

REGULAR MEETING OF THE BOARD OF THE LYNNFIELD CENTER WATER DISTRICT

The regular meeting of the Board was held on Monday, November 7, 2018 at 6:30 PM in the cafeteria at the Lynnfield Middle School at 505 Main Street, Lynnfield. Present were Commissioners Chairwoman Constance Leccese, Richard Lamusta, Superintendent Kenneth Burnham, Water Foreman Nick Couris, and Christine Smallenberger, Clerk of the Board.

Chairwoman Leccese called the meeting called to order at 6:34 pm. Chairwoman Leccese began the meeting with a discussion about the newsletter by introducing Angela Moulton from our engineering firm, CDM Smith to members of the District in attendance (refer to the attached sign-in sheet).

Angela Moulton took the floor and introduced CDM Smith engineers John Doherty and Carol Reigo in attendance. Angela Moulton said the District worked hard to put together the informational brochure with the intent for it to arrive at everyone's home last week. Unfortunately there was miscommunication with the mailing company and the understanding of CDM Smith is that the brochure has not yet arrived at anyone's home.

Angela Moulton will be presenting an overview of where the District's water comes from and further speak about the water at Glen Drive and why the District should consider the Greensand Plant at the December 10, 2018 Special District Meeting. The Lynnfield Water Department receives water from a different entity, MWRA. The District has 2 storage tanks on either side of district and has 4 locations with well sites, where the drinking water comes from. They are all groundwater. Two locations are Main Street and Glen Drive and come from the Ipswich River Basin and the other two locations are Phillips Road and come from the North Coastal Basin. The District is fortunate to receive water from 2 water locations. Ipswich River Basin is a stressed basin and other communities pull from this basin; when the river runs low the District is mandated with a watering ban. The big question is why does Glen Drive need treatment now? Glen Drive was constructed in the 1990s. When the District drove the Glen Drive wells, they did lots of pump tests and water quality was high quality with no need for a greensand filter and the high yield made it an ideal location for a water source. Manganese is naturally occurring in rocks and commonly found in Massachusetts. The manganese levels were low and there was no need for a filtration plant. The manganese slowly increased over time. Manganese is regulated as a secondary contaminant level. Over a certain value it gives discoloration and could be related to taste. 40% of the District's drinking water comes from Glen Drive and 40% comes from Phillips Road and the remaining water comes from Main Street at 20%. Glen Drive is a major contributor to the Districts' water supply and they all mix together.

How does greensand work? There are 4 bedrock wells that are pumped in a combined clear well, goes to a pumping station, then to distribution and finally to your home. The warrant article is proposing to install a greensand to the pumping station to remove the manganese in the water. Phillips Road is an existing site in the North Coastal Basin where we draw 40% of water. There is an existing greensand at Phillips Road that was originally developed in the 1980s as the water quality deemed it necessary. The District saw there was elevated iron and

manganese. In 2010, the district wanted to expand the site and did more sampling and it still showed iron and manganese levels. They took the opportunity to install the greensand filter plant. The warrant article is to address the water quality and water quantity. The 1 warrant article is a 2 phase approach. We are considering phase 1 for water quality. The issue is there are higher levels of manganese at Glen Drive and the proposal is to install the greensand filter plant. It is estimated to cost \$5.25 million and could be online in the year 2020. The second phase is to address the water quantity. Because the Ipswich River Basin is stressed, the District is looking to fund for additional sources of water; this additional water could come from surrounding towns, wells at other sites or MWRA. There needs to be a study to get additional water supply and that is for the peak demands where people tend to use more water. There will be a Special District Meeting on December 10, 2018 at 7 PM. The District is asking residents to come out and vote on this warrant article. A yes vote would address water quality issues at Glen Drive for 40% of water supplied and also to look into the study. A no vote would remain the same and see elevated levels of manganese and the District can't move forward with the study for additional sources. The flushing program helps to remove manganese buildup in the pipes. In order to get it out you need to get out the source and that's through Glen Drive. The preliminary schedule is also included in the mailer. The green (on the preliminary schedule) is to design and construct Glen Drive. If the District gets a yes vote we anticipate it could be online in 2020 and a yes vote would begin the study for additional water supplies. The red bars represent permitting and approval process if the District would obtain drinking water from MWRA as an additional source. There would be another Special District Meeting if the District wants to move forward to supplement for MWRA and this could take up to 2 years for permitting and another 2 years for design and construction if the District chooses to go in this direction.

