The Jewett City Water Company

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

June 25, 2021

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 2021 from January to May 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.

The leak detection survey of the S & W system in 2021 discovered four water service leaks on the customer side of the curb stop. To date three of the customers have had the service repaired/ replaced and the Company is working with the fourth customer to get their service repaired. 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 survey is scheduled to begin in June with the main system being completed first. 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
Executive Vice President

Jewett City Water Company
Non Revenue Water

Docket 20-10-31
Order # 3

WATER PRODUCTION AND CONSUMPTION YEAR 2021

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	8,341	6,582		14,923
February	7,903	6,124		14,027
March	8,865	6,837		15,702
April	9,561	6,186		15,747
May	10,985	6,335		17,320
June				0
July				0
August				0
September				0
October				0
November				0
December				0
Total PRODUCTION WATER	45,655	32,064		77,719
Total REVENUE Water (System only)				47,898
Balance as NON-REVENUE Water		(State Percentage:	38.4%	29,821
Description and estimated consumption of Non-Revenue Water				
a. Utility Usage -- at source/treatment plants				322
b. Utility Usage -- flushing hydrants (No flushed 65)				736
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,				
f. Fire Protection (No. of hydrant-using fires)				
g. Main Breaks (No. of breaks 3)				1,000
h. Service Line losses before meters (No. of cases)				
I. Other Non-Revenue uses/losses (specify):				
			Total	2,058
j. Balance (unknown)				27,763
Total Non-Revenue (Unaccounted-for) Water			35.7%	27,763
2020 Total Non-Revenue (Unaccounted-for) Water			23.5%	

Jewett City Water Company
Non Revenue Water

WATER PRODUCTION AND CONSUMPTION YEAR 2021

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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		108		108
February		88		88
March		98		98
April		144		144
May		164		164
June				0
July				0
August				0
September				0
October				0
November				0
December				0
Total PRODUCTION WATER	0	602		602
Total REVENUE Water (System only)				563
Balance as NON-REVENUE Water		(State Percentage:	6.5%)	39
Description and estimated consumption of Non-Revenue Water				
a. Utility Usage -- at source/treatment plants				2
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 _____)				
I. Other Non-Revenue uses/losses (specify): _____				
			Total	2
j. Balance (unknown)				5
Total Non-Revenue (Unaccounted-for) Water			6.1%	37
2020 Total Non-Revenue (Unaccounted-for) Water			0.0%	

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Non Revenue Water

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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		1151		1151
February		1031		1031
March		1041		1041
April		627		627
May		597		597
June				0
July				0
August				0
September				0
October				0
November				0
December				0
1(a) Total PRODUCTION WATER	0	4,447		4,447
2. Total REVENUE Water (System only)				1,415
3. Balance as NON-REVENUE Water		(State Percentage:	68.2%	3,032
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 4)				2,592
I. Other Non-Revenue uses/losses (specify):				
			Total	2,592
j. Balance (unknown)				440
Total Non-Revenue (Unaccounted-for) Water			9.9%	440
2020 Total Non-Revenue (Unaccounted-for) Water			57.7%	

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The leak detection survey of the S & W system in 2021 discovered four water service leaks on the customer side of the curb stop. To date three of the customers have had the service repaired/ replaced and the Company is working with the fourth customer to get their service repaired. 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.

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Respectively Submitted,

THE JEWETT CITY WATER COMPANY

Robert Sherwood
Executive Vice President

Jewett City Water Company
Main/ Service Leaks 2021

Docket 20-10-31
Order # 3

REPAIR DATE	SYSTEM	LOCATION	TYPE OF REPAIR	DESCRIPTION OF REPAIRS	Estimated Water Loss 1000/gals
REPAIR DATE	SYSTEM	LOCATION	TYPE OF REPAIR	DESCRIPTION OF REPAIRS	
1/30/2021	Main	24 MAPLE ST	MAIN	STRESS CRACK, 6 INCH AC MAIN	500
2/4/2021	Main	23 PULASKI ST	SERVICE	LEAK @ CORP	200
3/22/2021	S & W	73 EDMOND RD	SERVICE	Leak is on customer side. Send Letter to Repair,Customer made arrangement for repairs	648
3/31/2021	Main	26 HAWKINS ST	MAIN	FND 2" STEEL MAIN LEAKING.	300
4/16/2021	S & W	27 BONNIE ST	SERVICE	Leak is on customer side. Send Letter to Repair,Customer made arrangement for repairs	648
5/19/2021	S & W	8 LISA ST	SERVICE	Leak is on customer side. Send Letter to Repair,Customer made arrangement for repairs	648
	S & W	8 LEHA ST	SERVICE	Leak is on customer side. Send Letter to Repair,Customer has not made arrangement for repairs to date	648

