

City of  
**Fitchburg**



Department of  
**Public Works**

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

DPW Weekly Update October 28 – November 3, 2019

Dear Mayor, Councilors, and Colleagues:

As many of you know, last week was a difficult one for our DPW family, as we dealt with the tragic loss of Christopher DeSimone. Chris was the dispatcher at DPW, and even if you had never met him in person it is likely you spoke to him on the telephone. Chris was a pleasant, kind and friendly person that many of us will miss.

DPW would like to thank everyone at the city for their outpouring of support, condolences, and understanding during this tough period. We would specially like to thank Mayor DiNatale for making resources available to the staff during this time. The new Employee Assistance Program (EAP) that Susan Davis was able to rapidly implement was tremendously beneficial by providing counseling services via telephone and in-person at our offices. These services were very well used by the staff to help us through the grieving process.

Even during this difficult period, the DPW staff continued to perform admirably by responding to Friday's wind storm damage and by conducting their daily activities and projects that sustain our city.

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 53 new requests and completed 79 requests. The total outstanding requests backlog is now 307, a decrease of 26 from the previous reporting period. A majority of outstanding requests are for potholes, storm drains, and tree/brush trimming.

<u>Reporting Period</u> 10/21/19 - 11/03/19		<u>Previous Period</u>	<u>Change</u>
<b>Previous Request Backlog</b>	<b>333</b>		
New Requests	53	49	4
Completed Requests	79	28	+51
<b>Total Request Backlog</b>	<b>307</b>	333	-26
Potholes	61	84	-23
Storm Drains	80	77	3
Tree & Brush Pruning	55	56	-1
Traffic, Signals, Signs	14	18	-4
Berm Repairs	14	14	0
All other categories	83	84	-1
New Requests	53	49	4
Acknowledged	17	29	-12
Completed & Closed	7	6	1
Open	46	43	3

## ROADWAYS

### Potholes

Pothole patching efforts continued this week with approximately 360 potholes<sup>1</sup> filled at various locations, including the following:

- Oak Hill Road,
- Pearl Hill Road,
- Crocker Terrace,
- Northman Passway,
- Ross Street,
- Nutting Street,
- Allston Place,
- Pleasant Street,
- Perkins Street,
- Overlook Street,
- Scott Road.

DPW Streets Division received delivery of a brand new 2020 Freightliner Hot-Mix truck. The \$114,101 vehicle has a heated dump body that uses the exhaust to keep asphalt mix hot during transport from the plant to the work site. The old hot-mix truck will be repurposed for other uses.

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<sup>1</sup> Based on average pothole size of 3.5 inches depth and 1.5 foot wide by 1.5 foot long (volume of 0.66 cubic feet or 0.02 cubic yards)



Figure 1 - New Hot Mix Truck

### Storm Response

On Friday November 1<sup>st</sup> DPW responded to a heavy wind storm event. Starting at midnight a three-man crew worked until 7:00 AM clearing trees from roadways. From 7:00 AM to 5:00 PM two additional three-man crews were deployed to continue to clear the trees and limbs falling due to the heavy winds. Each crew had two chain saws, a loader and dump truck. Some of the streets impacted included Oak Hill Road, Goodwin Street, Pearl Hill Road and Williams Road. In addition to the wind, the rainfall also created issues and additional crews were deployed to check culverts and clean catch basins.

### Snow & Ice

Completed sand-making operations at the Airport Pit. The rented screening plant was picked up on Monday. Continued to prepare for upcoming winter season by repairing and inspecting trucks, plows and sanders.

### PARKS & RECREATION

Recreation Department has solidified 7 of 9 planned Concerts on the Common performers for 2020 season. Recreation Department is scheduling next summer's Annual Friends of Cogshall Sunday Concert Series for June 21, July 12, and August 9, 2020.

The Halloween maze was cleaned up and disassembly was completed on October 28, 2019.

