

City of
Fitchburg



Department of
Public Works

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

DPW Weekly Update August 4 - August 18, 2019

Dear Mayor, Councilors, and Colleagues:

The enclosed report covers a two-week period from August 4 through August 18.

Due to numerous vacancies, planned and unplanned leaves, and long-term absences due to FMLA and Worker's Compensations, DPW is currently operating at reduced staff levels across our various divisions. For example, in the past two weeks, DPW staffing levels have been at 50% for Administration, 68% for Engineering, and 62% for the Streets Division.

In close coordination with the HR Department, eight candidates were interviewed for five open LMEO positions in the Parks, Stormwater and Streets divisions. Each candidate brought a mix of experience, work ethic and enthusiasm that will surely augment the DPW team. This week, three more candidates will be interviewed for the open Working Foreman position within the Streets division. Additional open positions will be advertised in the following week, which once filled should bring us up to full strength.

Even with these low staffing levels, DPW crews continued to respond to requests in a timely manner through the SeeClickFix program:

- New Requests (2-week) 78
- Completed 18 (23%)
- Average days to complete 3.2
- Total Request Backlog..... 336 (+8 from month ago)

As always please feel to contact us with any comments, questions, concerns or suggestions regarding the enclosed report.

Sincerely,

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

ROADWAYS

Traffic

Line striping efforts shifted towards repainting school zone markings and crosswalks around the various schools in preparation for the upcoming school year. McKay, Applewild, Longsjo Middle and FSU areas were completed.

Crosswalks at the following locations were inspected and found lacking the requisite ADA ramps, sight distances, signage/markings, and will therefore be re-engineered and re-built by DPW:

- 855 John Fitch Highway – between Coolidge Park and the apartment buildings;
- 362 John Fitch Highway – between DCU and Market Basket Plaza;
- 762 Water Street – between WPKZ and La Reyna Bakery

The intersection of Franklin Road and Oak Hill Road was reviewed for safety improvements. It was found that shrubs are encroaching on city ROW and blocking sight lines. The homeowner will be asked to have the shrubs moved from the ROW. Also, flashing LED stop signs are on order for installation at this intersection.

Crack Sealing

Pavement contractors returned this week to continue crack sealing throughout the city. By filling pavement cracks, water and debris is prevented from entering into the pavement and subbase, thereby extending the pavement life for about five to seven years. Our contractor has completed approximately 27% of the work so far and will continue to work throughout the city in the coming week.

Preventative Maintenance			
Crack Sealing			
Contractor: Superior Sealcoating, Inc			
	<u>Cost</u>	<u>Material</u> (gallons)	<u>Area Covered</u> (sq ft)
Budget	\$75,000	8,000.00	
This week	\$3,839.44	421.50	44,975
Total To Date	\$19,152.16	2,151.00	471,313
Percent Complete	26%	27%	

Micro-Surfacing

MassDOT questioned whether Skyview Drive was indeed an accepted street. After researching the subject, DPW Engineering found that the paperwork was never officially approved by City Council. The proper petition will be filed shortly to correct this omission. For the time being, Skyview Drive will be removed from the paving list.

Roadways scheduled for micro-surfacing were prepared this week by DPW crews:

- Streets Division prepared Upham Street by cold-planning six areas of the pavement that had extensive rutting and/or potholes and repaving them;
- Streets Division paved around manhole on Upham Street;
- MassDOT has received and approved the request for Chapter 90 funds.

Corrective Maintenance

Pothole patching efforts continued these past two weeks with approximately 900 potholes¹ filled at various locations, including the following:

- Beacon Street,
- Bamford Street,
- Jackson Ave,
- Alice Ave,
- Cleveland Street,
- Lunenburg Street,
- Davis Street,
- Winter Street,
- Brier Street,
- Oak Street,
- Ashburnham Street,
- Gale Street,
- Rollstone Street,
- Nichols Street,
- Otis Street,
- Senna Road,
- Hope Street,
- Rollstone Road,
- Colony Road,
- Hartland Ave,
- Westminster Hill Road,
- Ashburnham Hill Road,
- Cascade Street,
- Federal Street,
- West Street,
- Water Street,
- East Street,
- Birch Street,
- Albee Street,
- Crescent Street, and
- Hawes Street.

