



**301 Broad Street
Fitchburg, MA 01420
Phone: 978-829-1900**

DPW Weekly Update February 24 – March 1, 2020

Dear Mayor, Councilors, and Colleagues;

As part of the consent decree between DEP/EPA and the City, the Wastewater Division is required to file a series of reports by the end of February. Deputy Commissioner of Wastewater Jeff Murawski with support from sewer systems and treatment plant managers prepared and filed the following reports last week:

- SSO and Dry-weather CSO Compliance Report (February 2019 – January 2020)
 - 11 reported sanitary sewer overflows (SSO) in reporting period, mostly caused by blockages of sewer lines – crews cleaned blockages and restored flow.
 - 2 reported dry weather combined sewer overflows in reporting period, caused by blockages of sewer lines – crews cleaned blockages and restored flow.
 - There were additional backups on private property that were the responsibility of the property owners.
- CSOs Monitoring and Overflow Report (February 2019 – January 2020)
 - The city currently has 11 CSO regulator sites, all of which are monitored.
 - There were 145 overflow events resulting in 16,066,944 gallons of combined sewage/stormwater being released into the N. Nashua River and its tributaries.
- Semi-annual Progress Report (August 2019 – January 2020)
 - This report outlines all of the asset management, operations and maintenance being conducted to both the sewer collections and treatment systems.
 - This year construction work will focus on closing/separating CSOs 39, 48 and 7 which accounted for 3.6 million gallons of combined overflow (22% of total).

In addition to the consent decree required reporting, Sanitary Engineering Aide John Beauchemin Sr. helped prepare and submit the Industrial Pre-treatment Program (IPP) Annual Report for calendar year 2019. There are eight Significant Industrial Users (SIUs) that send process water to the City's treatment facility and these flows must be monitored and managed to prevent contamination of the environment.

Please feel free to contact Deputy Commissioner Murawski with any questions regarding the city's continued efforts to protect the environment and meet regulatory mandates.

Sincerely,

Nicolas H. Bosonetto, PE
Commissioner of Public Works/City Engineer

CONSTITUENT SERVICES

DPW continued to respond to service requests in a timely manner through the [SeeClickFix](#) program. In the past two weeks DPW received 14 new requests and closed 29 requests. The total outstanding requests backlog is now 151, a decrease of 15 from the previous reporting period. We will continue to work on the backlog request in preparation for the spring season.

Reporting Period 2/17/20 - 3/1/20		Previous Period	Change
Previous Request Backlog	166		
New Requests	14	28	-14
Completed Requests	29	28	1
Total Request Backlog	151	166	-15
Potholes	25	33	-8
Storm Drains	48	47	1
Tree & Brush Pruning	14	16	-2
Traffic, Signals, Signs	6	6	0
Berm Repairs	6	7	-1
All other categories	52	57	-5
New Requests	14	28	-14
Acknowledged	6	3	3
Completed & Closed	3	6	-3
Open	11	22	-11

ROADWAYS

Snow Operations

	Saturday 2/22	Sunday 2/23	Monday 2/24	Tuesday 2/25	Wednesday 2/26	Thursday 2/27	Friday 2/28
Rain (in)	0.0	0.0	0.0	0.0	0.98	0.03	0.0
Snow (in)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hi/Lo Temp (F)	23/41	30/48	28/59	39/52	37/46	25/46	21/32

Sources:

<https://www.cocorahs.org/ViewData/ListDailyPrecipReports.aspx> (STA MA-WR-22)

<https://www.timeanddate.com/weather/@4936825/historic>

- Spot salting and sanding during temperature drop after rain events.
- Sand was hauled from Airport Pit to DPW yard.
- Additional salt was ordered and delivered into the salt shed.
- Trucks and plows continued to be maintained and fixed.

Traffic Signs & Signals

Placed stop ahead sign on Clarendon Street at Franklin Road per FPD request.

Stormwater

DPW Streets continued cleaning out swales and culverts on Ashby West, McIntire, Alpine Road and Ashburnham Street.

Cleaned out drainage swale at Coggshall Park.

Crews repaired old stone culvert on the dead-end side of Sheldon Road after complaints received during Ward 3 meeting from residents.

