

City of  
**Fitchburg**



Department of  
**Public Works**

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

DPW Weekly Update November 18 - November 24, 2019

Dear Mayor, Councilors, and Colleagues:

DPW has started planning for next year's DPW day and have scheduled the following date in coordination with the Fitchburg School Department:

SAVE THE DATE

JUNE 17<sup>th</sup> 2020

DPW DAY

We are starting the effort of coordinating the festivities early this year to assure a successful event for all the children. We have many new pieces of equipment as well as our new salt shed that we are very excited to show off.

As always, please feel free to contact us with any comments or questions.

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 33 new requests and closed 35 requests. The total outstanding requests backlog is now 255, a decrease of 2 from the previous reporting period. A majority of outstanding requests are for potholes, storm drains, and tree/brush trimming.

<u>Reporting Period</u> 11/11/19 - 11/24/19		<u>Previous Period</u>	<u>Change</u>
<b>Previous Request Backlog</b>	257		
New Requests	33	28	5
Completed Requests	35	79	-44
<b>Total Request Backlog</b>	255	257	-2
Potholes	47	52	-5
Storm Drains	59	57	2
Tree & Brush Pruning	48	46	2
Traffic, Signals, Signs	13	12	1
Berm Repairs	12	12	0
All other categories	76	78	-2
<b>New Requests</b>	33	28	5
Acknowledged	15	29	-14
Completed & Closed	10	8	2
Open	23	43	-20

Continued work on redesign of DPW webpages. Nate LaRose is leading this effort for DPW. Webpages are being redesigned to provide ease of use and depth of information for the public. Emphasis is being placed on SeeClickFix as the primary method to communicate requests to DPW divisions. Weekly reports will also be uploaded to the website for dissemination.

## ROADWAYS

### Snow & Ice

The Commissioner, Streets Superintendent and the Streets General Foreman attended winter maintenance course offered by Baystate Roads. The class focused on different winter road maintenance methods and equipment including the correct use of salt and chemicals. We learned a lot and picked up many new salting methods that we look forward to institute in Fitchburg.

Calcium Chloride (CaCl<sub>2</sub>) tanks were purchased and installed on the sanders. A total of five sanders are now outfitted with the tanks. The CaCl<sub>2</sub> is sprayed onto the salt as it exits the spreader and helps to activate the salt, prewet it so it stays on the road, and also helps deicing at lower temperatures.



Figure 1 - Calcium Chloride Tanks Installed

The DPW Mechanics continued to prepare the trucks for the winter by installing salt spreaders and fabricating/replacing the many associated parts.

#### Sidewalks

Used the stump grinder to remove two large stumps on Ward Street and paved the area.

#### Potholes

Pothole patching efforts continued this week with approximately 600 potholes<sup>1</sup> filled at various locations, including the following:

- Townsend Street,
- Central Ave Ext,
- Sunrise Ave,
- Whitmore Street,
- Klondike Ave,
- Webster Street,
- Circle Street,
- Eaton Street,
- Norwood Street,
- Parson Circle,
- Mctire Road,
- Merriam Parkway,
- Victoria Lane,
- Authority Drive;

Paved around catch basins on Martel Street, Daniels Street and Billotta Way.

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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)

## Traffic

DPW crews started construction of the Oak Hill Road/Franklin Road intersection improvements this week. The project area was cut and cleared of asphalt and the curbing for the sidewalk and ADA ramps started to be installed. Two catchbasins had to be rebuilt due to their deteriorating condition. Many thanks to the Cleghorn House of Pizza for allowing our crews to use the parking lot and for providing delicious baklava! Construction will continue over the next couple of weeks.



*Figure 2 - Oak Hill at Franklin Road Intersection*

The DPW Streets Division received its newest addition to the fleet this week. The \$55,194 trailer dump was purchased using FY2019 capital funds. The trailer will be used to haul sand, sweeping and other materials between the DPW yard, the Airport Pit and the landfill.



*Figure 3 - Dump Trailer Received*

**PARKS & RECREATION**

DPW Crews continued cleaning up and removing fences encroaching on the rail-trail project. These encroachments must be removed prior to December 1<sup>st</sup>.

Cleaned up Crocker Field for the upcoming football game.

Decorated streetlights in downtown with garland.

Removed ducks from Coggshall Park and delivered them to Hollis Hill Farm for the winter.

Continued to clean up parks and Main Street. Picked up trash on Charles Street, Nashua Street and Rindge Road.