Driveway aprons were installed at the following locations:

- 499 Richardson road
- 570 High Rock Road

Paved sewer manholes at the following locations:

- Westminster Street,
- Airport Road,
- Ashby State Road,
- Upham Street,
- Jackson Avenue, and
- Alice Avenue.

PARKS & RECREATION

The Fitchburg Disability Commission and the Fitchburg Board of Park Commissioners extend our sincere appreciation to IC Federal Credit Union for sponsoring our new aquatic Wheel Chair. Beginning this summer disabled residents will have the opportunity to join in the water fun at the J. Robert Crowley Swimming Complex with friends and family. Residents interested in using the aquatic chair during public swim hours should check in at the front desk.

¹ 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)

We also extend our appreciation to Mayor Stephen L DiNatale for his continued support to the disability commission and his assistance in bring this goal to fruition.

The J Robert Crowley Swimming Complex is open through August 25. Public swim hours are Sunday-Thursday from 11 - 6pm and Fri & Sat from 11am - 7pm.

Brand new Epoxy floors were installed in the restrooms in the Parkhill Park Bathroom. Work began Monday 8/5 and was completed on 8/7.

DPW crews continued to work on the new trail on Rollstone Hill alongside volunteers from the Student Conservation crews. Coordination continues with Fitchburg Greenway Committee regarding budgeting and expenditures of the various grant funds.

DPW crews continued clean up trash and mow the grass at various parks. New basketball nets were installed at Green Street Playground.

DPW crews removed ten large barriers from the Twin Cities Rail Trail right-of-way.

The summer playground program attended their third Summer Field Trip on 8/16 to Roll On America. A total of 108 participants attended with 16 seasonal staff on hand to supervise.

Recreation Director interviewed with Georgie Rodriguez on WPKZ. Topics discussed included the swans, summer programming, swimming pools, splash parks and the Flags of Nations display at Heritage Park.

Unfortunately in the past two weeks we lost both of our new swans. One swan was discovered deceased on 8/4 by park staff. The remains have been brought to tufts veterinary center for necropsy. Results won't be available for another month. The second swan was discovered deceased by park staff on 8/16. The death appears to be from a large animal.

Summer is coming to a close and the Summer Playground program is scheduled to wrap up with a bounce house and pool party at Coolidge Park on 8/23. The City Pool and splash park will be closing on 8/25.



Figure 1 - Mayor at Pool Wheelchair Presentation

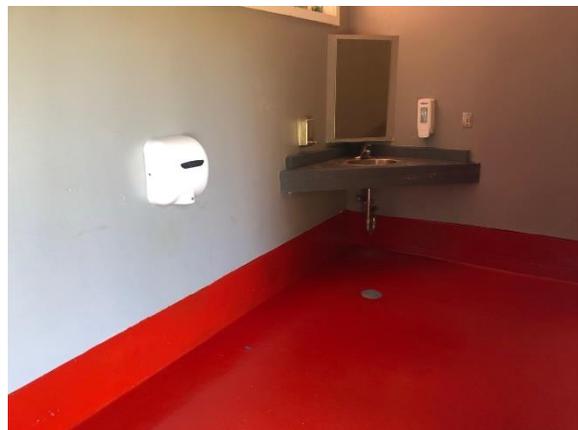


Figure 2 - New Epoxy Floors at Parkhill Park Bathrooms

Concerts on the Common was cancelled on 8/7/2019 due to weather. The 8/13 concert went as planned.

Friday night movies series last week played Back to the Future. Estimated attendance 20 residents. The movie prior was Spiderman: Into the Interverse with approximately 50 residents in attendance.

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	5
Up righted monuments.....	5
Uncovered/cleaned flat monuments	40
Foundation marking for monuments.....	5
Catch basin repair	0
Filled sink holes.....	0
Trimmed Trees	0
Trimmed shrubs.....	5
Meeting with Families.....	14
Payments - invoiced/processed.....	14
Family Genealogy	8

Forest Hill Cemetery had fence repairs completed as well as pillars painted and clearing of brush along the Crocker Lot.