Jewett City Water Company
Non Revenue Water

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February	7,903	6,124		14,027
March	8,865	6,837		15,702
April	9,561	6,186		15,747
May	10,985	6,335		17,320
June	10,838	6,922		17,760
July	9,021	5,827		14,848
August	8,903	6,128		15,031
September	8,100	6,056		14,156
October	8,401	6,371		14,772
November	8,738	5,706		14,444
December	8,309	6,137		14,446
Total PRODUCTION WATER	107,965	75,211		183,176
Total REVENUE Water (System only)				119,802
Balance as NON-REVENUE Water		(State Percentage:	34.6%	63,374
Description and estimated consumption of Non-Revenue Water				
a. Utility Usage -- at source/treatment plants				612
b. Utility Usage -- flushing hydrants (No flushed 130)				1,472
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,				
f. Fire Protection (No. of hydrant-using fires)				
g. Main Breaks (No. of breaks 2)				5,000
h. Service Line losses before meters (No. of cases 7)				43,243
I. Other Non-Revenue uses/losses (specify):				
			Total	50,327
j. Balance (unknown)				13,047
Total Non-Revenue (Unaccounted-for) Water			7.1%	13,047

Jewett City Water Company
Non Revenue Water

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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		108		108
February		88		88
March		98		98
April		144		144
May		164		164
June		176		176
July		188		188
August		167		167
September		144		144
October		207		207
November		132		132
December		178		178
Total PRODUCTION WATER	0	1,794		1,794
Total REVENUE Water (System only)				1,564
Balance as NON-REVENUE Water		(State Percentage:	12.8%)	230
Description and estimated consumption of Non-Revenue Water				
a. Utility Usage -- at source/treatment plants				4
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)				
I. Other Non-Revenue uses/losses (specify):				
			Total	4
j. Balance (unknown)				5
Total Non-Revenue (Unaccounted-for) Water			12.6%	226

Jewett City Water Company
Non Revenue Water

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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		1151		1151
February		1031		1031
March		1041		1041
April		627		627
May		597		597
June		547		547
July		554		554
August		659		659
September		550		550
October		661		661
November		681		681
December		725		725
1(a) Total PRODUCTION WATER	0	8,824		8,824
2. Total REVENUE Water (System only)				3,391
3. Balance as NON-REVENUE Water		(State Percentage:	61.6%	5,433
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 4)				2,592
I. Other Non-Revenue uses/losses (specify):				
			Total	2,592
j. Balance (unknown)				2,841
Total Non-Revenue (Unaccounted-for) Water			32.2%	2,841

Water Leak Survey Report For:
Jewett City
Water Company
Jewett City and Hill-N-Dale Systems

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

June/July 2021

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: 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 June 16, 2021 and was completed on July 16, 2021. 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, Railroad Ave under the train tracks to the old mill, 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
Hopeville Road
Stone Hill Road
River Road
Preston Road
Voluntown Road
Slater Ave

