The Jewett City Water Company

PO Box 1088
Enfield, CT 06083-1088
Tel.: (800) 430-8073
Fax: (860) 749-5381

August 1, 2022

Re: Docket 20-10-31 – Application of The Jewett City Water Company to Amend Rate Schedules – Order #3

The NRW for each water system within the Company for the year 2022 from January to June is attached.

The report contains the production and revenue water for each system, a description of any leak, location of leak and repair date. Included in the report are the leak detection surveys performed by outside consultants for the S & W System and Hill & Dale System.

The leak detection survey of the S & W system in 2022 discovered three water service leaks on the customer side of the curb stop. To date three of the customers have had the service repaired/ replaced. The repair of these leaks has reduced the water production to the system. The Company will continue to monitor the S & W system for any increase in production and will utilize the leak detection service company to help identify the location of any leak.

The Company has contracted with the leak detection service for all systems to be surveyed. The main system survey is scheduled to begin in August. Any leaks discovered will be addressed as the Company is notified by the contractor of any possible leaks.

Respectively Submitted,

THE JEWETT CITY WATER COMPANY

Robert Sherwood
President

Jewett City Water Company
Non Revenue Water

Docket 20-10-31
Order # 3

WATER PRODUCTION AND CONSUMPTION YEAR 2022

Quantities of water produced and purchased and the quantities delivered to consumer and lost or unaccounted for including system demand experience, during the year. Estimates for each of the listed items of non-revenue water

Potable water produced, metered, and discharged for consumptive use

JCWC MAIN SYSTEM

Month	Thou. Gals. from terminal Reservoirs	Thou. Gals pumped from Wells	Thou. Gals. Purchased	Total Thou. Gals. delivered to mains
January	885	485		1,370
February	898	319		1,217
March	808	536		1,344
April	702	593		1,295
May	926	637		1,563
June	918	628		1,546
July				
August				
September				
October				
November				
December				
Total PRODUCTION WATER	5,137	3,198		8,335
Total REVENUE Water (System only)				5,986
Balance as NON-REVENUE Water		(State Percentage:	28.2%	2,349
Description and estimated consumption of Non-Revenue Water				
a. Utility Usage -- at source/treatment plants				337
b. Utility Usage -- flushing hydrants (No flushed 65)				368
c. Utility Usage -- bleeders (No. in use)				
d. Utility Usage -- meter bench (No. meters tested)				
e. Utility Usage -- other purposes (specify):				
New construction, fill, flush,				300
f. Fire Protection (No. of hydrant-using fires)				
g. Main Breaks (No. of breaks 1)				131
h. Service Line losses before meters (No. of cases 4)				681
I. Other Non-Revenue uses/losses (specify):				
			Total	1,817
j. Balance (unknown)				532
6 mon Total Non-Revenue (Unaccounted-for) Water			6.4%	532

Jewett City Water Company
Non Revenue Water

Docket 20-10-31
Order # 3

WATER PRODUCTION AND CONSUMPTION YEAR 2022

Quantities of water produced and purchased and the quantities delivered to consumer and lost or unaccounted for including system demand experience, during the year. Estimates for each of the listed items of non-revenue water

Potable water produced, metered, and discharged for consumptive use

JCWC HILL N DALE SYSTEM

Month	Thou. Gals. from terminal Reservoirs	Thou. Gals pumped from Wells	Thou. Gals. Purchased	Total Thou. Gals. delivered to mains
January		150		150
February		171		171
March		110		110
April		153		153
May		192		192
June		155		155
July				
August				
September				
October				
November				
December				
Total PRODUCTION WATER	0	931		931
Total REVENUE Water (System only)				694
Balance as NON-REVENUE Water		(State Percentage:	25.5%)	237
Description and estimated consumption of Non-Revenue Water				
a. Utility Usage -- at source/treatment plants				6
b. Utility Usage -- flushing hydrants (No flushed)				
c. Utility Usage -- bleeders (No. in use)				
d. Utility Usage -- meter bench (No. meters tested)				
e. Utility Usage -- other purposes (specify):				
New construction, fill, flush, filter bed malfunction				
f. Fire Protection (No. of hydrant-using fires)				
g. Main Breaks (No. of breaks)				
h. Service Line losses before meters (No. of cases 1)				9
I. Other Non-Revenue uses/losses (specify):				
			Total	15
j. Balance (unknown)				5
6 mon Total Non-Revenue (Unaccounted-for) Water			23.8%	222

