

City of
Fitchburg



Department of
Public Works

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

DPW Weekly Update October 12 – October 18, 2020

Dear Mayor, Councilors, and Colleagues;

On Sunday MassDOT started the highway exit renumbering project to convert exit numbers from the sequential-order to a new mileage-based numbering system. Informational videos and interactive maps can be found on www.newmassexits.com. This state wide project will commence from east to west (or north to south) along each route.

The change is required by federal guidelines to bring Massachusetts into compliance with the 2009 MUTCD which requires mileage-based exit numbering system. Most other states throughout the nation converted exit numbers decades ago. Failure to comply with the MUTCD requirement would jeopardize approximately \$600 Million/year in federal transportation funding to MassDOT.

The new exit numbers for Route 2 through Fitchburg will be as follows:

	Old Exit	New Exit
Depot Rd.	27	94
Route 31	28	95
Merriam Ave.	30	98
Route 12	31 (EB)	99 (EB)
	31 A/B	99 A/B
Route 13	32	100
I-190	33	101



The old exit numbers will be shown in a supplemental plaque under the exit number for a couple of years following the conversion.

Sincerely,

Nicolas Bosonetto, PE
Commissioner of Public Works
City Engineer

STREETS DIVISION
Gary Withington - Superintendent

In the past two weeks DPW received 29 new requests and closed 22 requests. The total outstanding requests backlog is now 364, 7 more than the previous reporting period. Most outstanding requests are for potholes and storm drains.

<u>Reporting Period</u> <u>10/04/20 - 10/18/20</u>		<u>Previous</u> <u>Period</u>	<u>Change</u>
Previous Request Backlog		357	
New Requests	29	33	-4
Completed Requests	22	36	-14
Total Request Backlog		364	357
Potholes	126	123	3
Storm Drains	39	36	3
Tree & Brush Pruning	63	62	1
Traffic, Signals, Signs	16	18	-2
Berm Repairs	20	20	0
All other categories	100	98	2
New Requests		29	33
Acknowledged	21	26	-5
Completed & Closed	9	8	1
Open	20	25	-5

The weather last week was cool, with two heavy rain storms. The storms have helped refill our reservoirs after the summer drought, but also created some localized flooding around catch basins which are clogged up with leaves. The rain is also impacting paving and concrete work, which is typical for this time of year.

	Saturday 10/10	Sunday 10/11	Monday 10/12	Tuesday 10/13	Wednesday 10/14	Thursday 10/15	Friday 10/16
Rain (in)	0.00	0.00	0.23	1.03	0.00	0.03	1.47
Hi/Lo Temp (F)	54/73	46/61	45/52	46/54	46/64	46/70	48/64

Sources:

<https://www.cocorahs.org/ViewData/ListDailyPrecipReports.aspx> (STA MA-WR-22)
<https://www.timeanddate.com/weather/@4936825/historic>

Signals, Signs & Stripes Crew

- Moved message board to Boulder Drive for the drug take back and early voting events;
- Mounted temporary DO NOT ENTER sign on saw horse at Day Street;
- Made and installed new street sign for St Bernard Street;

Paving Crew

- Promoted Randy Duval to Foreman;
- Continued paving of Ashby West Road;
- Spread out grindings on Maine Avenue;
- Supported Water Division by cutting trenches on Morris Street, Madison Street, St Paul Street and Stockwell Avenue;

Stormwater Crew

- Repaired catch basin on Hartwell Street.

Sidewalk Crew

- Continued to install Handicap Ramps on Water Street and Spruce Street;

Trash & Streetsweeping & Brush

- Helped Board of Health by picking up illegal dumping;
- Spot streetsweeping around the city;
- Picked up trash on Main Street, Ashby West Road, Fifth Mass Turnpike;
- Removed trees from Coggshall Park;
- Cut brush on Marshall Road, Lincoln Street, and Rindge Road.

Mechanic Shop

- Continued repairing and preparing spreaders on large trucks for the winter season.