**CEMETERIES**

Cemeteries crews continued to prepare the grounds for the winter. Flowers and veteran flags are being picked up and the leaves are being collected. The Mauseoleum and graves were cleaned to keep with specifications.

Attended Historical Commission meeting in effort to get Laurel Hill, Dean Hill, West Street, South Street, and Hartwell cemeteries on the state and national register of historical places in an effort to protect them and obtain funding for their preservation.

DPW Engineering supervised and DPW Streets crews installed and the installation of a 12” perforated drain line at the Forest Hill Cemetery. This drain line was tied into the bottom of a 3’ wide x 4’ high box culvert that runs through the cemetery to help reduce groundwater elevations in that location. If groundwater levels are successfully reduced, the area will be used for additional graves.

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

Interments .....	1
Up righted monuments.....	2
Uncovered/cleaned flat monuments .....	0
Foundation marking for monuments.....	0
Catch basin repair .....	0
Trimmed Trees .....	0
Trimmed shrubs.....	0
Meeting with Families.....	6
Payments - invoiced/processed.....	6
Family Genealogy .....	3

## STORM WATER

### Rainfall Amounts

Mon 18	Tues 19	Wed 20	Thur 21	Fri 22	Sat 23	Sun 24
0.54"	0.05"	0.07"	0.00"	0.05"	0.38"	1.11"

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

### Catch Basins/Swales

DPW Streets crews cleaned the swale along Townsend Street from Cortland Avenue up past the Fitchburg/Lunenburg line.

DPW Engineering reviewed the drainage system CCTV inspection videos for Normandy Road and Leyte Road (Green Acres) to determine areas in need of spot repairs. DPW Engineering plans to have PJ Albert perform the spot repairs while they are onsite performing combination manhole (CMH) separations for the Wastewater Division. The spot repairs are in support of work being done by the Fitchburg Housing Authority to address sewer and drain issues in the housing development.

### Flood Zones

DPW Engineering held conference call with Weston & Sampson to review documents related to the City's Municipal Vulnerability Preparedness (MVP) Planning Grant. To date, the City has held one Core Team meeting, and plans to hold its MVP Planning workshop with key City stakeholders sometime in January/February 2020.

DPW Engineering attended a meeting at the Leominster Office of Emergency Management held by the US Geological Survey (USGS) to discuss updates to the Federal Emergency Management Agency's (FEMA's) effective Flood Insurance Rate Maps (FIRMs) for the City of Fitchburg. These maps show the various flood hazard areas throughout the City. FEMA updates these maps on an as-needed basis whenever new data or improved engineering analysis methods become available. The last update to the City of Fitchburg's FIRMS was September 19, 1991.

### Dams

DPW Engineering provided the Department of Conservation & Recreation (DCR) Office of Dam Safety (ODS) with an updated Dam Registration Form for Upper Sawmill Pond Dam (MA00873). This dam is located just off of Old Princeton Road in Fitchburg, and both the pond and dam were taken over by the City due to non-payment of taxes by the prior owner.

**WATER SUPPLY**

The Water Supply Division produced 28.2 million gallons of drinking water this past week. The Bickford pump station is transferring 5 million gallons per day (MGD) from Bickford Reservoir to Mare Meadow. Reservoirs continued to be inspected and patrolled:

- Patrolled Kirby Property for ATV activity. Identified house from which ATVs had been coming from and riding on this City-owned property. Filed no trespass order with Ashby PD against the owner of the property.
- Patrolled areas around Marshall PRV Station, LaCava Pump Station, Oak Hill Tank/Pump Station, Scott Tank, Overlook Tank, Bickford Pump Station, Meetinghouse Reservoir, and Shattuck.
- Completed patrols on foot of the Scott transmission line, Oak Hill transmission line, and the “Baker Family Preserve” property on Ashby West Road.
- Picked up trash on Rindge Road and at Marshall PRV Station. Picked up TV’s dumped at Overlook and tires dumped on Ashby West Road.
- Repaired sump pump hose at the cluster house for the Oak Hill Tank.
- Verified address of individual cutting trails on Water Division property on Frog Hollow Road in Westminster. Also met with the Westminster Conservation Agent at the property (individual has also cut trails, etc. on Westminster conservation land), the Westminster Conservation Commission will send letter to the offending party and request that the person attend the next ConCom meeting to discuss.

