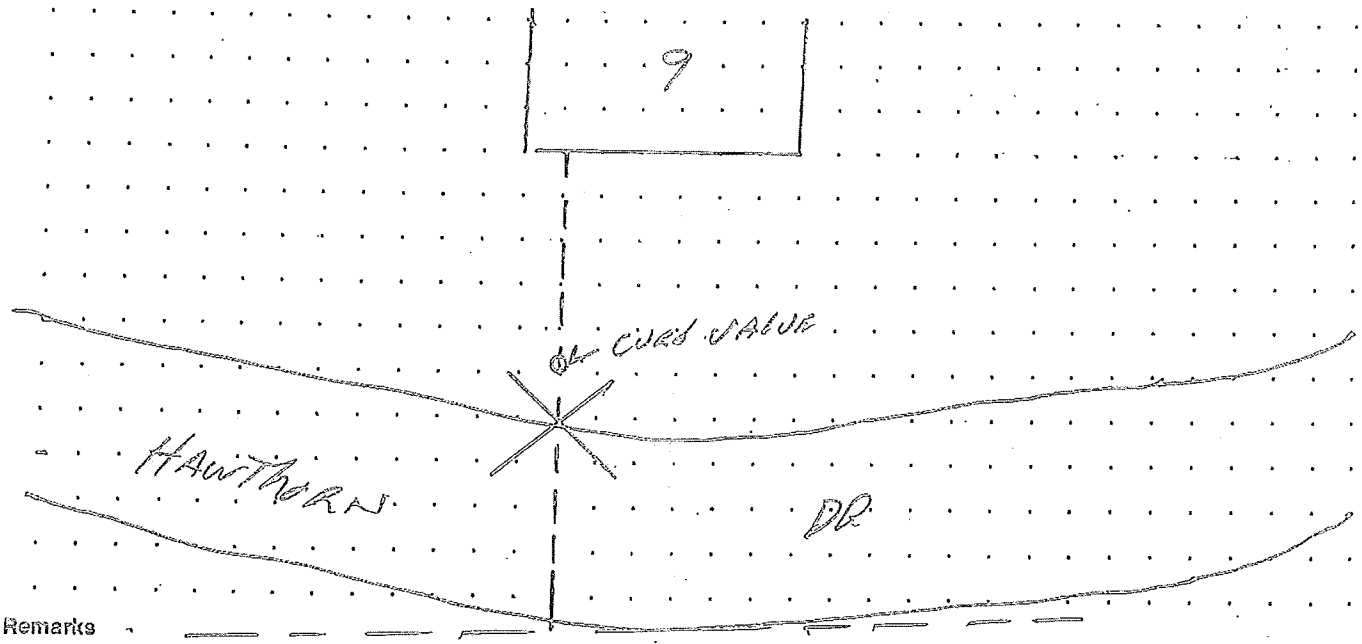
Main Valve	
Curb Valve	✓
Meter Box	
Selected Test	
Hydrant	✓
See Remarks	✓

LEAK APPEARS TO BE ON:

Main	
Service	✓
Joint Connection	
Hydrant	
Valve	
Misc.	

COVER

Concrete	
Asphalt	
Brick	
Gravel	
Soil	✓
Other	



Remarks

LEAK IS ON SERVICE LINE TO #9 HAWTHORN DR. AT OR NEAR NORTH CURB LINE.

Company Representative

Heath Consultant

FORM E-004

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 1
Date 8-13-10
Ownership Public Private Easement
Leak Indication Classification
I(C) II(B) III(A)
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company MERRIMACK VILLAGE DIST. District
City MERRIMACK State NH
Nearest Street Address
BREK DRIVE #46

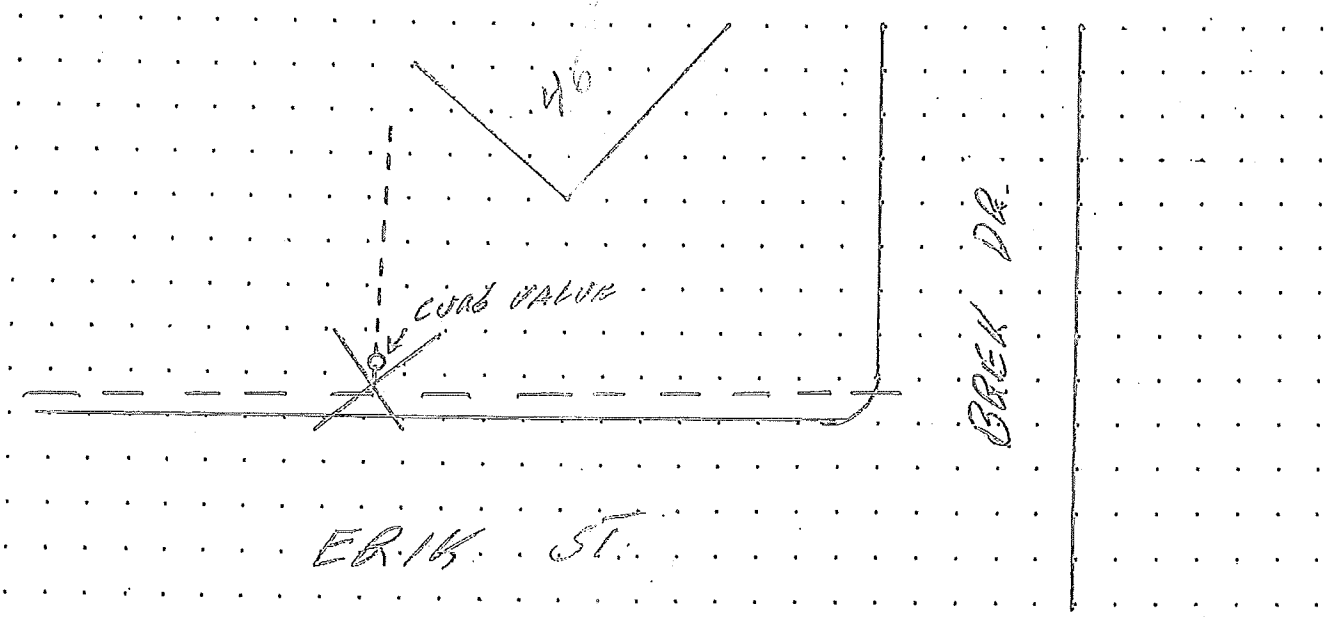
INDICATION OF LEAK	
Sonic	
Surfaced Water	
Other	

ESTIMATION OF LEAKAGE:

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

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

COVER	
Concrete	
Asphalt	
Brick	
Gravel	
Soil	
Other	



Remarks

LEAK IS ON SERVICE LINE TO #46 BREK DR FROM ERIK CT. BETWEEN CURB VALVE AND SERVICE TAP.

Company Representative

Heath Consultant

FORM C-004

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 5
Date 8-16-11
Ownership Public (Private) Easement
Leak Indication Classification
I(C) II(B) (III(A))
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company MERRIMACK VILLAGE DIST. District
City MERRIMACK State NH
Nearest Street Address
BREK DRIVE #43

INDICATION OF LEAK	
Sonic	✓
Surfaced Water	
Other	

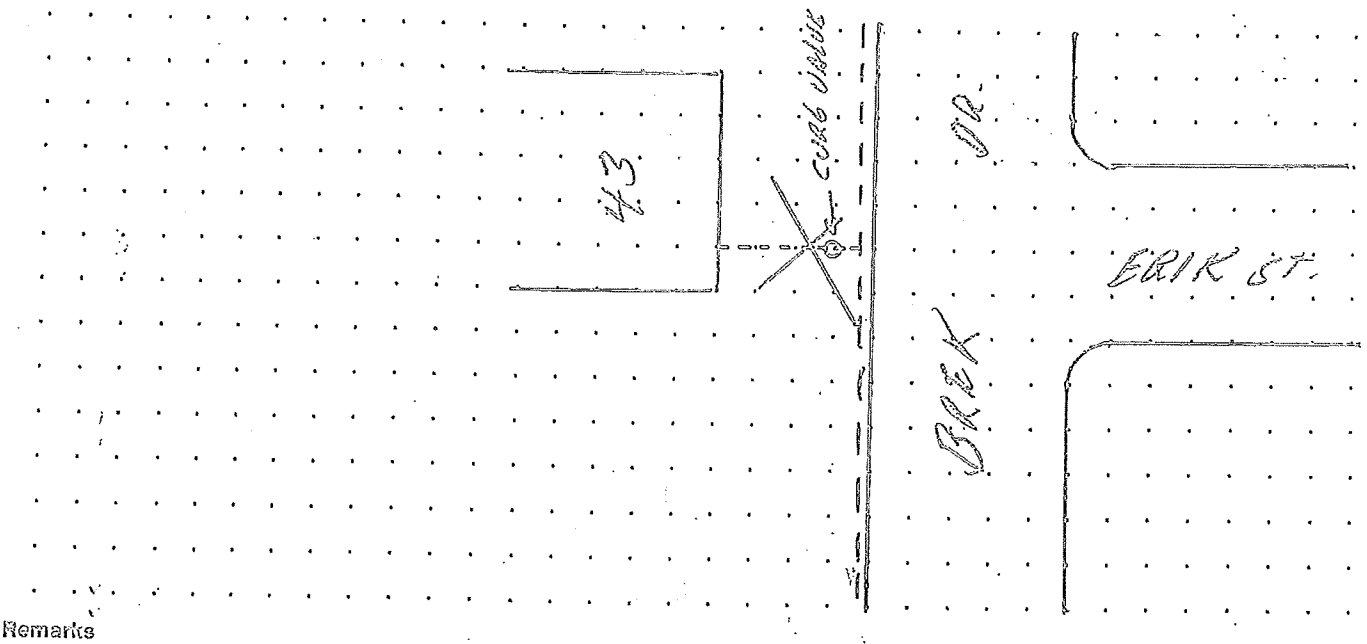
ESTIMATION OF LEAKAGE:

2 GPM

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

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

COVER	
Concrete	
Asphalt	
Brick	
Gravel	
Soil	✓
Other	



Remarks

LEAK IS ON CUSTOMERS SIDE OF CURB VALVE ON SERVICE LINE TO #43 BREK DRIVE.

Company Representative

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 6
Date 8-17-10
Ownership (Public) (Private) Easement
Leak Indication Classification
I(C) (II(B)) III(A)
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company MERRIMACK VILLAGE DIST. District
City MERRIMACK State NH
Nearest Street Address

OLD KINGS ROAD #15

INDICATION OF LEAK

Sonic	✓
Surfaced Water	
Other	

ESTIMATION OF LEAKAGE:

8 GPM

LEAKAGE DETECTED AT:

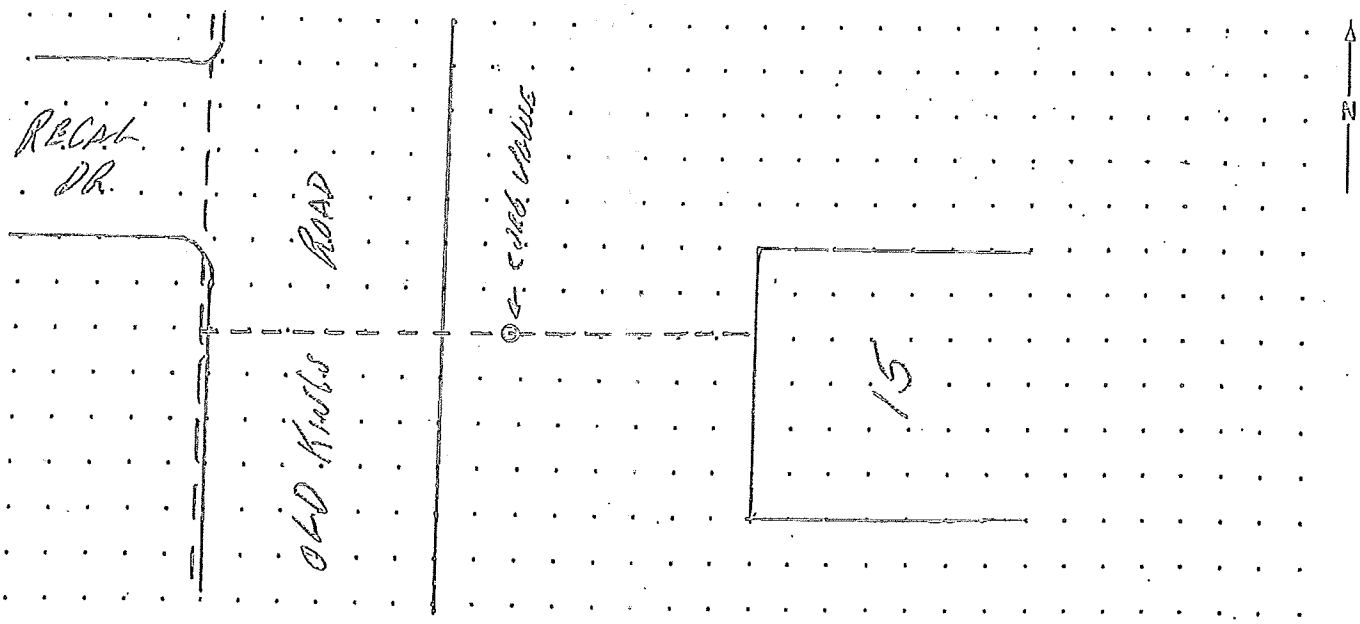
Main Valve	✓
Curb Valve	✓
Meter Box	
Selected Test	✓
Hydrant	
See Remarks	

LEAK APPEARS TO BE ON:

Main	
Service	✓
Joint Connection	
Hydrant	
Valve	
Misc.	

COVER

Concrete	
Asphalt	✓
Brick	
Gravel	
Soil	✓
Other	



Remarks

LEAK IS ON SERVICE LINE TO #15 OLD KINGS ROAD UNABLE TO OPERATE CURB VALVE TO DETERMINE LOCATION OF LEAK.

