



LYNNFIELD CENTER WATER DISTRICT WARRANT
The Commonwealth of Massachusetts
Regular Board Meeting
7:30 pm October 1, 2020

Date, time, place: The regular meeting of the Board was held on Thursday October 1, 2020 at 7:30 PM via Virtual Zoom Meeting.

Present via Virtual: Commissioners Anders Youngren, Joseph Maney, Jack Adelson, Superintendent John Scenna, Treasurer James Alexander, and Clerk of the Board Christine Smallenberger

Absent: none

Also attending virtual: Mike Nelson from CDM Smith, Stefan Taschner, Paul Wood, Cara Maney, Anthony Bartolo, Adriana Nastari, Kathy Campbell

Additional attachments: Agenda, incorporated into the minutes hereto.

Next Regular Meeting: October 13, 2020 at 7:00 PM - Virtual

Adjourn: 9:25 PM

Chairman Maney read the following statement:

Pursuant to Governor Baker's March 12, 2020 Order Suspending Certain Provisions of the Open Meeting Law, G.L. c.30A, §18, and the Governor's March 15, 2020 Order imposing strict limitation on the number of people that may gather in one place, this meeting of the LCWD Board of Commissioners will be conducted via remote participation. Specific information and the general guidelines for remote participation by members of the public and/or parties with a right and/or requirement to attend this meeting can be found within this posting below. No in-person attendance of members of the public will be permitted, but every effort will be made to ensure that the public can adequately access the proceedings in real time, via technological means. In the event that we are unable to do so,

despite best efforts, we will post minutes of proceedings as soon as possible after the meeting.

The meeting was called to order at 7:32 pm and being recorded for keeping minutes.

1. Superintendent's Update

- a. Water Consumption, Restrictions, Demands and Emergency Plans: we spent the majority of summer operating under an emergency order we created with the DEP. That emergency order allowed us to supplement our existing infrastructure and resources to supply water to match the demand in the district. In June the demand far exceeded supply which led to the emergency order. 2 things came out of this order: the ability to use station 1 on an emergency permit only and the ability to supplement our water with MWRA if needed, wheeling through the Lynnfield Water District (LWD) with a temporary connection on Summer Street where the systems abut. On September 24th we elected to rescind the order and return the system to level 3 restrictions that allows normal outdoor watering and also allows for watering with automated systems on Tuesdays and Saturdays. As of that week, the average daily supply in September was 753,000 gallons +/- when compared to June where the average daily was 975,000. The average daily peak was around 1.2 million gallons at certain points in June. It is less than the August average, which was around 820,000. So far, we have not had any issues with lowering the restriction since we lowered it to a level 3. A lot of good came out of this emergency order. We were able to stabilize our system. We were operating at extremely low pressures that caused issues in residential homes with plumbing issues and were concerned with fire flow. The emergency order allowed us to restabilize our system. Also, this summer created a path to use station 1 as a seasonal basis moving forward. Station 1 was originally signed on an emergency permit with the DEP as the nitrate levels were approaching the level where it needed to be shut down. We ran station 1 in the spring and operated station 1 in the summer and collected data through live testing and analytical lab testing. We collected enough data to give to the DEP to allow us to consider use of station 1 again for seasonal use. The nitrate levels never got near the limit and actually went down the more we used station 1 during the summer. This was a huge benefit. Also, prior to bringing in MWRA water, we had to do a blending analysis for the DEP. This was something we had to eventually do as part of our long-term capital plan for a lot of options to supplement our water. CDM did a great job creating this report. CDM looked at years of water sampling results. The difference is we treat our water with chlorine and the MWRA treats their surface water with chloramines. The MWRA also operates at a

significantly higher pH level. The blending analysis produced, demonstrated we can blend our water without significantly adding infrastructure to treat before blending. We also looked at various scenarios earlier in the summer that looked at the height of the water in our storage tanks and how it affected areas with pressures. The operators, with their years of experience, did a good job determining the levels and how it affected pressures. We were able to document tank height in its relation to its fire-fighting abilities. We also looked at potential sources for water on an emergency basis in and around the district. We quickly realized the best way to supplement is through MWRA from a neighboring town. A lot of good came out of this emergency order. We spent the summer analyzing data averages. We were able to maintain pressure once we supplemented our sources yet needed to remain at a level 5 restriction; at this point it is what was needed. This will probably be the last night this item will be on the agenda. LWD is preparing a bill for water consumption during our testing and the MWRA will bill us as well. We had flowed approximately 12,000 gallons. We will use all this information for our capital studies.