Water Treatment

Reservoir Levels as of 11/21/19			
Northern Reservoirs	Elevation below spillway		Southern Reservoirs
Fitchburg/Ashby	-1.88 feet	-0.38 feet	Meetinghouse
Scott	-2.73 feet	-1.95 feet	Mare Meadow
Lovell	-0.63 feet	-1.75 feet	Bickford
Water Filtration Plant Flows/Production from 11/15/19 through 11/21/19			
	Falulah Plant	Regional Plant	Totals
Raw Water Inlet (Gal)	6,759,000	25,339,000	32,098,000
Backwash to waste (Gal)	789,000	3,075,000	3,864,000
Finish Water - Treated & Distributed (Gal)	5,970,000	22,264,000	28,234,000
Capacity	(6 MGD) 16%	(12 MGD) 30%	(18 MGD) 25.5%
Efficiency	88%	88%	88%

### Fire Hydrants

Total Hydrants	Out of Operation	Hydrants Replaced	Hydrants Repaired	Painted	Flushed	Winterized
1,632	3	0	1	3	1	181

- FWD personnel completed winterizing hydrants on the Scott and Low systems. Personnel began winterizing hydrants on the High System. Three personnel each day this week were assigned to winterization.

### Water Distribution

- Emergency call-ins = 1: 11/15 at 3:35 p.m. - 16 Temple Street, leak at vacant house, service shut off
- FWD personnel (11/19) assisted the service truck with getting on curbside at 1045 Oak Hill Road, it was a wheel valve that will need to be excavated and replaced (scheduled for 11/21). Gate valves were located for the shut down and residents that were to be affected by the shutdown were notified.
- FWD personnel (11/20) renewed the city-side of the water service line to 59 Holt Street. Trench was backfilled, compacted and cold patched.
- FWD personnel (11/20) excavated and reset curb stop box at 120 Pershing Street.
- FWD personnel (11/20) excavated and repaired curbside at 9 Linden Street. Trench was backfilled, compacted, and cold-patched.
- FWD personnel (11/20) shut off the water at the curbside to 39 Cliff Street per request of the FFD.
- FWD personnel (11/21) excavated and replaced a 1.5-inch wheel valve to 1045 Oak Hill Road with a 1.5-inch curbstop. Trench was backfilled and compacted. This work required a shutdown of a section of 12-inch water main on this street, when recharging the water main it was discovered that the hydrant in front of 995 Oak Hill Road would not shut down completely. Hydrant was taken out of service and the FFD notified.
- FWD personnel (11/22) prepped and paved the trenches at 59 Holt Street, 9 Linden Street, and 1045 Oak Hill Road.
- FWD personnel (11/22) attempted to repair the hydrant at 995 Oak Hill Road; however, it was determined that the hydrant shoe is bad and, therefore, the hydrant will need to be excavated and replaced. This work has been scheduled for 11/25.
- Distribution Superintendent went to 995 Oak Hill Road to inspect/review location of water meters and determine how another building on the property is fed water. It was determined that there is only one water meter in the main house which also feeds the other building on the property, this is connected into the water pipe after the water meter for the main building, therefore, all water use at the property is being metered.
- Distribution Superintendent responded to two emails for hydrant flow tests, advised persons that after November 1st flow tests are done depending on weather. We will look at the weather forecast after the Thanksgiving holiday and see when it can be scheduled. One was for an addition at McKay School and one for the Moran Square redevelopment project.

## 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).
- Dropped backflow data sheets off at 774 Crawford Street for new backflow devices (four total) that information is needed for. These devices will then have to be tested.
- Dropped paperwork off at DaVita Dialysis and also inspected two new backflow devices installed at this location.
- Discovered a 4-inch backflow device on a fire service at 158 Airport Road that was not in our system, collected the needed information from the device label and informed owner about the testing that is required.
- Visited UTZ chips after the owner contacted the Water Division about a 1-inch meter that the contractors did not change, it was a 2-inch meter that had been replaced with the current 1-inch meter with bushings. Baystate felt that the line should be shut off at the street when this meter is replaced. UTZ would like it completed on a Friday as it would not impact their production as much on that day of the week.
- Spoke with owner of 310 Main Street about overdue backflow test, owner stated that the OS&Y valve needs to be repaired first and that this work will be completed in January. Sprinkler company told owner that the valve should not be operated as it is already leaking and could fail if operated/closed.
- Removed the backflow devices at 140 Industrial Road from our system, the building is empty and is going to be converted to a cannabis growing facility. The Water Division will have to complete a cross connection survey at some point (as well as review plans) to determine if any backflow devices are needed with the new configuration.
- Total of 15 real estate closings – final readings completed along with preparation of final bills for attorneys/realtors. Future real estate closing final readings also scheduled.
- Processed 48 invoices totaling \$496,924.33 for FY20 warrants WG20022.
- Entered 4 purchase orders and 1 change order into Munis for approval by Purchasing.
- Payroll for w/e 11/27/19 processed and submitted. Total payroll \$74,871.22. This payroll includes \$4,138.38 in overtime and \$17,000 for the Professional Standards and Safety Stipend payment to Local 39 employees and also includes the sell back of one week of vacation time for one employee.
- Completed preliminary reports for November billing, including sending the Generate A/R reports to Courtney for calculating Wastewater's commitment.
- 11,013 water/sewer bills were generated and sent to Touchpoint for printing/ mailing. Customers began receiving bills on 11/21 (and call volume increased accordingly).