Company Representative

Heath Consultant

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 7
Date 8-17-10
Ownership Public (Private) Easement
Leak Indication Classification
I(C) (II(B)) III(A)
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company MERRIMACK VILLAGE DIST. District
City MERRIMACK State NH
Nearest Street Address
OLD KINGS ROAD #27

INDICATION OF LEAK

Sonic	✓
Surfaced Water	✓
Other	

ESTIMATION OF LEAKAGE:

5 GPM

LEAKAGE DETECTED AT:

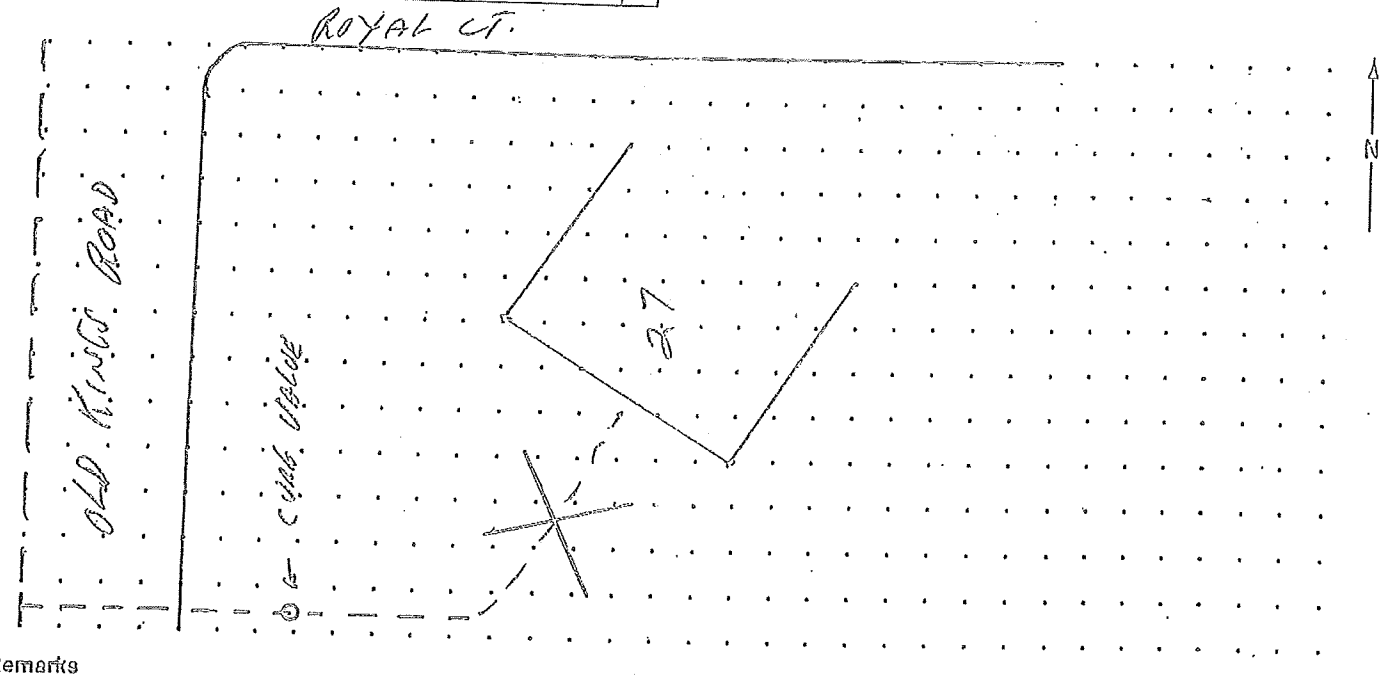
Main Valve	✓
Curb Valve	✓
Meter Box	
Selected Test	
Hydrant	✓
See Remarks	

LEAK APPEARS TO BE ON:

Main	
Service	✓
Joint Connection	
Hydrant	
Valve	
Misc.	

COVER

Concrete	✓
Asphalt	
Brick	
Gravel	
Soil	✓
Other	



Remarks

LEAK IS ON CUSTOMER SIDE OF CURB VALVE ON SERVICE TO #27 OLD KINGS ROAD.

Company Representative

Heath Consultant

HEATH CONSULTANTS

HEATH CONSULTANTS INCORPORATED
9030 Monroe Road, Houston, TX 77061

Page No. 0
Date 8-18-10
Ownership (Public) Private Easement
Leak Indication Classification
I(C) (II(B)) III(A)
(Circle One)

LEAKAGE CONTROL REPORT
WATER SURVEY

Company MERRIMACK VILLAGE DIST. District
City MERRIMACK State NH
Nearest Street Address
BAMBI TRAIL #9

INDICATION OF LEAK	
Sonic	✓
Surfaced Water	
Other	

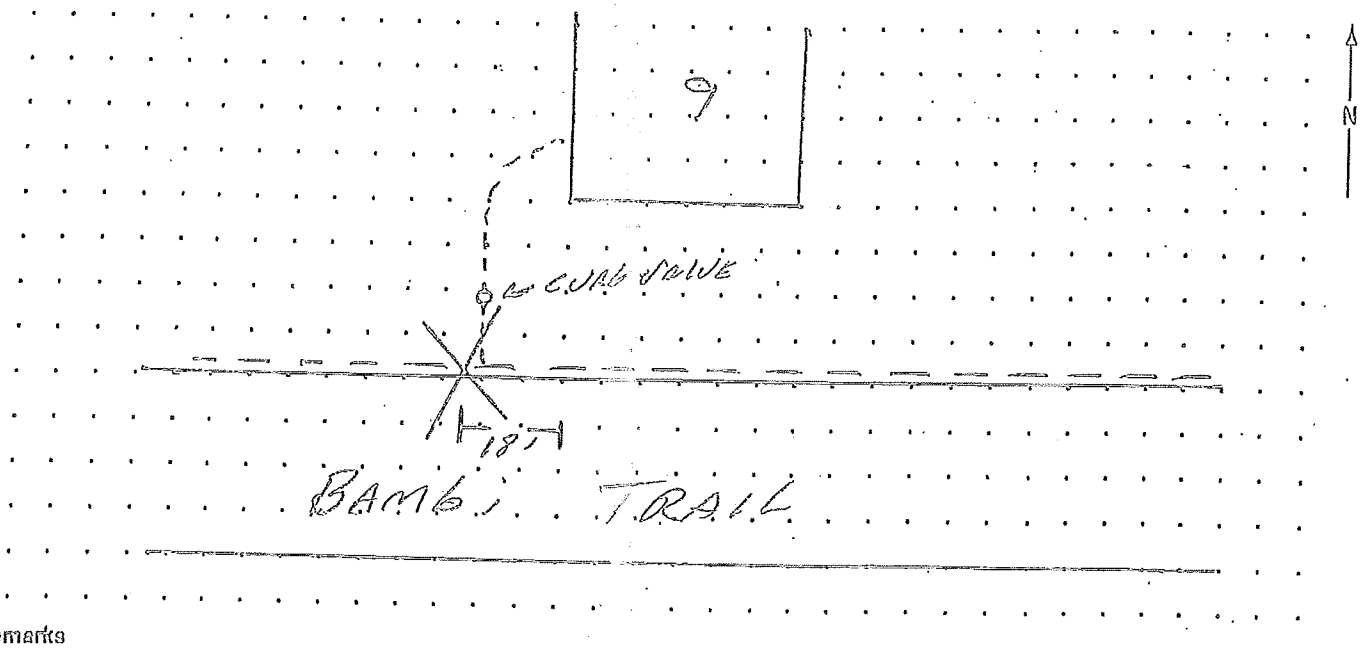
ESTIMATION OF LEAKAGE:

15 GPM

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

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

COVER	
Concrete	
Asphalt	
Brick	
Gravel	
Soil	✓
Other	



Remarks

LEAK IS ON 8" AC MAIN 18' WEST OF WEST BUILDING LINE OF #9 BAMBI TRAIL.

Company Representative

Heath Consultant

Attachment 4B

MVD Leak Detection Data - Z Corr

Rec No	Date	User	Zone	No. DCLs	No. Corrs	Logger Address
66	9/2/2011 3:00	Heinz	C-4	6	1	Z1: Danbury inline in #21 yard; Z2: Danbury hy # 125 hy valve; Z3: Dandury/ Maidstone inline for Danbury; Z4: Danbury/Maidstone inline for Danbury; Z5: Maidstone/ Carrie inline for Carrie; Z6: Maidstone/ Madson inline for Madson;
67	9/2/2011 3:00	Heinz	C-4	5	1	
352	8/31/2011 3:00	Heinz	MyZone	4	0	Z1: Mitchell St inline valve; Z2: Mitchell St hy # 296 hy valve; Z3:Hy valve hy #365; Z4:Mitchell St inline valve;
43	8/30/2011 3:00	Heinz	C-3	3	0	Z1:Becon Dr/ Turkey Hill inline valve for Becon; Z2: Becon Dr hy #79 hy valve; Z3: Becon Dr/ Turkey Hill inline valve near Pilgrim Dr;
120	8/26/2011 3:00	Heinz	D-4	6	0	Z1: Jessica Dr inline valve near Ellie; Z2: Jessica hy valve hy #695; Z3: Jessica hy #696 hy valve; Z4: Jessica Hy # 694 hy valve; Z5: Jessica inline valve on Ellie near house #22; Z6: Jessica inline valve near Chelsea;
118	8/24/2011 3:00	Heinz	D-4	6	2	Z1:Baboosic Lake Rd/Jessica inline valve; Z2: Jessica hy # 719 hy valve; Z3: Jessica inline valve in #17 driveway; Z4: Jessica hy #718 hy valve; Z5: Jessica inline valve near Chelsea Dr; Z6: Jessica Dr hy #701 hy valve;
7	8/23/2011 3:00	Heinz	B-2	3	0	Z1: Baboosic/ Samuel J Dr inline valve for Samuel J; Z2: Samuel J hy #767 hy valve; Z3: Samuel J hy valve on last Hy;
23	8/20/2011 3:00	Heinz	C-2	3	0	Z1:Windsor hy #677 hy valve; Z2: Windsor hy #676 hy valve; Z3: Windsor/ Babsoosic inline for Windsor;
5	8/17/2011 3:00	Heinz	B-2	5	1	Z1: Parker Dr/ Baboosic inline for Parker; Z2: Windsor hy #680 hy valve; Z3:Parker Rd hy valve hy #585; Z4: Westminster hy #678 hy valve; Z5: Hy#679 hy valve;
22	8/16/2011 3:00	Heinz	C-2	6	2	Z1: Parker Dr/ Baboosic inline for Parker; Z2: Parker Rd inline near house #4; Z3:Parker Rd hy valve hy #585; Z4: Parker Rd hy #586 hy valve; Z5: Parker Rd hy #587 hy valve; Z6:Parker Rd hy #588 hy valve;
21	8/13/2011 3:00	Heinz	C-2	6	5	Z1: Linden Way inline valve; Z2: Linden Way inline valve near house #3; Z3:Linden Way hy # hy valve; Z4: Conservation hy valve hy #477; Z5: Conservation hy #781 hy valve; Z6: Conservation hy #783 hy valve;
28	8/12/2011 3:00	Heinz	C-3	3	0	Z1: Bambi Trail inline valve; Z2: Bambi Trail inline valve near house #2; Z3: Bambi Trail inline valve near house #16;
27	8/11/2011 3:00	Heinz	C-3	4	1	Z1: Marty Dr hy #575 hy valve; Z2: Marty Dr inline for Stonedge Way; Z3: Marty Dr hy valve hy #574; Z4:Marty/Baboosic inline valve for Marty;
26	8/10/2011 3:00	Heinz	C-3	6	0	Z1: Marty Dr/Baboosic inline for Marty; Z2: Marty Dr inline near house #9; Z3: Marty Dr inline valve in #11 yard; Z4:Marty hy #577 hy valve; Z5:Marty Dr hy valve Hy#576; Z6:Marty Dr hy # 575 hy valve;
52	8/9/2011 3:00	Heinz	C-3	4	0	Z1: Mitchell St inline valve; Z2: Mitchell St inline valve; Z3: Mitchell St hy #296 hy valve; Z4:Mitchell St hy #395 hy valve;
221	8/5/2011 3:00	Heinz	F-5	3	0	Z1: Baboosic/Dick inline valve for Dick; Z2: Lesa hy #192 hy valve; Z3: Lesa inline valve on Baboosic;
110	8/2/2011 3:00	Heinz	D-4	6	3	Z1: Cota Rd/ Erla inline valve; Z2: Cota Rd hy #374 hy valve; Z3: Cota/ Sharon Ave inline for Sharon; Z4: Cota inline valve in #30 driveway; Z5: Cota /Iris inline valve for Cota; Z6: Cota hy between house #36
44	7/30/2011 3:00	Heinz	C-3	3	0	Z1: McQuestion/ Meerymeeting inline valve for Merrymeeting; Z2: Merrymeeting/ MacQuestion inline valve; Z6: Merrymeeting hy #445 hy valve;
105	7/28/2011 3:00	Heinz	D-3	6	0	Z1: Meadow View/ McQuestion inline valve for Meadow View; Z2: Meadow View Merrymeeting inline for Merrymeeting; Z4: Meerymeeting hy #447 hy valve; Z5: Merrymeeting inline valve; Z6: Merrymeeting hy #445 hy valve;
137	7/26/2011 3:00	Heinz	E-4-5	6	0	Z1: West Chamberlin Hy (NEW) Turkey Hill; Z2: Turkey Hill/Sarah Dr inline valve; Z3: Turkey Hill/Jade inline valve; Z4: Turkey Hill ht valve near highway garage; Z5: Turkey Hill/Penrose inline valve; Z6: Turkey Hill hy valve near house # 63;
104	7/23/2011 3:00	Heinz	D-3	3	3	Z3: Linda/ McQuestion inline valve for Linda; Z4: Linda hy#726 hy valve; Z5: Linda hy # 727 hy valve;
348	7/23/2011 3:00	Heinz	MyZone	2	1	Z1: Woodward / Dwyer St inline valve on Woodward; Z2: Woodward hy valve on Woodward;
295	7/22/2011 3:00	Heinz	H-2	5	3	
292	7/21/2011 3:00	Heinz	H-2	5	0	Z1: Erik hy#555 hy valve; Z2: Erik St hy #566 hy valve; Z3: Erik St hy #806 hy valve; Z4: Inline valve for Erik St near Greenleaf; Z5: Hy valve hy #803;
230	7/20/2011 3:00	Heinz	G-2	6	3	Z1: Dahl Rd hy #413 hy valve; Z2: Dahl Rd/ Brek inline valve inline for Dahl; Z3: Inline valve for Brek; Z4: Brek hy #554 hy valve; Z5: Inline valve Brek; Z6: Brek/Kyle inline valve;
242	7/19/2011 3:00	Heinz	G-3	6	1	Z1: Inline valve in #5 yard; Z2: Dahl Rd/ Everest inline for Everest; Z3: Inline valve Dahl; Z4: Inline valve Kyle; Z5: Inline valve in #27 yard; Z6: Dahl hy valve hy #413;
243	7/19/2011 3:00	Heinz	G-3	6	1	
337	7/16/2011 3:00	Heinz	MyZone	3	3	Z1: Silver Doe hy #182 hy valve; Z2: Bambi Trail inline valve ; Z3: Bambi Trail inline near house #3;
239	7/8/2011 3:00	Heinz	G-2	6	1	Z1: Dena/Peaslee inline valve; Z2: Dena/ Hawthorne inline for Hawthorne; Z3: Hawthorne hy#579 hy valve; Z4: Dena/ Erik inline valve for Dena; Z5: Erik/ Dena inline for Erik; Z6: Erik/ Dena inline valve for Erik;
299	7/7/2011 3:00	Heinz	H-2	3	0	Z1: Camp Sargent inline near hy #697; Z2: Naticook hy #151 inline valve; Z3: Naticook hy #321 hy valve;