PARKS DIVISION AND RECREATION DEPARTMENT

Nate LaRose – Recreation Director

- Parks Division crew is down to two men due to injuries and vacancies.
- Park Crew continued to winterize the parks by blowing out irrigation and water systems;
- Continued to pick up leaves in the parks;
- Picked up trash on Main Street;
- Changed closing time signs on Coggshall Park;
- Installed basketball hoop at Coolidge Park;
- Recreation Office Closed October 12, 2020 for Columbus Day.
- Updated City Website and Homepage with Halloween Celebration activities and guidance on 10/14/2020
- Assisted Mayor's Office & City Clerk's Office with elections related website updating.
- Continued Asset Management updates regarding city parks and maintained traffic islands. Updates included facility features and sizing. Thank you to the Wastewater Division for their assistance converting data into a GIS format.
- Discussed with the City Treasurer's office the status of a Parcel of land directly adjacent to Grant Park which has been taken for taxes.

- Conversed with a member of Boy Scout Troop 17 regarding potential eagle scout projects in the parks on 10/15/2020.
- Conducted site visits of smaller parks and traffic islands on 10/15/2020 for maintenance needs and asset management tracking. Parks/Traffic Islands visited include: Putnam Park, Forest Park, St. Joseph Ave Island, South St/Electric Ave island, and Dextraze Circle.
- Attended Spooky Drive-In site visit with FSU and Reimagine North of Main on 10/14/2020.
- Upcoming Events:
 - Movies at Putnam Place
 - A Nightmare Before Christmas – October 30, 2020
 - Spooky Drive-In Movies at the Wallace Civic Center
 - Hocus Pocus – October 24, 2020
 - The Addams Family (2019) – October 31, 2020

Other Updates:

- Following conversations with Fitchburg State University we have the sad news to announce that due to the Covid-19 Pandemic the annual Winter Walking Club at the Fitchburg State Recreation center will be cancelled this year. We appreciate all the support we've received from Fitchburg State for this long running program and look forward to returning in future years.

CEMETERIES DIVISION

Jaquelyn Poirier - Superintendent

Held meeting of Trustees of the Public Burial Grounds on Thursday October 15th at the Senior Center. Joined by IT Director Bonilla to discuss development of a geodatabase for the cemeteries to track burials and overall modernize paperwork procedures at the cemeteries.

The Cemetery crews continued to clean, mow, and maintain the cemetery grounds. Also maintained the walking trails around Forest Hill Cemetery. In addition to routine maintenance and administration tasks, the following were completed:

Full Interments	1
Inurnments.....	2
Up righted monuments.....	0
Uncovered/cleaned flat monuments.....	0
Foundation marking for monuments.....	2
Catch basin repair	0
Filled Sink Holes	0
Trimmed Trees	0
Trimmed shrubs.....	0
Meeting with Families.....	6
Payments - invoiced/processed.....	3
Family Genealogy	4

ENGINEERING DIVISION

Nicholas Erickson, P.E. – Assistant City Engineer

Administrative/Engineering

- Attended the Economic Development Task Force meeting.
- Reviewed draft presentation by Arcadis for DPW Water's Supervisory Control and Data Acquisition (SCADA) System Upgrade Project and provided feedback. This presentation will be given at the next Water/Wastewater Commission meeting and summarizes Arcadis' work to date to design upgrades to the telemetry and control systems at the City's two water treatment facilities and various remote sites located throughout the water supply and distribution systems.
- Performed records search for Bond Street and Haskell Street per request from Andrysick Land Surveying and sent the resulting plans via email.
- Worked with Weston & Sampson to finalize and submit an application to MassDEP's State Revolving Fund (SRF) program in order to secure \$96,600 in grant funding that was awarded to the City to digitize its water system assets in a Geographic Information Systems (GIS) environment.
- Submitted a Statement of Interest (SOI) to the Massachusetts Emergency Management Agency (MEMA) to qualify for a chance to potentially secure grant funding for rehabilitation of the North Nashua River Flood Damage Reduction System (FDR). MEMA will review the SOI's and invite selected applicants to submit full grant applications to one of two Federal Emergency Management (FEMA) grant programs.