Dates in System

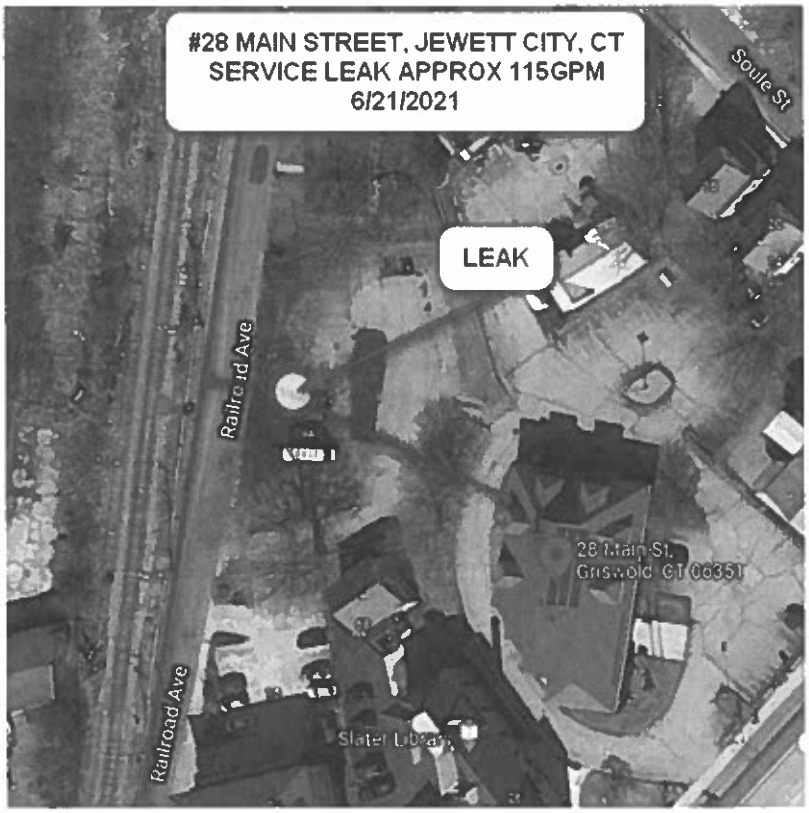
DATES WORKED	JOB TYPE	DETAILS
6/16/2021	START SURVEY	STARTED SYSTEM SURVEY
6/21/2021	SURVEY	SURVEY/PINPOINT
6/24/2021	SURVEY	SURVEY
6/25/2021	EARLY MORNING	SURVEY/CORRELATING
6/28/2021	EARLY MORNING	SURVEY/CORRELATING
6/29/2021	DIG	#28 MAIN ST TOWN HALL SERVICE
6/30/2021	EARLY MORNING	SURVEY/CORRELATING/PINPOINT
7/7/2021	DIG	#181 MAIN ST SERVICE
7/13/2021	SURVEY	SURVEY/CORRELATING/PINPOINT
7/16/2021	SURVEY COMPLETE	HILL AND DALE SURVEY/CORRELATING/PINPOINT

Leaks Located

Four Service Leaks, and 2 hydrant leaks were uncovered during this survey. An estimated total of 195 gallons per minute (GPM) loss, was due to these leaks. If left undetected, these leaks could add up to 280,800 gallons per day, 1,965,600 gallons per week, and a total of 102,211,200 gallons per year.

Jewett City Water Company Leak List					
#	DATE	TYPE OF LEAK	ADDRESS	LOCATION DETAILS	ESTIMATED GPM
1	6/21/2021	HYDRANT	#57 SOUTH MAIN ST	HYDRANT LEAK	8
2	6/21/2021	SERVICE	#28 MAIN ST	TAPPED OFF RAILROAD AVE	115
3	6/25/2021	HYDRANT	178 NORTH MAIN ST	HYDRANT LEAK	2
4	6/30/2021	SERVICE	181/183 NORTH MAIN ST	SERVICE LEAK	30
5	7/13/2021	SERVICE	#62 MONROE AVE	SERVICE LEAK	20
6	7/16/2021	SERVICE	#77 ASHLAND ST	SERVICE LEAK	20
	TOTAL ESTIMATED GALLONS PER MINUTE LOSS				195

Aerial Reports



Grouf'sWater
LEAK SERVICES


#181 NORTH MAIN STREET, JEWETT CITY, CT
SERVICE LEAK APPROX 30GPM
6/30/2021
LEAK
12
Belvedere Ave
N Main St
181 N Main St
Griswold, CT 06351
12


#62 MONROE AVE, JEWETT CITY, CT
SERVICE LEAK APPROX 20GPM
7/13/2021
LEAK
December Dr
Monroe Av



Conclusion

Smaller Water Systems like Jewett City Water Company, benefit immensely from Leak Detection programs. In this survey six 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 water being pumped into the system.

Number of Leaks located:

0 Main BreakS – **0 GPM**

4 Service Leaks - approximately leaking a total of **185 GPM**

2 Hydrant Leaks - approximately leaking a total of **10 GPM**

0 Valve Leaks – **0 GPM**

Approximate system total gallons per minute loss: **195 GPM**

Approximate system yearly loss: **102,211,200 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 town, 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. Only 2 leaking hydrants were found in this water system, which tells me the crew does an astounding job flushing and maintaining their water system.