The bar chart goes into the water rates. The first blue bar shows the approximate average water bill is around \$140 to \$150 per year. The District is currently revising their water rate structure to adjust the rate structure to encourage water conservation. The green bar shows how the water rates could be affected if you have a YES vote and how it would be paid off. The red bar is hypothetical 100% MWRA and a sample of what the rates might look like. The water rates are only tied to your water usage and are not related to the taxes. It's the physical amount of water that you use. Over time, water rates increase due to inflation and escalation and will be expected to increase. There is a regular scheduled meeting on November 26, 2018 and CDM will be there to answer questions. And the next meeting is the Special District Meeting on December 10, 2018 where residents will come out and vote whether to construct the greensand filter plant and move forward looking at additional water supplies.

A ratepayer asked: Is there a reason behind the December 10, 2018 date. A lot of people don't feel they are affected by it. I'm wondering if there is a reason why or can it be delayed and make an educated decision. The brochure might get people to read it. Chairwoman Leccese said the brochure should be arriving tomorrow to everyone's homes. We are giving you 6 weeks to review and if anyone has questions they can call the District. The District wants to improve the quality of water.

Another ratepayer asked why invest \$6 million on a stressed basin; can we just do the study. Angela Moulton responded the study does show if the District were to continue to grow you

would hit a point and couldn't meet the daily demand; the District is built out so the District can meet demand. Chairwoman Leccese said the District pulls from 2 basins. We want to take care of the water quality issues in your homes. A ratepayer asked how about we just get a price for MWRA, that would solve all the problems and there would be no ban and water quality. How come you aren't giving us what we want? We asked for that months ago and this is the only plan. You never talked about that. Chairwoman Leccese responded the board has discussed this with our engineering firm and had done thorough investigation and we are responding to the majority of ratepayers. We do work for the District. This is the best option in our opinion for the ratepayers in the District. A ratepayer responded if we vote no, what is Plan B, the flushing has done nothing. Superintendent Burnham said we will continue to do directional flushing. In the summertime we won't have the availability to flush. A ratepayer responded I still have brown water and shouldn't have to install a filter, I don't have the money to install one. Angela Moulton said the study is necessary to tie into MWRA; we need to do a hydraulic analysis to tie into MWRA. Once the study is complete we can start the permit process which is 2 years and then start building and constructing which is a multi-year process and right now 40% of your water has elevated levels of manganese. We want to clean the drinking water source and have enough to meet your average daily demand and get the wheels turning for the additional water sources. Mrs. Campbell said friends of hers had MWRA and had to boil water. Maybe CDM Smith can explain the different water sources. Carol Reigo responded to Mrs. Campbell's question saying the District's drinking water is ground water, wells that go down many feet and are in protected areas that are mandated and protected by the DEP to protect from contamination. When water is pumped from the well it is pumped naturally so there is a filtration that occurs. The manganese is dissolved and is in the water so the soil doesn't take out the manganese. Other things such as pathogens and bacteria is filtered through the soil and that's why you need greensand filter. MWRA is surface water through Wachusett in the Worcester reservoir. The MWRA constructed an ozone treatment facility and added ultra violet disinfectant and then sends the water through pipes to be delivered to customers. All water supplies have to be approved through state. MWRA has to meet all same requirements as the District. The boil order can be related to pipes and is because of bacteria. It has nothing to do with manganese.

Mr. Almy stated it appears there has been a lot of work done. Angela Moulton said we do a higher level study to make sure it make sense to spend the money and are working on studying at a high level and will be summarized and when finalized it will be handed to the District. We are not sure when they will be available. Mr. Almy asked will it be available before the warrant is voted on. Chairwoman Leccese said there was a lot of analyses done. When the District first heard about the issue this spring, we engaged CDM Smith and asked CDM Smith to conduct an analysis of what was causing the problem. This wasn't just a willy-nilly decision. Mr. Almy said for 6 weeks he has asked to review this document and has a history of managing water and wants to see it as a ratepayer when available.

Mrs. Rauseo asked can anyone submit a warrant article and is that still open. Superintendent Burnham said you will have to talk to Attorney Casey, he is not here tonight. We can put you in touch with him. Mrs. Rauseo asked would it be prudent to separate the 2 phases to vote on the second phase on a separate article. Mrs. Rauseo wants to copy phase 2 as another line item.