Figure 3 - Forest Hill Repairs

WASTE WATER

The smoke testing of the interceptor systems was completed last week. Several potential sources of stormwater infiltration into the sewer system were identified for remediation. The inside of the interceptors were also inspected using a combination of sensors including CCTV, laser, and sonar technology. The results of these inspections will be analyzed further to determine whether further repairs are necessary.

Treatment Plant

Routine maintenance on the plant's equipment continued on the first stage aeration basins, secondary clarifiers, septage receiving hoses, and pumping equipment. The buildings are currently being re-sided.

Waste Water Treatment Week (8/4 - 8/10)

Sewage Treated (gals)	41,360,000	Includes sewer and stormwater/ infiltration from combined system
Septage Treated (gals)	341,000	From septic pumping trucks
Treatment %	98%	<2% bypassed secondary treatment due to wet weather events
Organics Removed (tons)	49	BOD prevented from entering Nashua River
Solids Removed (tons)	77	Organic and inorganic matter prevented from entering Nashua River
Total solids sent to landfill (tons)	160	Totals include some water content
Chemical Usage		
Chlorine (gals)	2,700	Used for odor control and disinfection
Bisulfite (gals)	870	Used for neutralization chlorine prior to discharging into Nashua River
Magnesium Hydroxide (gals)	700	Used for alkalinity adjustment
Ferric Chloride (gals)	460	Used as coagulant
Sodium Hydroxide (gals)	600	Used for pH adjustment of influent

Collection System

- Installed 200-feet of pipe on Hartford Street to re-direct stormwater away from the sanitary system and into the storm drain system. It is estimated that this catch basin contributes about 5,0000 gallons to the sewer system for a 1-inch rain event. Project will be finished the week of 8/19.
- Raised a buried manhole off of Causeway Street 10-feet using concrete riser rings.
- Replaced a collapsing sewer manhole casting on Jackson Avenue.
- Built an invert on a manhole that didn't have one at 303 Tibbett Circle.
- Raised a buried manhole on Chamberlain Avenue.
- Responded to three service calls, all of which were homeowner issues.
- Due to dry weather this past week, there was only one CSO Event, which occurred at the Post Office regulator.
- No Sanitary Sewer Overflow events this week.
- Reviewed CCTV Videos for Beech Street – some minor fractures in a few pipes, but nothing critical to repair.
- Vacuumed out first stage aeration basin #2 for SSU project at East WWTF.
- Collections crew inspected sewers during pumping out of Longsjö Middle School basement due to water line break.



Figure 4 - Causeway Street MH



Figure 5 - Vacuuming of Mixer Tanks

STORM WATER

Prepared for and attended Conservation Commission meeting for emergency culvert replacement on Stickney Road. Emergency certification for the work was approved. Signed form received 8/13/19. The project will replace the existing 30" RCP with dual 36" RCP, new headwalls at each end, and road paving. The work will be performed by DPW crews commencing in late August/early September.

DPW installed a catch basin, manhole and drain line on Seneca Street to alleviate water run-off onto the street.



Figure 6 - Seneca Street Drain

Dry Weather Stormwater Outfall Inspections continued through the week. These inspections are being carried out by DPW interns, Engineering Staff and a consultant. Interns received training on the sampling procedure back in June. During dry weather these stormwater outfalls should be dry. Any flow is tested to determine if it is sewage, drinking water, or infiltration/inflow.

- 53 outfalls visited
- 40 found dry, no additional inspection needed
- 13 found wet/flowing
- 7 sampled
- 145 out of 277 complete to date



Figure 7- DPW Interns Outfall Training

DPW crews repaired a culvert on Ashburnham Hill Road. Berms installation was prepared on Boylston and Vine Street.

WATER SUPPLY

The Water Supply Division generated and uploaded 11,052 water and sewer bills. Sewer only bills were sent to the Towns of Lunenburg and Westminster. The accounts system was updated thorough checks of Registry of Deeds records to confirm 31 real estate transfers. Phone calls were made to 61 customers with backflow devices to set up annual testing of the devices.