Jewett City Water Company
Non Revenue Water

Docket 20-10-31
Order # 3

WATER PRODUCTION AND CONSUMPTION YEAR 2022

Quantities of water produced and purchased and the quantities delivered to consumer and lost or unaccounted for including system demand experience, during the year. Estimates for each of the listed items of non-revenue water

1. Potable water produced, metered, and discharged for consumptive use

JCWC S & W SYSTEM

Month	Thou. Gals. from terminal Reservoirs	Thou. Gals pumped from Wells	Thou. Gals. Purchased	Total Thou. Gals. delivered to mains
January		79		79
February		72		72
March		86		86
April		89		89
May		1029		1029
June		1007		1007
July				
August				
September				
October				
November				
December				
1(a) Total PRODUCTION WATER	0	2,362		2,362
2. Total REVENUE Water (System only)				1,615
3. Balance as NON-REVENUE Water		(State Percentage:	31.6%	747
4. Description and estimated consumption of Non-Revenue Water				
a. Utility Usage -- at source/treatment plants				
b. Utility Usage -- flushing hydrants (No flushed)				
c. Utility Usage -- bleeders (No. in use)				
d. Utility Usage -- meter bench (No. meters tested)				
e. Utility Usage -- other purposes (specify):				
New construction, fill, flush, filter bed malfunction				
f. Fire Protection (No. of hydrant-using fires)				
g. Main Breaks (No. of breaks)				
h. Service Line losses before meters (No. of cases 3)				475
I. Other Non-Revenue uses/losses (specify):				
			Total	475
j. Balance (unknown)				272
6 mon Total Non-Revenue (Unaccounted-for) Water			11.5%	272

Jewett City Water Company
Main/ Service Leaks 2022, Jan-June

Docket 20-10-31
Order # 3

REPAIR DATE	SYSTEM	LOCATION	TYPE OF REPAIR	DESCRIPTION OF REPAIRS	Estimated Water Loss 1000/gals
01/24/22	MAIN	Cathcart	Service	2 inch water service split	56
02/02/22	MAIN	64 SOUTH MAIN ST	Service	FND 3/4" COPPER SERVICE LEAKING IN THE ROAD	21
02/16/22	S & W	49 Leha Ae	Service	Service leak on customer side of service	129
02/23/22	S & W	115 Edmund Rd	Service	Service leak on customer side of service	216
02/23/22	S & W	122 Edmund Rd	Service	Service leak on customer side of service	130
03/14/22	MAIN	42 Russell St.	Main	3" Split along seam of 2" IP Main - Repaired with 15" wrap	131
03/18/22	MAIN	143 North Main St	Service	FND 3/4" COPPER SERVICE LEAKING IN THE ROAD	262
04/26/22	MAIN	106 BROWN AVE	Service	FND 3/4" COPPER SERVICE LEAKING IN THE ROAD	262
06/21/22	H & D	10 KENYON RD	Service	CONTRACTOR STRUCK SERVICE LINE	9

The Jewett City Water Company

PO Box 1088
Enfield, CT 06083-1088
Tel.: (800) 430-8073
Fax: (860) 749-5381

January 31, 2023

Re: Docket 20-10-31 – Application of The Jewett City Water Company to Amend Rate Schedules – Order #3

The NRW for each water system within the Company for the year 2022 from January to December is attached.

The report contains the production and revenue water for each system, a description of any leak, location of leak and repair date. Included in the report are the leak detection surveys performed by outside consultants for the Main System, S & W System and Hill & Dale System.

The leak detection survey of the S & W system in 2022 discovered six water service leaks on the customer side of the curb stop. To date three of the customers have had the service repaired/ replaced. The repair of these leaks has reduced the water production to the system. The Company will continue to monitor the S & W system for any increase in production and will utilize the leak detection service company to help identify the location of any leak.

The Company has contracted with the leak detection service for all systems to be surveyed. The Leak detection surveys have been completed. Any leaks discovered will be addressed as the Company is notified by the contractor of any possible leaks.

