

City of
Fitchburg



Department of
Public Works

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

DPW Weekly Update October 7 - October 13, 2019

Dear Mayor, Councilors, and Colleagues:

On Tuesday October 8th, I had the great privilege of accompanying Mayor DiNatale to Beacon Hill to testify in front of the Joint Committee on Transportation regarding local funding levels included in Governor Baker's \$18 Billion transportation bond bill (H. 4002). The Mayor and I were part of the Massachusetts Municipal Association's (MMA) panel conveying the message that Chapter 90 funding levels are insufficient to maintain local roadways in a state of good repair.

The MMA's biennial survey shows that municipalities need to spend \$685 million annually to maintain roadways, compared to the current \$200 million per year Chapter 90 funding levels. The [MMA continues to advocate for \\$300 million per year](#) funding levels indexed to inflation. The \$18 Billion bond bill currently only includes \$490 Million (less than 3%) for municipal transportation including funding for the Complete Streets, Small Bridge, and Municipal Pavement Partnership Programs.

Mayor DiNatale and I spoke to the Joint Committee regarding the state of disrepair of our local roadways and the need to increase the Chapter 90 funding levels significantly to meet local needs. We also reiterated that the Mayor allocates an average of \$650,000 per year from the city's budget towards roadway repairs and related equipment to supplement the \$1.12 Million in Chapter 90 funds. However, in order to bring our roadways and sidewalks to acceptable levels, we would require at least a four-fold increase in transportation funding. This level of funding simply cannot be raised at the local level through property tax increases, and therefore we are dependent on increased state transportation aid programs.

As always we appreciate the Mayor's and the delegation's continued support and advocacy for funding our infrastructure.

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 57 new requests and completed 32 requests. The total outstanding requests backlog is now 341, a majority of which are for potholes, storm drains, and tree/brush trimming.

<u>Reporting Period</u> 9/23/19 - 10/06/19		<u>Previous</u>	<u>Change</u>
Previous Request Backlog	324		
New Requests	59	57	+2
Completed Requests	42	32	+10
Total Request Backlog	341	324	+17
Potholes	85	73	+12
Storm Drains	85	84	+1
Tree & Brush Pruning	57	53	+4
Traffic, Signals, Signs	19	21	-2
Berm Repairs	13	13	0
All other categories	82	80	+2
New Requests	59	57	+2
Acknowledged	32	39	-7
Completed & Closed	10	10	0
Open	49	47	+2

ROADWAYS

Traffic Signs, Stripes, and Signals

Installed horse crossing signs and dangerous curve ahead signs on Fisher Road.

Installed stop sign at 240 Clarendon Street.

Installed fall banners on Main Street.

Sidewalks

The sidewalk on Pleasant Street damaged by the crane during the Longsjö roof project was repaired by DPW crews. The costs of repairs are being itemized and will be forwarded to the contractor.

Brush Cutting and Cleaning

Brush was cut and cleaned along:

- Railroad Street,
- Second Street,
- First Street
- Middle Street,
- Westminster Street, and
- Castle Road.

Potholes

Pothole patching efforts continued this week with approximately 200 potholes¹ filled at various locations, including the following:

- Pearl Hill Road
- High Street
- Mayland Street
- Fairview Street



Figure 1 - Cold Planer

The City of Fitchburg DPW has purchased and placed into service new equipment to remove potholes. Mayor Stephen L. DiNatale inaugurated the new skidsteer-mounted cold planer on Temple Street last week as DPW crews grinded away potholes. The new Bobcat skidsteer was purchased at a cost of \$51,000 and the cold-planner attachment cost and additional \$38,000. The total cost of \$89,000 was funded through the Mayor's appropriation of Fiscal Year 2019 available funds.

"I am very happy that the city has added a new tool to the DPW's toolbox to help address road repairs. This machine will help with small areas throughout our city that are plagued with potholes. Although this is not a full remedy to address our New England roads, this is conscious effort of my administration to tackle road repairs as much as we can afford," said Mayor DiNatale.