Potholes

Pothole patching efforts continued during the week using cold-patch and the hot box at various locations, including the following:

- Boylston Street,
- Canton Street,
- Day Street,
- Fairmount Street,
- Frankfort Street,
- Franklin Road,
- Garnet Street,
- Goodwin Street,
- Green Street,
- Industrial Road,
- Madison Street,
- Oak Hill Road,
- Pearl Street,
- Pleasant Street,
- Pratt Road,
- Prichard Street,
- Reingold Ave,
- River Street
- Rollstone Road,
- Sheldon Road,
- Snow Street
- Stickney Road,
- Stonybrook Road,
- Vernon Court,
- Williams Road.

CEMETERIES

In addition to routine maintenance and administration tasks, the following were completed:

Full Interments	0
Inurnments.....	1
Up righted monuments.....	0
Uncovered/cleaned flat monuments	0
Foundation marking for monuments.....	0
Catch basin repair	0
Trimmed Trees	0
Trimmed shrubs.....	0
Meeting with Families.....	2
Payments - invoiced/processed.....	3
Family Genealogy	0

ENGINEERING

- Held a public listening session for the City's Municipal Vulnerability Preparedness (MVP) Planning Grant at the Senior Center from 6:30 pm to 7:30 pm on Tuesday February 25th. The ideas for resiliency discussed at this meeting will be incorporated into the final summary report which is submitted for review and approval to the Massachusetts Executive Office of Energy and Environmental Affairs (EOEEA), who oversee the grant program.
- Continued to provide ongoing assistance to MassIT Field Technician with E-911 address assignments and address confirmations for the state-wide emergency database.
- Attended the Public Works Committee meeting to present the results of the Alternatives Analysis for McTaggart's Pond Dam. The recently completed study will help the City to determine the best path forward for the dam. Alternatives that were evaluated in the study include dam rehabilitation, dam size reduction, and dam removal. Various considerations for each alternative included cost, ecological value, recreational value, and aesthetic value, among other factors.
- Attended the Central Massachusetts Stormwater Coalition Steering Committee Meeting. Fitchburg is an active member of this organization, which aims to assist Massachusetts communities with the burdens of Municipal Separate Storm Sewer System (MS4) permit requirements from the US Environmental Protection Agency (EPA).
- Met with the Fire Department and a group of volunteers that call themselves Team Rubicon to discuss ways they may be able to help map out the City's fire hydrants.
- Met with representatives from MassDOT District 3 to discuss outstanding issues on Lunenburg Street, including combination manhole separation, paving, and intersection reconfiguration to provide a dedicated right turn lane from John Fitch Highway northbound to Lunenburg Street eastbound.
- Responded to questions from prospective bidders on the Water Department's Supervisory Control and Data Acquisition (SCADA) System upgrade project. A feasibility study for the project has already been completed by Arcadis. The current solicitation is for the design and construction administration phase of the project.

Road Construction

- Met with the City's paving contractor, PJ Albert, to review the Proposed Spring paving list for 2020, discuss logistics, and solicit input/feedback.
- DPW Engineering took measurements of pavement at 50' intervals and recorded casting counts and locations/extents on Berkley St., Lenox St., Garfield St., and Richmond St. for estimating purposes. Prepared estimates for each using these measurements.

- Valley St Extension project is ready for road construction. This project consists of 3 new homes being built as well as 250+ feet of new roadway added to the end of Valley St. at the cost of the developer. All utilities have been installed and stubbed off at property line.



Figure 1 - Valley St. Extension project

Planning Reviews

- DPW Engineering approved remaining bond items for the Valley St. Extension project

GIS/Asset Management

- CAI Tech is now hosting the latest Tax Parcel data on axisgis.com/fitchburgma/
- Obtained StreetScan deliverables. Incorporated PCI scores into our Asset Management database.
- DPW Engineering used ArcMap/GIS to create a 2020 Fitchburg PCI Map for presentation to city councilors.
- DPW Engineering held a web conference with the StreetScan Team to discuss deliverables and review results, expectations etc.

Permits & Inspections

- Issued dumpster permit for 655 Main St., to be placed on Grove St.
- Conducted inspection of and recorded water levels in 5 ground monitoring wells at Forest Hill Cemetery. Monitoring wells are located behind the Columbarium section where DPW has installed subsurface drains in an attempt to lower groundwater elevations to accommodate more graves in this portion of the cemetery.