313	7/6/2011 3:00	Heinz	H-3	6	0	Z1: Camp Sargent inline near hy #697; Z2: Naticook/ Lamson inline valve for Lamson; Z3: Naticook/ Peter inline valve foe Peter; Z4: naticook hy # hy valve; Z5 : Cynthia inline valve; Z6: Joey/ Naticook inline valve;
265	7/2/2011 3:00	Heinz	G-4	6	1	Z1: Camp Sargent/ Continential Blvd inline valve; Z2: Ingham /Camp Sargent inline valve for Camp Sargent Rd; Z3: Camp Sargent Rd hy #54 hy valve; Z4: Camp Sargent Castilon Court inline for Casilon Court; Z5: Camp Sargent inline valve past hy #697; Z6: Camp Sargent Hy #53 hy valve;
301	7/1/2011 3:00	Heinz	H-3	5	0	Z1: Cynthia inline valve; Z2: Cynthia/Christina inline valve; Z3: Christina inline valve; Z4: Christina/ Lorrain inline valve; Z5: Lorrain/ Naticook inline valve;
280	6/30/2011 3:00	Heinz	G-4	6	3	Z1: Camp Sargent/Ingham inline valve; Z3: hy valve Ingham Rd; Z4: Ingham inline valve; Z5: Ingham/ Cambridge inline for Ingham; Z6: Hy valve hy #728;
150	6/28/2011 3:00	Heinz	E-4	6	0	Z1: Meetinghouse Rd/ Fox Meadow inlione valve; Z2: Fox Meadow hy valve (no # on Hy); Z3: Fox Meadow/ Riley Ln inline valve; Z4: Bancroft/ Rutherford inline valve; Z5: Cassie inline valve; Z6: Cassie hy #706 hy valve;
179	6/25/2011 3:00	Heinz	E-5	6	0	Z1: Oxford inline valve on Eden; Z2: Oxford inline valve for Oxford; Z3: Oxford hy #340 hy valve; Z4: Bancroft/ Rutherford inline valve; Z5: Bancroft/ Rutherford inline valve for Bancroft; Z6: West Chamberlin inline valve for Rutherford;
175	6/24/2011 3:00	Heinz	E-5	6	3	Z1: Turkey Hill/ Eden inline valve; Z2: Newton/ Oxford inline valve for Oxford; Z3: Newton/ Bancroft inline for bancroft; Z4: Bancroft/ Newton inline valve for Newton; Z5: Newton East Chamberlin inline for Newton; Z6: East Chamberlin inline valve;
176	6/24/2011 3:00	Heinz	E-5	6	3	
195	6/23/2011 3:00	Heinz	F-4	3	0	Z1: Merrill/Amherst Rd inline for Merrill; Z2: Merrill hy#814 hy valve; Z3: Merrill hy valve hy #815;
145	6/22/2011 3:00	Heinz	E-4	6	1	Z1: Craig Dr inline valve near Kellyway; Z2: Kellyway hy #478 hy valve; Z3: Craig Dr inline valve near house#17; Z4: Craig Dr hy #336 hy valve; Z5: Craig Dr inline valve between house #3-5; Z6: Craig Dr inline near Sarah;
146	6/22/2011 3:00	Heinz	E-4	5	0	Z1: Sarah Dr hy valve hy #201; Z2: Sarah Dr hy valve #208 ; Z4: Sarah Dr/ Craig inline valve; Z5: Craig Dr hy #659 hy valve; Z6: Craig Dr inline valve near Kellyway;
172	6/21/2011 3:00	Heinz	E-5	6	3	Z1: Sarah Dr hy valve hy #201; Z2: Sarah Dr hy valve #208 ; Z3: Sarah Dr hy valve hy #647; Z4: Sarah Dr/ Craig inline valve; Z5: Craig Dr hy #659 hy valve; Z6: Craig Dr inline valve near Kellyway;
194	6/18/2011 3:00	Heinz	F-4	5	1	Z1: Bryce Dr/Amherst Rd inline valve; Z2: Bryce Dr/Scott Dr inline for Scott Dr; Z3: Scott Dr hy 369 hy valve; Z4: Scott Dr hy #367 hy valve; Z5: Scott Dr Hy #628;
168	6/15/2011 3:00	Heinz	E-5	3	0	Z2: Laurel St inline valve; Z3: Lauel St hy valve hy #158; Z4: Laurel St/Northwood inline valve;
167	6/14/2011 3:00	Heinz	E-5	3	0	Z2: Northwood/Acacia inline valve; Z3: Acacia hy valve hy #337; Z4: Acacia Craig Dr inline valve;
154	6/4/2011 3:00	Heinz	E-4	3	0	Z2: Northwood/Acacia inline for Acacia; Z3: Hy Valve hy # Northwood; Z4:Northwood/Cross inline valve for Northwood;
152	6/3/2011 3:00	Heinz	E-4	3	0	Z2: Inline for Cross St; Z3: Northwood / Cross St inline valve for Northwood; Z4: Cross/ Laurel inline for Laurel;
153	6/3/2011 3:00	Heinz	E-4	3	0	
41	5/28/2011 3:00	Heinz	C-3	3	0	Z2: inline valve for Baboosic Lake Rd; Z3: Windsor inline valve; Z4: Parker/Baboosic Lake Rd inline for Parker;
148	5/26/2011 3:00	Heinz	E-4	3	0	Z2: Turkey Hill/ Wintergreen inline valve; Z3: Wintergreen/ Whitewood inline for Whitewood; Z4: ; Wintergreen/Scotchpine inline valve;
218	5/25/2011 3:00	Heinz	F-5	3	0	Z3: Turkey Hill (new hy) hy valve; Z4: Turkey Hill/ Birches inlne of Turkey Hill;
177	5/24/2011 3:00	Heinz	E-5	3	0	Z2: Turkey Hill in #150 yard inline for Turkey Hill; Z3: Hy valve (new hy) Turkey Hill Rd #146; Z4: Turkey Hill hy valve (new hy) #136 Turkey Hill Apts;
213	5/21/2011 3:00	Heinz	F-5	3	1	Z2: Turkey Hill near Wallace Rd inline for Turkey Hill; Z3: Bon Ave inline valve for Turkey Hill; Z4: Turkey Hill/Den inline for Den Ave;
212	5/20/2011 3:00	Heinz	F-5	3	0	Z2: Bon Ave/Turkey Hill hy valve new hy; Z3: Bon Ave inline valve near house #6; Z4: Bigwood inline valve;
211	5/19/2011 3:00	Heinz	F-5	3	0	Z2: Bigwood inline valve near Heidi; Z3: Bigwood inline near house #21; Z4: Bigwood inline ;
169	5/18/2011 3:00	Heinz	E-5	3	0	Z2: Turkey Hill inline for Bigwood on Turkey Hill; Z3: Bigwood hy #45 hy valve; Z4: Bigwood inline valve near house #21;
210	5/17/2011 3:00	Heinz	F-5	3	0	Z2: Turkey Hill/ Wallace Rd inline valve; Z3: Joe Ellen/ Wallace inline valve; Z4: Jo Ellen inline valve near Park Ave;
206	5/13/2011 3:00	Heinz	F-5	3	0	Z2: Jo Ellen inline valve; Z3: Sunset hy # hy valve; Z4: Sunset/ Turkey Hill inline for Sunset in yard #150;
207	5/13/2011 3:00	Heinz	F-5	2	0	Z2: Jo Ellen/ Forsythia inline valve; Z4: Park inline valve;
191	5/11/2011 3:00	Heinz	F-4	3	0	Z2: Jo Ellen/ Forsythia inline valve; Z3: Joe Ellen/ Forsythia hy valve hy #99; Z4: Park inline valve;
190	5/10/2011 3:00	Heinz	F-4	3	0	Z2: Joe Ellen/Amherst inline valve for Joe Ellen; Z3: Joe Ellen/Forsythia inline valve; Z4: Joe Ellen/ Wallace inline foe Wallace;
201	5/7/2011 3:00	Heinz	F-4	3	0	Z2: Jade/Penrose inline valve; Z3: Stevens Ave hy #47 hy valve; Z4: Stevens Ave/ VBerry inline for Berry;

155	5/4/2011 3:00	Heinz	E-4	3	0	Z2: Jade/Penrose inline valve; Z3: Jade hy valve; Z4: Jade inline for Penrose;
234	5/3/2011 3:00	Heinz	G-2	3	0	Z1: May Dr/Naticook Rd inline valve; Z2: May Dr inline valve;
8	4/30/2011 3:00	Heinz	B-2	3	1	Z1: Carter Rd hy 777 hy valve; Z2: Carter Rd hy 779; Z3: Carter inline valve;
298	4/29/2011 3:00	Heinz	H-2	4	1	Z1: Winchster/Lampson inline valve; Z2: Winchster hy #120 hy valve; Z3: Winchester/Westborn inline valve; Z4: Winchester inline valve;
233	4/27/2011 3:00	Heinz	G-2	4	0	Z1: Peter/Jay inline valve; Z2: Jay inline valve; Z3: Gail/ Curt inline valve; Z4: Curt/ Gail inline valve;
296	4/23/2011 3:00	Heinz	H-2	4	1	Z1: Z4: Peter /Nora inline valve for Nora; Z2: Peter inline valve near Nora Dr; Z3: Peter inline valve; Z4: Peter /Nora inline valve for Nora;
293	4/22/2011 3:00	Heinz	H-2	4	0	Z1: Joey Rd/Naticook inline valve; Z2: Joey Rd/ Gail Rd inline valve; Z3: Joey Rd inline valve near house #10; Z4: Joey Rd / Curt inline valve;
294	4/22/2011 3:00	Heinz	H-2	4	0	
305	4/21/2011 3:00	Heinz	H-3	4	0	Z2: Westborn/Wenchester inline valve; Z3: Westborn/ May inline valve ; Z4: Westborn/ naticook inline valve for Westborn;
306	4/21/2011 3:00	Heinz	H-3	3	0	
304	4/20/2011 3:00	Heinz	H-3	5	2	Z1: Lamson Rd/ Naticook inline valve; Z2: Lamson Dr/May inline valve; Z3: Lamson inline valve valve for Lamson; Z4: Nora inline valve; Z5: Westborn inline valve;
241	4/19/2011 3:00	Heinz	G-3	4	5	Z1: Dahl Rd hy #466 hy valve; Z2: Colesrock hy 601 hy valve; Z3: Colesrock hy 602 hy valve; Z4: Colesrock inline valve;
228	4/14/2011 3:00	Heinz	G-2	5	7	Z1: Cramerhill inline valve; Z2: Cramerhill inline valve for Colesrock; Z3: Cramerhill inline valve; Z4: Cramerhill hy valve hy#598; Z5: Cramerhill inine valve;
131	4/13/2011 3:00	Heinz	D-5	4	0	Z1: Iris Dr-hy#435 hy valve; Z2: Iris inline valve near house #17; Z3: Iris/Cota Rd inline valve for Iris; Z4: Iris inline valve near house #30;
107	4/12/2011 3:00	Heinz	D-4	2	0	Z1: Sharon inline near hy #374; Z2: Cota/Sharon near house#20;
108	4/12/2011 3:00	Heinz	D-4	1	0	
51	4/9/2011 3:00	Heinz	C-3	3	3	Z1: Z3: Bambi Trail /Silver Doe inline valve; Z2: Silver Doe hy #182; Z3: Bambi Trail /Silver Doe inline valve;
127	4/8/2011 3:00	Heinz	D-4	5	0	Z1: Cota Rd/Iris Dr inline valve; Z2: Cota Rd/Hy valve near house #38; Z3: Z;3 Cota Rd inline valve near house #60; Z4: Cota Rd Hy valve near house #80; Z5: Cota Rd/Iris inline valve for Cota;
128	4/8/2011 3:00	Heinz	D-4	4	0	Z1: Cota Rd/Erla inline valve; Z2: Cota Rd/Sharon inline valve; Z4: Cota Rd inline valve near house #30; Z5: Cota Rd/Iris inline valve;
125	4/7/2011 3:00	Heinz	D-4	5	2	Z1: Cota Rd/Erla inline valve; Z2: Cota Rd/Sharon inline valve; Z3: Cota Rd/ Sharon inline valve near house #20; Z4: Cota Rd inline valve near house #30; Z5: Cota Rd/Iris inline valve;
126	4/7/2011 3:00	Heinz	D-4	3	0	
281	3/31/2011 3:00	Heinz	G-4	5	0	Z1: Cambridge Dr hy valve hy #648; Z2: Cambridge Dr inline valve near house #9; Z4: inline valve near house #33; Z5: inline valve near house #41;
282	3/31/2011 3:00	Heinz	G-4	4	0	
45	3/30/2011 3:00	Heinz	C-3	5	10	Z2: Bambi Trail/Silver Doe near house #3; Z4: Silver Doe hy#182 hy valve; Z5: Bambi Trail/ Silver Doe inline valve;
371	1/21/2011 10:36	heinz	office	5	10	
370	1/21/2011 10:32	Heinz	office	5	10	
223	1/11/2011 3:00	Heinz	G-2	3	2	Z1: Cramerhill/ Seaverns Bridge Rd inline valve; Z2: Cramerhill/Colesrock inline valve; Z3: Cramerhill hy valve hy#598;
224	1/11/2011 3:00	Heinz	G-2	3	2	
236	1/6/2011 3:00	Heinz	G-2	3	3	Z1: Cramerhill/Seaverns Bridge inline valve; Z2: Cramerhill/ Colesrock inline; Z3: Cramerhill/Colesrock inline valve;
237	1/6/2011 3:00	Heinz	G-2	2	1	Z1: Cramerhill/Seaverns Bridge inline valve; Z3: Cramerhill/Colesrock inline valve;
235	1/5/2011 3:00	Heinz	G-2	5	7	Z1: Cramerhill/Seaverns Bridge inline valve; Z2: Cramerhill/ Colesrock inline; Z3: Cramerhill/Colesrock inline valve; Z4: Cramerhill/ inline for Cramerhill; Z5: Cramerhill hy valve#598 hy valve;
47	1/4/2011 3:00	Heinz	C-3	3	2	Z1: Bambi Trail/ Baboosic inline valve; Z2: Bambi Trail near Silver Doe; Z3: Silver Doe hy valve;
372	1/3/2011 9:36	Heinz	q	2	1	
57	12/20/2010 10:21	Heinz	C-4	2	0	Z1: Bambi Trail inline valve; Z2: Bambi Trail inline near Silver Doe;
79	12/20/2010 9:55	Heinz	C-4	2	1	Z1: Bambi Trail inline valve; Z2: Bambi Trail inline near Silver Doe;
62	12/14/2010 3:00	Heinz	C-4	5	0	Z1: Woodland/ Deerwood inline valve; Z2: Woodland/ Birchwood inline valve; Z3: Woodland/ Pinetree inline valve; Z4: Woodland/Hartwood inline valve; Z5: Woodland inline valve;
357	12/7/2010 10:19	ZUser	MyZone	3	1	
358	12/7/2010 10:19	ZUser	MyZone	2	1	
111	12/2/2010 3:00	Heinz	D-4	3	1	Z1: Pilgram/ Turkey hill inline valve; Z2: Pilgram/Mayflower inline valve; Z3: Mayflower/ Minuteman inline valve;
106	12/1/2010 3:00	Heinz	D-4	5	2	Z1: Pilgram Ave/Turkey Hill inline valve; Z2: Pilgram/Mayflower inline valve; Z3: Mayflower/ Minuteman inline valve; Z4: Minuteman hy #75 hy valve; Z5: Powderhouse inline valve;