The cold planer is capable of grinding out a square yard of pavement in 3 seconds. Instead of just filling potholes with hot-mix, DPW will start grinding down the top layer of asphalt on roadway sections that have significant cracking and potholes and then repave the section with asphalt to produce a smoother and longer lasting repair.

In addition to the cold planner attachment, the new Bobcat skidsteer is capable of using other attachments including sweepers, buckets, and brush cutting implements.

Snow & Ice

On Friday DPW held a ribbon-cutting event for the new saltshed. Thanks to a \$500,000 allocation by the Mayor, along with \$75,000 from other sources, the new saltshed was completed this year. Salt has been ordered and will begin filling in the shed in the coming weeks. A pizza party was held prior to the event with DPW crews, city councilors, staff from other city departments and former Commissioner Lenny Laakso. For more information please see: <https://www.sentinelandenterprise.com/2019/10/14/fitchburg-unveils-new-500000-salt-shed/>

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)



Figure 2 - Salt Shed Ribbon Cutting (Courtesy: Sentinel & Enterprise)

DPW started distributing the winter plowing contractor packets.

GIS team is creating maps outlining the salt-only roadways for this winter season.

Lighting

The timer controlling the street lights on Main Street has been reset to account for the earlier sunsets as winter approaches.

Crack Sealing

Crack Sealing has been completed for this year. A total of 8,238 gallons of material was applied to preserve the city's pavement.

PARKS & RECREATION

In Partnership with the annual Trick or Treat on Main Street the Recreation Department will be holding its annual Halloween Party on October 26, 2019 from 12-2pm at the Fitchburg Senior Center. The Party will include a spooky maze, Halloween themed arts and crafts and movie screening.



Figure 3 - Parkhill Park Bathhouse

Rockwell Roofing completed the work on the Parkhill Park bathhouse roof. Upon stripping the existing asphalt singles several rotted roofing boards were found. The rot was replaced and a change order was issued for an additional \$376 to cover supplies and labor.

Biddy League Registration is available online at www.fitchburgma.gov/activities. For more information visit www.fitchburgma.gov/biddyleague.

Recreation Director attended the Monthly Parks and Recreation Director meeting for the Massachusetts Recreation and Parks Association at the Southborough Recreation Department.

Completed updates the City Calendar with community events for the month of October.

Attending the Trails Vision Committee Meeting on 10/11/2019. The committee reviewed updates on the language in the draft Vision plan. Upon updates the document will be sent to Mass Audubon and the North County Land trust for reviews on the descriptions and recommendations for their land.

Prepared applications to the Fitchburg Cultural Council for the Annual Concerts on the Common and the annual Winterfest at Coggshall Park. Submissions are due on October 15, 2019

Submitted a letter of support for the Farmers' Market Application to the Fitchburg Cultural Council from Growing Places.

The splash park at Whitney Park and at Park Hill were closed and winterized. Coolidge Park pool and bathroom were also winterized.

Crews continued the installation of the backstop at Goodrich Playground.

Removed fallen trees from Coolidge Park and 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	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.....	4
Payments - invoiced/processed.....	9
Family Genealogy	5

DPW Engineering prepared responses to question on the City's RFP for cemetery management software.

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

This past week DPW crews with the assistance of the MCI Shirley inmates cleared brush, trees and garbage out of the Nashua River next to RiverFront Park. Six tires, four bags of trash and four truckloads of brush were removed along with several trees. The removal of trees and vegetation sparked concern among some residents who would like the river to remain in a more natural state. The removal of vegetation, however, was being done per the direction of the US Army Corps of Engineers (USACE) to prevent flood damage.