Water Treatment

Reservoir Levels as of 8/15			
Northern Reservoirs	Elevation below spillway		Southern Reservoirs
Fitchburg/Ashby	-0.90 feet	-1.00 feet	Meetinghouse
Scott	Full	-1.42 feet	Mare Meadow
Lovell	-2.32 feet	Full	Bickford
Water Filtration Plant Flows/Production from 8/1 to 8/15			
	Falulah Plant	Regional Plant	Totals
Raw Water Inlet (Gal)	18,952,000	57,618,000	76,570,000
Backwash to waste (Gal)	2,808,000	6,053,000	8,861,000
Finish Water - Treated & Distributed (Gal)	16,144,000	51,565,000	67,709,000
Weekly Average (Gal)	8,072,000	25,782,500	33,854,500

Transfer between reservoirs is currently under way. Mare Meadow is being pumped into Meetinghouse reservoir. Reservoir and spillways areas are being maintained and patrolled.

Fire Hydrants

Total Hydrants	Out of Operation	Hydrants Replaced	Hydrants Repaired	Painted	Flushed
1,632	2	2	5	4	26

- All fire hydrants except for two are operational in the city. The hydrant at Cushing Street by River Front Park is shut off because the water main is damaged.
- Continued flushing/greasing hydrants on the High System (red bonnets) this week in the Oakhill Road area towards England Avenue, as well as around Reingold School, Daniel Heights, and Plymouth Street areas.
- Hydrants at 23 Chester Street and 125 Wallace Road were repaired, both were returned to service and FFD was notified.
- Hydrant at the Fitchburg Airport was repaired. The base gasket was replaced and crews needed to excavate/expose the shoe and unbolt/remove the barrel of the hydrant to install gasket. The hydrant valve was also rebuilt at the same time. The hydrant was returned to service, FFD was notified.

- Hydrant at the corner of Electric Avenue and Mt. Elam Road was repaired. Hydrant was hit by a vehicle at some point (hit and run). Crews installed a new break away kit and returned to service, FFD was notified.
- Sinkhole near hydrant at 20 Canton Street was filled and repaved.
- Cleared brush around hydrant on Mechanic Street.
- Contractor (Baltazar) relocated two hydrants on Summer Street as part of the Summer Street reconstruction project.

Water Distribution

- Saw-cut and jackhammered the pavement around eight gate boxes on Columbus Street. These gate boxes were all broken and filled with trash and sand. Crews cleaned/replaced and set new gate box tops/extensions and covers and the paved around all gate boxes.
- Paved trench around gate box on Macintosh Lane at Cortland Avenue.
- Fixed leak on the city-side of the water service from tap to curb stop at 686 Westminster Hill Road (line had developed a leak).
- Shut off the 4-inch domestic service at Longsjo Middle School for plumbing repairs. The water was turned back on Wednesday and then shut off again on Thursday morning due a pipe breaking in the basement. It was repaired and the water was turned back on again.
- Assisted contractor (Alleva) with excavation at 196 Water Street to repair owner's side of the service line. It was determined that the city-side was copper (could not confirm by tie-card) and did not have to be replaced.
- Met with and advised contractor on City Hall project to excavate a test hole to precisely locate existing water mains and lines to City Hall. The contractor agreed and, with the assistance/oversight of Water Distribution personnel, excavated the test hole on Monday, 8/12. Both of the 16-inch water mains (High and Low Systems) were located as well as the existing 6-inch line to City Hall. It is believe that the 4-inch water service that also supplied City Hall was located as well (it was unexpected found to be running up Main Street, parallel to the 16-inch Low System water main). To verify, the contractor will tap a hole in the 4-inch to make sure it is a live main. At a later date, the contractor will cut in a new tee for the new 8-inch connection and abandon the existing 6-inch and 4-inch connections. This work will require a shutdown of the 16" High System water main (the work will be done at night to avoid disruptions to businesses, etc.).
- Contractor (Tandem) renewed owner's side of the water service to 22 Winter Street.
- Contractor (Proctor) installed a new 1-inch fire service to 185 Tibbett Circle.