220	11/30/2010 3:00	Heinz	F-5	5	0	Z1: Camp Sargent inline Cedar ; Z2: Camp Sargent inline Whitter; Z3: Camp Sargent/Whitter inline valve; Z4: Camp Sargent hy valve NEW hy; Z5: Camp Sargent NEW hy near Trailer Park;
276	11/24/2010 3:00	Heinz	G-4	2	0	Z1: Camp Sargent/ Cedar Ln inline valve; Z2: Camp Sargent/ Whitter inline valve;
277	11/24/2010 3:00	Heinz	G-4	2	0	Z1: Camp Sargent/ Spurce NEW inline valve; Z2: Camp Sargent/ Arbor inline valve;
217	11/23/2010 3:00	Heinz	F-5	3	0	Z1: Camp Sargent/ Spurce NEW inline valve; Z2: Camp Sargent/ Arbor inline valve; Z3: Camp Sargent/ Beech inline valve;
287	11/21/2010 3:00	Heinz	G-5	3	0	Z1: Camp Sargent NEW inline valve ; Z2: Douglas St inline valve; Z3: Beech St/Cedar Ln inline for Cedar ;
286	11/19/2010 3:00	Heinz	G-5	3	0	Z1: Camp Sargent/Beech St NEW inline valve; Z2: Beech St hy valve; Z3: Beech St/Cedar Ln inline for Cedar ;
290	11/18/2010 3:00	Heinz	G-6	3	0	Z1: Spruce/ Camp Sargent NEW inline valve for Spruce; Z2: Spruce/Arbor inline valve; Z3: Arbor /Camp Sargent NEW inline valve for Arbor;
193	11/17/2010 3:00	Heinz	F-4	3	0	Z1: Berry Ln inline valve near house #9; Z2: Stevens hy#47 hy valve ; Z3: Stevens/Amherst inline valve;
208	11/16/2010 3:00	Heinz	F-5	5	0	Z1: Whitter/Camp Sargent inline valve; Z3: Whitter hy # hy valve; Z4: Whitter inline near hy #; Z5: Whittter/Camp Sargent inline valve;
209	11/16/2010 3:00	Heinz	F-5	4	0	
166	11/13/2010 3:00	Heinz	E-5	3	0	Z1: Newton/Bancroft inline valve; Z2: Newton/ Bancroft inline valve; Z3: Newton inline valve on West Chaberlin;
162	11/10/2010 3:00	Heinz	E-5	5	3	Z1: Eden/Turkey hill inline ; Z2: Eden/Oxford inline valve for Oxford; Z3: Oxford/Rutherford inline valve near hy#340; Z5: Rutherford/Bancroft inline valve;
253	11/6/2010 3:00	Heinz	G-3	4	1	Z1: Brek near house#2 inline valve; Z2: Brek hy #201 hy valve; Z3: Brek hy #202 hy valve; Z4: Brek inline near house#45;
251	11/5/2010 3:00	Heinz	G-3	4	0	Z1: Brek inline valve; Z2: Brek inline valve; Z3: Brek inline valve near hy #199; Z4: Brek inline valve near hy #200;
309	11/3/2010 3:00	Heinz	H-3	3	0	Z1: May/Peter inline valve; Z2: May hy valve; Z3: May/Westborn inline valve;
245	11/2/2010 3:00	Heinz	G-3	5	1	Z1: Gail/Peter inline valve; Z2: Gail/Nora inline valve near house #18; Z3: Gail/Curt inline valve; Z4: Gail/Curt inline valve near house #24; Z5: Gail/Jay inline valve;
320	10/28/2010 3:00	Heinz	H-4	4	0	Z1: Joey Rd/Naticook Rd inline for Joey; Z2: Joey/Gail inline inline for Gail; Z3: Joey inline near house #10; Z4: Joey Rd/Curt inline valve at house #3;
321	10/28/2010 3:00	Heinz	H-4	4	0	Z1: Peter/Naticook inline valve; Z2: Peter/Nora inline valve for Peter; Z3: Peter inline valve; Z4: Peter/Nora inline for Nora near stop sign;
288	10/27/2010 3:00	Heinz	G-5	5	3	Z1: Joey Rd/Naticook Rd inline for Joey; Z2: Joey/Gail inline inline for Gail; Z3: Joey inline near house #10; Z4: Joey Rd/Curt inline valve at house #3; Z5: Curt inline valve near hy #170;
308	10/26/2010 3:00	Heinz	H-3	5	0	Z1: Camp Sargent/Whitter inline valve; Z2: Whitter inline near house #18 ; Z3: Whitter hy valve; Z4: Whitter inline valve near house #35; Z5: Whitter inline valve Camp Sargent;
273	10/23/2010 3:00	Heinz	G-4	3	0	Z1: Ingham inline near Cambridge; Z2: Ingham inline near house #10; Z3: Ingham inline near house #10;
271	10/22/2010 3:00	Heinz	G-4	5	1	Z2: Cambrdge Dr inline near house#9; Z4: Cambridge Dr inline near house #33; Z5: inline for Alrich;
214	10/21/2010 3:00	Heinz	F-5	3	0	Z1: Bryce Dr inline for Bryce; Z2: Scott Dr inline valve; Z3: Scott Dr hy #369 hy valve;
368	10/20/2010 9:03	ZUser	MyZone	2	1	Z1: curb going toward house; Z2: measurement from house toward street;
244	10/19/2010 3:00	Heinz	G-3	5	1	Z1: Dahl/Everest inline valve; Z2: Dahl/Brek inline valve; Z3: Dahl inline valve near hy #204 hy valve; Z4: Dahl inline valve between house 27/29 inline; Z5: Dahl hy valve #413;
303	10/14/2010 3:00	Heinz	H-3	4	1	Z1: Lamson/ NAticook inline valve; Z2: Lamson/ May inline valve ; Z3: Lamson/Nora inline valve; Z4: Lamson/Westborn inline valve;
261	10/13/2010 3:00	Heinz	G-4	3	0	Z1: Ingham Rd inline near house #8; Z2: Ingham Rd inline near house #10; Z3: Ingham Rd inline valve/ Cambrdge Rd;
30	10/12/2010 3:00	Heinz	C-3	3	3	Z1: Bambi Tr near house #3; Z2: Bambi inline valve near house #15; Z3: Inline on Silver Doe;
31	10/12/2010 3:00	Heinz	C-3	3	3	
204	10/9/2010 3:00	Heinz	F-4	3	0	Z1: Queensway inline valve; Z2: hy valve 327 hy valve; Z3: Old kings inline valve;
300	10/8/2010 3:00	Heinz	H-2	4	0	Z1: Eric/Dahl inline valve; Z2: Eric hy valve #56; Z3: Eric inline valve at circle; Z4: Eric hy valve hy #806;
257	10/7/2010 3:00	Heinz	G-3	3	1	Z1: Dahl/Eric inline valve; Z2: Eric inline valve ; Z3: Eric hy#200 hy valve;
254	10/6/2010 3:00	Heinz	G-3	5	1	Z1: Hy #198 hy valve; Z2: Eric inline valve ; Z3: Eric hy#554 hy valve; Z4: Eric inline valve; Z5: Hy valve hy #555;
255	10/6/2010 3:00	Heinz	G-3	4	1	
252	10/5/2010 3:00	Heinz	G-3	3	0	Z2: Dena/ Hawthorne inline; Z3: Dena/Eric inline valve;
314	10/1/2010 3:00	Heinz	H-4	3	0	Z1: Westborn inline valve; Z2: Westborn/May Dr inline valve; Z3: Westborn/Wincster ibnline valve;

311	9/30/2010 3:00	Heinz	H-3	5	4	Z1: Westborn inline valve near Hy #87; Z2: Westborn/May Dr inline valve for May Dr; Z3: Westborn/Winchster inline valve; Z4: Westborn/Lamson inline valve; Z5: Lamson/Nora inline valve;
322	9/29/2010 3:00	Heinz	H-4	3	1	Z1: dunbarton inline valve; Z2: hampsted inline valve; Z3: hampsted hy #635;
11	9/28/2010 3:00	Heinz	B-4	3	2	Z1: Brookside/Patten Rd inline valve; Z2: Brookside near hy #129 inline valve; Z3: Brookside Dr inline valve near house #26;
15	9/25/2010 3:00	Heinz	B-5	5	1	Z1: Brookside/Patten Rd inline valve; Z2: Brookside near hy #132 inline valve; Z3: Brookside Dr/Greenwich inline valve; Z4: Brookside inline valve near house #26; Z5: Brookside Dr/Walden inline valve ;
36	9/23/2010 3:00	Heinz	C-3	3	0	Z1: Bambi Trail inline near house#3; Z2: Bambi Trail inline near house #15; Z3: Silver Doe inline valve;
272	9/22/2010 3:00	Heinz	G-4	4	0	Z1: Ingham/Naticook inline valve; Z2: Ingham inline valve near house #9; Z3: Ingham/Morningside inline valve; Z4: Ingham/ Cambridge inline valve;
270	9/21/2010 3:00	Heinz	G-4	4	1	Z1: LAmson/Naticook Rd inline valve; Z2: Lamson Dr/ Nora inline valve; Z3: Lamson/ Westborn inline valve; Z4: Lamson inline near hy #40;
93	8/25/2010 3:00	Heinz	C-6	5	3	
327	8/24/2010 10:28	Heinz	MyZone	2	1	Z1: Dena/Hawthorn inline valve; Z2: Hawthorn hy valve hy #579;
284	8/24/2010 9:56	Heinz	G-4	3	1	Z2: Lamson inline valve; Z3: inline for Westborn;
259	8/23/2010 10:28	Heinz	G-4	3	3	Z1: Ingham Rd near house #8 inline valve; Z2: Ingham Rd near house #10 inline valve; Z3: Igham Rd inline for Sunset Rd (stub);
86	8/12/2010 3:00	Heinz	C-6	3	0	Z1: Timber inline valve; Z2: Fernwood inline valve; Z3: Joppa inline for Timber;
85	8/11/2010 3:00	Heinz	C-6	3	0	Z1: Pinetree hy #109 hy valve; Z2: Pinetree/Evergreen inline valve; Z3: Pinetree/Baboosic inline for Pinetree;
58	8/10/2010 3:00	Heinz	C-4	3	0	Z1: Birchwood inline valve; Z2: Birchwood hy #64 hy valve; Z3: Birchwood/Woodland inline for Birchwood;
100	8/7/2010 3:00	Heinz	C-6	4	0	Z1: Hillside Terr/Baboosic inline valve; Z2: Hillsde Terr inline near house #18 ; Z3: Hillside Terr hy #114 hy valve ; Z4: Hillsde Terr Wire inline valve;
124	8/6/2010 3:00	Heinz	D-4	4	0	Z1: Evergreen inline valve; Z2: Birchwood inline valve near Evergreen; Z3: Evergreen/Shady inline valve; Z4: Evergreen/Pinewood inline valve;
103	8/4/2010 3:00	Heinz	C-7	4	0	Z1: Chapel/Rt 3 inline valve; Z2: Hy 237 hy valve; Z3: Chapel inline valve Harris; Z4: Dw/ Harris inline valve;
134	8/3/2010 3:00	Heinz	D-5	5	0	Z1: Woodland/Baboosic inline valve; Z2: Woodland/ Deerwood inline valve; Z3: Woodland/ Birchwood inline valve; Z4: Woodland/Pinetree inline valve; Z5: Woodland near house #18 near Hartwood;
74	7/30/2010 3:00	Heinz	C-4	5	1	Z1: Forest/Joppa inline valve; Z2: Fernwood inline valve; Z3: Forest/Woodland Dr inline valve; Z4: Forest/ Huckleberry inline valve; Z5: Forest inline near house #22;
123	7/29/2010 3:00	Heinz	D-4	5	0	Z1: Hartwood near house #25; Z2: Huckleberry inline valve; Z3: Hartwood/Woodland Park near house #18; Z4: Hartwood near house #16; Z5: Hartwood/Joppa inline valve;
84	7/28/2010 3:00	Heinz	C-5	5	0	Z1: Independence/Baboosic inline valve; Z2: Independence/Freedom inline valve; Z3: Indepedence inline valve; Z4: Freedom inline valve; Z5: hy #527 hy valve;
122	7/27/2010 3:00	Heinz	D-4	5	1	Z1: Cota hy valvehy #134; Z2: Cota hy valve hy #133; Z3: Cota hy valve hy #132; Z4: Sharon inline valve; Z5: Cota inline valve house 30;
119	7/24/2010 3:00	Heinz	D-4	5	0	Z1: Cota/Turkey Hill inline valve; Z2: Cota/ Erla inline valve; Z3: Cota inline valve house #20; Z4: Cota inline valve; Z5: Cota iline valve house 30;
116	7/23/2010 3:00	Heinz	D-4	3	0	Z1: Sharon/Cota inline valve; Z2: Sharon/Cota hy valve; Z3: Cota/Erla inline valve;
114	7/22/2010 3:00	Heinz	D-4	4	3	Z1: Iris hy #435 hy valve; Z2: Iris inline valve; Z3: Iris/Cota inline for Iris; Z4: Iris/Cota inline;
115	7/22/2010 3:00	Heinz	D-4	3	2	
113	7/21/2010 3:00	Heinz	D-4	3	0	Z1: Beacon Dr inline valve; Z2: Becon Dr hy #79 hy valve; Z3: Beacon/Turkeyhill inline for Becon;
82	7/17/2010 3:00	Heinz	C-5	5	0	Z1: Valleyview/Patten Rd inline valve; Z2: Burt St/Valleyview inline valve; Z3: Valleyveiw/ Courtland inline for Valleyveiw; Z4: Courtland hy valve hy #116; Z5: Courtland/ Baboosic inline for Courtland;
80	7/16/2010 3:00	Heinz	C-5	3	1	Z1: Burt hy #403 hy valve; Z2: Burt/ Valleyview inline valve; Z3: Valleyview/ Patten Rd inline;
64	7/15/2010 3:00	Heinz	C-4	5	0	Z1: Burt/Derry St inline valve; Z2: Burt/ Frier Tuck inline valve; Z3: Burt hy valve hy #402; Z4: Little John inline valve; Z5: Burt hy #403 hy valve;
63	7/14/2010 3:00	Heinz	C-4	4	0	Z1: Derry St/Joppa Rd inline valve; Z2: Derry St/ Dover St inline valve; Z3: Derry St hy #146 hy valve; Z4: Dover St inline near Burt St;
60	7/13/2010 3:00	Heinz	C-4	3	1	Z1: hy valve on Silver Doe; Z2: inline in grass nar house #22; Z3: Bambi Trail inline near house #15;
55	7/12/2010 8:53	Heinz	C-3	3	2	
56	7/12/2010 8:53	Heinz	C-3	3	2	
138	7/10/2010 3:00	Heinz	E-4	3	1	Z1: Hutchingson/Cowin inline valve; Z2: Cowin inline near house #6; Z3: Cummings/Naticook inline valve;
203	7/9/2010 3:00	Heinz	F-4	5	1	Z2: Hutchingson inline; Z3: hy #344 hy valve; Z4: Hutchingson/Cowin inline valve; Z5: Corwin inline near house #6;
202	7/8/2010 3:00	Heinz	F-4	2	0	Z1: Danforth/Naticook inline valve ; Z2: Hassel hy # 348 hy valve;