Respectively Submitted,

THE JEWETT CITY WATER COMPANY

Robert Sherwood

Robert Sherwood
President

Jewett City Water Company
Non Revenue Water

Docket 20-10-31
Order # 3

WATER PRODUCTION AND CONSUMPTION YEAR 2022

Quantities of water produced and purchased and the quantities delivered to consumer and lost or unaccounted for including system demand experience, during the year. Estimates for each of the listed items of non-revenue water

Potable water produced, metered, and discharged for consumptive use

JCWC MAIN SYSTEM

Month	Thou. Gals. from terminal Reservoirs	Thou. Gals pumped from Wells	Thou. Gals. Purchased	Total Thou. Gals. delivered to mains
January	8,859	4,857		13,716
February	8,998	3,194		12,192
March	8,088	5,365		13,453
April	7,022	5,933		12,955
May	9,260	6,370		15,630
June	9,182	6,280		15,462
July	10,467	6,741		17,208
August	10,182	6,538		16,720
September	8,935	5,363		14,298
October	8,488	6,044		14,532
November	9,283	4,655		13,938
December	8,355	4,876		13,231
Total PRODUCTION WATER	107,119	66,216		173,335
Total REVENUE Water (System only)				119,905
Balance as NON-REVENUE Water		(State Percentage:	30.8%	53,430
Description and estimated consumption of Non-Revenue Water				
a. Utility Usage -- at source/treatment plants				682
b. Utility Usage -- flushing hydrants (No flushed 130)				1,958
c. Utility Usage -- bleeders (No. in use)				
d. Utility Usage -- meter bench (No. meters tested)				
e. Utility Usage -- other purposes (specify):				
New construction, fill, flush,				100
f. Fire Protection (No. of hydrant-using fires)				
g. Main Breaks (No. of breaks 2)				3,000
h. Service Line losses before meters (No. of cases 5)				1,401
I. Other Non-Revenue uses/losses (specify):				
			Total	7,141
j. Balance (unknown)				46,289
6 mon Total Non-Revenue (Unaccounted-for) Water			26.7%	46,289

Jewett City Water Company
Non Revenue Water

Docket 20-10-31
Order # 3

WATER PRODUCTION AND CONSUMPTION YEAR 2022

Quantities of water produced and purchased and the quantities delivered to consumer and lost or unaccounted for including system demand experience, during the year. Estimates for each of the listed items of non-revenue water

Potable water produced, metered, and discharged for consumptive use

JCWC HILL N DALE SYSTEM

Month	Thou. Gals. from terminal Reservoirs	Thou. Gals pumped from Wells	Thou. Gals. Purchased	Total Thou. Gals. delivered to mains
January		146		146
February		166		166
March		107		107
April		149		149
May		186		186
June		155		155
July		172		172
August		154		154
September		122		122
October		133		133
November		124		124
December		162		162
Total PRODUCTION WATER	0	1,776		1,776
Total REVENUE Water (System only)				1,401
Balance as NON-REVENUE Water		(State Percentage:	21.1%)	375
Description and estimated consumption of Non-Revenue Water				
a. Utility Usage -- at source/treatment plants				100
b. Utility Usage -- flushing hydrants (No flushed)				
c. Utility Usage -- bleeders (No. in use)				
d. Utility Usage -- meter bench (No. meters tested)				
e. Utility Usage -- other purposes (specify):				
New construction, fill, flush, filter bed malfunction				
f. Fire Protection (No. of hydrant-using fires)				
g. Main Breaks (No. of breaks)				
h. Service Line losses before meters (No. of cases 1)				9
I. Other Non-Revenue uses/losses (specify):				
			Total	109
j. Balance (unknown)				266
6 mon Total Non-Revenue (Unaccounted-for) Water			15.0%	266

Jewett City Water Company
Non Revenue Water

Docket 20-10-31
Order # 3

WATER PRODUCTION AND CONSUMPTION YEAR 2022

Quantities of water produced and purchased and the quantities delivered to consumer and lost or unaccounted for including system demand experience, during the year. Estimates for each of the listed items of non-revenue water