- b. Update on p/t administrative assistant position: We have offered the position to Keira Finnegan and she has accepted the part-time position. Ms. Finnegan will be starting next week for training with a regular work schedule Monday through Thursday from 12pm to 4pm and will be covering full-time while the office manager is on vacation. Ms. Finnegan's background is in the gaming industry and did a lot of customer service and marketing for new clients. This experience combined with strong work qualities demonstrated during the interview process will be a good fit to the office and allow us to work more efficiently and more effectively. The board supports the superintendents' decision. We had a great pool of candidates to choose from.
- c. Update on September quarterly bills: A week and a half ago the office issued over 2700 bills for the summer quarter for June, July, and August. At this time, the superintendent presented a brief PowerPoint focused on the rates and the time and effort involved in setting the new rate structure. The rate setting process had been an ongoing item and discussion for almost a year now. One of the initiatives of the board is to look at the rates and create a rate structure that is fair and equitable and covers our costs. This comes at the tail end of a prior administration where a budget had been passed with those rates unable to sustain the budget that was in place. A committee was created with Commissioner Youngren as the liaison to the committee. The committee consisted of Stefan Taschner, a longtime

district clerk and former commissioner and administrator, and 2 volunteers from the district. We advertised for volunteers to form the committee. The committee worked with Raftelis, a municipal financial advisor for utility companies that specializes in forecasting, rates, and building capital investment into the rates. Dave Fox, the project manager, worked with the committee. The committee looked at what goes into the rates. The rates need to cover the operating budget, maintenance budget, indirect costs, capital studies and reserves. We need reserves in case of issues. We need to build enough revenue to cover capital projects we desperately need such as the current capital projects we are studying for supplemental water and consistent water quality. The district collects revenue from 2 bills: the water revenue is collected through the water bill which used to be a yearly bill. Added to this, is a piece of the release estate tax bill which is labeled Lynnfield Center Water District tax. The tax revenue is based on the value of your home assessed at a rate set by the Board of Commissioners. Historically the district has received nearly 80% of revenue from the tax levy based on the assessed value of your home, not on water consumption or number of people living in your home. The smaller portion of revenue, approximately 17% is based on volumetric rates. The main purpose of the study was to determine the appropriate methodology for the district's cost recovery mechanism. With most utilities, the more you use the more you pay. Nearly every utility is based on volume. The district, similar to LWD both have this tax piece. The scope of the rate study was to analyze water usage from previous years and looked at assessed property values and use data to create new water rates to fully recover revenues at an appropriate balance between tax and rate recovery. The primary goals were to promote equity amongst customer base, maintain adequate and stable revenue stream and reduce revenue reliance on the tax base. The assumptions that came out of the new rate: the yearly bill was replaced with quarterly billing, we reduced the number of tiers to 3, recognized increased cost of servicing non-essential customer fixed charges and spread out through all quarters in the system. We looked to increase our revenue stream to ensure financial stability and reduce reliance on taxes by recovering a substantial amount more of revenues from volumetric rates. The chart in the presentation shows the shift of impact from the new rates. It is less dependent on the tax and puts more of the cost on how much water you use. We looked at the impacts during the process and 65% of customers were forecasted to have zero impact or a lower water bill with the new rate system in place. About 14% of our customers were forecasted to have a 10% increase, 11% of our customers were forecasted a 20% increase and 12% of our customers were forecasted to have a 30% increase or greater. 70% of our customers were