158	7/7/2010 3:00	Heinz	E-4	5	0	Z1: Cross inline valve; Z2: Cross/ Northwood inline valve; Z3: Cross/ Laurel inline valve; Z4: Laurel/Northwood inline valve; Z5: Candy/Turkey Hill inline for candy;
151	7/3/2010 3:00	Heinz	E-4	5	1	Z1: Cross Street inline near hy #156; Z2: Croos/Northwood inline ; Z3: Hy # 157 hy valve ; Z4: Northwood valve near house #8; Z5: Candy/Northwood inline valve;
144	7/2/2010 3:00	Heinz	E-4	5	0	Z1: Acacia/ Sarah inline valve; Z2: Bambi inline near house #3; Z3: Acacia/ Northwood near house #8 inline valve; Z4: Candy/ Northwood inline valve; Z5: Candy/Turkey Hill inline valve;
328	7/1/2010 3:00	Heinz	MyZone	5	0	Z1: Bambi Trail/ Baboosic inline; Z2: Bambi inline near house #3; Z3: Bambi inline near house #15; Z4: Silver Doe house #22 inline; Z5: Silver Doe/ Bambi Trail inline on corner;
367	6/25/2010 9:00	ZUser	MyZone	2	1	
366	6/25/2010 8:35	ZUser	MyZone	5	5	
178	6/25/2010 3:00	Heinz	E-5	5	2	Z1: Craig inline valve near #17; Z2: Hy #336 hy valve; Z3: Craig inline valve near house#3; Z4: inline for Acacia; Z5:inline for Craig near Sarah;
147	6/24/2010 3:00	Heinz	E-4	5	0	Z1: Sarah Dr inline valve; Z2: Craig hy #659 hy valve; Z3: Craig inline valve for Kellyway; Z4: Kellyway hy #478 hy valve; Z5:Craig inline valve near house #17;
117	6/23/2010 3:00	Heinz	D-4	5	3	Z1: Sarah Dr/ Turkey Hill inline for Sarah Dr; Z2: Sarah hy #207 hy valve; Z3: Sarah inline valve near hy #208 ; Z4: Sarah Dr ht #647 hy valve; Z5: Sarah Dr inline near house #33;
173	6/22/2010 3:00	Heinz	E-5	4	0	Z1: Jade/Turkey Hill inline; Z2: Jade inline; Z3: JAde hy #205 hy valve; Z4: Penrose inline valve for Penrose;
319	6/19/2010 3:00	Heinz	H-4	3	0	Z1: Dunbarton/ Tinker inline for Dunbarton; Z2: hy #645 hy valve; Z3: hy #646 hy valve;
10	6/18/2010 3:00	Heinz	B-4	4	4	Z1: Beaver Brook Dr inline; Z2: Hy #441 Beaver Brook Dr; Z3: Kin Henry inline; Z4: King Henry inline valve;
33	6/16/2010 3:00	Heinz	C-3	3	0	Z1: Michell St inline near house #8; Z2: Michelle St hy #296 hy valve; Z3: Michell St hy #365 hy valve;
32	6/15/2010 3:00	Heinz	C-3	3	0	Z1: Mitchelle St /Baboosic inline for Mitchell; Z2: Mitchell St inline left side of road; Z3: Mitchell St inline near house #8;
140	6/12/2010 3:00	Heinz	E-4	4	5	Z1: Reily/ Carrie inline for Carrie; Z2: Carrie inline valve ; Z3: Carrie inline on right; Z4: Carrie hy #706 hy valve;
139	6/10/2010 3:00	Heinz	E-4	3	1	Z1: Meetinghouse Rd/Nathan Hale hy #504 hy valve; Z2: Meetinghouse hy #505 hy valve; Z3: Meetinghouse/ Amherst Rd inline valve for Meetinhouse;
159	6/9/2010 3:00	Heinz	E-4	5	0	Z1: Meetinghouse Rd inline valve near house #11; Z2: Meetinghouse hy #503 hy valve; Z3: Meetinghouse/ Nathan Hale inline valve; Z4: Hy #504 hy valve; Z5: Meetinghouse Rd hy #505 hy valve;
129	6/8/2010 3:00	Heinz	D-4	5	1	Z1: Turkey Hill hy #97 hy valve; Z2: Turkey Hill inline at the park; Z3: Turkey Hill/Meetin House Rd inline; Z4: Meeting House Rd inline valve; Z5: Meetinghouse Rd hy valve #502;
369	6/4/2010 9:56	ZUser	MyZone	2	1	
112	6/2/2010 3:00	Heinz	D-4	5	6	Z1: Linda Ln inline valve for Linda; Z2: McQuestion hy #534 hy valve; Z3: McQuestion inline for McQuestion; Z4: McQuestion #533 hy valve; Z5: Hy#97 McQuestion/Turkey Hill hy valve;
40	5/28/2010 3:00	Heinz	C-3	5	2	Z1: Mcquestion/ Merrymeeting inline; Z2: Mcquestion/ Meadowview inline for Mcquestion; Z3: hy #389; Z4: hy#388 Mcquestion; Z5: Linda Lane inline valve;
39	5/27/2010 3:00	Heinz	C-3	5	0	Z1: Baboosic hy #295 hy valve; Z2: Baboosic/Marty Dr inline valve ; Z3: Baboosic hy#148 hy in front of house #182; Z4: Baboosic/Bambi Trail inline valve; Z5: Baboosic/ Madine Benett hy #149 hy valve;
38	5/26/2010 3:00	Heinz	C-3	5	0	Z1: Baboosic hy #531 hy valve; Z2: Baboosic hy#530 hy valve; Z3: Baboosic hy#529 hy valve; Z4: Baboosic inline valve; Z5: Hy#295 near Mitchell St;
37	5/25/2010 3:00	Heinz	C-3	5	0	Z1: Baoosic Lake Rd hy #532; Z2: ParkerDr/ Baboosic inline valve; Z3: Baboosic/ Windsor Dr inline valve; Z4: Baboosic/Marty Dr inline valve; Z5: Hy #531 hy valve;
9	5/22/2010 3:00	Heinz	B-3	5	0	Z1: Baoosic Lake Rd hy #673; Z2: Baboosic hy #672; Z3: Baboosic/ Windsor Dr inline valve; Z4: Baboosic hy #671 ; Z5: Hy #532 ;
6	5/21/2010 3:00	Heinz	B-2	3	0	Z1: Scenic Vista inline on Baboosic Lake Rd; Z2: Scenic Vista hy #723 hy valve; Z3: Scenic Vista/ Shore Dr inline valve;
19	5/18/2010 3:00	Heinz	B1-2	5	3	Z1: Shore Dr inline valve; Z2: Shore hy valve hy # 722; Z3: Shore Dr/Lona inline valve; Z4: Shore inline valve; Z5: Scence Vista inline valve;
4	5/15/2010 3:00	Heinz	B-2	5	5	Z1: Carter Rd inline valve ; Z2: Carter Rd hy valve hy #777; Z3: Carter Rd hy #779 hy valve; Z4: Carter Rd inline valve; Z5: Carter Rd/Shore Dr inline valve;
3	5/14/2010 3:00	Heinz	B-2	5	0	Z1: Baboosic Lake Rd/Miriam inline valve; Z2: Baboosic/Carter inline valve ; Z3: Baboosic Lake/Mayhew inline valve; Z4: Baboosic Lake hy #674 hy valve; Z5: Baboosic/ Longa inline valve;
2	5/13/2010 3:00	Heinz	B-2	3	1	Z1: Parker Dr/ South Baboosic inline; Z2: Parker Dr hy #588 hy valve; Z3: Parker Dr hy #587 hy valve;
1	5/12/2010 3:00	Heinz	B-2	3	0	Z1: Samual J Dr inline valve for Samual J; Z2: Scenic Vista Way inline valve; Z3: Samual J hy #767 hy valve;

20	5/11/2010 3:00	Heinz	C-2	6	3	Z1: Parker Dr inline valve at Baboosic; Z2: Parker Dr near tank
25	5/8/2010 3:00	Heinz	C-2	3	0	Z1: Windsor/Baboosic inline for Windsor; Z2: Widsor hy #676 hy valve; Z3: Windsor/Westminster inline for Westminster;
24	5/7/2010 3:00	Heinz	C-2	5	2	Z1: Windsor/Baboosic inline for Windsor; Z2: Windsor Dr hy #680 hy valve; Z3: Windsor Dr/Westminster inline valve; Z4: Windsor hy #678 hy valve; Z5: Windsor hy #679 hy valve;
78	5/6/2010 3:00	Heinz	C-4	5	1	Z1: Linden/Conservation inline; Z2: Hy #477 hy valve on Conservation Dr; Z3: Conservation Dr hy #782; Z4: Conservation Dr inline valve; Z5: Conservation Dr hy #783 hy valve;
48	5/5/2010 3:00	Heinz	C-3	6	3	Z1: Marty Dr/Baboosic Lake Rd inline for Marty; Z2: Marty Dr/Linden way inline valve; Z3: Conservation Dr inline valve ; Z4: Marty Dr inlinr for Marty near Stonedge valve; Z5: Concervastion hy #477 ; Z6: Conservation Way hy #781 hy valve;
75	5/4/2010 3:00	Heinz	C-4	6	4	Z1: Marty Dr hy #576 hy valve; Z2: Marty Dr hy #575 hy valve ; Z3: Marty Dr inline valve for Stonedge; Z4: Marty Dr inlinr for Marty near Stonedge valve; Z5: Marty Dr hy valve hy #574; Z6: Marty Dr /Linden Way inline valve;
363	5/3/2010 12:51	ZUser	MyZone	3	2	[illegible] Shelburne near hy#468 inline; Z2: Shelburne inline for pit; Z3: in pit #5 on [illegible]pe ;
174	4/24/2010 3:00	Heinz	E-5	3	0	Z1: Marty Drive inline; Z2: Marty Dr inline valve near house #9; Z3: hy valve hy #193 ;
71	4/23/2010 3:00	Heinz	C-4	6	2	Z1: Marty Drive inline; Z2: Marty Dr inline valve near house #9; Z3: hy valve hy #193 ; Z4: Marty Dr hy#577 hy valve; Z5: Marty Dr inline valve near house#31; Z6: hy valve hy #579;
70	4/22/2010 3:00	Heinz	C-4	3	0	Z1: Lesa inline on Baboosic Lake Rd; Z2: Lesa hy #192 hy valve; Z3: Dick Dr inline ;
69	4/21/2010 3:00	Heinz	C-4	5	0	Z1: Bambi Trail inline for Bambi; Z2: Bambi Trail near house #3; Z3: Bambi Trail near house #22 inline valve ; Z4: Bambi Trail hy #182 hy valve; Z5: Bambi Trail/Silver Doe inline valve;
35	4/20/2010 3:00	Heinz	C-3	5	0	Z1: Ellie inline valve; Z2: Jessica/ Ellie inline valve for Ellie; Z3: HY # 693 Jessica; Z4: inline for Chelsea; Z5: HY # 696 on hy;
136	4/17/2010 3:00	Heinz	D4	6	4	Z1: Jessica hy #701 hy valve; Z2: Jessica/ Ellie inline valve ; Z3: Jessica/Ellie for Jessica; Z4: Jessica inline ; Z5: Jessica cross country valve in yard #59; Z6: Jessica hy #696 on back of hy;
18	4/15/2010 3:00	Heinz	B-7	6	3	[illegible] Shelburne near hy#468 inline; Z2: Shelburne inline for pit; Z3: in pit #5 on [illegible]pe ; Z4: hy #469 hy valve; Z5: valve for pit #4 on valve; Z6: valve for pit #3;
109	4/14/2010 3:00	Heinz	D-4	6	2	Z1: Jessica/Baboosic Lake Rd inline valve for Jessica; Z2: Jessica hy #719 hy valve; Z3: Jessica Inline valve near house #17 ; Z4: Jessica hy #718 hy valve; Z5: Jessica inline valve near Chelsea; Z6: Jessica hy #701 hy valve;
130	4/9/2010 3:00	Heinz	D-4	6	3	Z1: Meadowview inline valve ; Z2: Meadowview inline near house #21; Z3: hy valve hy #448; Z4: Merrymeeting hy #447 hy valve; Z5: Merrymeeting hy #446 hy valve; Z6: Merrymeeting inline valve near hy #448;
50	4/7/2010 3:00	Heinz	C-3	6	0	Z1: Danbury inline valve near house #21; Z2: Danbury hy #125 hy valve ; Z3: Madison inline valve ; Z4: Madison hy valve hy # 126; Z5: Madison/ Maidstone inline valve for Madison; Z6: Maidstone/Danbury inline valve;
157	4/6/2010 3:00	Heinz	E-4	6	1	Z1: Turkey Hill /Wintergreen inline valve; Z2: Wintergreen/Whitewood inline valve; Z3: Inline Wintergreen near hy #612; Z4:Scotchpine inline valve; Z5:Wintergreen hy valve #621; Z6: Z:6 hy # 629 hy valve;
73	4/3/2010 3:00	Heinz	C-4	6	2	Z1: Maidstone/Patten Rd inline for Maidstone; Z2: Maidstone hy # 128 hy valve ; Z3: Maidstone and Madison inline valve ; Z4: Carrie/Maidstone inline valve; Z5: Maidstone/Danbury inline valve for Danbury; Z6:Maidstone/Baboosic Lake inline valve;
89	4/2/2010 3:00	Heinz	C-6	6	1	Z1: Continental Inline valve for Fedelity; Z2: inline valve near office; Z3: inline valve in field near pump #3; Z4: inline for Continental; Z5: inline valve for Cambridge; Z6: inline valve Camp Sargent/ Continental;
72	3/27/2010 3:00	Heinz	C-4	6	1	Z1: Continental hy #212; Z2: Continental hy #211 hy valve; Z3: Continental inline in road ; Z4: inline on Talent Rd for warehouse; Z5: Continental hy valve #714; Z6: Continental inline near Camp Sarent;
199	3/26/2010 3:00	Heinz	F-4	6	0	Z1: Continental inline at Intechra; Z2: Continental near Intechra; Z3: Continental near DRS inline valve; Z4: Continental inline valve; Z5: Continental inline valve near CPM; Z6: Continental hy #212 hy valve;
196	3/25/2010 3:00	Heinz	F-4	6	0	Z1: Continenal hy #330 valve; Z2: #10 Continental inline valve; Z3: Contiental valve near George Gorden; Z4: hy#329 hy valve; Z5: valve foe GT Solar; Z6: Continental inline valve;
68	3/20/2010 3:00	Heinz	C-4	6	0	Z2: Continental hy #332; Z3: Continental near hy 331; Z4: Continental Shaws valve; Z5: Continental hy valve hy #330; Z6: Continental inline valve near #10;
65	3/19/2010 3:00	Heinz	C-4	3	0	Z1: Jakes Ln /Patten Rd inline near hy #127; Z2: Jakes Ln hy #237 hy valve; Z3: Jakes Ln inline valve;
81	3/16/2010 3:00	Heinz	C-5	4	0	Z1: Brookside Dr inline near Patten Rd; Z2: Hy #129 on Brookside Dr; Z3: Brookside Dr inline valve near house #26; Z4: Walden inline valve;
61	3/13/2010 3:00	Heinz	C-4	6	3	Z1: Greenwich inline valve; Z2: Greenwich inline valve south; Z3: Hy valve 133 ; Z4: Carrage inline valve; Z5: Carrage inline valve Walden; Z6: Greenwich/ Brookside inline valve;