The North Nashua River is actually a Flood Damage Reduction (FDR) system built by USACE from 1937 to 1981 consisting of a network of concrete and stone flood walls, stone slope protection, stone channel paving, and other features at 23 locations along 4.4 miles of the river. This FDR system was designed to protect industrial, commercial, and residential property in low-lying areas throughout the city. A new city webpage has been created explaining the system at: <http://www.ci.fitchburg.ma.us/834/North-Nashua-River-FDR-System>



Figure 4- Tree and Brush Clearing Along the Nashua FDR System

The USACE inspects the FDR every year to assure that the flood control system is reliable and does not represent a risk to life and property. Our most [resent inspection report](#), dated August 28, 2019 rated the FDR system as 'Unacceptable', meaning there are deficiencies that must be immediately taken care of by the DPW. The report states that significant vegetation, including large brush and trees, must be removed from the channels of the Nashua River. The report actually directs DPW to spray herbicides along the river channel to 'control/eliminate woody vegetation and weed growth' but DPW feels this may cause damage to the river's ecology and are seeking alternative means of controlling the vegetation.

Overall, DPW will continue to cut brush and trees from the North Nashua River Flood Damage Reduction System as directed by the USACE in order to protect the city. We will also keep in mind the ecological concerns and find alternatives to the proposed herbicide use.

Catch Basins

Finished rebuilding catch basin on Mt Vernon Street and Cascade Street. Started reconstructing catch basin on Westminster Street.

MS4 Permit

DPW Engineering attended the Central MA Regional Stormwater Coalition (CMRSWC) Steering Committee meeting. The CMRSWC is a group of 30+ member communities in Central MA that are all subject to the US EPA's Municipal Separate Storm Sewer System (MS4) discharge permitting requirements. As neighbors, our 30 communities share stormwater systems, surface water resources, and the need to ensure the long-term protection of these resources. Working as a group allows us to collectively protect the resources we share, and to meet the requirements of the MS4 Permit in an efficient and cost-effective manner. DPW Civil Engineer Nick Erickson was elected to the Steering Committee in November 2018 for a term of two years.

DPW Engineering conducted a desktop review of the sewer and drainage connections for 1151 Main Street to confirm that the building's floor drains discharge to the sewer system and not the stormwater system. The building owner is proposing a car detailing business, and would like to dump spent wash water down the drain.

Berms

DPW Street crews installed berms at:

- 15 Warren Street
- Theresa Street
- Wanoosnoc Road
- Fifth Mass Pike, and
- Richardson Road.

Stickney Road Culvert

Final paving was completed on the Stickney Road Culvert project.



Figure 5 – Stickney Road Culvert

WATER SUPPLY

The Water Supply Division produced 29.5 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. Water is also being transferred from Scott Reservoir to Lovell Reservoir through gravity flow.

Water Treatment

Reservoir Levels as of 10/11/2019			
Northern Reservoirs	Elevation below spillway		Southern Reservoirs
Fitchburg/Ashby	-3.00 feet	Full	Meetinghouse
Scott	-2.80 feet	-4.10 feet	Mare Meadow
Lovell	-0.80 feet	-1.10 feet	Bickford
Water Filtration Plant Flows/Production from 10/3/19 through 10/10/19			
	Falulah Plant	Regional Plant	Totals
Raw Water Inlet (Gal)	8,948,000	24,691,000	33,639,000
Backwash to waste (Gal)	1,157,000	3,007,000	4,164,000
Finish Water - Treated & Distributed (Gal)	7,791,000	21,684,000	29,475,000
Efficiency	87%	88%	87.6%

Fire Hydrants

Total Hydrants	Out of Operation	Hydrants Replaced	Hydrants Repaired	Painted	Flushed
1,632	1	0	1	0	23

- FWD personnel continued hydrant flushing on the High System in the Clarendon Street, Plymouth Street, Chester Street, Daniels Street, and Prospect Street areas.
- Checked/operated hydrant that was hit on Main Street at Snow Street - no issues with hydrant were found, it operated correctly.
- On Monday, a contractor (Hydra Tech) performed hydrant maintenance at 535 South Street (Ashley Ridge Condos). These are hydrants owned by the condo association.