Superintendent Burnham said as a resident you can put that in the warrant. We proposed them jointly to move forward to rectify the situation and as more time goes on and gets delayed, it will affect other residents. Mrs. Rauseo is concerned it will not pass. Superintendent said call the office and they will give you the number to the attorney. The District has plenty of water to meet demand from October to May and what we are looking for is additional supply to augment and get rid of part of the ban. If we went to MWRA it is a number of years away. Do you want to leave the people in the area with bad water quality? Mrs. Rauseo said it is you people that are giving us bad water. A ratepayer asked how are we going to sell this to the town/District...the debt is being carried across the board will we all be paying this debt off or will there be additional funding? Superintendent Burnham said we applied for money in a grant to make improvements in the water system infrastructure with a low cost loan. Angela Moulton said we submitted an application to get a 2% loan that is paid off in 20 years and will find out in February/March if the state approves the application and to see if funding will be available. It is just how the state rolls. Chairwoman Leccese said we are looking at worse-case scenario at 4.5%, it could potentially be less of an impact to the ratepayer. A ratepayer asked do we need a quorum. Superintendent Burnham said there is no quorum, majority vote. Chairwoman Leccese said we will have electronic vote so as not to put people on the spot.

A ratepayer asked about Phase 2 funding and wants to know where the money is coming from. Chairwoman Leccese said it is all in the \$5 million. The ratepayer asked how much are you planning on spending for the study? Angela Moulton responded that Phase 1 is approximately \$5.2 million and Phase 2 is \$250,000 for the study in collaboration with South Lynnfield to obtain MWRA water from them. A ratepayer asked if anyone had thought in the past few years to look at this and now all of a sudden we want to spend \$250,000. Superintendent Burnham responded that South Lynnfield doesn't have the ability to have pass water to us as their pipeline is smaller. The District had been in discussion with MWRA to hook up to the line they were planning for Peabody up Route 1 but Peabody backed out the plan. Peabody City Council said they will rebuild their West Peabody treatment plant and this caused MWRA to close the book for expansion at this time. The District had discussed putting a valve at Moulton/Summer Street and pay for a study to include some of the application process to run a pipe 35 feet to Huckleberry Road. This is what the District was hoping for but it is off the table for now. A ratepayer asked why can't we put the study as Plan B. I have brown water and I want the study. Superintendent Burnham said the District is trying to make it better and will flush and that's the only thing we can do. A ratepayer said it feels like a lot of money for a study, sounds like you have MWRA money already. Superintendent Burnham said the MWRA has a wheeling valve; you meter it and you buy the water. Part of the study is to work with South Lynnfield engineers to determine if they can give us the volume of water. Chairwoman Leccese said if we can keep the loan down the rates will not be as much. Angela Moulton said 4 years ago CDM Smith began working with the District to do a hydraulic model to have a better understanding of the District's system. We have to do take that model and see how it interacts with South Lynnfield to make sure its compatible hydraulically. South Lynnfield has a hydraulic model and we need to put both models together to see how they interact and that is where a chunk of the \$100,000 is going. We want to make sure everything is accurate and calibrated and then model different scenarios. If we take 500,000 gallons a day or 1 Million, what needs to happen to the system to

facilitate taking the water? If we want to take a supply from MWRA, we would have to spend x amount of dollars to get the water. This would give residents that want to know the capital costs for supplementing as well as for 100%. A ratepayer asked could the study be done in conjunction with the MWRA plan. Why is the MWRA plan so far off, can they both be looked at simultaneously?

Mr. Prouty said from a logical standpoint why not do the study first before the greensand filter plant. Commonsense says to do the study first. Chairwoman Leccese said she respectfully disagrees, our engineers studied this. We could have left MWRA off the table. Mr. Prouty said so you are doing this as a favor? Chairwoman Leccese responded as this issue was being discussed, people said we didn't have enough water so we are trying to work on that segment as well. A ratepayer said everyone just wants clean water. Chairwoman Leccese said no one is trying to diminish it.

Carol Reigo from CDM Smith said once the manganese starts to increase it never gets better and will continue to increase. What affects a small area will continue to affect more and more areas. In treating the manganese with greensand it is not just for the current levels it would be designed to have capacity to increased levels of manganese as time goes on. It really doesn't just affect a small area, it will benefit everyone. The second point on cost issue for the study if you go 100% MWRA water it is a pretty significant cost difference. This is a snapshot of today. If we take MWRA published capital plan and project going forward, and we don't know how we are going, the MWRA rates based on current capital plans will show over time the rates increase. The orange line (on the chart) is wheeling through South Lynnfield and the red line is to tie-in directly not getting water from the other district. CDM Smith is projecting over time where the increases will be. We do projections for 25+ years. One consideration for greensand is the cost for today and long term estimated projection. Life cycle is 20-40 years for regular maintenance. The greensand plant would be rehabbed. Similar to the Phillips Road plant, it was installed in 1980 and upgraded in 2010; we didn't knock it down.