1. Potable water produced, metered, and discharged for consumptive use

JCWC S & W SYSTEM

Month	Thou. Gals. from terminal Reservoirs	Thou. Gals pumped from Wells	Thou. Gals. Purchased	Total Thou. Gals. delivered to mains
January		740		740
February		681		681
March		800		800
April		869		869
May		1001		1001
June		980		980
July		1169		1169
August		1159		1159
September		1058		1058
October		1024		1024
November		956		956
December		865		865
1(a) Total PRODUCTION WATER	0	11,302		11,302
2. Total REVENUE Water (System only)				3,334
3. Balance as NON-REVENUE Water		(State Percentage:	70.5%	7,968
4. Description and estimated consumption of Non-Revenue Water				
a. Utility Usage -- at source/treatment plants				100
b. Utility Usage -- flushing hydrants (No flushed 2)				50
c. Utility Usage -- bleeders (No. in use)				
d. Utility Usage -- meter bench (No. meters tested)				
e. Utility Usage -- other purposes (specify):				
New construction, fill, flush, filter bed malfunction				
f. Fire Protection (No. of hydrant-using fires)				
g. Main Breaks (No. of breaks)				
h. Service Line losses before meters (No. of cases 6)				975
I. Other Non-Revenue uses/losses (specify):				
			Total	1,125
j. Balance (unknown)				6,843
Total Non-Revenue (Unaccounted-for) Water			60.5%	6,843

Jewett City Water Company
Main/ Service Leaks 2022, Jan-June

Docket 20-10-31
Order # 3

REPAIR DATE	SYSTEM	LOCATION	TYPE OF REPAIR	DESCRIPTION OF REPAIRS	Estimated Water Loss 1000/gals
1/24/2022	MAIN	Cathcart	Service	2 inch water service split	56
2/2/2022	MAIN	64 SOUTH MAIN ST	Service	FND 3/4" COPPER SERVICE LEAKING IN THE ROAD	21
2/16/2022	S & W	49 Leha Ae	Service	Service leak on customer side of service	200
2/23/2022	S & W	115 Edmund Rd	Service	Service leak on customer side of service	216
2/23/2022	S & W	122 Edmund Rd	Service	Service leak on customer side of service	200
3/14/2022	MAIN	42 Russell St.	Main	3" Split along seam of 2" IP Main - Repaired with 15" wrap	131
3/18/2022	MAIN	143 North Main St	Service	FND 3/4" COPPER SERVICE LEAKING IN THE ROAD	262
4/26/2022	MAIN	106 BROWN AVE	Service	FND 3/4" COPPER SERVICE LEAKING IN THE ROAD	262
6/21/2022	H & D	10 KENYON RD	Service	CONTRACTOR STRUCK SERVICE LINE	9
6/25/2022	S &W	# 122 EDMOND RD	Service	Est GALLONS LOST 11 GPM	150
7/22/2022	MAIN	22 BOW LN	Service	2" SPLIT 3/4 PLASTIC	200
7/28/2022	MAIN	303 Slater Ave Intersection	replace fire hydrant	Hydrant hit by car, new hydrant was installed,	
9/29/2022	MAIN	181-183 North Main	Service	FND 3/4" COPPER SERVICE LEAKING IN THE ROAD	500
10/4/2022	S &W	24 Leha	Service	Service leak on customer side of service	200
11/18/2022	MAIN	43/45 Hill ST	Service	2"split	300
12/20/2022	S & W	16 BONNIE ST	Service	2" SPLIT	150

Water Leak Survey Report For:
Jewett City
Water Company
Hill & Dale System

Hazardville Water Company
#481 Taylor Rd
Enfield, CT 06083

February/March 2022

Survey Completed by:

MATT GROUF

Grouf'sWater
LEAK SERVICES
DEAD ON IS MY NAME PINPOINT IS MY GAME

11 BIRCHES RD HUBBARDSTON, MA 01452
GROUFSWATER@GMAIL.COM

Equipment used in this Survey

I use state-of-the-art technology to accurately identify and narrow down areas of interest. This includes real-time or overnight correlating of water mains and services. High powered sonic equipment, capable of finding very small leaks, was applied to detect and pinpoint accurate leak locations quickly. This included listening on top of the ground over water mains, as well as contacting hydrants, services, and valves. Utilizing both digital correlating and sonic listening allowed me to precisely pinpoint water breaks for correction.