13	3/12/2010 3:00	Heinz	B-5	6	1	Z1: Hertiage inline on Patten Rd; Z2: HeritageBrookside inline valve; Z3: Patten/Brookside inline valve; Z4: Hy #132 Brookside hy valve; Z5: Greenwich inline valve; Z6: Greenwich/Patten inline valve;
59	3/11/2010 3:00	Heinz	C-4	3	0	
16	3/9/2010 3:00	Heinz	B-5	3	0	Z1: Dw hyw/Mcgraw Bridge Rd inline valve; Z2: Wood Inline valve;
359	3/8/2010 11:15	ZUser	MyZone	2	0	
77	3/6/2010 3:00	Heinz	C-4	3	2	Z1: East Chamberland hy #23; Z2: Oak inline valve; Z3: East Chamberland hy #24 hy valve;
156	3/5/2010 3:00	Heinz	E-4	6	1	Z1: Acacia inline valve ; Z2: Acacia hy valve hy #337; Z3: Acacia inline valve; Z4: Acacia hy #336 hy valve ; Z5: Craig inline valve near house 17; Z6: Craig near Kelly inline valve;
170	3/2/2010 3:00	Heinz	E-5	3	0	Z1: Candy inline valve near house #8; Z2: Northwood/ Candy inline valve; Z3: Candy/ Turkey Hill inline valve;
149	2/27/2010 3:00	Heinz	E-4	4	0	Z1: Sarah Dr inline valve; Z2: Hy #654 hy on Craig Dr; Z3: Craig inline valve near Kelly Way; Z4: Kelly Way hy #478 hy valve;
121	2/26/2010 3:00	Heinz	D-4	6	2	Z1: Sarah Dr/Turkey Hill inline valve; Z2: Craig inline valve; Z3: Sarah Dr hy #208 hy valve; Z4: Sarah inline valve; Z5: Sarah Dr hy #471 hy valve; Z6: Sarah inline valve near house 33;
132	2/24/2010 3:00	Heinz	D-5	4	0	Z1: Penrose/Turkey Hill inline valve; Z2: inline valve for Penrose; Z3: inline valve for Jade; Z4: inline Turkey Hill/Jade inline for Jade;
186	2/23/2010 3:00	Heinz	E-6	6	2	Z1: Columbia Circle inline valve; Z2: Columbia Circle/Brentton inline valve; Z3: Columbia Circle hy valve hy #366; Z5: Columbia Circle hy #186 hy valve; Z6: Columbia Circle inline valve;
185	2/20/2010 3:00	Heinz	E-6	3	0	Z1: Bretton inline valve; Z2: Oak inline valve near West Chamberland; Z3: Hillcrest/Bretton inline valve;
318	2/18/2010 3:00	Heinz	H-4	6	1	Z1: Tinker Rd/ Holts Landing hy #824 hy valve; Z2: Tinker Rd hy 825 hy valve; Z3: Tinker Rd hy #826 hy valve; Z4: Tinker Rd hy #827 hy valve; Z5: Tinker Rd hy valve hy#828 hy valve; Z6: Tinker Rd end of main valve;
317	2/13/2010 3:00	Heinz	H-4	6	0	Z1: Tinker Rd hy valve 829 hy ; Z2: Tinker Rd hy 822 hy valve; Z3: Tinker Rd inline ; Z4: inline for Holts Landing; Z5: Tinker Rd hy valve hy#824 hy valve; Z6: Tinker Rd hy #825 hy valve;
29	2/12/2010 3:00	Heinz	C-3	6	5	Z1: Hilchingpost Rd inline valve; Z2: Steeplechase Rd inline valve; Z3: Steeplechase Rd end of main; Z4: Steeplchase/ Cobblestone inline; Z5: Cobblestone inline valve; Z6: Cobblestone hy #799 hy valve;
53	2/9/2010 3:00	Heinz	C-3	5	3	Z1: Woodward inline valve; Z2: Woodward inline valve Hy #442 hy valve; Z3: Woodward inline valve; Z4: Woodward inline valve for Hictchingpost; Z5: Hitchingpost/ Draycoach inline foe Draycoach;
54	2/9/2010 3:00	Heinz	C-3	4	2	
49	2/6/2010 3:00	Heinz	C-3	5	2	Z1: Woodward / Bean Rd inline valve; Z2: Woodward hy#381 hy valve ; Z3: Bean/ Bean inline valve ; Z4: Woodward/ Dwyer inline valve; Z5: Z; French Ct / Woodward Bean inline;
76	2/5/2010 3:00	Heinz	C-4	6	0	Z1: Bean Rd inline valve; Z2: Bean/ Woodbine inline valve; Z3: Bean/ Bean inline valve ; Z4: Woodward inline valve; Z5: inline for Woodward/ Bean inline; Z6: Woodward hy valve hy #381 ;
46	2/4/2010 3:00	Heinz	C-3	6	0	Z1: Bean Rd inline for Bean; Z2: Bean/ Woodbine inline valve; Z3: Bean inline valve hy #734 hy valve; Z4: Bean Rd hy valve hy #733 ; Z5: Bean Rd hy #731 Hy valve; Z6: Bean Rd inline valve;
42	2/3/2010 3:00	Heinz	C-3	6	0	Z1: Bean Rd /Profile inline for Bean; Z2: Bean/ Woodbine inline valve; Z3: Bean inline valve ; Z4: Woodbine hy #732 hy valve; Z5: Woodbine inline valve near hy 731; Z6: Bean Rd inline valve;
34	2/2/2010 3:00	Heinz	C-3	3	2	Z1: Profile Dr #737 hy valve; Z2: Profile Dr inline valve; Z3: Bean Rd inline valve for Profile;
96	1/28/2010 3:00	Heinz	C-6	6	6	Z1: Bean inline valve; Z2: Bean Rd hy valve hy #738; Z3: Bean inline valve; Z4: Profiole/ Bean Rd valve for Profile; Z5: Profile inline for profile; Z6: Profile hy #737 hy valve;
95	1/27/2010 3:00	Heinz	C-6	6	0	Z1: BEAN RD/Klara inline valve; Z2: Bean Rd/ inline valve; Z3: Bean Rd/ Jefferson inline ; Z4: Bean Rd hy#744 hy valve; Z5: Bean Rd inline valve; Z6: West Rd inline valve;
94	1/26/2010 3:00	Heinz	C-6	6	4	Z1: BEAN RD near hy#745; Z2: Bean Rd/ Breanne inline valve; Z3: Bean Rd inline near Breanne; Z4: Bean Rd hy#742 hy valve; Z5: Klara inline valve; Z6: Klara Dr hy valve hy #747;
92	1/23/2010 3:00	Heinz	C-6	6	1	Z1: BEAN RD inline valve; Z2: Westscott inline valve; Z3: Westscott hy valve #747; Z4: WESTSCOTT HY valve hy#748; Z5: Bean Rd hy #746 hy valve; Z6: Bean Rd inline hy#745;
88	1/15/2010 3:00	HEINZ	C-6	6	3	Z1: Bean Rd inline valve; Z2: Bean Rd hy #751 inline valve; Z3: Bean Rd hy #750 hy valve; Z4: Bean Rd inline valve; Z5: Bean Rd/ Westscott inline valve ; Z6: Bean Rd hy valve hy #749;
87	1/13/2010 3:00	Heinz	C-6	3	0	Z1: Z:1 Wood St inline valve; Z2: Hy 224 hy valve; Z3: Mcgraw Bridge /Belair inline valve;
330	1/12/2010 3:00	Heinz	MyZone	3	0	Z1: Dw Highway/ Mcgraw Bridge Rd inlinvalve; Z2: Wood St inline valve; Z3: Sunnydale hy valve hy #725;
102	1/8/2010 3:00	Heinz	C-6	4	0	Z1: Collins inline near Ivy; Z2: Collins by buckmedow inlive; Z3: Collins inline valve; Z4: Collins inline valve clay;

90	12/22/2009 3:00	Heinz	C-6	5	0	Z1: Berkley inline valve ner house#34; Z2: Berkley St inline valve near house #28; Z3: Berkley St hy #163 hy valve ner house 21; Z4: Berkley inline valve near house #18; Z5: Hy #187 hy valve;
91	12/22/2009 3:00	Heinz	C-6	4	0	
101	12/8/2009 3:00	Heinz	C-6	6	2	Z1: Sndhill Dr ner house #30 inline valve; Z2: Berkely St inline valve; Z3: Berkly hy #191 hy valve; Z4: Berkley near house #24 inline valve; Z5: inline for Short St; Z6: Sandill/ Short St inline vlve;
99	12/5/2009 3:00	hEINZ	c-6	6	1	Z1: Ivy Dr inline valve; Z2: Sandhill inline valve; Z3: Sandhill inline near Short St; Z4: Sandhill hy #190 hy valve; Z5: Sandhill inline near house # 30??; Z6: Sandill hy #539 hy valve;
98	12/4/2009 3:00	Heinz	C-6	4	1	Z1: Mallard Point/Wire Rd inline valve; Z2: Mallard Point hy valve hy #432; Z3: Mallard Point inline valve at house #65; Z4: Mallard Point hy valve hy#618;
97	12/3/2009 3:00	HEINZ	C-6	6	2	Z1: Mallard Point inline valve; Z2: Mallard Point/Brant Dr inline valve; Z3: Mallard Point/Drank inline valve; Z4: Mallard Point inline valve near house #32; Z5: hy valve hy #618 ; Z6: hy 432 near house #73;
83	12/2/2009 3:00	Heinz	C-5	4	0	Z1: Ichabod Dr /Wire Rd inline valve; Z2: Crane inline valve; Z3: Crane hy valve hy #593; Z4: Icabod hy #594 hy valve;
12	12/1/2009 3:00	Heinz	B-5	4	0	Z1: Eagle/Falcon inline valve ;
14	11/21/2009 3:00	Heinz	B-5	6	5	Z1: Brenda inline; Z2: BRENDA INLINE VALVE NEAR HY #176; Z3: Brenda inline; Z4: Blair/Brenda inline valve; Z5: Hy #301 Brenda hy valve; Z6: Bedford Rd inline valve for Brenda;
17	11/17/2009 3:00	Heinz	B-6	6	0	Z1: Whispering Pines inline; Z2: Whispering pines /Brenda inline near hy 179; Z3: Brenda inline for Brenda inline for Brenda; Z4: Blair inline valve; Z5: Whispering Pines inline valve for Dodler Ct; Z6: Whispering Pines dead end valve;
165	11/13/2009 3:00	Heinz	E-5	5	0	Z1: Newton inline valve; Z2: Newton inline valve Bancroft; Z3: Rutherford/Bancroft inline; Z4: Chamberland inline valve; Z5: Chamberland inline valve;
163	11/11/2009 3:00	Heinz	E-5	6	2	Z1: Oxford/Rutherford inline valve; Z2: Rutherford inline valve near hy #340; Z3: Rutherford/Bancroft inline; Z4: Bancroft inline ; Z5: Chamberland inline; Z6: Chamberland near Rutherford inline;
161	11/10/2009 3:00	Heinz	E-5	4	0	Z1: Turkey Hill/Bancroft inline valve; Z2: Sarah hy #207 hy valve; Z3:Eden/Oxford inline valve; Z4: Turkey Hill/Eden inline valve;
184	11/7/2009 3:00	Heinz	E-5	6	2	Z1: Turkey Hill/Sarah inkine valve; Z2: Sarah hy #207 hy valve; Z3: Sarah hy #208 hy valve; Z4: Craig inline valve near house #5; Z5: Sarah/ Craig inline valve; Z6:Craig Dr hy #646 hy valve;
183	11/6/2009 3:00	Heinz	E-5	6	1	Z1: Craig inline valve near house #17; Z2: Craig/Kelly Way hy #478 hy vavle; Z3: Craig/Kelly near inline valve on Craig; Z4: Craig inline valve near house #5; Z5: Craig Sarah inline valve; Z6: Sarah Dr hy #647 near house#27;
182	11/5/2009 3:00	Heinz	E-5	6	2	Z1: Acacia inline valve; Z2: ACACIA HY #337 HY valve; Z3: Z:3 Acacia inline valve; Z4: Craig inline valve near house #5; Z5: Craig Sarah inline valve; Z6: Craig #17 house inline valve;
181	11/4/2009 3:00	Heinz	E-5	6	0	Z1: Cross inline near hy 156; Z2: Cross/Northwood inline; Z3: Northwood hy157 hy valve; Z5: Northwood/Candy inline valve; Z6: Cross/Laruel inline;
180	9/3/2009 3:00	HEINZ	E-5	6	0	Z1: Wintergreen inline valve; Z2: Wintergreen/Whitewood inline valve; Z3: Wintergreen inline valve; Z4: Wintergreen/ Scotchpine inline valve; Z5: Wintergreen hy valve hy #621; Z6: Wintergreen hy #629 hy valve;
171	9/2/2009 3:00	Heinz	E-5	5	6	Z1: Joe Ellen / Park inline valve; Z2: Park inline; Z3: Joe Ellen inline valve; Z4: Forsythia inline valve; Z5: Joe Ellen / Amherst st inline;
160	9/1/2009 3:00	Heinz	E-5	5	5	Z3: Joe Ellen/ Forsythia inline valve; Z4: Joe Ellen Park inline valve; Z5: Park inline valve;
164	8/12/2009 3:00	Heinz	E-5	3	0	Z2: Bigwood/Bon inline valve ; Z3: Turkey Hill/ Bon inline valve;
289	8/5/2009 3:00	Heinz	G-5	5	0	Z1: Camp Sargent /Spruce inline; Z2: Spruce/ Arbor inline valve; Z3: Spruce/Douglas inline valve; Z4: Douglas /Cedar inline ; Z5: Douglas inline valve;
285	8/1/2009 3:00	Heinz	G-5	6	3	Z1: Camp Sargent /Cedar inline valve; Z2: Cedar/ Douglas inline valve; Z3: Douglas/ Spruce inline valve; Z4: Spruce/Beech inline valve; Z5: Spruce/Arbor inline valve; Z6: Camp Sargent/Spruce inline valve;
200	7/30/2009 3:00	HEINZ	F-4	6	0	Z1: Camp Sargent Inline near Shaws; Z2: Camp Sargent/ Buttonwood inline; Z3: Camp Sargent hy #21 hy valve; Z4: Campsargent/ Whitter inline valve; Z5: Camp Sargent/Whitter inline valve; Z6: Camp Sargent/Cedar inline valve;
219	7/28/2009 3:00	Heinz	F-5	6	0	Z1: Camp Sargent/whitter inline ; Z2: Whitter hy #592 hy valve ; Z3: Whitter/Englewood inline valve; Z4: inline valve near house #35; Z5: hy #28 near house 37; Z6: Camp Sargent / Whitter inline valve;
215	7/23/2009 3:00	Heinz	F-5	6	0	Z1: Amherst Rd Stevens inline valve ; Z2: hy #47 Stevens Ave; Z3: Berry Ln inline valve; Z4: Davidson inline valve; Z5: ; Z6: ;
216	7/23/2009 3:00	Heinz	F-5	1	0	Z1: Amherst Rd Stevens inline valve ;
205	7/22/2009 3:00	Heinz	F-5	6	1	Z1: Amherst Rd Stevens inline valve ; Z2: hy #47 Stevens Ave; Z3: Berry Ln inline valve; Z4: Davidson inline valve; Z5: ; Z6: ;
143	7/18/2009 3:00	Heinz	E-4	6	2	Z1: Riverside inline/ Davidson; Z2: Davidson near #1 inline valve; Z3: Piemont/Davidson inline valve ; Z4: Davidson inline valve; Z5: hy #318 hy valve ; Z6: Davidson hy #319 hy valve;