Mrs. Rauseo asked does the red line on the chart include the greensand filter, if we already paid for the filter plant and found its not working or do we need to just pay for the 100% MWRA. You want us to vote for greensand and then 5 years vote for MWRA. Mrs. Rauseo further said the District hasn't been honest with us. Mr. Prouty said the difference is \$58 a month if you go 100% MWRA. One ratepayer said people are spending \$8,000 to put water filtrations in their homes. Superintendent Burnham said there are people taking advantage of installing the filters. The ratepayer further exclaimed you have to replace filters very often. Is there a reason why there are so many inconsistencies when one neighbor isn't getting discoloration and another one is, how is that possible? Carol Reigo said everyone uses water differently. It has been tested, it is the manganese. A ratepayer asked could there be something wrong with her pipe under the ground. Carol Reigo said it is probably the actual manner how people use the water, it doesn't sit stagnant in the pipes. There are so many different ways and other people use very little water. A ratepayer said those who have the problem use the water a lot and they consistently use the water and their neighbors don't have the problem. The manganese tends to deposit on the pipes. Carol Reigo said the DEP method is directional flushing. A ratepayer gentlemen asked are there special conditions and is the system working efficiently. Carol Reigo

said the manganese is dissolved and when it hits the air, when it is oxidized is when you see the brown water. We have to oxidize the manganese and take it from being dissolved and making it a particle and run it through greensand to have it removed; it is a common problem. The same ratepayer asked are you guaranteeing the brown water will be gone. Carol Reigo said the District will have to flush the system to ensure it is gone. This gentlemen said it is premature to vote on the 10th of December as the people of the District aren't educated properly. I don't know why there can't be more information if you spend \$6 Million now and then \$10 Million later. Carol Reigo said that is not the intent. When the question came up about MWRA, it was several months ago so we put a graph together to show if we went 100% MWRA. The ratepayer said you were meeting with South Lynnfield to tie in to their water. Superintendent Burnham said we met with them and are in the process of negotiating with them to do the study. Carol Reigo said the study is to bring MWRA through their pipes. The cost of the water is established by the MWRA. The ratepayer said if only 4 people show up, would you ever consider a quorum for voting? Superintendent Burnham said it is part of the enabling act. Someone asked if we can change the quorum rule. A ratepayer asked did Peabody go with a greensand plant. Superintendent Burnham said they have surface water and is a whole different system. For us to tie 100%, we would have to pay for the pipeline all the way to Saugus which is a lot of money and that is why we are looking at South Lynnfield to supplement. Wakefield has all sorts of pipeline, North Reading gets their water from Andover. North Reading had looked at MWRA but made a deal with Andover. The study will look at all sources. We will spend what we need and want to make sure we have enough money.

Dan Tomasello, from the Lynnfield Villager, asked would the people experiencing brown water have brown water if we join MWRA. Superintendent Burnham said they would get clean water.

Mr. Volpe asked has there been inspection of pipes, especially in the houses who have brown water. Superintendent Burnham said once the water leaves the District, it has to do with the home's water service. The pipes in the ground are all cement lined. All our pipes are in good shape, they had been inspected. Someone suggested to dig holes. The pipe on Lowell Street are fairly new. Mr. Volpe asked will the greensand take care of it, if it is not the pipes and how many people are affected. Superintendent Burnham said the upper portion of Chestnut, some Cortland, a couple in Apple Hill and N. Hill Drive, West Tapley, Powder Hill, the other side of Tapley and Norris have no problem. Foreman Couris said the area has 400 homes but there have only been 50 complaints. Mr. Volpe said why not install filtration systems in those 50 homes. If it is 50 homes that is a lot cheaper than the greensand filter. Superintendent Burnham said you can put it on the Warrant and the rest of the District can vote on it. Mr. Prouty said it won't solve the manganese problem. One gentlemen said we get discolored when you are flushing otherwise we don't. Superintendent Burnham said when we flush we start at the base on Lowell Street. A ratepayer asked why is flushing done during the day and not nighttime. Foreman Couris said operationally the least affected people wouldn't be home during the daytime and getting ready for work in the morning. Superintendent Burnham said it is pretty loud. We had finished the flushing program on the 14th of October. A ratepayer said she is getting brown water and has gotten it 3 times. She said she has to run it for a long period of time and you haven't been doing flushing during this time. She asked if you will be flushing again. Superintendent Burnham inquired to whereabouts she is located. She replied Willis