not going to see an impact when you consider both bills. Once the rates were passed in February, we conducted a public outreach to ensure people were aware of the increase. We issued press releases on the new rates, televised a rate workshop, had several newspaper articles, and put inserts in the December 2019 alerting customers that we are considering changing the rates and an insert advising customers of the rate changes in the March 2020 bills. The June bill was the first bill with the new rates. We included a note on the left side saying this is your first bill on the new rates. We created a section on our website focused on the rate process to be readily available for our customers. The summer quarter has been completed and nearly 85% of our bills were below \$500. The average bill was \$307. 72% of bills were under \$250. Nearly 30% were under \$100. This produced exactly what it was forecasted to produce. The rates were set at the majority of our consumers based on their history of consumption. We expected some high bills. We forecasted 5% of accounts would have the highest impact. As a result, 4% of bills were greater than \$1,500. The distribution on the pie chart was similar to what was forecasted. Our new customer portal, WaterSmart, will bring consumption right into the hands of our customers without a water bill. The monthly readings will be put into the software for customers to access each month. They will be able to see their consumption and where they will fall within the tiers. It will allow us to provide information on how meters work and enable customers to pay their bills. Commissioner Youngren added the tax component of the revenue stream is important as we have 2 tasks the district is responsible for: 1 is to provide clean potable water and the other is to provide fire suppression support whether you use water or no water. All homes in the district are protected by the fire department by accessing the fire hydrants. Chairman Maney offered the 14 ratepayers in attendance a chance to speak or to call the office or the commissioners with any questions. There is a lot of misinformation out on social media. The office has researched dozens of accounts to provide people with more information as not everyone tracks their water usage. Similar to electricity, people don't track how much water they are consuming. We have looked back at many homes, and looked at their annual usage, re-read their meters and usage and with some homes we can get a daily usage report to show what is happening in a particular home. Chairman Maney once more expressed anyone with questions to please call and we will get you the information to help you better understand your bill. Approximately 30% of our meters can track daily consumption; Chairman Maney has a goal to achieve 100% of our accounts with this technology for daily/hourly usage instead of monthly. This project would also be up to the

voters of the district. Please see the attached presentation to be placed on file.

2. Supplemental Water Program Study

- a. Formal presentation from CDM regarding partnering options for supplemental water supply

2 voters in the district came forward at a prior Annual District Meeting to fund a study of the district for supplemental water studies. CDM Smith and the district have been working on this study diligently. At the Annual Meeting this past June, CDM presented options to the district. These projects are to upgrade the existing infrastructure and improve water quality and supplement our water system so we don't have to be as restrictive in the summer. The summary provided in June, provided Lynnfield Water District (LWD) as a potential partner for supplementing our water. We took a pause from this study and took the summer to look at other potential partners. The original study was looking at partnering with LWD. We wanted to make sure we left no stone unturned. If we requested an appropriation of funds from the district, we want to make sure we have done our due diligence. Mike Nelson and Angela Moulton from CDM worked throughout the summer in parallel with the emergency order and prepared a presentation of what we have studied.

Mike Nelson from CDM Smith presented a summarized finding for supplemental water options to the district. Mike will briefly review the presentation in June with the key points and will end with CDM's recommendation for the board's consideration. In June, CDM talked about a spectrum of options that included a do-nothing approach, 100% LCWD to 100% MWRA as well as in-between combinations of these options. The slides show the various options to address the quality issue. What we are focusing on today is in the middle and will call it supplemental water. The options we fully vetted are with 3 neighboring communities. The first option is Andover with an intermediary through North Reading (as that is the only hydraulic pathway to get water to the district). North Reading recently renewed an agreement to increase the water they get from Andover. The second option is receiving supplemental MWRA water from either LWD or Wakefield. Andover produces their own water from Haggetts Pond and Merrimack. LWD is 100% MWRA with a line up Route 1. Wakefield is a prime example of a community that is predominately MWRA yet produces their own water and blends it daily. They pump and treat their own water source with a split 90% MWRA and 10% their own water. A noteworthy item: why wouldn't we make a direct connection to MWRA? This would be an option under a different set of circumstances. If Peabody had gone to MWRA, a pipeline would have gone up Route 1 and a connection would have been made. This did not happen as Peabody decided to produce their own water and rebuild their own treatment plants. For the district to connect to MWRA, it would