Street Lights

- Coordinated various streetlight repairs with Dagle Electric, the City's streetlight service contractor. Closed corresponding work request tickets in See-Click-Fix.

Road Construction

- **Beech Street Reconstruction Project** - The City's paving contractor, PJ Albert (PJA), continued road and sidewalk reconstruction of Beech Street from Kimball Street to Pratt Street. This week PJA paved the top 1.5" wearing course of pavement, painted the double yellow centerline, and painted crosswalks. Outstanding items include paving driveway aprons and cleaning up the new parking area at 63 Beech Street. DPW Engineering performed the following:
 - Conducted field visits and provided construction administration and oversight as needed.
 - Assisted with traffic control during paving due to lack of detail officers available.
 - Reviewed three draft invoices from PJA, worked with PJA to revise as needed, and approved the final invoices for payment.
- **Crawford Street Paving Project** - The City's paving contractor, PJA, continued road reconstruction of Crawford Street from the Nashua River to the Leominster city line.

This week PJA painted the double yellow centerline and white fog lines. Outstanding items include paving driveway aprons. DPW Engineering performed the following:

- Conducted field visits and provided construction administration and oversight as needed.
- Assisted PJA with traffic control due to the inability to obtain a police detail.
- Reviewed one invoice from PJA and approved for payment.
- Conducted field visits to measure and mark out driveway apron locations.
- Prepared cost estimate for installation of driveway aprons. Due to the cost and limited budget, this work will have to be performed in-house by DPW crews.
- **Water Street ADA Ramps Project** – This is a project to construct ADA ramps on Water Street. DPW Engineering performed daily site visits and provided field support to DPW crews as needed.

Permitting, Inspections & Site Visits

- Performed a site visit to 195 Kimball Street to review concerns about drainage with the property manager.
- Conducted site visit to 150 Appleton Circle to mark out the property line per request from DPW Water.
- Performed site visit to Beech Street to supervise paving and striping operations.
- Performed multiple site visits to Crawford Street to measure and mark out driveway aprons that need paving and supervise striping operations.

Engineering Services			
	Type	Number	Fees
PERMITS	Street Occupation Permits (No Fee)	1	n/a
	Trench Permits (\$75)	2	\$150
	Excavation/Road Opening Permits (\$250/\$350)	1	\$350
	Driveway/Curb Cut Permits (No Fee)	0	n/a
	Sign Permits (No Fee)	0	n/a
	Sewer Permits (See Ch. 149 for Fees)	1	\$1,000
	Application Reviews	1	n/a
	Engineering Plan Reviews	2	n/a
INSPECTIONS	Driveway Inspections	0	n/a
	Trench Inspections	0	n/a
	Site Visits/Inspections	14	n/a
	Dig-Safe requests	0	n/a
	Sewer/Drain Inspections	1	n/a
	Street Light Inspection	2	n/a
	Totals	24	\$1,500

WATER SUPPLY DIVISION
John Deline – Deputy Commissioner of Water

The Water Supply Division produced 29.4 million gallons of drinking water this past week. Water is being transferred from Bickford Reservoir to Mare Meadow Reservoir, from Mare Meadow Reservoir to Meetinghouse Reservoir, which is the terminal reservoir to the Regional Plant, and from Fitchburg and Scott Reservoirs to Lovell Reservoir, which is the terminal reservoir to the Falulah Plant. Reservoirs continued to be inspected and patrolled on a daily basis.