Water Distribution

- On Monday, FWD personnel paved two trenches on Fairmount Street
- On Tuesday, FWD personnel excavated and removed a broken 2-inch wheel valve and Siamese connection for the service to 130 Salem Street, crews replaced with a new Siamese connection and a 2-inch curbstop. Trench was backfilled, compacted, and paved.
- On Wednesday and Thursday, FWD personnel cleaned, checked, and adjusted gate boxes on Summer Street from Main Street to Harvard Street. Crews also marked out and called in DigSafe for replacement of old iron pipe water services at 12-14, 17-19, 89, 97 and 118

Summer Street, FWD will start replacing these services next week in preparation for road reconstruction project next spring.

- Marked out curbstops for shut off at 60 Highview Street and 201 Beech Street - need to change meters at these locations and interior valve may not operate.
- FWD personnel worked on cleaning off the 16-inch by x4-inch tee that was removed from Main Street in front of City Hall to get it ready for paint. It will then put on display at the Falulah Plant. This tee was manufactured by the Fitchburg Water Works probably around 1900 and is a part of the history of the Fitchburg Water Division.
- On Tuesday, Steve/Greg assisted Cogswell Sprinkler Company with flushing the water main and fire sprinkler main at 224 Industrial Road (Avery/Dennison building).
- Monitored/inspected work on the new water main to City Hall on Main Street all week.
- Spoke with contractor (Glen Hines) about a new water main installation at 579 South Street, advised that the water main size is 8-inch with a tapping sleeve and valve.
- Spoke with Hiller Fire Protection about hydrant flow test information at 307 Airport Road. Information on file was given.
- The first class of the Fall Advanced Water Treatment Course was held on Monday at the Falulah Plant. This course consists of a total of seven, full-day classes (Mondays, except for Columbus Day).
- Inspected/sealed new meter installations by private contractors and installed MIUs.
- Removed seasonal irrigation meter and backflow device from Morin field.
- 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).
- Removed seasonal meters at Gus Johnson Field (two meters), Monument Park, Beech Street Splash Park, Westminster Street Splash Park, at the boulder on Main Street, and rotary at Rindge Road/John Fitch Highway.

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

Water Permits and Inspections	
Type	Number
Emergency DigSafe Markouts	7
DigSafe Markouts	31
Inspections of Work on Water System	5
Record Plan Updates	3
Curb Stops Turned off/on	10
Located/cleaned gate/curb boxes	26
Final Readings/Real Estate Closings	14
New Meter Installations	6
Seasonal Meters Removed	7
Backflow Preventers Tested	20
Residential Appointments Made	10
Totals	239

WASTE WATER

During the last week of September, the WWTF treated 33.2 million gallons of sewage with no bypasses. In total, 37.8 tons of organics and 72.6 tons of solids were removed and prevented from entering the Nashua River.

<u>Week of 9/29/2019 - 10/05/2019</u>		
Sewage Flow	33.25	Million Gallons
Rainfall	0.46	inches
Secondary Bypass	0	Million Gallons
BOD _{in} (lbs)	78,670	pounds
BOD _{out} (lbs)	2,961	pounds
BOD Removal (%)	96.03%	
TSS _{in} (lbs)	149,388	pounds
TSS _{out} (lbs)	4,127	pounds
TSS Removal (%)	96.96%	