SubSurface Leak Detection: LD-18 w/ High Sensitivity Contact and Ground Microphones

SubSurface Leak Detection: Z-Corr Digital Correlating Loggers (8 Pack)

Sewerin: Stethophon 04 w/ Ground Microphone and Contact Microphone

Schonstedt: GA-92 XTd Magnetic Locator

Schonstedt: REX Pipe and Cable Locator

Scope of Survey

The water leak detection survey began February 23, 2022 and was completed on March 8, 2022. Acoustic listening and digital correlation of the entire system of mains and services were performed during this survey. Listening with sonic equipment on the valves, curb stops and silcocks (when accessible), and on top of the ground over all the water mains was performed. I correlated the entire main from curb stop to curb stop as well, with no leaks found during this survey.

Dates in System

DATES WORKED	JOB TYPE	DETAILS
2/23/2022	START SURVEY	SURVEY HOUSE TO HOUSE
2/24/2022	SURVEY	SURVEY/CORRELATE
3/8/2022	SURVEY COMPLETE	SURVEY

Leaks Located

No Leaks were uncovered during this survey.

Conclusion

The Hill & Dale water system is an efficient system. Jewett City Water Company does an excellent job maintaining the water system. No leaks were uncovered during this survey. Leak Detection Surveys are essential to the conservation efforts of pure and clean water. Conserving this natural resource will help ensure a water supply is available for future generations. These surveys cut down on non-revenue water, which in turn increases revenues, and saves on rate payers resources. Underground leaks that do not surface, can undermine public and private property causing extensive damage. Leaks pose an increased risk for safety and are uncovered with routine leak detection.

Number of Leaks located:

o Main Breaks – **o GPM**

o Service Leaks - approximately leaking a total of **o GPM**

o Hydrant Leaks - approximately leaking a total of **o GPM**

o Valve Leaks – **o GPM**

Approximate system total gallons per minute loss: **o GPM**

Approximate system yearly loss: **o Gallons**

Recommendations

Full system comprehensive leak detection survey conducted once per calendar year. Leak detection surveys save an extensive amount of money and resources for the Jewett City Water Company, by detecting leaks that can go unnoticed.

Recognition

I would like to thank Bob, Jon, and James at the Hazardville Water Company and Jewett City Water Company for their immediate response to all inquiries in the system.

Water Leak Survey Report For:
Jewett City
Water Company
Jewett City Main System

Jewett City Water Company
#481 Taylor Rd
Enfield, CT 06083

August/September 2022

Survey Completed by:

MATT GROUF

Grouf'sWater
LEAK SERVICES
DEAD ON IS MY NAME PINPOINT IS MY GAME

11 BIRCHES RD HUBBARDSTON, MA 01452
GROUFSWATER@GMAIL.COM

Equipment used in this Survey

I use state-of-the-art technology to accurately identify and narrow down areas of interest. This included real-time or overnight correlating of water mains and services. High powered sonic equipment, capable of finding very small leaks, was applied to detect and pinpoint accurate leak locations quickly. This included listening on top of the ground over water mains, as well as contacting hydrants, services, and valves. Utilizing both digital correlating and sonic listening allowed me to precisely pinpoint water breaks for correction.

SubSurface Leak Detection: LD-18 w/ High Sensitivity Contact and Ground Microphones

SubSurface Leak Detection: LD-15 w/ High Sensitivity Contact and Ground Microphones

SubSurface Leak Detection: Z-Corr Digital Correlating Loggers (8 Pack)

Sewerin: Stethophon 04 w/ Ground Microphone and Contact Microphone

Schonstedt: GA-92 XTd Magnetic Locator

Schonstedt: REX Pipe and Cable Locator

Scope of Survey

The water leak detection survey began August 11, 2022 and was completed on September 20, 2022. Acoustic listening and digital correlation of approximately 27 miles of mains were performed during this survey. Streets with heavy traffic were correlated and listened on during early morning hours for accurate testing results. A service leak and hydrant leak were detected on North Main Street through this method. The cross-country mains correlated, was the line that runs from Slater Ave under the river to the old mill on Wedgewood Dr, Hopeville Wellfield to December Drive, Stone Hill Tank to Banjo Sullivan Rd to Roger Rd, and the JC Easement. No leaks were found on these cross-country mains. Listening with sonic equipment on the hydrants, valves, curb stops (when accessible), and on top of the ground over all the water mains was performed. All leaks uncovered were immediately alerted to the Jewett City Water Company.