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

Permits and Inspections	
<u>Type</u>	<u>Number</u>
Emergency DigSafe Markouts	2
DigSafe Markouts	10
Inspections	7
Record Plan Updates	9
Curb Stops Services	10
Located/cleaned gate/curb boxes	25
Final Readings	31
Meter Installs	12
Backflow Preventers Tested	71
Residential Appointments Made	17
Totals	194

ENGINEERING

DPW Engineering Division is currently completing plans for the reconstruction of Beech Street from Kimball Road to Pratt Street. This project will consist of full-depth pavement reclamation and sidewalk installation. The preliminary estimate for this project is \$711,130, which will be paid from UNITIL, Waste Water, and Chapter 90 accounts.

The proposed project will include granite curb, concrete sidewalks, handicap ramps & full depth reclamation of the pavement. Continuous sidewalks will be installed on the east side of the street from Kimball Street to Pratt Street. Sidewalks will also be installed on the west side of the street from Pratt Street to Wall Street with crosswalks and ADA ramps at Wall Street and Pratt Street.

This street was chosen as a good candidate for improvement due to its poor condition, its functionality as a collector roadway, and the fact that most utility work has been completed. There still remains a small segment of UNITIL gas line from LaFlamme Place to Pratt Street that is currently being upgraded. Also, Waste Water Division will have to replace a drain line in 2027, at which time they will repave any disturbed section of roadway.

Asset Management

- StreetScan has completed its data collection of the city's streets and will now commence the sidewalk assessment. The street data will be processed and analyzed to determine the pavement condition using a Pavement Condition Index (PCI).

- Engineering Division met with IT and Cemeteries Superintendent to discuss and finalize the RFP for cemetery management software. The cemeteries database is a vital system for the proper maintenance of records and genealogical resources. The proposed software will feature a GPS enabled app that allows visitors to find burial sites easily. DPW GIS intern is currently collecting data points for existing burial plots.
- A meeting was held with our engineering consultant to determine the feasibility of pursuing a grant from MassDEP to fund preparation of Asset Management Plans (AMP) for existing water infrastructure that includes drinking water, wastewater and stormwater systems. The maximum grant award will be \$150,000 or 60% of eligible project cost, whichever is less. The remaining amount would have to include In-Kind Services (20%) and a capital contribution (20%).

Permits and Inspections

DPW inspects trenches on private property in accordance to MGL Section 82A. DPW inspected the following trenches to assure utility contractors are adequately meeting their safety obligations.

- 11-17 Sanborn Street - an unpermitted trench was open overnight. DPW instructed contractor to back fill before the end of the day 8/13/19. Building Department has been contacted since it appears a drain system was being installed without permits.
- 479 Milk St. sewer repair on private property.
- 144 Depot St Sewer repair on private property.

Driveways and Curbcuts

- 18 Mechanic Street - existing driveway is between fire hydrant and guide wire for utility pole. Resident requesting relocation of hydrant so the driveway opening can be widened. Needs review and approval by Commissioner.

Permits and Inspections		
<u>Type</u>	<u>Number</u>	<u>Fees</u>
Dig-Safe requests	25	n/a
Dumpster Permits	2	
Driveway Permits	1	
Sign Permits		
Trench Inspections	3	\$ 675.00
Excavation Permits		
Sewer Permits		
Sewer/Drain Inspections		
Parcel Updates	11	
Planning Reviews	3	
Totals	45	\$ 675.00

Developments and Parcels

DPW performed the following inspections, plan reviews, and parcel data upgrades in support of development throughout the city:

- Performed site plan and subdivision review for the following projects:
 - Old Princeton Road PUD
 - 99 Development Drive
 - Fitchburg Arts Community/BF Brown Redevelopment

Street Lights

- Winthrop Street has no street lights from Laurel Street to Milk Street -recommend 2 lights be installed.
- Main Street at Circle Street - light concrete pole is severely damaged crack all the way through needs replacement.