Sewer System

- Paved 100 linear feet sewer trench on Airport Road.
- Inspected previously paved sewer trenches on Townsend Street, will team up with DPW Streets Division to repair.
- Met with FFD to discuss replacement of a chamber and manholes in the station parking lot.
- One combined sewer overflow (CSO) occurred during the week, at CSO-39.
- Replaced three locking frames and covers on Will Thompson Way and Lyric Lane.
- Replaced sunken frame and cover at 260 Walton Street.
- Cleared easement and raised frame and cover on Burma Road Trail, behind #24 Bilotta Way.
- Cleared and jetted a soft blockage at manhole at First Street at Railroad Street. Manhole has a poor-condition invert, and will be replaced as part of CSS project in Spring 2020.
- Pumped out water on Airport Road manholes that we will abandoned next week. Also sawcut these manholes.
- Performed weekly pump station checks: all were in good order.
- Raised a buried frame and cover at #84 Bilotta Way.
- Patched manhole where pavement had sunk at #9 Hannigan Court.
- Restored driveway where we dug for a manhole on Cobble Drive behind Brideau Oil.
- Ordered Road Plates, Barrels, Cones, and Detour/Road Closed signs for Safety Program.
- Conducted in-field investigations in South Street/Benson Street Sewershed and found 4 catch basins that are illicitly tied into the Sewer System. One Catch Basin can be removed using in-house forces on South Street near Whalon Street.
- Reviewed SSES Phase II Final Draft prior to EPA/DEP Submittal.



Figure 6: Airport Road paving.



*Figure 7: Replacement frame & cover, at #260
Walton Street*

Plant Operations

Due to the recent dry weather, there were no bypass events at the plant. Plant maintenance continued with preventative on the various elements of the treatment system.

Kickoff meeting was held with acoustic consultant to address nuisance noise at East Plant.

Received easement valuation from Howard S. Dono & Associates, for Airport property easement valuation of gas service easement, for the gas service line to the East Plant, for incorporation of into easements process with the Fitchburg Airport.

Planning for “The Continuing Adventures of CC Sewercam” for 2020 release.

Continuing coordination for Massachusetts STEM Week 2019 presentations at Fitchburg Public Schools (McKay, Memorial and Longsjö), for Friday – Oct. 25th.

Provided information to Council & Mayor’s Office, concerning the proposed Massachusetts State House Bill (H.3976), titled “An Act on Promoting Awareness of Sewage Pollution in Public Waters”.

ENGINEERING

DPW Engineering performed a review of feedback received from the US Census Bureau on its Local Update of Census Addresses Operation (LUCA) that was completed in 2018. The City does not have any objection to the feedback received, and will not be filing an appeal.

Engineering Services			
	<u>Type</u>	<u>Number</u>	<u>Fees</u>
PERMITS	Dumpster Permits		
	Trench Permits		
	Excavation Permits		
	Driveway Permits		
	Sign Permits		
	Sewer Permits		
INSPECTIONS	Driveway Inspections		n/a
	Trench Inspections	22	n/a
	Site Inspections		n/a
	Dig-Safe requests	10	n/a
	Sewer/Drain Inspections		n/a
	Street Light Inspection	13	n/a
	New Address Assignments		n/a
	Parcel Updates		
	Planning Reviews		n/a
	Totals	45	\$0.00

ADMINISTRATION

Solicitation for plow contractors has been posted on the City's Purchasing website in both English and Spanish. Contracts have been sent to anyone that has plowed for us in previous years. Questions have started to come in regarding insurance requirements.

Placed an order with Eastern Salt for 25 loads of road salt.

Reviewed all DPW Department accounts for accuracy and monitored budgets.

Performed sewer billing analysis for FY16-FY20.

Started to perform water billing analysis for FY16-FY20. This is the starting point to a financial projection and capital improvement plan for the water department.

All DPW divisions processed their bi-weekly payroll warrants which included contractual stipend payments.

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	69	\$ 79,457	*Note 1	\$ 11,425		\$ 68,411
Cemeteries	10	\$ 2,346				\$ 11,979
Parks	5	\$ 1,212				\$ 7,306
Recreation	7	\$ 5,592				\$ 3,731
Water Supply	39	\$ 41,557				\$ 59,905
Waste Water	56	\$ 110,008	*Note 2	\$ 33,140		\$ 73,524
Total	186	\$ 240,171	-	\$ 44,565	\$ -	\$224,855
*1 - Engineering Permits & Performance Bonds		3				
*2 - Septage at East Plant (Gallons)		389,882				