be cost prohibitive and entail a bevy of complicated construction, large diameter water mains through multiple communities and onto Route 1 while bringing in Massachusetts DOT in for additional permitting and acceptance. The second route is through Wakefield but the master meters where it meets are on the wrong side and the farthest from the district and a large diameter would have to be built through Wakefield. The MWRA now allows wheeling to connect to an abutting system, bringing water in through their system. Several communities are taking advantage of wheeling through an MWRA community. We have looked at wheeling through LWD and Wakefield. The option to develop new groundwater sources is unlikely as a portion our withdrawal permit is in the Ipswich River Basin and a portion in the North Coastal Basin. The Ipswich River Basin has been studied and there is ample demand still available within our current withdrawal limits and permits but not ample for new groundwater sources. It is extremely difficult to obtain permits to build new wells from the DEP. We can drill for replacement wells. Currently, the district does not take their fully permitted yield and over time fatigue and performance can drop well production. The district is allowed to drill a replacement well within 250 feet of an existing well.

Option 1, Andover: We would have to go through North Reading who relies on Andover for water. If the district makes a capital improvement to our infrastructure, we want water when we need it most. Andover was upfront with us, they may have a problem providing water in June, or whenever the peak consumption months are. Getting water from their treatment plant through North Reading is quite a length for the water to travel in the pipes with a lot of pressure drop. They have transmission mains which would need to be upgraded as it is at its max capacity. We are talking a mile of main. Once the water gets through the pump station, there would be major upgrades needed in North Reading and we would need to build a new transmission main down Route 28. There is a lot of costs associated with this option. The conclusion was to eliminate Andover because it is not a cost-effective solution and there is no 100% guarantee to get water when it is most needed.

Option 2, LWD: The same 2 scenarios were developed and mimicked for a Wakefield option. We are looking to supplement during peak demand either 25% or 50% from MWRA. Supplementing through LWD, the 25% scenario would need pipeline improvements to push water into our district. Their main pumping station would need more powerful pumps and a bigger generator. The third consideration is LWD requires an above ground construction and off the road where land would need to be acquired or leased to build this infrastructure. There is an easement in proximity, but we do not have a cost associated with this building. With the 50% scenario, this increases the pipeline you will need. In addition, they would build a

new and bigger pumping station behind the existing station to push high volume of water through their system. This brings another challenge as the land behind their pumping station is Lynn Woods and to acquire the land would be an act of legislature for public park land as well as the new building at the interconnection. The pros of supplementing 25% from LWD is we wouldn't need to make upgrades to our pipeline. The cons include building codes, siting a new building where an above ground building is more expensive, and requiring legislature approval of state park lands. LWD's engineers, Tata and Howard, provided us with a map of their system. The red boxes are capital improvements, replacement of pumps, generator, VFD and controls. If we were to supplement at 50%, the main pumping station would be completely replaced.

In the Wakefield option with the same scenarios, some piping is required in both Lynnfield and Wakefield and there are improvements that straddle the town line. The biggest question is would a booster station need to be constructed to keep the district at the pressure we are used to. It is not required for 25% but borderline for 50% supplemental and rather than build a booster station, we can upsize some pipe. The 25% option would require some pipeline upgrades, with an underground vault containing a meter and a control valve. The current geometry turn radius of the road could be a benefit for safety to cars. 50% requires upgrades for both Wakefield and the district from 8 to 12 inch or 6 inch to 8 inch mains. Pumping is not required which is fantastic. There will be some pressure reduction only if Glen Drive is turned off. Environmental Partners presented the option at 250 gallons per minute (gpm) with not a lot of upgrades. The report focused on upgrades with the 50% option. CDM looked at the 25% option and how can we solve an issue Wakefield is having while getting the water at a reasonable investment. Within the presentation, 2 circles represent the gaps between the 2 systems with nothing in between. When you connect the 2 systems, it creates a loop. Wakefield might be willing to be a business partner as there is a mutual benefit to them. Baystate Road is deficient in fire flow and under the ISO fire requirements. It is essentially a long dead-end. This dead end does not have the required fire flow, is bad for water quality and redundancy and all three are a problem. There could be a mutual benefit. CDM has come up with a concept that the district could turn over the existing water main on Main Street and Baystate Road and turn it over to Wakefield. There are only 2 metered customers in this section, the Elks and an office building (original Northrup building). It is not uncommon to have another town service another town's customer. This would loop Baystate Road for Wakefield and provide 2 sources of water while increasing circulation. It does not solve their fire flow issue but improves the fire flow issue and for the district it costs almost nothing as it is 600 feet of pipe. The one capital improvement under this scenario is the district could run 800 feet, with an 8 inch water main on our