325	7/17/2009 3:00	E-5-6	MyZone	5	0	Z1: Riverside inline valve ; Z2: Riverside hy valve 316 hy valve; Z3: Amherst Rd hy 308 hy valve; Z4: Riverside/Daivdson inline valve; Z5: Davidson/ Amherst Rd inline valve;
324	7/16/2009 3:00	E-3-4	MyZone	6	1	Z1: Amherst Rd hy #310 hy valve; Z2: Amherst Rd hy #309 hy valve; Z3: Amherst Rd hy 308 hy valve; Z4: Amherst Rd hy 307 hy valve; Z5: Amherst Rd /Merrill ilnine valve; Z6: Amherst Rd /Bryce inline valve;
142	7/15/2009 3:00	Heinz	e-4	6	0	Z1: Amherst Rd hy #311 hy valve; Z2: Amherst Rd hy #115 hy valve; Z3: Amherst Rd hyb 3313 HY VALVE; Z4: Amherst Rd hy#314; Z5: Riverside inline valve; Z6: Amherst Rd /Davidson inline;
141	7/14/2009 3:00	Heinz	E-4	6	4	Z1: Naticook Rd near house #10 hy valve hy #196; Z2: Naticook Rd /Dena inline valve; Z3: Naticook RD/ Dena Rd inline valve; Z4: Dena inline valve for Dena; Z5: Naticook Rd inline valve near hy 195; Z6: Pealee Rd hy #325 hy valve;
187	7/2/2009 3:00	Heinz	F-2-4	6	4	Z1: Amherst Rd hy #493; Z2: HY 494 hy valve Amherst Rd; Z3: Amherst Rd hy #495 hy valve; Z4 Amherst Rd hy #496 hy valve; Z5: Amherst Rd hy # 315; Z6: Piemont inline valve;
260	7/1/2009 3:00	Heinz	G-4	3	3	Z1: Cambridge hy #653; Z2: Cambridge inline valve near hy 653; Z3: Ingham inline near Cambridge;
258	6/27/2009 3:00	Heinz	G-4	6	9	Z1: Cambridge hy #653; Z2: Cambridge iline valve ; Z3: Ingham inline near Cambrigde; Z4: Igham hy #728; Z5: Inham inline; Z6:Ingham inline valve;
232	6/26/2009 3:00	Heinz	G-2	6	1	Z1: Seavern Brdge Rd hy #603; Z2: Cramerhill Rd inline; Z3: hy #670 hy valve Seavern Bridge RD; Z4: Seavern Brigde RD stub inline for Landau Way; Z5: Bates Rd inline valve; Z6: Bates Rd inline valve;
231	6/24/2009 3:00	Heinz	G-2	6	0	Z1: Seaverns Bridge Rd inline; Z2: Boston Post Rd inline; Z3: Greenleaf inline valve; Z4: inline valve on Seavern Bridge Rd; Z5: Seavern Bridge Rd at Cramerhill; Z6: hy valve hy 603 Seavern Bridge Rd;
229	6/18/2009 3:00	Heinz	G-2	6	2	Z1: Springfield Circle inline near Rimmon Ct; Z2: Springfield Circle hy #632 hy valve; Z3: Sringfield Circle hy valve hy #631; Z4: Springfield Circle hy #592 hy valve; Z5: Springfield Circle /Savannah Way inline;
291	6/13/2009 3:00	Heinz	H-2	6	1	Z1: Springfield Savannahway inline ; Z2: HY VALVE HY #105 Savannh way; Z3: Savannah Way inline valve near Springfield Circle; Z4: Springfield Circle hy valve hy #632; Z5: Taconic inline valve; Z6: Rimmon Ct inline valve;
226	6/12/2009 3:00	Heinz	G-2	6	2	Z1: Bates Rd inline valve; Z2: Bates Rd hy valve 665; Z3: Bates Rd hy valve 664; Z4: Bates Rd inline near Four Winds; Z5: Bates Rd hy valve hy #663; Z6: Bates RD hy #662 hy valve;
227	6/12/2009 3:00	Heinz	G-2	6	0	
240	6/9/2009 3:00	Heinz	G-2	6	1	Z1: Peaslee Rd/Bates inline valve; Z2: Bates Rd hy #698 hy valve; Z3: Bates Rd inline valve; Z4: Bates/ Maryann inline valve; Z5: Bates inline valve; Z6: Bates inline valve near Charles;
188	5/30/2009 3:00	Heinz	F-2	6	2	Z1: Amhest Rd / Peaslee inline valve; Z2: Peaslee Rd hy # 491 hy valve; Z3: Peaslee Rd hy valve hy #490 ; Z4: Pealee Rd Bates Rd inline valve; Z5: Peaslee Rd inline; Z6: ; hy hy valve peaslee Rd;
250	5/28/2009 3:00	Heinz	G-3	6	1	Z1: Everest inline ; Z2: Fourwinds inline; Z3: Fourwinds hy valve hy #810; Z4: Everest hy 595 hy valve; Z5: Rainer Ct inline valve; Z6: Everest inline at Dahl Rd;
344	5/22/2009 3:00	Heinz	MyZone	4	0	Z1: Queensway inline valve; Z2: Queensway hy#459 hy valve; Z3: Queensway hy #460 hy valve; Z4: Queensway/Olds Kings inline valve;
364	5/20/2009 3:00	ZUser	MyZone	6	0	Z1: Camp Sargent Rd Continential inline valve; Z2: Camp Sargent inline near Ingham; Z3: Camp Sargent hy #54 hy valve; Z4: Camp Sargent/ Caslton Ct inline; Z5: Camp Sargent inline; Z6: Camp Sargent inline near hy #53;
338	5/16/2009 3:00	Heinz	MyZone	6	13	Z1: Cramerhill inline; Z2: Coles Rock inline; Z3: Cramerhill inline; Z4: Cramerhill inline; Z5: hy 598 Cramerhill inline; Z6: Cramerhill inline;
333	5/14/2009 3:00	Heinz	MyZone	6	14	Z1: Cramerhill inline; Z2: Coles Rock inline; Z3: Cramerhill inline; Z4: Cramerhill inline; Z5: hy 598 Cramerhill inline; Z6: Cramerhill inline;
331	5/12/2009 3:00	Heinz	MyZone	4	0	Z1: Joey Rd/Camp Sargent inline; Z2: Joey Rd/Gail Rd inline valve; Z3: Joey Rd near house #10 inline valve; Z4: Joey Rd hy #152 hy valve;
283	5/8/2009 3:00	Heinz	G-4	4	4	Z1: Queensway inline; Z2: Queensway hy #459 hy valve; Z3: Queensway hy valve 460; Z4: Queensway Old Kings inline valve;
355	5/5/2009 3:00	Heinz	MyZone	6	14	Z1: Ingham Rd/Camp Sargent inline; Z2: Ingham Rd inline at Morningside; Z3: Ingham Rd inline near hy 320; Z4: Ingham Rd inline near house #10 IN DRIVEAY; Z5: Inham Rd near Cambrigde Dr; Z6: end of Inham near hy #728;
356	5/5/2009 3:00	Heinz	MyZone	6	15	Z1: Ingham Inline/Cambridge inline; Z2: Cambridge inline; Z3: Cambridge inline near hy #652; Z4: Cambridge inline near hy #651; Z5: inline for Alrich Cir; Z6: Cambridge inline near hy 650;
342	5/2/2009 3:00	Heinz	MyZone	6	5	Z1: Ingham inline/Cambridge inline; Z2: Cambridge inline; Z3: Cambridge inline near hy #652; Z4: Cambridge inline near hy #651; Z5: inline for Alrich Cir; Z6: Cambridge inline near hy 650;
345	4/23/2009 3:00	Heinz	MyZone	6	2	Z1: Tinker Rd inline valve; Z2: Tinker Rd hy valve hy #829; Z3: Tinker RD inline valve; Z4: Tinker Rd inline near hy 824; Z5: Tinker RD#825 hy valve; Z6: Tinker Rd hy valve #825 hy valve;
346	4/23/2009 3:00	Heinz	MyZone	6	2	

197	3/26/2009 3:00	Heinz	F-4	6	7	Z1: hy #390 hy valve; Z2: inline valve for Royal Ct; Z3: Old King inline valve; Z4: Queensway inline valve; Z5: hy valve hy#459; Z6: Queensway inline valve;
198	3/26/2009 3:00	Heinz	F-4	6	7	
362	3/25/2009 12:19	ZUser	MyZone	2	1	Z2: Z5; Z6;
361	3/25/2009 11:49	ZUser	MyZone	2	1	Z3: #3 16' from #1; Z4: on hydrant valve #320;
360	3/25/2009 11:25	ZUser	MyZone	2	1	Z3: #3 16' from #1; Z4: on hydrant valve #320;
373	3/25/2009 11:00	ron	test on Ingham	4	6	Z1: school side of valve on ingham infont #8; Z2: #2 is 9'4" from #1; Z3: #3 16' from #1; Z4: on hydrant valve #320;
326	3/25/2009 10:27	Heinz	MyZone	2	1	Z1: school side of valve on ingham infont #8; Z2: hydrant valve #320;
247	3/25/2009 3:00	Heinz	G-3	6	3	Z1: Queensway inline valve; Z2: hy #459 hy valve; Z3: Queensway inline valve; Z5: inline for Royal ct; Z6: hy #390 hy;
248	3/25/2009 3:00	Heinz	G-3	5	3	
269	3/21/2009 3:00	Heinz	G-4	3	3	Z1: Cambridge hy valve hy #653; Z2: Cambridge inline valve; Z3: Ingham inline valve;
267	3/20/2009 3:00	Heinz	G-4	3	1	Z1: Cambridge Dr inline valve; Z2: Cambridge inline near hy #649; Z3: inline valve near hy #650;
268	3/20/2009 3:00	Heinz	G-4	3	1	Z1: Cambridge Dr inline valve; Z2: Cambridge hy #653 hy valve; Z3: Ingham inline valve;
264	3/19/2009 3:00	HEINZ	G-4	6	0	Z1: Cambridge Dr inline valve; Z2: Cambridge inline near hy #649; Z3: inline valve near hy #650; Z4: Alrich inline valve; Z5: inline for Cambridge; Z6: inline valve for Cambridge;
263	3/18/2009 3:00	Heinz	G-4	3	3	Z1: Morningside inline valve; Z2: hy valve hy #320; Z3: Ingham RDinline valve house #8;
262	3/17/2009 3:00	Heinz	G-4	6	10	Z1: Camp Sargent Rd inline valve; Z2: Ingham Rd inline valve; Z3: Ingham Rd hy valve hy #320; Z4: Ingham Rd inline near house #8; Z5: Ingham Rd valve for Cambridge; Z6: Ingham Rd hy #728;
332	3/13/2009 3:00	Heinz	MyZone	6	9	Z1: Camp Sargent Rd inline valve; Z2: Ingham Rd inline valve; Z3: Hy #320 hy valve; Z4: Inline valve Ingham Rd; Z5: inline valve inham Rd; Z6: hy valve 728 at the end of road;
225	3/11/2009 3:00	Heinz	G-2	6	0	Z1: Peason inline valve; Z2: Peasly /Abby inline valve; Z3: hy valve hy #481; Z4: Abby Ln inline valve; Z5: inline valve on Penny Ln; Z6: Penny Ln/Abby inline valve;
256	3/7/2009 3:00	Heinz	G-3	5	0	Z1: Everest inline valve at Rainer Ct; Z2: Fourwinds hy valve hy #595; Z4: Everest inline valve; Z5: Dahl Rd/Everst inline valve for Dahl Rd;
238	3/6/2009 3:00	Heinz	G-2	4	0	Z1: Rushmore inline valve; Z2: ; hy valve hy#758; Z3: Eric St hy#803; Z4: hy#591 HY VALVE;
297	2/28/2009 3:00	Heinz	H-2	6	4	Z1: Kyle/Dalh inline valve; Z2:Eric SThy #806; Z3: Eric St hy#803; Z4: Greenleaf hy#805; Z5: Greenleaf hy #801hy valve; Z6: Greenleaf St hy #800;
249	2/27/2009 3:00	Heinz	G-3	6	3	Z1: Kyle/Dalh inline valve; Z2: Kyle hy #199 hy valve; Z3: hy valve hy #200; Z4: Dahl Rd hy valve hy#413; Z5: Dahl Rd hy valve hy #468; Z6: Kyle inline valve;
278	2/26/2009 3:00	Heinz	G-4	6	2	Z1: Dahl Rd/Everest inline; Z2: Dahl Rd hy #203; Z3: Eric St 179 in yard house #3; Z4: Dahl Rd hy valve hy#413; Z5: Dahl Rd hy valve hy #468; Z6: Dahl Rd hy valve hy #555;
246	2/25/2009 3:00	Heinz	G-3	6	2	Z1: Spaulding/Regal hy #328; Z2: Hawthorne Rd hy #579; Z3: Eric St 179 in yard house #3; Z4: hy #554 EricSt; Z5: Eric St hy #555 ; Z6: Eric St hy #556;
274	2/24/2009 3:00	Heinz	G-4	6	5	Z1: Spaulding/Regal hy #328; Z2: Regal/Queensway inline valve; Z3: Queensway hy#460 hy valve; Z4: Queensway hy 460; Z5: hy valve 390; Z6: Majestic ln hy #327;
275	2/24/2009 3:00	Heinz	G-4	6	5	
266	2/20/2009 3:00	Heinz	G-4	6	1	Z1: Pearson Rd hy #196 hy valve; Z2: Pealee Rd hy #325 hy valve; Z3: Peaslee Rd hy #326 ; Z4: Peaslee Rd hy #219 hy valve; Z5: Peaslee Rd hy #488 hy valve; Z6:Peaslee Rd hy #489 hy valve;
189	2/14/2009 3:00	Heinz	F-4	6	1	Z1: Hutchinson hy #347 hy valve; Z2: Hutchinson inline valve near Corwin; Z3: Huthinson/Corwin inline valve; Z4: Huthinson hy #344 hy valve; Z5: Cummings hy valve hy 345; Z6: Cummings/Naticook inline valve;
192	2/13/2009 3:00	HEINZ	F-4	3	2	Z1: Naticook/Danforth hy 349 hy valve; Z2: Naticook / Danfoth inline valve for Danforth; Z3: Danfoth hy# 350hy valve;
316	2/12/2009 3:00	Heinz	H-4	6	1	Z1: Naticook Rd hy #558 hy valve; Z2: Naticook Rd hy #557 hy valve; Z3: Naticook Rd hy valve #561; Z4: Naticook Rd hy#347 hy valve; Z5: Naticook Rd hy valve #346 hy valve; Z6: Naticook Rd hy #497 hy valve;
315	2/11/2009 3:00	Heinz	H-4	6	0	Z1: Naticook Rd hy #563 hy valve; Z2: Naticook Rd hy #562 hy valve; Z3: Naticook Rd hy valve #561; Z4: Naticook Rd hy#560 hy valve; Z5: Naticook Rd hy valve #559 ; Z6: Naticook Rd hy #558 hy valve;
302	2/10/2009 3:00	Heinz	H-3	5	0	Z1: Tinker Rd hy #824 hy valve; Z2: Tinker Rd hy #825 hy valve; Z3: Tinker Rd hy #826 hy valve; Z4: Tinker Rd hy #827 hy valve; Z5: Tinker Rd hy #828 hy valve;
222	2/7/2009 3:00	Heinz	G H I 1-5	6	0	Z1: Tinker Rd hy #643 hy valve; Z2: Tinker Rd hy #625 near Leblanc Ln; Z3: Tinker Rd hy #626 hy valve; Z4: Tinker Rd hy #829 (new) hy valve; Z5: Tinker Rd hy #823 hy valve; Z6: Tinker Rd hy #824 hy valve;
323	2/6/2009 3:00	Heinz	H-4	4	0	Z1: Hampstead/Dunbarton hy valve; Z2: hy #645 near house 14 hy valve; Z3: Dunbarton/Tinker Rd hy #643 hy valve; Z4: Hampsead hy #635 hy valve;