Streetlights

- Closed out SeeClickFix ticket for 47 E Prospect St. to investigate reports of a light outage Y4. This light was fixed by the City's street light contractor.
- Closed out SeeClickFix ticket for 38 Snow St. to investigate reports of a light outage Y4. This was determined to be a privately owned light for a parking lot.

Miscellaneous

- Assisted New England Engineering Group with street layouts for a surveying project on Ashburnham St.
- Made a deposit of \$5,825.00 (\$4,000 for sewer connection fees and \$1,825 for trench and excavation permit fees).

Engineering Services			
	Type	Number	Fees
PERMITS	Dumpster Permits	1	\$0
	Trench Permits	0	\$0
	Excavation Permits	0	\$0
	Driveway Permits	0	n/a
	Sign Permits	0	n/a
	Sewer Permits	0	\$0
INSPECTIONS	Driveway Inspections	0	n/a
	Trench Inspections	0	n/a
	Site Inspections	1	n/a
	Dig-Safe requests	3	n/a
	Sewer/Drain Inspections	0	n/a
	Street Light Inspection	2	n/a
Totals			\$0

WATER SUPPLY

The Water Supply Division produced 28.9 million gallons of drinking water this past week. No transfer of water between reservoirs is taking place. Reservoirs continued to be inspected and patrolled.

Wyman Pond gate was opened to 9 inches to compensate for the rainfall/snowmelt that occurred this week, increasing inflow to the reservoir. The Reservoir Caretaker is monitoring the level on a daily basis and opening/closing the discharge gate as needed to maintain the seasonal, 2-foot drawdown for the winter months.

Water Treatment

Reservoir Levels as of 2/27/20			
Northern Reservoirs	Elevation below spillway		Southern Reservoirs
Fitchburg/Ashby	Full	-0.64 feet	Meetinghouse
Scott	Full	Full	Mare Meadow
Lovell	Full	Full	Bickford
Water Filtration Plant Flows/Production from 2/21/20 through 2/27/20			
	Falulah Plant	Regional Plant	Totals
Raw Water Inlet (Gal)	6,300,000	26,714,000	33,014,000
Backwash to waste (Gal)	1,056,000	3,049,000	4,105,000
Finish Water - Treated & Distributed (Gal)	5,244,000	23,665,000	28,909,000
Capacity	(6 MGD) 15%	(12 MGD) 32%	(18 MGD) 26%
Efficiency	83%	89%	88%

- Adjusted pressure at the Narrows Road PRV station in order to mitigate issues resulting from low flows (the PRV valve was "cavitating").
- MPC corrected pressure problems with eye wash stations at the Regional Plant.
- Installed a new CL17 chlorine analyzer for the clearwell at the Regional Plant after the existing unit failed (it was original to the plant). A spare analyzer was in stock (another spare will be ordered).
- Laviolette Controls calibrated DP (differential pressure cells) at various locations, including the Falulah Plant, Scott Pump Station, Scott Tank, Overlook Tank, and Marshall PRV. This was completed as part the calibration of all master meters annually.

Water Distribution

- Wyman Pond level was checked throughout the week. Gate is opened to 9 inches.
- Went to the MA RMV and to obtain replacement license plates for W-9 (Ford 550), one plate was unreadable so it would not pass state inspection.
- FWD crews located and cleaned out curb stop boxes throughout the week to prepare for possible service line shut downs for meter replacements. Service lines that have been determined to be, or potentially be, iron pipe are likely to require shut downs.