Water Treatment

Reservoir Levels as of 10/15/20			
Northern Reservoirs	Elevation below spillway		Southern Reservoirs
Fitchburg/ Ashby	-2.86 feet	- 1.17 feet	Meetinghouse
Scott	-4.56 feet	-5.20 feet	Mare Meadow
Lovell	-4.52 feet	-3.08 feet	Bickford

Water Filtration Plant Flows/Production from 10/9/20 through 10/15/20			
	Falulah Plant	Regional Plant	Totals
Raw Water Inlet (Gal)	8,142,000	24,442,000	32,584,000
Backwash to waste (Gal)	987,000	2,197,000	3,184,000
Finish Water - Treated & Distributed (Gal)	7,155,000	22,245,000	29,400,000
Capacity	(6 MGD) 19.4%	(12 MGD) 29.1%	(18 MGD) 25.9%
Efficiency	88%	91%	90%

- CorrTech finished up with the inspection and cleaning of the following water storage tanks and clearwells: Overlook Storage Tank (1.5 MG), Regional Underground Storage Tanks (each 1.0 MG), Regional clearwells, and the Oak Hill Storage Tank (0.465 MG). Per MA DEP Regulations, water storage tanks and clearwells must be cleaned/inspected every 5 years.
- There was a power outage in Westminster that affected the Meetinghouse gatehouse. The portable generator was brought out to operate the traveling screens; however, it was discovered that, previously, the incorrect outlets were installed on the generator. There was also an issue with the power selector switch. Electrician (Piper Electric) hard-wired the generator for the evening and managed to get the selector switch set to the correct setting. Following restoration of power, Piper Electric reinstalled the plug on portable generator (they will also provide a quote to install new outlets at stations so all will be compatible with generator). Bigpower (formerly Bigelow Power) was contacted about repairing the selector switch on the portable generator (they will be out to look at it and provide quote for repair).
- Tested the chlorine gas detector at the Falulah Plant with the Fitchburg Fire Department and it did not function correctly. Determined that the detector needed a new cell, which was ordered and overnighted. It was installed the next day and the system was tested again and functioned correctly. The Fitchburg Fire Department was notified.

- The fall removal of sludge/settled solids from the backwash residuals settling lagoons at the Regional Plant continued. Lagoon #1 was completed on 10/14 (21 loads total) and the contractor will begin on Lagoon #2 on 10/15. One load per day is being pumped from the lagoons and disposed of at the West Plant (a total of 15-20 loads needs to be removed from each of the lagoons, which takes 5-8 weeks to complete depending on precipitation/weather).

Water Distribution

- Patrolled areas around Overlook Reservoir, Marshall Plant, Meetinghouse Reservoir, Bickford Pump Station, Oak Hill Storage Tank, Scott Tank, Fitchburg North Dam, and Wachusett Reservoir.
- Cut/removed brush on the upstream slope of the south dam at Fitchburg Reservoir.
- Worked on reviewing and inspecting the Rice and Jewell Hill properties to ensure compliance with the Conservation Restrictions held by the City.
- FWD personnel excavated and completed the connection from the 12-inch water main on Crawford Street to the 8-inch line supplying 380 Crawford utilizing new 8-inch ductile iron pipe and two, 45 degree elbows. The old, 8-inch main that was connected at Blueberry Lane is now shut off and cut/capped. This will eliminate a long stretch of the 8-inch line.
- FWD personnel worked with Wastewater personnel to reroute the sewer lateral from 9 Weymouth Street to the nearest sewer manhole. Installation was completed and the trench was backfilled and compacted. Thank you to the Sewer Department for their assistance, this demonstrates good teamwork with two departments working together to resolve an issue that arose.
- FWD personnel excavated and renewed the water service at 74 Pine Street, contractor (Tocci) renewed the owner's side of the water service.
- FWD personnel performed numerous turn offs/ons of water services for the water meter replacement project.
- FWD personnel tried to continue hydrant flushing on the High and Low systems but, due to running with a skeleton crew again this week, only 11 hydrants were flushed.
- FWD personnel shut off seasonal water service to the State Pool on Wanoosnoc Road and also to Moran Field.
- Investigated a possible water leak on at 253 Oak Hill Road, leak was determined to be on the owner's side of the water service, owner was given contractors list.
- Completed weekly inspections and maintenance/cleaning of Water Division vehicles and equipment.