Streets Correlated and Listened Early Morning
East Main Street
North Main Street
South Main Street
Stone Hill Road
River Road
Preston Road
Voluntown Road
Slater Ave

Dates in System

DATES WORKED	JOB TYPE	DETAILS
8/11/2022	START SURVEY	STARTED SYSTEM SURVEY
8/18/2022	SURVEY	SURVEY/RECHECK POSSIBLE LEAKS
8/26/2022	SURVEY	SURVEY/RECHECK POSSIBLE LEAKS
8/29/2022	EARLY MORNING	EARLY MORNING SURVEY/CORRELATING
9/12/2022	EARLY MORNING	EARLY MORNING SURVEY/CORRELATING
9/20/2022	SURVEY COMPLETE	SURVEY/FINAL RECHECKS

Leaks Located

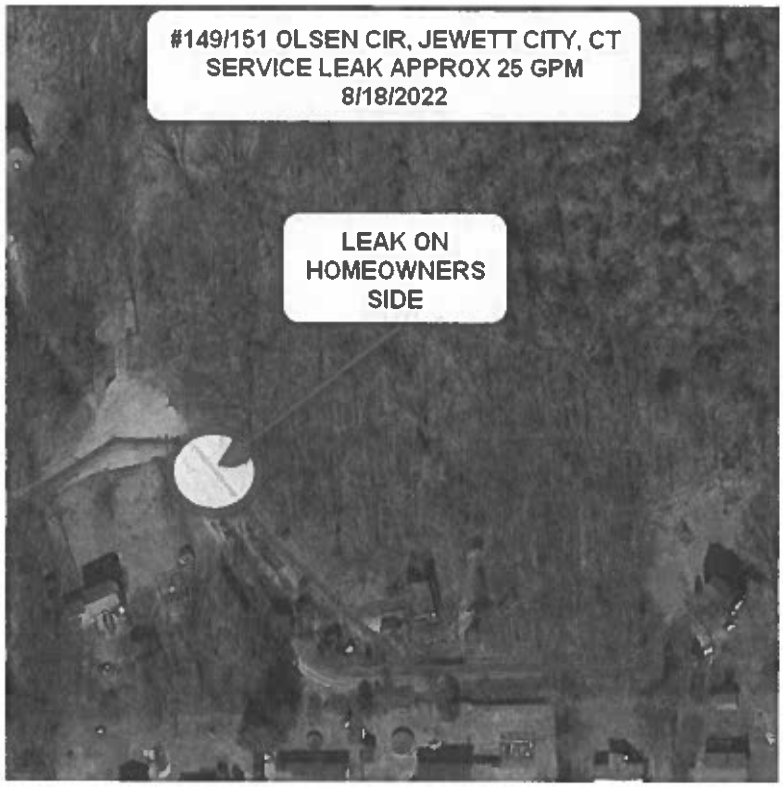
One Main Break, five Service Leaks, and 2 Hydrant Leaks were uncovered during this survey. An estimated total of 144 gallons per minute (GPM) loss, was due to these leaks. If left undetected, these leaks could add up to 207,360 gallons per day, 1,451,520 gallons per week, and a total of 75,479,040 gallons per year.

