



# TOWN OF LINCOLN

WATER DEPARTMENT

MIDDLESEX COUNTY  
MASSACHUSETTS

TOWN OF LINCOLN  
WATER DEPARTMENT  
16 Lincoln Road  
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Water Commissioners Meeting

**August 20, 2019**

4:00 p.m.

**Town Hall Donaldson Room, 16 Lincoln Road**

Attendees:

Ruth Ann Hendrickson, Chairman  
Heather Ring, Water Commissioner  
MaryBeth Wisser, Water Superintendent

Ryan Neyland Tata and Howard  
Patrick O'Neil Tat and Howard  
Sara Sherlock former owner of 225 Sandy Pond

Absent: Bob Antia, Water Commissioner

Commissioner Hendrickson called the meeting to order at 4:00 pm.

**1. Approve Minutes of the July 10, 2019 - vote expected:**

The Commission reviewed and approved the minutes as amended (discussion on fees for exempt list was tabled) for the July 10, 2019 meeting. Motion made by Commissioner Ring, Second by Commissioner Chairman Hendrickson. Approved unanimously.

**2. Drought Update- vote expected:** The Board reviewed the pond levels for August 2019. Superintendent Wisser informed the Board the pond level had dropped about one foot. The levels are the same as in 2018.

Motion made by Commissioner Ring to continue with the current water conservation program already in place. Second by Commissioner Chairman Hendrickson. Approved unanimously.

**3. Appointment – Sara Sherlock to discuss 225 Sandy Pond Road water service - vote expected:**

The Board considered the request from Mrs. Sarah Sherlock, former resident of 225 Sandy Pond Rd to share in the costs for finding the water main. Superintendent Wisser informed the contractor and Mrs. Sherlock that the location of the water main may not be as shown on the plans and advised the contractor to get a road opening permit from the Town. Mrs. Sarah Sherlock agreed to hire the Town to locate the main and was informed that all cost associated with the installation would be passed on to her for payment. Mrs. Sherlock presented her request to the Board providing receipts and documentation of the money expended. Commissioner Ring stated that Sandy Pond Road was relocated a while ago and the Water Department maps were not updated

Motion made by Chairman Hendrickson for the Water Department to pay for half the cost for day one excavation and all of the cost for day two excavation for a total refund of \$2790 for the installation of the water service for 225 Sandy Pond Road. Second by Commissioner Ring Approved unanimously.

**4. Abatement request 194 Lincoln Road – vote expected:**

Superintendent Wisner informed the Board that the abatement was denied twice before. The customer is appealing the decision. Commissioner Antia reviewed the data logger report. The report indicated a leak condition existed in December 2018. Ms. Wisner informed the Board that the customer contacted the office in August 2018 regarding broken pipe in the irrigation system. The customer was away on vacation so the leak went undetected for a month. The customer shut the system off but did not repair. The water department visited the property in October 2018 and the leak was not repaired. The water department visited the property in December 2018 to perform a data logger and the leak was still not repaired. Superintendent Wisner furnished the Board copies of the water bills before and after the leak as well as the usage history report.

Motion made by Commissioner Ring to deny the abatement request for 194 Lincoln Road due to the fact the leak was not repaired in a timely matter per the regulation, Second by Chairman Hendrickson. Approved unanimously.

**5. Appointment – 153 Lexington Road to discuss water bill:**

The Board reviewed the information provided in an email from Assistant Town Administrator Mary Day. The March 2017 minutes say: *Commissioner Lawler proposed, as an interim measure, that the Tier 1 level stay at 0-20,000 gallons and that the Tier 2 level change to 20,001-100,000, above which the Tier 3 rate will apply.*

Email from Mary C. Day reports:

On 8/06/18 she was issued a bill #28250 for 40,905 gallons. 905 gallons were billed at the Tier 3 rate instead of the Tier 2 rate. She is due \$10.36.

On 12/10/18 she was issued bill #29998 for 46,588 gallons. 6,588 gallons were billed at the Tier 3 rate instead of the Tier 2 rate. She is due \$75.43.

In addition to this she was charged 2 interest amounts because she was told by different people to only pay what she owed. The two interest amounts are \$16.05 and \$32.58.

She is not looking for an abatement on the usage itself, just the rate at which it was charged. That would make this an adjustment based on a previously board approved rate.

My suggestion is that you approve an abatement for  $\$10.36 + \$32.58 = \$42.94$  on bill #28250 and  $\$75.43 + \$16.05 = \$91.48$ . This totals \$134.42 and will settle the outstanding issue for her.

Motion made by Commissioner Ring to direct the Town Accountant to return the overcharge for 153 Lexington Road due to the clerical error. Second by Commissioner Chairman Hendrickson. Approved unanimously.