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

Water Permits and Inspections	
Type	Number
Emergency DigSafe Mark-outs	3
DigSafe Mark-outs	10
Inspections of Work on Water System	2
Record Plan Updates	7
Curb Stops Turned off/on	7
Located/cleaned gate/curb boxes	13
Final Readings/Real Estate Closings	15
New Meter Installations	10
Backflow Preventers Tested	43
Residential Appointments Made	3
<b>Totals</b>	<b>113</b>

## ENGINEERING

DPW Engineering met with Rebecca Adams of AC3, a consulting company working on behalf of developers interested in converting an existing warehouse located at 291 Westminster Street into a marijuana manufacturing facility. DPW Engineering provided her with information regarding the bridge used for access to the property and the dam located on the property.

DPW Engineering received and reviewed a memorandum from its consultant Weston & Sampson regarding an alternatives analysis and opinion of probable cost to address prematurely failing retaining walls along Arbor Way. These walls were constructed to support the roadway when it was built as part of the Montachusett Industrial Park Expansion that occurred in the late 1990's. The top two alternatives include stabilization using earthen embankments and mechanical repair. Total estimated costs for each alternative are \$545,000 and \$830,000, respectively. It is unclear how the City will fund this repair.

DPW Engineering inspected a broken streetlight conduit on the North Common across from the federal building. The conduit was either broken or disconnected during the sidewalk construction of the Complete Streets project. Community Development was contacted and asked to have their contractor fix the problem.

DPW Engineering staff attended Worcester County Highway Association meeting.

DPW Engineering continued to work with Purchasing on procurement for various projects, including the Falulah Pipeline Replacement Project, the SCADA Upgrade Project, the Narrows Road Hydroturbine Project, and the Pump Stations Roof Replacement Project. Each of these projects in in various stages of design.

Engineering Services			
	<u>Type</u>	<u>Number</u>	<u>Fees</u>
PERMITS	Dumpster Permits		
	Trench Permits	3	\$225.00
	Excavation Permits		
	Driveway Permits		
	Sign Permits		
	Sewer Permits		
INSPECTIONS	Driveway Inspections		n/a
	Trench Inspections	18	n/a
	Site Inspections	19	n/a
	Dig-Safe requests	1	n/a
	Sewer/Drain Inspections	14	n/a
	Street Light Inspection		n/a
	New Address Assignments		n/a
	Parcel Updates	1	n/a
	Planning Reviews		n/a
	<b>Totals</b>	56	\$225.00

## ADMINISTRATION

- Winter operations:
  - Reviewed plow contracts received and corresponded with prospective contractors and their insurance agents.
  - We have 31 approved contractors.
  - We have 13 contractors that have submitted partial contract packages but need additional documentation to complete approval.
  - We are still accepting contracts for plow contractors.
- Continued to work on the water department financial review.
- Finalized water department fixed assets reporting for Auditor's office. Started to compile the information for wastewater department.
- Submitted the November sewer commitment to the Treasurer's office.
- Finalized the FY20 Q2 sewer industrial billing.
- Reviewed all DPW Department accounts for accuracy and monitored budgets.
- All DPW divisions processed the bi-weekly payroll including contractual stipends.

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	39	\$ 38,404	*Note 1	\$ 1,225		\$ 85,214
Cemeteries	12	\$ 1,756				\$ 14,237
Parks						\$ 8,829
Recreation	6	\$ 1,917				\$ 3,131
Water Supply	48	\$ 496,924			\$ 486,727	\$ 74,871
Waste Water	6	\$ 16,532	*Note 2	\$ 40,330	\$ 937,545	\$ 85,841
<b>Total</b>	<b>111</b>	<b>\$ 555,533</b>		<b>\$ 41,555</b>	<b>\$ 1,424,272</b>	<b>\$272,122</b>
*1 - Engineering Permits & Performance Bonds						
*2 - Septage at East Plant (Gallons)		474,471				