- Completed shut downs of water service lines throughout the week to allow the meter replacement contractor to replace meters which had iron services and/or wheel valves that the contractor determined might fail if operated.
- During the course of the week, FWD crews checked/maintained all water trenches repaired with cold patch (final restoration will be completed in the spring when the weather improves and local asphalt plants reopen).
- FWD crews excavated and repaired/replaced a curb stop at 16 Mathews Street.
- FWD crews removed/replaced rusted out nuts and bolts on the hydrant at Williams Street and Walton Street.
- FWD crews excavated and installed a curb box extension at 75 Hollywood Street.
- FWD personnel excavated and repaired/replaced a curb box at 210 Madison Street.
- FWD personnel shut off a hydrant that was hit by a vehicle at 391 Clarendon Street, hydrant was placed out-of-service and is scheduled to be repaired.
- Investigated a leak on the water service at 31 Martel Street, leak is on the service line in the basement. Home owner was given a contractors list.
- Completed several shut-offs at vacant buildings in which water lines/plumbing had frozen and were discovered leaking by owners, etc.
- Continued checking for frozen hydrants and wintering hydrants as needed throughout the course of the week.
- FWD personnel assisted all week in the meter department covering a vacant position.
- FWD personnel picked up cold patch from Keating's.
- Completed weekly inspections and maintenance/cleaning of Water Division vehicles and equipment.
- Completed housekeeping duties at 1200 Rindge Road.

Fire Hydrants

Total Hydrants	Out of Operation	Hydrants Replaced	Hydrants Repaired	Painted	Flushed	Winterized
1,632	3	0	1	0	0	73

Administration and Meters/Billing

- Total of 11 real estate closings – final readings completed along with preparation of final bills for attorneys/realtors. Future real estate closing final readings also scheduled.
- 41 invoices totaling \$42,611.78 were processed for FY20 warrant WG20036.
- 4 purchase requisitions and 4 change order entered into Munis for approval by Purchasing.
- Bi-monthly payroll was generated for week ending 3/6/20. Total payroll for the two week period was \$54,454.77, including \$4,886.31 in overtime.
- Scheduled backflow tests. Made changes to backflow database with new owner information. Personnel continued conducting monthly backflow device testing.
- Changed 239 meters in Munis to Neptune. This is time intensive as well as being time sensitive.
- Met with Ti-Sales to review process of reading Neptune meters that were not picked up by gateways (MIUs were temporarily installed inside buildings). Other FWD personnel were updated on procedures so that they may fulfill some of the duties of the Head Water Meter Reader, who recently resigned.

- Loaded 7553 Badger meter accounts onto the mobile reading laptops for monthly billing. There is a new glitch with Badger. Though 7553 meters were loaded from Munis to Read Center, 8159 accounts went from Read Center into the laptops. Attempted to troubleshoot problem but was unsuccessful. This adds 606 accounts onto the missed reading reports that have already been changed to Neptune meters. This is adding more work to wade thru the accounts that are actual missed Badger readings.
- Attended weekly implementation meeting for WaterSmart software to review progress and develop tasks going forward.
- Attended monthly progress meeting for the water meter upgrade project.
- FWD personnel read water meters city-wide for monthly water/sewer billing.
- The four backflow preventer test kits where brought to King-Gage Engineering in Mendon to have annual calibration completed per MA DEP regulations.
- Investigated a high bill complaint at 985 Franklin Road, customer stated the bill went up after a new water meter was installed. After checking everything, an issue was found with the bathtub faucet causing an intermittent leak.
- Received delivery of two pallets (240 meters) from Ti-Sales this week.

In addition to routine maintenance and administrative tasks, the following services were completed by Water Division staff:

Water Permits and Inspections	
Type	Number
Emergency DigSafe Mark-outs	5
DigSafe Mark-outs	8
Inspections of Work on Water System	3
Record Plan Updates	10
Review Special Permit Applications	4
New Water Service Applications	0
View Permits reviewed	0
Curb Stops Turned off/on	20
Located/cleaned gate/curb boxes	31
Final Readings/Real Estate Closings	9
New Meter Installations	15
Backflow Preventers Tested	8
Cross Connection Surveys	0
Residential Appointments Made	2
Totals	115

WASTE WATER

The WWTF processed 65.45 million gallons of sewage. In total, 46.8 tons of organics and 61.3 tons of solids were removed and prevented from entering the Nashua River.