service side and create a redundant loop in the Pine Street, Edward Ave, Freeman Ave. neighborhood. This represents a minimal investment in pipeline upgrades. CDM feels this is a good solution. The 50% option has more upgrades at 575 gpm but there is an issue at Baystate Road. You can't get all the water through Vernon Street. If you push 575 gpm, you lose fire protection in the commercial area of Wakefield. There is a water main on Wharton that can be upgraded that can improve fire flow. To upgrade a water main on Main Street and Lowell Street, it would run through a traffic circle under I-95 in Wakefield which is a bit of an undertaking. This would be the only improvement to solve their fire flow issue. It is a critical factor for Wakefield should we push for all 575 gpm.

The cost comparison slide compares the potential LWD partnership directly to a potential Wakefield partnership at the two flow rates. CDM was provided costs for both LWD and Wakefield and we developed our own costs. Everyone has a base cost which wasn't exactly apples to apples. LWD included booster upgrades and piping replacement with a 25% cost for feed, and 50% cost for feed for increasing levels of investment for pipeline. Wakefield has no cost for a booster station and minimal costs for water main improvements in Wakefield at 25% and increases with the 50% option whereas LWD has more significant improvements and costs. With the LWD option there are no water main improvements needed in our district and minimal with Wakefield. It is standard practice to add 25% for contingencies and 25% for engineering and construction oversight. The subtotal has costs common to all options. The interbasin permitting allowance and MWRA tie-in fee, will be the same price for either option. Bringing MWRA into our district is a lengthy process. The tie-in fee is related to the amount of water you take. In these scenarios these are the only capital improvements and does not include the water rates. The district will need to agree on a rate for the cost of the water with whichever option is chosen. The district will pay an MWRA rate and an additional intermunicipal rate.

In summary: supplementing 25% with LWD requires pipeline and pump station improvements and land and possible legislative action to acquire use of the land. For the costs presented for 50% supplemental we are approaching direct connection costs with MWRA, this option is cost prohibitive. Wakefield at 25% is hydraulically favorable with a minimal investment and 50% is possible but requires more capital improvements, including upsizing our water main.

CDM recommends the district pursue a connection with Wakefield at Baystate Road and Main Street, reach an agreement for 250 gpm by creating a loop on Bay State Road, and begin the permitting process as it will take two and a half years. Within the permit, CDM recommends asking for 575 gpm for future flexibility (there is no

financial implication in asking for 575 gpm). This is especially important because Wakefield may be able to provide this level of water in the future if desired.

CDM also recommends completing the studies for treatment upgrades at Main Street wells, Glen drive wells, and continue the work of this past summer and pursue a permit for station 1 for seasonal operations. Station 1 was vital to this year and it made a difference. The 250 gpm of supplemental water is five times the water we received from Station 1. Receiving 250 gpm of supplemental water and bringing station 1 online will make a difference for summer demand.

In the past, CDM examined LCWD's system vulnerability. If there is a break on Heritage, there is only 1 water pipe that brings water to that area and the district would put out 200 customers with no water. The Wakefield interconnection is the only option that could solve this vulnerability to a portion of the district; this is important to consider.