Hosted Bidy League Registration night on October 30, 2019. Next registration night is Thursday, November 7, 2019 from 4:30 to 5:30 PM at Landry Arena. Bidy League Registration is available online at [www.fitchburgma.gov/activities](http://www.fitchburgma.gov/activities). For more information visit [www.fitchburgma.gov/bidyleague](http://www.fitchburgma.gov/bidyleague).

The Fitchburg Recreation Department is pleased to announce the 2019-2020 Walking and Jogging Club registration is now available. The Walking and Jogging Club is a partnership between the City of Fitchburg and Fitchburg State University which allows local residents to escape the cold and wet winter months and walk inside at the Fitchburg State University Recreation Center's jogging track.

Fitchburg State welcomes Fitchburg residents of all ages to walk or jog on the 1/11th of a mile track, which is suspended above the gymnasium on the second floor. Minors must be accompanied by an adult. Starting on October 1, 2019, the program is open Mondays through Fridays from 6:00 AM to 12:00 PM, Saturdays from 10:00 AM to 3:00 PM and Sundays from 3:00 PM to 10:00 PM. The walking club ends on April 1, 2020. Registration is required and is now available in the City of Fitchburg Recreation Department.

Met with IT Director to discuss next steps on Website Refresh. Began reviewing content and photos on DPW Webpages including Parks and Recreation.

Repaired fence on Nikitas Field.

Completed installation of backstop at Goodrich Park.

### CEMETERIES

The cemetery crews continued to maintain the grounds by mowing, trimming, cleaning graves and monuments, picking up litter and painting.

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

Interments .....	2
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.....	4
Payments - invoiced/processed.....	12
Family Genealogy .....	2

DPW Engineering continued to work with Cemetery Division on GIS/GPS mapping of Forest Hill Cemetery ahead of purchase and implementation of a cemetery management software.

## STORM WATER

### Rainfall Amounts

Mon 28	Tues 29	Wed 30	Thur 31	Fri 1	Sat 2	Sun 3
1.26"	0.05"	0.08"	0.23"	0.61"	0.00"	0.00"

Courtesy: [https://www.cocorahs.org\\_station\\_MA-WR-22](https://www.cocorahs.org_station_MA-WR-22)

DPW Engineering prepared for and hosted the first Core Team meeting for the City's Municipal Vulnerability Preparedness (MVP) Planning Grant at the Water Department's Falulah Water Treatment Facility Training Room on Friday. The Core Team is comprised of representatives from many of the City's Departments, boards, and local stakeholders. The Core Team's role in the grant process is to:

- o convene to establish the goals for the project;
- o provide data and local expertise on the assets and vulnerabilities;
- o participate in the stakeholder workshop; and
- o finalize priority actions for the final report.



Figure 2 - Completed Drainage

Completed installation of new drain line on Westminster Street just north of Warner Street to alleviate flooding caused by the collapsed culvert. The drain system upgrade was completed from the manhole near Warner Street to the outfall.

The drainage system from Westminster Street up Warner Avenue is being upgraded by Tandem Construction as part of a private sewer line extension. DPW Engineering has discussed the sewer line extension project they will be undertaking over the next several weeks to bring sewer service to house #24. The proposed sewer alignment will interfere with the existing drain basins located near the bottom of the hill. Tandem agreed to install a new precast concrete deep sump catch basin in this location, to replace the existing shallow-sump brick basins that are in poor condition. DPW will reimburse Tandem for the cost of the structure.

Backed filled berms at 273 Theresa Street, 15 Warren Street, Fifth Mass Pike, Cathy Street, Vine Street and Boylston Street.

## Dams

DPW Engineering performed a site visit to the Upper Sawmill Pond Dam located just off Old Princeton Road. The City recently received communication from the Office of Dam Safety (ODS) that the City took ownership of this dam in 2011 due to non-payment of taxes. This dam is an intermediate size, significant hazard classification dam. It is approximately 16 feet tall and appears to be of stone masonry construction.

### WATER SUPPLY

The Water Supply Division produced 28.2 million gallons of drinking water this past week. The Bickford pump station is transferring 4 million gallons per day (MGD) from Bickford Reservoir to Mare Meadow. Reservoirs continued to be inspected and patrolled. Wyman Pond is beginning a seasonal 2-foot drawdown period for the purpose of controlling noxious weeds.