354	2/5/2009 3:00	Heinz	MyZone	4	0	Z1: Camp Sargent Rd/hy valve hy #; Z2: Camo Sargent Rd #573 Castleton Ct hy valve; Z3: Camp Sargent Rd hy valve #697; Z4: Camp Sargent Rd hy valve #53;
279	2/3/2009 3:00	Heinz	G-4	6	1	Z1: Cambridge Dr hy #648; Z2: Cambridge Dr hy #649; Z3: Cambridge Dr hy #650; Z4: Cambridge Dr hy #651; Z5: Cambridge Dr 652; Z6: Cambridge Dr hy 653;
312	1/31/2009 3:00	Heinz	H-3	6	0	Z1: Naticook Rd/ hy #52 hy valve; Z2: Naticook Rd hy #51 near Lamson; Z3: Naticook#150 hy valve; Z4: hy #730 Naticook Rd; Z5: hy #151 Naticook Rd hy valve; Z6: hy#321 hy valve near spa;
310	1/30/2009 3:00	Heinz	H-3	3	0	Z1: Cynthia/Naticook inline valve; Z2: Cynthia/CHRITINA; Z3: HY #153 hy valve;
349	1/24/2009 3:00	Heinz	MyZone	3	0	Z1: Naticook/Lorraine inline valve; Z2: Lorraine/Christina inline valve; Z3: Westborn/Naticook inline valve;
350	1/24/2009 3:00	Heinz	MyZone	2	0	Z1: Z:1 JAY inline valve; Z2: Jay Rd inline;
347	1/23/2009 3:00	Heinz	MyZone	3	1	Z1: Lamson/Westborn inline valve; Z2: Westborn/Winchester inline valve; Z3: Westborn/Naticook inline valve;
343	1/22/2009 3:00	Heinz	MyZone	3	0	Z1: Lamson/May Dr inline valve; Z2: hy valve #50 inside hy; Z3:May Dr/Westborn inline valve;
307	1/21/2009 3:00	Heinz	H-3	3	0	Z2: Nora/Lamson inline valve; Z3: Nora/Peter inline valve;
339	1/17/2009 3:00	heinz	MyZone	2	1	Z4: Christina/Cynthia; Z5: Naticook/Cynthia inline valve;
340	1/17/2009 3:00	heinz	MyZone	3	0	Z3: ;
329	12/11/2008 3:00	Heinz	MyZone	6	1	Z1: Naticook Rd inline valve; Z2: Joey Rd/ Gale inline valve; Z3: Joey inline in HOUSE #10 YARD; Z4: hy #152 hy valve ; Z5: Joey Rd/Curt near house #3 inline valve; Z6: Curt inline near hy #178;
365	12/6/2008 3:00	ZUser	MyZone	4	0	Z3: Bryce Dr/ Bryce inline valve; Z4: hy#369 hy valve;
353	12/5/2008 3:00	Heinz	MyZone	5	1	Z1: Pilgram inline; Z2: Pilgram/ Powderhouse inline; Z3: Pilgram/Minuteman hy 75 hy valve; Z4: Pilgram/Minuteman inline valve; Z5: Mayflower inline to Jessica Dr;
351	11/25/2008 3:00	Heinz	MyZone	4	2	Z3: inline near hy #179 Whispering Pines; Z4: hy valve #174 hy valve; Z5: inline for dodier ct; Z6: hy#465 hy vavle;
341	11/19/2008 3:00	Heinz	MyZone	6	1	
336	11/15/2008 3:00	Heinz	MyZone	6	1	
334	11/14/2008 3:00	heinz	MyZone	6	0	
335	11/14/2008 3:00	heinz	MyZone	6	0	
135	9/4/2008 3:00	Heinz	d-5	3	1	Z4: Cota/Sharon near house #20; Z5: Cota/Iris inline valve;
133	8/26/2008 3:00	Heinz	D-5	4	2	Z2: Cote/Sharon on inline valve; Z4: hy 375 hy valve on Cota ; Z5: Cota/Iris Dr inline valve;
374	11/15/2002 3:00	Joe	Demo	8	3	

Attachment 5

Attachment #5

Date	1" Plastic	2" CLP	2" Cast	2" PVC	4" Cast	4Cast	12" Transite	16" DIP	16" PVC	20" DIP	24" RCP	Totals
1956			136			86	14445					42525
1957		1711										2954
1958												144
1959												1454
1960												370
1961		418										3669
1962		120										4103
1963		414										6075
1964		630					300					16449
1965	225	294					1034					3742
1966		777										5806
1967												20059
1968				340			4400					14829
1969		150					5525					27339
1970						5	3159					11240
1971		365		60			1729					15127
1972		26	260	88	18	06	13496					34527
1973							403					20238
1974							7259					23462
1974*					2780		25185			460		99805
1975							11278					24829
1976		4					11062					25458
1977							4183			17501		30035
1978							80			802		3611
1979			185									5632
1980		340					299					20731
1981						98						5347
1982		21				PVC		1428		2530		8373
1983		1263										19823
1984		504		876								18782
1985												13977
1986				590				5778		80		59403
1987				208	2798							25661
1988-1989				1812	4" PVC							27840
1990											144	3104
1991-1992						60						14842
1993-1994						32			11050			23852
1995-1996												8966
7/1/96-12/31/97				650	200	52						20598
1998				144	735	55						23891
1999	120			1266	220	02						11968
2000				430	360							16095
2001				100		0						9383
2002				250								19645
2003				260								14605
2004				965								7639
2005												13018
2006				452								2090
2007												1420
2008					620	0						8560
Total	345	7037	581	8491	2135	71	103837	7206	11050	21373	144	**837199**
					2798	98				**Grand Total**		**843095**

Total Cast to 1988 until change to PVC

Total PVC from 1988

Reeds Ferry

Last update 3/16/09

Attachment 6

MERRIMACK VILLAGE DISTRICT

TERMS AND CONDITIONS

1. Application and Contract

A. Application for water service will be made at the Water District Office during regular office hours, Monday through Friday.

B. Whether or not a signed application for service is made by the customer and accepted by the District, the rendering of the service by the District and its use by the customer, shall be deemed a contract between the parties, subject to all provisions of the tariff applicable to the service.

C. The District reserves the right to reject any application for service, if the amount and nature of the service applied for or the distance of the premises to be serviced from an existing suitable main, or the difficulty of access thereto, is such that the estimated income from the service applied for is insufficient under any of the District's applicable rates, to yield a reasonable return to the District, unless such application is accompanied by a cash payment or an undertaking satisfactory to the District guaranteeing a stipulated revenue for a definite period of time or both.

D. All customers must adhere to the odd/even water ordinance which states: MVD customers with street addresses that end in an odd number can water only on odd-numbered days of the month, while residents with even-numbered addresses can water on even-numbered days. On the 31st of March, May, July, August and October, all residents may water outside, but only from 5AM to 8AM. (See also 2.D and 2.J pages 6 & 7)

2. Deposits, Charges and Payments

A. On all services after January 1, 1956, a non-interest bearing security deposit, according to meter

F. The rates for all services provided by the Merrimack Village District shall be established by the Merrimack Village District Board of Commissioners as provided under RSA 38:28 which "Schedule of Rates" shall be available at the District office. The "Schedule of Rates" may be modified from time to time by the Board of Commissioners after at least one posted public hearing.

G. All sprinkler systems shall have testable backflow devices, with the exception of flow through systems. All backflow protection devices shall be registered with the district and tested bianmually or annually depending on the degree of hazard, by the district at the owner's expense, as per NH Code of Administrative Rules (Env – Ws 364.01-11)

H. Charges for Special Hook-ups: The Merrimack Village District Commissioners shall establish reasonable charges for special water hook-ups including, but not limited to the filling of swimming pools and ice rinks. Such charges shall include a meter hook-up charge, together with a water charge, labor and other charges as outlined in the MVD's current "Schedule of Rates".

I. To add a surcharge not to exceed $125.00, to a customer's water bill if customer fails to allow the District to change their current mechanical meter to a new radio-read meter. This surcharge would compensate the District for the cost of reading the mechanical meter.

WATER WORKS
www.mvdwater.org

MEMO

DATE: September 19, 2005

TO: MVD Staff

FROM: James A. McSweeney, Business Manager/Superintendent

RE: Policy Memorandum #05-01A

By-Law 1.D. – Odd/Even Water Ordinance Policy

Policy #05-01A

Effective Date: September 19, 2005

Purpose: To clarify Paragraph 1.D. of the Merrimack Village District By-Laws, regarding the odd/even usage of water and how it applies to various customers, the following administrative policy is adopted.

Policy: By-Law 1.D. reads as follows:

"All customers must adhere to the odd/even water ordinance which states: MVD customers with street addresses that end in an odd number can water only on odd-numbered days of the month, while residents with an even-numbered address can water on even-numbered days. On the 31st of March, May, July, August and October, all residents may water outside, but only from 5AM to 8AM.

Accordingly the interpretation below will be the policy in administering the intent of By-Law 1.D. This policy will be in effect until changed or rescinded by the Merrimack Village District Business Manager/Superintendent, the Board of Commissioners or the Annual District Meeting

Procedure: The Board of Commissioners has determined that the intent and original purpose of this By-Law was to preserve and maintain the existing system and to conserve on water consumption during high use and generally dry periods (late spring through fall).

The By-Law as indicated above emphasizes customer/residents "can only water" and "can water". The reference obviously is to the watering of lawns and gardens. A strict interpretation of this language applies the restriction and penalty to customer/residents who opt to water lawns and gardens. This would exempt users who desire to fill pools via a hydrant connection or through their household supply system. Hydrant connections for construction purposes, where ultimately a service line would be installed for supply purposes, would also be exempt from the restrictions. Additional various hook-ups for the supply of water to charitable organizations for fund raisers (car washes, carnivals, etc) and for hook-ups that are in the interest of public health (example: dust control) would also be exempt from the By-Law restrictions.

Note: Reviewed by the BOC on September 19, 2005 with no objections.

Attachment 7

(1) Technically feasible;

(2) Consistent with water system industry standards and regulations; and

(3) Consistent with other public health and safety considerations.

(o) The water system shall adopt a rate structure that promotes water conservation, as follows:

(1) The rate structure shall be based on:

a. A unit price of water; and

b. The amount of water used by each connection to the water system; and

(2) The unit price of water for residential connections shall:

a. Remain the same; or

b. Increase with the volume of water consumed.

(p) The water system shall complete a water conservation educational outreach initiative using materials prepared by the department as follows:

(1) The water system shall implement the applicable public notification and outreach requirements to municipal governments within its service area in accordance with Env-Wq 2101.11; and

(2) The water system shall implement an educational outreach initiative for its customers to promote water conservation immediately upon obtaining approval for the new source subject to the laws or regulations described by Env-Wq 2101.02.

(q) Activities completed in accordance with (b) through (p), above, shall be completed by water system personnel under the supervision of a certified operator pursuant to Env-Ws 367.

Source. #8353, eff 5-14-05 (See Revision Note at part heading for Env-Wq 2101) (formerly Env-Ws 390.04)

Env-Wq 2101.05 Requirements for Existing Large Community Water Systems.

(a) An existing large community water system shall implement the measures described in this section.

(b) Each large community water system shall install water meters within 3 years of obtaining approval for a new source of water that is subject to RSA 485:3 for all of the following:

(1) Public sector water users except firefighting;

(2) Private water users; and

(3) All sources of water.

(c) The water system shall size the water meters required by (b), above, in accordance with the specifications of the manufacturer.

(d) In selecting, installing, and maintaining water meters, the water system shall comply with procedures and protocols described in "Manual of Water Supply Practices, Water Meters-Selection,

Installation, Testing, and Maintenance," document identification number AWWA M6, American Water Works Association, 1999.

(e) The water system shall read the water meters required by (b)(1) and (2), above, at least once every 90 days.

(f) The water system shall read the water meters required by (b)(3), above, at least once every 30 days.

(g) The water system shall implement a water audit and leak detection program in accordance with "Manual of Water Supply Practices, Water Audits and Leak Detection" document identification number AWWA M36, American Water Works Association, 1999, within one year of obtaining approval for a new source of water.

(h) The water system shall repair all leaks identified by the activities required by (g) within 60 days of discovery unless a waiver is obtained in accordance with Env-Wq 2101.09.

(i) The water system shall estimate the volume and percentage of unaccounted-for water in the water system once every year using protocols and procedures described in "Manual of Water Supply Practices, Water Audits and Leak Detection" document identification number AWWA M36, American Water Works Association, 1999.

(j) The water system shall prepare and submit a response plan to the department within 60 days if the percentage of unaccounted-for water in the water system calculated pursuant to (i), above, exceeds 15% of the total volume of water introduced to the water system.

(k) The response plan prepared in accordance with (j), above, shall identify how the water system intends to reduce the percentage of unaccounted-for water to below 15% within 2 years, except for leaks that have been identified which must be repaired in accordance with paragraph (h).

(l) The department shall approve the response plan within 90 days if it contains recommended actions that comply with the requirements specified in (k), above.

(m) The water system shall implement the response plan in accordance with the approved schedule upon receiving approval from the department.

(n) The water system shall implement pressure reduction within one year of obtaining approval of a new source of water when:

(1) Technically feasible;

(2) Consistent with water system industry standards and regulations; and

(3) Consistent with other public health and safety considerations.

(o) The water system shall adopt a rate structure that promotes water conservation within 5 years of obtaining approval for a new source of water, as described below:

(1) The rate structure shall be based on:

a. A unit price of water; and

b. The amount of water used by each connection to the water system; and

(2) The unit price of water for residential customers shall:

a. Remain the same; or

b. Increase with the volume of water consumed.

(p) The water system shall complete a water conservation educational outreach initiative using materials prepared by the department as follows:

(1) The water system shall implement the applicable public notification and outreach requirements to municipal governments within its service area in accordance with Env-Wq 2101.11; and

(2) The water system shall implement an educational outreach initiative for its customers to promote water conservation immediately upon obtaining approval for the new source.

(q) Activities completed in accordance with (b) through (p), above, shall be completed by water system personnel under the supervision of a certified operator pursuant to Env-Ws 367.

Source. #8353, eff 5-14-05 (See Revision Note at part heading for Env-Wq 2101) (formerly Env-Ws 390.05)

Env-Wq 2101.06 Requirements for Existing Small Community Water Systems and Certain Water Systems Owned By Landlords.

(a) The requirements in this section shall apply to:

(1) An existing small community water system; and

(2) A new or existing water system owned by a landlord who supplies water only to tenants and includes water service in a rental fee.

(b) The water system shall either:

(1) Comply with the metering and water accounting requirements for existing large community water systems as described in Env-Wq 2101.05; or

(2) Conduct a comprehensive leak detection survey of the distribution system every 2 years.

(c) If the water system elects to conduct a comprehensive leak detection survey, the water system shall complete the survey in accordance with procedures and protocols described in Chapter 3 and 4 of the "Manual of Water Supply Practices, Water Audits and Leak Detection" document identification number AWWA M36, American Water Works Association, 1999.

(d) The water system shall repair all leaks identified by the activities required by (c), above, within 60 days of detection unless a waiver is obtained in accordance with Env-Wq 2101.09.

(e) The water system shall implement pressure reduction within one year of obtaining approval of a new source of water when:

(1) Technically feasible;

(2) Consistent with water system industry standards and regulations; and

(3) Consistent with other public health and safety considerations.

(f) The water system shall complete a water conservation educational outreach initiative using materials prepared by the department as described below:

Attachment 8

Conclusions

- Non-revenue water is about 13% of total production (FY 2009).
- The equivalent dwelling unit (EDU) usage is 248 gpd (FY 2009).
- The average user in MVD is currently charged less than other systems such as PWW and Aquarion Water Co. but more than MWW.
- Projected expenses will increase through FY 2013 depending on the amount of new debt assumed.
- Projected expenses will decrease in about 2014 as existing debt is retired.
- Current rates do not provide sufficient revenue for projected expenses beginning in FY 2012.
- Planned capital reserve expenditures are significant in the near term and exceed yearly budgeted capital reserve contributions. This will require withdrawals from capital reserves.
- The net impact to capital reserves by the current CIP is a decline of about $1,760,000 by 2015.
- Revenues must increase by 2% to meet operating expenses through FY 2013.
- Revenues must increase by 15% to support bonded debt for the Continental Boulevard Area and Blending projects, as well as operating expenses.

Recommendations

UEI offers the following recommendations at this time.

- Track metered consumption and update projected revenues if necessary.
- Increase rates by Option A or C above. Increasing both consumption and fixed rates is consistent with the 2007 rate study recommendations.
- Maintain at least $200,000/year in budgeted capital reserve contributions depending on desired balances to preserve.
- Review the need for rate adjustments in 2 years based on CIP spending.
- Consider increasing the meter charge ratios to match AWWA ratios.
- Consider alternative strategies for public hydrant charges. Evaluate impact if the Town was assessed the hydrant charge. This may require an updated cost of service to confirm the cost of hydrants.
- Consider voluntary (or mandatory) conservation strategies as an option to mitigate supply needs.