Chairman Maney asked could we have a temporary interconnection next summer or is that too early to tell. Mike Nelson said it is possible, but the DEP allowed an emergency connection and only 12,000 gallons flowed through the connection. The next time we connect on an emergency basis, it will be at a 20% higher rate and would have approval from the DEP, MWRA, and an agreement with Wakefield. The permitting connection is a two and a half year process and CDM has data on it with much of the process not in our control due to the interbasin transfer act, and a mandated environmental impact report slowing down the process.

The cost for MWRA water was included in the emergency agreement and will be reviewed by board. Commissioner Younggren asked how stable is MWRA's unit rate. Mike Nelson said their financial department is robust and they do not bounce their rates, they go up and don't go down. They go up at a shallow slope and rarely stay flat. It is a shallow curve and predictable. Commissioner Adelson asked about redrilling the wells and what is the gap in terms of how beneficial to increase our yield. Phillips Road and Main Street are closer to their permitted yield. If we push Glen Drive harder, the iron and manganese will multiply. We are only at a 50% yield at Glen Drive and we can't push to produce anymore without improved filtering, or we will get more discoloration in the water source. Adding filtration to that station can supplement as well and push the station harder, similar to Phillips Road.

Superintendent Scenna reminded the board it does not need to act tonight. CDM is comfortable making a recommendation and if we want to stay on course on what we have been saying, the district would schedule a district-wide meeting later this Fall to discuss a few options. He recommends that the board should do their due diligence, looking at the chart and considerations for supplementing with LWD and

Wakefield and to what extent do we want to do either. CDM feels that if we supplemented our existing system with 25% we would likely live with a level 3 restriction as our new maximum level of summer restrictions. Glen Drive creates higher levels of iron and manganese; this problem can be fixed with a greensand filter plant. Recommending the filter system and an interconnection will give our infrastructure the ability to rest during periods of the year for maintenance and recharge the ground water. Flexibility is huge. The presentation will be posted to the website.

3. Continued Business

- a. CARES Act... funding options for reimbursement of COVID related expenditures: The office pulled together a long list of COVID related expenses. Superintendent Scenna submitted \$40,000 of eligible covid expenses including the emergency supplemental water supply as a direct result of covid restrictions. We are attempting to recoup through the town's application. The town is allotted a certain amount of reimbursements and will turn a portion over to us since we serve the residents of the town.
- b. Bank Transition: Treasurer Alexander transferred large amount of funds last week. 1 or 2 accounts are still open with some clean up that needs to happen. We set a goal to be complete by November 1. Money was left in the operating account for outstanding obligations along with the payroll account for outstanding obligations and petty cash has a few thousand remaining. The rest has been transferred to the Everett Bank. The debit card issue has been resolved.
- c. Filter Rebate Program: there is still about \$24,000 left. The program is still active until the money is gone. Tomorrow we will prepare a rebate for West Tapley, Mayberry, and Tapley off Norris. Superintendent Scenna has rebates from Townsend Road and Perkins, which are within the flushing area, a little south of the area of impact and not eligible based on the conditions put forth. The only concern with changing the conditions is we have rejected some in the past that were outside the initial area. The board supports the superintendent to use his discretion with the people we have previously denied.

Motion: a motion was made to allow the superintendent to expand the rebate program within the flushing area and change the conditions from Apple Hill to the flushing area to take advantage of the filter rebate program.

Seconded: the motion was seconded, and the motion was passed with all saying aye by a unanimous vote.

4. Other Board Items:

- a. Approve Water Filter Applications: The rebates received will be put on a warrant and sent to the commissioners electronically for their approval.
- b. Approve Prior Meeting Minutes.

Motion: a motion was made to approve minutes of prior meetings for August 5, 2020, August 24, 2020 and September 14, 2020.

Seconded: the motion was seconded, and the motion was passed with all saying aye by a unanimous vote.

- c. Approve A/P and Payroll: The commissioners will approve electronically.
- d. Any other unanticipated items by the Board: none

A motion was made to adjourn at 9:25 PM.

Respectfully submitted,