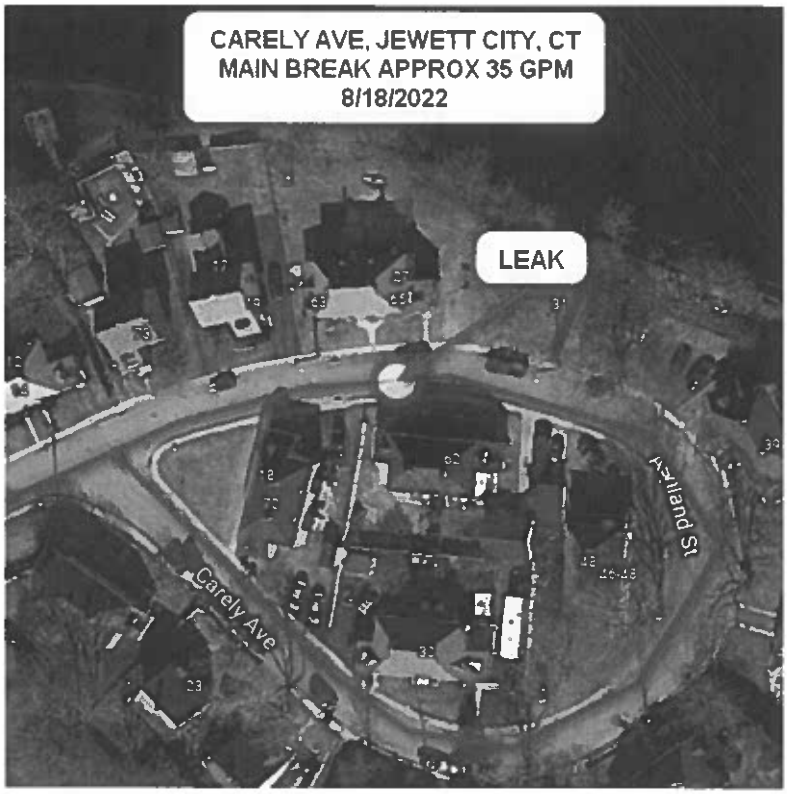
FINAL LEAK LIST FOR JEWETT CITY, CT 9/20/2022					
#	DATE	TYPE OF LEAK	ADDRESS	LOCATION DETAILS	ESTIMATED GPM
1	8/11/2022	SERVICE	77 ASHLAND ST	SERVICE LEAK	22
2	8/11/2022	SERVICE	128 NORTH MAIN ST	SERVICE LEAK	22
3	8/11/2022	HYDRANT	178 NORTH MAIN ST	HYDRANT LEAK	1
4	8/18/2022	SERVICE	149 OLSEN CIR	SERVICE LEAK	25
5	8/18/2022	HYDRANT	32 HILL ST	HYDRANT LEAK	2
6	8/18/2022	MAIN	CARELY AVE	MAIN BREAK	35
7	8/29/2022	SERVICE	17 ARROWHEAD DR	SERVICE LEAK	22
8	9/20/2022	SERVICE	38 MCKENNA AVE	SERVICE LEAK	15
	TOTAL ESTIMATED GALLONS PER MINUTE LOSS				144

Aerial Reports






#149/151 OLSEN CIR, JEWETT CITY, CT
SERVICE LEAK APPROX 25 GPM
8/18/2022
LEAK ON
HOMEOWNERS
SIDE


CARELY AVE, JEWETT CITY, CT
MAIN BREAK APPROX 35 GPM
8/18/2022
LEAK
Carely Ave
Ashland St


#17 ARROWHEAD DR, JEWETT CITY, CT
SERVICE LEAK APPROX 22GPM
8/29/2022
LEAK
Arrowhead Dr
Arrowhead Dr
17 Arrowhead Dr,
Griswold, CT 06351


#38 MCKENNA AVE, JEWETT CITY, CT
SERVICE LEAK APPROX 15 GPM
9/20/2022
38 McKenna Ave,
Griswold, CT 06351
LEAK
McKenna Ave
Beverly St

Conclusion

Smaller Water Systems like Jewett City Water Company, benefit immensely from Leak Detection programs. In this survey eight leaks were uncovered. Many of these leaks may never have surfaced, which is why yearly Leak Detection Surveys are essential to the conservation efforts of pure and clean water. Conserving this natural resource will help ensure a water supply is available for future generations. These surveys cut down on non-revenue water, which in turn increases revenues, and saves on rate payers resources. Underground leaks that do not surface, can undermine public and private property causing extensive damage. These leaks pose an increased risk for safety and are uncovered with routine leak detection. The amount of non-revenue water saved during this survey should dramatically decrease the amount of non-revenue water in the system.

Number of Leaks located:

1 Main Break – **35 GPM**

5 Service Leaks - approximately leaking a total of **106 GPM**

2 Hydrant Leaks - approximately leaking a total of **3 GPM**

0 Valve Leaks – **0 GPM**

Approximate system total gallons per minute loss: **144 GPM**

Approximate system yearly loss: **75,479,040 Gallons**

Recommendations

Full system comprehensive leak detection survey conducted once per calendar year. Leak detection surveys save an extensive amount of money and resources for the Jewett City Water Company, by detecting leaks that can go unnoticed.