**6. Appointment: Ryan Neyland Tata and Howard: Update on the disinfection By Products:**

Ryan Neyland presented two graphs associated with disinfection byproducts (DBPs) to show correlations between various water quality and operational parameters.

Graph No. 1 – TTHM Concentrations on the left side vertical axis, TOC/DOC on the right side vertical axis, both plotted versus time in months (February 2018 – August 2019). Graph No. 2 – Water Source Percent Contributions from the WTP and Well on the left side vertical axis, TTHM Concentrations on the right side vertical axis, both plotted versus time in month (February 2018 – August 2019). High TOC/DOC typically results in elevated TTHMs during the same month or following month. Months in which the water contributions from the WTP (surface water) are greater than normal (normal is around 65%-WTP/35%-Well) result in higher levels of TTHMs.

TOC/DOC levels in general have been increasing over the years with consistently higher levels in the summer of 2019 than historical levels. TOC/DOC levels experienced in the summer 2019 are approximately double the levels seen during the pilot study in the summer of 1999 prior to the WTP design. In April 2019 there was large spike in TOC levels in the surface water, followed by a large change in pumping scheme where 88% of water contributions were from the WTP in May 2019. The combined effect of the large increase in TOC and large pumping percentage from the WTP likely resulted in the large spike in TTHMs.

We have been working with the LWD in an attempt to pump greater volumes from the well and less from the WTP by modifying tank control setpoints. However, due to the well's current specific capacity (gpm pumped/foot of drawdown in the well) being less than 50% of the original specific capacity because the well has to be cleaned, the well continues to shut down on low water level. LWD's SCADA integrator was scheduled to be onsite to reduce the low level setpoint from 7.5 to 3.0 feet which will allow the well to be pumped at a higher rate. Pumping rate was recently dropped to 350 gpm, but will likely be able to be increased back up to 400 gpm or even greater with the low level setpoint change. We recommend cleaning the well in Fall 2019 to restore capacity. However, due to the age and overall condition of the old style shutter screen, a replacement well is recommended at Tower Road. The current well loses capacity much too quickly to sustain its use long term. Estimated costs for design, permitting, and construction of a replacement well were submitted to the LWD for planning purposes.

Clearwell operations at the WTP have been adjusted to lower the level of water in the clearwell which reduces the contact time in the clearwell and allows water to flow through the clearwell and into the distribution system quicker after chlorine is added. This was recently modified to help reduce TTHM production in the water in the WTP and reduce overall water age. Reducing the level in the clearwell also reduces the volume of water stored in the WTP clearwell during the 6-10 hour daily shut down period through the evening hours. This results in less water generating TTHMs in the clearwell prior to discharging into the distribution system.

There is some chance we could add a coagulant to the raw water to remove some TOC through the membranes. Tata & Howard is working with Evoqua to come up with a proposed plan to do some preliminary jar testing on various coagulants to determine if any will work to achieve some TOC removal. The membrane filtration technology at the WTP will not be able to remove a large percentage of TOC like a conventional or DAF plant is designed to do, but may be able to remove enough to remain below TTHM MCL. Jar testing and pilot testing will be necessary in the summer season to determine effectiveness. Coagulant storage and addition may be done at the WTP or at the raw water pump station depending on available space required, but space is limited at both locations. If coagulant is added and additional residuals are generated and backwash, the handling facilities/tanks and recycling system will need to be evaluated and likely modified.

Generating chloramines following the clearwell may be a viable solution to reducing the formation of additional TTHMs post-clearwell. However, if the DBP values coming off the clearwell are too high (LWD is conducting sampling to determine clearwell effluent DBP values), then generating chloramines may reduce the formation of DBPs, but not at a rate sufficient to prevent MCL violations. DBP values may always be close to MCL levels in the summer season even with chloramines. Generating chloramines does not physically remove the organic content from the water, but just inhibits the reaction of free chlorine and organic DBP precursors reducing the formation of DBPs in the distribution system.

Proposals for potential future engineering services were reviewed included the following:

Water Distribution System Mapping (Valves and Hydrants only) and Unidirectional Flushing (UDF) Plan  
Interconnection Evaluation (taking into account the previous Weston interconnection study)  
Distribution System pH Evaluation

Ryan Neyland presented and explained two graphs to the Board. The first graph represented TTHM, TOC, DOC concentrations from 2018-2019. The second graph represented Water Contribution percentages and TTHM 2018-2019. There is a direct correlation between increasing TOC with the increasing of TTHM in the warmer months. Winter months typically have shown lower TOC and Lower TTHM.