Fire Hydrants

Total Hydrants	Out of Operation	Hydrants Replaced	Hydrants Repaired	Maintenance Completed	Painted	Flushed
1,632	4	0	0	0	0	11

- FWD personnel repaired a hydrant that was broken during hydro-seeding at Fitchburg Airport and returned it to service, notified FFD.

Administration and Meters/Billing

- Total of 7 real estate closings – final readings completed along with preparation of final bills for attorneys/realtors. Future real estate closing final readings also scheduled.
- 25 invoices totaling \$238,404.98 were processed for FY20 warrant WG21017.
- 3 purchase requisitions were entered into Munis for approval by Purchasing.
- Ran all preliminary reports for monthly water/sewer billing and generated/uploaded 11,116 bills for October billing to Touchpoint for printing/mailing.
- During the course of the week, a total of 194 water meters were replaced with new Neptune meters - 1 was changed by FWD personnel and 193 by the City's contractor, Baystate WinSupply. Water Division personnel continued entering meter change information into Munis; however, because we are in the middle of a monthly billing this week, we can only input certain meter information (longitude, latitude, "GAL", and MIU numbers). Once the bills are generated, we then go back in and finish updating each account.
- The 10/14 Water/Wastewater Commission meeting was cancelled, the cancellation was posted on City website and sent to City Clerk for public posting.
- Spent considerable amount of time and effort looking into issues with the compound water meter at 245 River Street. It was determined that the low flow side of the compound meter was malfunctioning and not recording correct flows/usage. No matter how much water was flowed, the low side only indicated a flow of 1-1.5 g.p.m. with the high side closed (flow had not "shifted" over to the high side, which occurs at flows above that which can pass through the low side). A new replacement meter will be supplied by Ti-Sales and Water Division will complete the installation on 10/19/20.

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

Water Permits and Inspections	
Type	Number
Emergency DigSafe Mark-outs	0
DigSafe Mark-outs	5
Inspections of Work on Water System	8
Record Plan Updates	12
Special Permit Applications Reviewed	0
New Water Service Applications	0
View Permits reviewed	2
Curb Stops Turned off/on	17
Located/cleaned gate/curb boxes	23
Final Readings/ Real Estate Closings	0
New Meter Installations	3
Backflow Preventers Tested	2
Cross Connection Surveys	0
Residential Appointments Made	0
Totals	72

WASTE WATER DIVISION
Jeff Murawski, P.E. - Deputy Commissioner of Wastewater

The WWTF processed 31.4 million gallons of sewage during the first week of October. In total, 88.5 tons of organics and 137.0 tons of solids were removed and prevented from entering the Nashua River.

<u>Week of 9/27/2020 - 10/03/2020</u>		
Sewage Flow	31.40	Million Gallons
Rainfall	0.10	Inches
Secondary Bypass	0.00	Million Gallons
BOD _{in} (lbs)	178,789	Pounds
BOD _{out} (lbs)	1,696	Pounds
BOD Removal (%)	99.03%	
TSS _{in} (lbs)	276,286	Pounds
TSS _{out} (lbs)	2,179	Pounds
TSS Removal (%)	99.15%	

WWTF Maintenance & Operations:

- West Plant: replaced electrical underground handhole.
- Secondary Systems Upgrades Project: (no activity).
- Aerated Grit Chamber No. 1: Set up pump and drained A.G. Chamber No. 1 on Wednesday (10/14); started grit removal Friday (10/16).
- Primary Settling Basins Cross Collector Project: cleaned and free up seized wall bearings last Friday (10/9); delivered wall bearings to machine shop Wednesday (10/14); machine shop may be able to start working on wall bearings on Friday (10/16) (*ongoing*).
- Performed Groundskeeping, at East & West Plants.
- Vehicles: checking plow systems to get ready for winter season (*ongoing*).
- Preventative Maintenance rounds were performed this week, by available maintenance staff, using “Staffing Minimization” hours (80 person-hours in total).