#### Water Treatment

Reservoir Levels as of 10/31/19			
Northern Reservoirs	Elevation below spillway		Southern Reservoirs
Fitchburg/ Ashby	-2.20 feet	-0.62 feet	Meetinghouse
Scott	-2.72 feet	-2.50 feet	Mare Meadow
Lovell	-0.18 feet	-1.12 feet	Bickford
Water Filtration Plant Flows/Production from 10/25/19 through 10/31/19			
	Falulah Plant	Regional Plant	Totals
Raw Water Inlet (Gal)	7,613,000	24,162,000	31,775,000
Backwash to waste (Gal)	863,000	2,697,000	3,560,000
Finish Water - Treated & Distributed (Gal)	6,750,000	21,465,000	28,215,000
Capacity	(6 MGD) 16%	(12 MGD) 26%	(18 MGD) 23%
Efficiency	89%	89%	89%

#### Fire Hydrants

Total Hydrants	Out of Operation	Hydrants Replaced	Hydrants Repaired	Painted	Flushed	Winterized
1,632	3	0	1	0	0	56

- 10/25 at 11:25 p.m. - Airport Road at Melrose Street, hydrant hit, have vehicle information
- 10/31 at 8:30 p.m. - 143 Wanoosnoc Road, hydrant hit, no vehicle information (hit and run)
- FWD personnel continued winterizing hydrants on the Oak Hill System.

- On Monday, FWD personnel reset the cement bollards that are protecting a hydrant in front of the bus company on Airport Road; these had been hit and displaced by a car.
- On Monday, FWD personnel excavated (by hand) to the tap for temporary water on Cushing Street, shut off tap, and removed temporary hose that was connected to the fire hydrant at Riverfront Park (will be reinstalled in spring)

### Water Distribution

- On Tuesday, Minuteman Truck delivered the Water Division's new utility truck. It is a 2020 International with enclosed utility body that will serve crews well, particularly when completing water system repairs during the winter months and inclement weather. On Thursday, FWD personnel transferred equipment and parts to the new utility truck. Compartments were lined with protective rubber material to protect the metal from scratching/denting. D&G lettered and installed the city seal on doors on the truck on Friday. Additional graphics will be installed on the utility body once a design is complete.



*Figure 3 - New Water Utility Truck*

- On Tuesday, FWD personnel renewed city-side of water service line to 97 Summer Street, it needed to be trenched across the road (crews were unable to pull the service line) so the trench was covered with metal, road plates for the night and personnel completed the installation of the new line on Wednesday. The trench was backfilled, compacted and paved upon completion of the work.
- Reset gate box on Mechanic Street at Main Street and paved around it.
- J R Glass replaced the back window on W-4 after it was accidentally broken.
- Monitored the contractor (Boucher Construction) installing the sewer and water services at 600 Pearl Hill Road.
- Contractor at City Hall excavated and installed a new 2-inch water service to the old bank building.

- Obtained prices and checked on availability on a Wacker Neuson Rammer (“jumping jack” compactor) for compacting trenches, the shaft at the motor failed on the current compactor and it does not make economic sense to repair due to the cost of the repair relative to the age of the compactor