Lane and asked will you be posting when you flush. Superintendent Burnham said we will post it like we did the last time. Mrs. Campbell asked how many ratepayers are in the whole district as she is in an area where there is no discoloration. Foreman Couris said there are approximately 2700 accounts. Mrs. Campbell asked how many ratepayers are not affected by the greensand filter; she was on a tour to see the greensand filter with the buckets with the manganese. She asked how many homes are not affected. Foreman Couris said all the water is mixed, so possibly 250 homes are affected. The vast majority are being served well and don't need a filtration system. Foreman Couris said the District is testing and puts the results on the website. Mr. Prouty asked how many are these homes around the Glen Drive well. Foreman Couris said we can't tell specifically as the water is mixed. Foreman Couris said not all water in Lynnfield has an iron and manganese issue. During a normal day 60% is pumped. Mr. Prouty asked if the water is mixed, how many meters are affected. Foreman Couris said at the top of my head 250, in the upper of Chestnut and Lowell. Mr. Prouty asked are you getting at the well head or measure in the street. Foreman Couris said we measure both. Mr. Prouty asked does that well service half of Lynnfield. Foreman Couris said there are a lot of variables. Mr. Prouty said if you take the position for a couple of hundred houses, it is different than saying that the entire well is putting out entire levels of manganese. Carol Reigo said at certain levels it doesn't create a problem. It is tricky and settles out whether it is in your home or street. You can measure manganese in the flowing water but the levels are still .03 and the standard is .05. Manganese can be stirred up, it is not an exact. Mr. Prouty said the issue is not necessarily isolated it is somewhat a District-wide issue. Angela Moulton wants to emphasize Glen Drive services 40% of the system. Angela Moulton further explains you would have to get existing manganese built up in the pipeline out and with adding the greensand filter there would be no water with the source to be introduced into the pipes. Mrs. Rauseo asked why don't you remove the 40% and just get MWRA water. Angela Moulton responded you can't meet District demands if you shut off 40% of the water. Carol Reigo said MWRA is several years away. If you were to get a different source of water, now we have a blending issue of 2 different types of water and need to make sure the ph and chlorine is compatible. MWRA has mono-chlorine, and the District has chlorine. There are a lot of different considerations in taking a different type of water. The study will evaluate all the considerations of the different types of water. Mr. Almy asked can you give us an idea of what kind of summer supplemental supply for MWRA. Angela Moulton said the average demand is .6 during the winter and an additional .4 mgd for the summer months as a supplemental source for the peak summer demands. Mr. Almy asked will that be enough to meet the water ban. Superintendent Burnham said the mandatory "no watering ban" will go away, the 5 to 9 PM even days will not go away because of the Ipswich River Association and Mystic Valley Environmental Group. The District already spoke with Duane Levangie from the Mass DEP during our permitting process last spring and the DEP would consider it. Mr. Almy asked so the key number is 400,000 gallons and Angela Moulton replied yes.

Mrs. Toscano said where she lives isn't impacted and this is a big cost. She has a question about the cost. What happens if we vote yes and we authorize and it is more than \$6 million, do you come back to us. Chairwoman Leccese said we are hoping to mitigate the cost and are considering this a worst case scenario. Mrs. Toscano asked has the block rate structure been

voted and do we get to vote on it? Superintendent Burnham said we notified the District in the last billing process to increase the rates. That was already in the pipeline.

Mrs. Toscano asked is it on the website and is this the projection for an average water user. Superintendent Burnham said we used that rate structure to come up with these numbers. Mrs. Toscano said if you look at the average water bill on the mailer it doesn't include the tax bill portion so it is misleading and what we are really paying is more like \$660. Superintendent Burnham said North Reading's tax rate is higher and their water rates are what they are. If we are comparing them they need to be more apples to apples. Angela Moulton responded this is only for water usage. With other communities we couldn't give an apples to apples comparison. Mr. Nelson asked for confirmation that our next meeting is on November 26th and moving ahead with the Special District Meeting on December 10th. Chairwoman Leccese said she wishes more people would come to the meetings. We put the information on the District's Facebook, website, and the newspaper. Superintendent Burnham said we can have another informational meeting on the November 26th.

A motion was made to approve the minutes of the October 22, 2018 board meeting. The motion was seconded and approved.

A motion was made to approve the rate structure as previously discussed. The motion was seconded and approved.

Chairwoman Leccese made a motion that was approved and the meeting adjourned at 8:46 pm.

Respectfully submitted,