<u>Week of 2/16/2020 – 2/22/2020</u>		
Sewage Flow	65.45	Million Gallons
Rainfall	0.38	Inches
Secondary Bypass	0.00	Million Gallons
BOD _{in} (lbs)	96,160	Pounds
BOD _{out} (lbs)	2,564	Pounds
BOD Removal (%)	97.22%	
TSS _{in} (lbs)	126,693	Pounds
TSS _{out} (lbs)	4,107	Pounds
TSS Removal (%)	96.62%	

- “Rain Barrels Program – 2020” received buy-in from program partner departments (DPW - Wastewater; DPW – Engineering Division; and Fitchburg Conservation Commission). Program will go to “press release” during the week of March 2nd – March 6th.
- Presented Water/Wastewater Commission support letter for Fitchburg/Westminster IMA extension (Order No. 005-20) to Council’s City Property Committee.
- Submitted three (3) Consent Decree deliverable reports:
 - I. “Semi-Annual Report, for Period of August 1, 2019 – January 31, 2020” (Remedial Measures Updates);
 - II. “2019 CSOs Monitoring & Overflows Report”; and
 - III. “SSOs and Dry-Weather CSOs Compliance Report”) to MassDEP and USEPA on February 28th.
- Submitted “2019 Industrial Pretreatment Program Annual Report” to USEPA and to MassDEP.
- Provided preliminary support to Fitchburg H.S.’s “Massachusetts Envirothon Team”, for their 2020 Competition (2020 Current Issue: “Sustainable Safe Water Supply”).
- Met with representatives of MassDOT’s Region 3 Office, concerning paving Lunenburg Street (Route 2A) and the separation of six (6) combination manholes in the Lunenburg Street area between Boutelle Street and John Fitch Highway.

Sewer System

- Completed combination manhole checks in the City. Checks were done just as a routine inspection/observance, since we haven’t received a large rain event in some time that would trigger a NPDES Permit required check. In 12 of the City’s 178 remaining CMHs, “tell-tale” blocks were activated, suggesting a flow transference.
- Thirty (30) manhole were inspected in the Lower Cleghorn area. As is typical, no major issues were discovered.

- Weekly pump station checks were performed: no significant issues were observed.
- Two employees went to “Competent Person Trench Safety Training”.
- Vactor was diagnosed by crew, mechanics, and outside vendor, who determined a wiring harness issue. Towed to a mechanic on Friday for service.
- The annual “Sanitary Sewer Overflow and Dry-Weather Combined Sewer Overflows Report” was completed and submitted, which includes a comprehensive table of every single sewer issue call the City receives during the year.

ADMINISTRATION

- Winter operations:
 - Processed the invoices for payment that were turned in by plow contractors.
 - Corresponded with insurance agents to secure certificates of insurance for plow contractors who have expired or expiring insurance policies.
- Financial:
 - Finalized an electricity analysis for the water division and discussed findings with Deputy Commissioner of Water Supply.
 - Submitted Chapter 90 reimbursement request to MassDOT for the Cracksealing project. Reimbursement request totals \$72,808.
 - Received a request from internal auditors for backup documentation for water department land purchases in FY19. Located contract documents and submitted to Melanson Heath for review.
 - Submitted a request to the Mayor’s office and City Council to accept the MassDOT Safe Routes to School Signs & Lines Grant not to exceed \$6,000 for work in the area of Reingold Elementary School.
 - Submitted a request to the Mayor’s office and City Council for funds to repair the existing wall on Arbor Way.
 - Calculated the contractual retro pay for all FAMASS members for input in the April payroll.
 - Reviewed all DPW Department accounts for accuracy and monitored budgets.
 - All DPW divisions processed the bi-weekly payrolls.

Invoicing, Warrants, and Payrolls

	Invoices		Deposits		Billings	Payroll
<u>Division</u>	<u>Number</u>	<u>Total \$</u>	<u>Number</u>	<u>Total \$</u>		
Streets/Admin/Engineering	43	\$ 22,244	*Note 1			\$ 73,488
Cemeteries	9	\$ 3,163				\$ 10,130
Parks						\$ 6,496
Recreation	15	\$ 1,564				\$ 3,131
Water Supply	35	\$ 27,840				\$ 54,455
Waste Water	34	\$ 58,032	*Note 2	\$ 15,030		\$ 76,743
			*Note 3			
Total	136	\$ 112,844		\$ 15,030	\$ -	\$224,443
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*1 - Engineering Permits & Performance Bonds						
*2 - Septage at East Plant (Gallons)						
*3 - Industrial Billing Payments						
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