### Meters and Billing

- Set up appointments for backflow testing. Left door tags on properties as necessary to get property owners to set up appointments for backflow testing.
- Investigated zero/repeat readings and tampers discovered during monthly billing. New Neptune meters/MIUs (meter interface units aka electronic registers) are being installed whenever access is gained to a house/building (for any purpose, not just for investigation of zero usage).
- Inspected/sealed new meter installations by private contractors and installed MIUs (plumbers installed the meters and FWD personnel inspect the installation and install the MIU).
- Completed monthly reading of all water meters city wide (two personnel, two days), also worked on collecting missed reads and Neptune reads that did not come in through gateways (MIUs have not been installed on exterior of buildings)
- Contacted UTZ Chips to let them know that the meter contractor will be contacting them to replace water meter (also obtained permission to give contractor the cell number for our contact at UTZ)
- Removed seasonal meter and backflow device from Riverfront Park, seasonal meter from Coolidge pool, and backflow device from dog park at Coolidge
- Investigated a high water bill at 93 Greenbriar Road, meter was profiled and it showed higher than normal usage from about 9/8/19 through 9/18/19, source of leak was possibly a toilet that was sticking.
- Checked the Registry of Deeds records to confirm real estate transfers and changed ownership records as appropriate in Munis. It is common to have a closing fall through and the Water Division is not notified (and we do not want to change all the information in Munis and have the former buyer get bill as many times it is not forwarded).
- Revised billing accounts with information for water meters and MIUs (meter interface units) that were replaced/installed during the course of the week. Missy and Jennifer completed tracking paperwork for new Neptune meters/MIUs that were taken from stock by employees for installations.
- Revised accounts in the cross connection/backflow testing/tracking software (customer name changes, phone numbers, etc.).
- Worked with Meter Room on resolving all zero usage reports. Called/emailed customers to set up appointments to determine why there is no usage recorded (e.g., vacant, equipment issue, etc.). New Neptune water meters/MIUs are being installed whenever FWD personnel access a respective house/building for identified metering issues.
- Checked with Building Department about accounts that were reinstated.
- Total of 14 real estate closings – final readings completed along with preparation of final bills for attorneys/realtors. Future real estate closing final readings also scheduled.

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

Water Permits and Inspections	
Type	Number
Emergency DigSafe Mark-outs	1
DigSafe Mark-outs	25
Inspections of Work on Water System	6
Record Plan Updates	5
Curb Stops Turned off/on	7
Located/cleaned gate/curb boxes	6
Final Readings/Real Estate Closings	14
New Meter Installations	4
Backflow Preventers Tested	3
Residential Appointments Made	0
<b>Totals</b>	<b>71</b>

## WASTE WATER

During the fourth week of October, the WWTF treated 43.8 million gallons of sewage with no bypasses. In total, 57.2 tons of organics and 89.3 tons of solids were removed and prevented from entering the Nashua River.

<u>Week of 10/20/2019 - 10/26/2019</u>		
Sewage Flow	43.85	Million Gallons
Rainfall	0.72	inches
Secondary Bypass	0	Million Gallons
BOD <sub>in</sub> (lbs)	117,238	pounds
BOD <sub>out</sub> (lbs)	2,828	pounds
BOD Removal (%)	97.50%	
TSS <sub>in</sub> (lbs)	184,435	pounds
TSS <sub>out</sub> (lbs)	5,883	pounds
TSS Removal (%)	96.84%	

Working with Unitil (and consultant) and Fitchburg Legal Department to secure easements for the gas service line servicing the East Wastewater Treatment Facility.

Participated in meeting with West Group LLC, regarding procurement assistance for the West Wastewater Treatment Facility repurposing (anaerobic digestion facility).

Participated in “Future Cities Challenge”, at the Boys & Girls Club of Fitchburg and Leominster.

### Sewer System

- Raised a buried manhole on the Water Street Trunk Easement and paved around it.

- Paved a sewer patch on Townsend Street after Streets Division milled the patch.
- Checked CSO Blocks three times due to rain events.
- Two Weekly Pump Station Checks: no issues were observed.
- Used the CCTV Van to locate and raised a buried manhole in easement at #110 Depot Street.
- Raised a buried manhole at #81 Bond Street.
- Cut brush around Sawyer Passway Pump Station.
- Swapped a Drain Cover for a Sewer Cover on Depot Street.
- Replaced patch around manhole at Mechanic Street at Lowe Passway due to settlement.
- Paved top-course on patches on Airport Road.
- Conducted meter maintenance on 12 flow meters, including replacing desiccant and scrubbing meters sensor. Also replaced 4 batteries.
- Problem Area Checks: found one issue at Marconi Club; jetted the sewer line, and the sewer is flowing again. Will replace problematic sewer line in coming weeks.
- Picked up our Vactor in Manchester (finally repaired!).
- Put joint sealer on 10 manholes/patches.
- Met with PJ Albert regarding combination manhole separations. Will start work on Valley Street next week and Green Acres housing development. Nine (9) Combination Manholes will be separated.
- Continued work on Construction On-Call Contract. Edited site plans and finished specifications. Only project drawing details need updating now, along with an Order of Conditions from Conservation Commission.
- Placed Order for new Combination Sewer Truck manufactured by Sewer Equipment of America, Inc. (purchase price was \$491,000 - below budget for this important fleet equipment piece). Delivery is expected in June 2020.
- Reviewed sewer design plan for #160 Stickney Road sewer extension.