<u>Work Order Report: October 10th - 16th, 2020</u>					
Demand Statistics	PM Statistics	Averages			
Rejected Work Orders	0	Rejected Work Orders	0	% Total Work Orders Completed On Time	77.80%
Demand Work Orders	1	PM Work Orders	26	Avg. Days Late / All Work Orders	3.33
Demand Work Orders Completed Late	0	PM Work Orders Completed Late	6	Avg. Days to Complete / All Work Orders	10.8
Demand Work Orders Completed On Time	1	PM Work Orders Completed On Time	20	Total Maintenance Man Hours	80
% Demand Work Orders Completed On Time	100.00%	% PM Work Orders Completed On Time	76.90%		
Avg. Days Late / Demand Work Order	0	Avg. Days Late / PM Work Order	3.33		
Avg. Days to Complete / Demand Work Order	0	Avg. Days to Complete / PM Work Order	10.83		

- Subsequent to discontinuing “Shelter-in-Place” staffing, Treatment Operations staff are now on a normal shift rotation plan but with limited staff (“staffing minimization”).
 - Weekend operators on their 10.5 hour weekday shift are performing exterior plant duties this week (Secondary Clarifiers cleaning, Gravity Thickeners cleaning, Chlorine Contact Chamber cleaning, and pumps and draft tube cleanings).

- Total Phosphorus numbers have begun to go down. We seem to have a pattern of the first two tests of the week being within proper parameters but the third test is abnormally high. Treatment Ops is continuing to investigate the issue.
 - Update: Increased Ferric dosage rates, on 10/01/2020 (*ongoing*).
- Tested all emergency showers.
- Preventative Maintenance checks on Gravity Belt Thickeners.
- Cleaned the Gravity Thickener.
- Cleaned the Return Activated Sludge Pumps.
- 10/13/2020: drained Grit Chamber for Maintenance cleaning.
- 10/13/2020 rain event: 0.8-inches of rainfall resulted in a peak flow of 22.65 MGD at the plant; we bypassed 0.048 MG for the rain event.
- 10/13/2020: video conference for City of Fitchburg Public Education Brochure Review with CDM Smith.
- 10/15/2020: completed and submitted September NPDES DMR to MADEP and USEPA.
- Chemical deliveries:
 - Sodium Hypochlorite (Chlorine Disinfectant and Odors Neutralizing Chemical).

Administration:

- Daily (or more frequent, as needed) conducting video calls with Wastewater Management Team.
- Provided tour of Westerly Wastewater Treatment Facility for “RFEI” respondent, Suez.
- Presented Petition No. 204-20 (Sewer Ordinance Change) to Legislative Affairs Committee on Tuesday – Oct. 13th.
- Attended (virtually) presentation (Oct. 14th) by WPI students, concerning the Massachusetts House Bill H.4921 (*‘An Act Promoting Awareness of Sewage Pollution in Public Waters’*).
- Sewer Billing Abatements.
- Coordinated with Purchasing Department, for Wastewater procurement needs.
- Coordinated with Human Resources Department, for Wastewater personnel needs.

Sewer System

- New Wastewater Division decals put on the CCTV Van.
- Performed pump stations checks: no unusual events observed.
- Sawcut Weymouth Street for re-routing lateral, and re-routed the sewer lateral from #9 Weymouth St. to the sewer manhole. Teamed up with Water Division on the repair.
- One employee took & passed the Massachusetts Hoisting 2A Exam.
- We scheduled and witnessed a free demonstration of Cretex PRO-RING™ riser rings in DPW yard. This product would be an alternative way (to brick & mortar courses) to raise cast iron frames for manholes & catchbasins.



Figure 1: Cretex representative giving demo to Streets & Sewer personnel of PRO-RING™ riser rings in DPW Yard.

- Checked CSO Blocks: four (4) CSO activations were discovered, from the early week rain event (nearly an inch of rain).
- Cleaned out the old Vactor's debris body, and drove it back to CN Wood, for final repairs to be made before official vehicle swap with Water Division.
- Elm Street Sewer Repair trench was prepped for paving (next week), and small bypass piping trenches were also paved this week.