Recognition

I would like to thank Jon and James at the Jewett City Water Company for their immediate response to all inquiries and leak locations. The system is maintained very well, with almost no leaking hydrants and valves.

Water Leak Survey Report For:
Jewett City
Water Company
S & W System

Hazardville Water Company
#481 Taylor Rd
Enfield, CT 06083

February 2022

Survey Completed by:

MATT GROUF

Grouf'sWater
LEAK SERVICES
DEAD ON IS MY NAME PINPOINT IS MY GAME

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Equipment used in this Survey

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SubSurface Leak Detection: LD-18 w/ High Sensitivity Contact and Ground Microphones

SubSurface Leak Detection: Z-Corr Digital Correlating Loggers (8 Pack)

Sewerin: Stethophon 04 w/ Ground Microphone and Contact Microphone

Schonstedt: GA-92 XTd Magnetic Locator

Schonstedt: REX Pipe and Cable Locator



Scope of Survey

The water leak detection survey began February 16, 2022 and was completed on February 23, 2022. Acoustic listening and digital correlation of the entire system of mains and services were performed during this survey. 3 service leaks were uncovered during this survey. The cross-country mains correlated, were the lines that run from the pump house to Bonnie St and the pump house to Lisa Ave. No leaks were found on these cross-country mains. Listening with sonic equipment on the valves, curb stops and silcocks (when accessible), and on top of the ground over all the water mains was performed. All leaks uncovered were immediately alerted to the Jewett City Water Company.

Dates in System

DATES WORKED	JOB TYPE	DETAILS
2/16/2022	START SURVEY	SURVEY
2/23/2022	SURVEY	SURVEY/PINPOINT

Leaks Located

Three Service Leaks were uncovered during this survey. An estimated total of 11 gallons per minute (GPM) loss, was due to these leaks. If left undetected, these leaks could add up to 15,840 gallons per day, 110,880 gallons per week, and a total of 5,765,760 gallons per year.

S & W SYSTEM FINAL LEAK LIST					
#	DATE	TYPE OF LEAK	ADDRESS	LOCATION DETAILS	ESTIMATED GPM
1	6/21/2021	SERVICE	#49 LEHA AVE	SERVICE LEAK	3
2	6/21/2021	SERVICE	#115 EDMOND RD	SERVICE LEAK	5
3	6/25/2021	SERVICE	#122 EDMOND RD	SERVICE LEAK	3
				TOTAL ESTIMATED GALLONS PER MINUTE LOSS	11

Aerial Reports







Conclusion

Smaller Water Systems like the S & W system, benefit immensely from Leak Detection programs. In this survey three leaks were uncovered. These leaks may never have surfaced, which is why yearly Leak Detection Surveys are essential to the conservation efforts of pure and clean water. Conserving this natural resource will help ensure a water supply is available for future generations. These surveys cut down on non-revenue water, which in turn increases revenues, and saves on rate payers resources. Underground leaks that do not surface, can undermine public and private property causing extensive damage. These leaks pose an increased risk for safety and are uncovered with routine leak detection. The amount of non-revenue water saved during this survey should decrease the amount of unaccounted for water being pumped into the system.

Number of Leaks located:

0 Main Breaks – **0 GPM**

3 Service Leaks - approximately leaking a total of **11 GPM**

0 Hydrant Leaks - approximately leaking a total of **0 GPM**

0 Valve Leaks – **0 GPM**

Approximate system total gallons per minute loss: **11 GPM**

Approximate system yearly loss: **5,765,760 Gallons**

Recommendations

Full system comprehensive leak detection survey conducted once per calendar year. Leak detection surveys save an extensive amount of money and resources for the Jewett City Water Company, by detecting leaks that can go unnoticed.

Recognition

I would like to thank Bob, Jon, and James at the Hazardville Water Company and Jewett City Water Company for their immediate response to all inquiries and leak locations. It is nice to see water systems like this, that monitor there usage closely to be able to recognize an issue in the system in a timely manner.