## ENGINEERING

Engineering prepared RFP for the Falulah Pipeline Replacement Project. DPW Engineering responded to questions received from the on-call engineering consultants (Arcadis, Tighe & Bond, Weston & Sampson) regarding the RFP that was sent out last week for the design of a replacement transmission line between the Falulah Water Treatment Facility and the Falulah water storage tanks. DPW Engineering received proposals, reviewed, and put together a comparison matrix.

DPW Engineering met with Purchasing, IT, and DPW Water to discuss the need for an owner's project manager (OPM) for the Water Division's SCADA project and its categorization as a Ch. 149 procurement project.



Figure 4 - Romano Avenue Repaving

Inspected Romano Avenue due to complaints regarding the crack sealing. Upon review, it was determined that the contractor had over-applied material creating a slippery surface on the hill between Belmont Street and Canton Street. DPW Engineering contacted the contractor and withheld payment of last invoice until problem was resolved. After meeting with contractor it was determined that the only method of resolving the safety issue would be to repave the section of roadway. DPW offered to prepare the roadway by cleaning the gutters/catch basins and using the milling machine to key into existing pavement prior to repaving. The repaving would have to be completed by the contractor.

The contractor promptly responded and agreed to repave the section of Romano Avenue on Saturday morning. The safety issue caused by the slippery material has therefore been resolved.

Engineering Services			
	Type	Number	Fees
PERMITS	Dumpster Permits		
	Trench Permits	3	\$225.00
	Excavation Permits	37	\$3,050.00
	Driveway Permits	1	
	Sign Permits		
	Sewer Permits		
INSPECTIONS	Driveway Inspections	1	n/a
	Trench Inspections	8	n/a
	Site Inspections	15	n/a
	Dig-Safe requests	1	n/a
	Sewer/Drain Inspections	8	n/a
	Street Light Inspection	8	n/a
	New Address Assignments	1	n/a
	Parcel Updates	0	n/a
	Planning Reviews	1	n/a
	<b>Totals</b>	<b>84</b>	<b>\$3,275.00</b>

**ADMINISTRATION**

- Winter operations:
  - Reviewed plow contracts received and corresponded with prospective contractors and their insurance agents.
  - We have 13 approved contractors.
  - We have 16 contractors that have submitted partial contract packages but need additional documentation to complete approval.
- Continued to work on calculating the industrial billings for FY20 Q2.
- Continued to run reports for the water department financial review.
- Worked on water department fixed assets reporting for Auditor’s office.
- Reviewed all DPW Department accounts for accuracy and monitored budgets.

<b>Invoicing, Warrants, and Payrolls</b>						
	<b>Invoices</b>		<b>Deposits</b>		<b>Billings</b>	<b>Payroll</b>
<u>Division</u>	<u>Number</u>	<u>Total \$</u>	<u>Number</u>	<u>Total \$</u>		
Streets/Admin/Engineering			*Note 1	\$ 2,775		
Cemeteries	14	\$ 5,499				
Parks						
Recreation	6	\$ 2,716				
Water Supply	21	\$ 22,150				
Waste Water	9	\$ 35,816	*Note 2	\$ 29,895		
<b>Total</b>	<b>50</b>	<b>\$ 66,182</b>		<b>\$ 32,670</b>	<b>\$ -</b>	<b>\$ -</b>
*1 - Engineering Permits & Performance Bonds		2				
*2 - Septage at East Plant (Gallons)		351,706				