**7. Discuss the results of the Energy audit. Does the Board want to place the upgrades in the FY21 Capital– vote expected:**

Superintendent Wisner recommended not to pursue the energy saving lighting upgrades at this time but rather replace the bulbs and fixtures as needed, a little each fiscal year. Ms. Wisner recommended the Board consider increasing the building maintenance so funds would be available each year. Ms. Wisner informed the Board that the light fixtures in the office and multipurpose room have already been upgraded.

Motion made by Chairman Hendrickson not to include the upgrades noted in the energy audit for the FY21 Capital and to replace as you go. Second by Commissioner Ring. Approved unanimously.

**8. Discuss the Dam Operation and Maintenance Policy – vote expected:**

Superintendent Wisner explained to the Board that she had been working with Chairman Hendrickson and added in the chain of command as well as defining the level of emergencies. Commissioner Ring suggested Ms. Wisner add a section to the document for definition of the acronyms Chairman Hendrickson suggested Ms. Wisner specify the engineer referenced as a contact in the report.

Motion made by Chairman Hendrickson to accept the dam operation and maintenance policy as amended. Second by Commissioner Ring. Approved unanimously.

**9. Discuss the 2019 updates to the Water department rules and regulations – vote expected:**

Changes made to the regulations are as follows:

Revised Table of Contents
Added new section numbers
Added grandfather clause for existing irrigation meters section 19.10
Changed right to left page 12 for fire hydrant opening direction
Added the distance between hydrants
Moved Abandoned service and service leak to the rates and fees section increased fee from \$2500 to \$3500
Soil moisture changed fees from \$30 and \$40 to \$50 for both
Changed # of days from 90 to 60 for submission to be consistent with other rebate programs
Changed the washer rebate from \$200 to \$100
Removed verifying and replaced with demonstrate rebate program
Relocated fire suppression fees to the domestic and commercial water lines section
Increased fees for fire suppression fees to the domestic and commercial water lines 7500, 8500, 10,000, 15000, 40000, 80000, 120000 from 2500, 3750, 5000, 10000, 20000, 40000
tapping section
Base charge is now per dwelling for multiunit buildings
After hours rate 200 to 250

Hour rate from 50 to 60 for additional hours over 4 hours
Increased backflow fee from 50 to 75
Increased irrigation meter fee from 1250 to 2500
Added missed apt fee 50
Increased meter opt out fee from 15 to 25
Increased non radio meter from 200 to 300
Eliminated the faucet rebate program

Motion made by Chairman Hendrickson to continue discussions at the next regular Water Board Meeting. Second by Commissioner Ring. Approved unanimously.

**10. Discuss the FY'21 Capital and Operating Budgets – Round One:** Superintendent Wisner presents the draft FY21 Capital and Operating Budget to the Board: Tabled

**11. Discuss phase two of the air quality monitoring at the WTP:**

Superintendent Wisner informed the Board the report confirmed that while working inside the containment a full face respirator is required, but that the operators no longer need to wear the respirators while working in the process room. The Department will continue to incorporate the recommendations noted in the Tata and Howard report.

**12. Discuss Emergency Response Plan (ERP) and sign the signatory page for the revised ERP:**

The Board approved the revisions to the Emergency Response plan and signed the Section 1.3 Plan Approval.

**13. Update from Commissioner Antia on the Communications improvement project:** Tabled

**14. Discuss increasing the travel time from 45 minutes to 1 hour so that we can reach a wider range of potential candidates for employment – vote expected:**

Motion made by Commissioner Ring increase the travel time from 45 minutes to 1 hour so that the department can reach a wider range of potential candidates for employment Second by Chairman Hendrickson Approved unanimously.

**15. Discuss the change of goals regarding the preparation of minutes and re-sign the cover sheet – vote expected:** Tabled

**16. Other business**

- **The unexpected resignation of Jennifer Curtin will require additional services from Randy Mercer for training and for completing the next billing cycle. Ms. Wisner will get a quote from Mr. Mercer.**
- **Sign the addendum with Tata and Howard for project management services for the catwalk**

Motion made by Commissioner Ring to sign the addendum with Tata and Howard for the additional services needed for the installation of the OSHA catwalk platforms for the Water treatment Plant Second by Chairman Hendrickson Approved unanimously.

There being no further business, the meeting adjourned at 7:25 PM. Motion made by Chairman Hendrickson. Second by Commissioner Ring. Approved unanimously. The next meeting of the Water Commissioners is scheduled for September 10, 2019 at 9:00 AM at Town Hall, second floor hearing room, 16 Lincoln Road.

Respectfully submitted, MaryBeth Wisner, Water Superintendent