

REGULAR MEETING OF THE BOARD OF THE LYNNFIELD CENTER WATER DISTRICT

The regular meeting of the Board was held on Monday September 10, 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, Treasurer James Alexander, District Counsel Attorney Christopher Casey, Water Foreman Nick Couris, and Christine Smallenberger, Clerk of the Board.

The Meeting was called to order at 6:35 PM.

In attendance at the meeting were the members of the district. Please refer to the attached sign-in sheet.

Chairwoman Leccese opened the meeting by introducing Camp, Dresser & McKee (CDM) engineers, Angela Moulton and Elaine Sistare that will speak to the issues. Angela Moulton is a licensed civil engineer and has worked for CDM for 10 years and has worked on several water projects for the District. Elaine is a civil environmental licensed engineer with CDM for the last 20 years and most of that time has been involved in projects with LCWD. CDM has been in business since the 1940's, has worked on brown water projects and employs 5,000+ people worldwide. CDM has a large breadth of knowledge on this issue. This problem is not rare, especially for New England. The District has always worked hard to meet the federal and state guidelines. In recent months CDM has heard about the discoloration and is working with the District to find solutions. CDM is in contact with the DEP with respect to the drinking water. The District, on an ongoing basis, has been logging dates, times, addresses and the nature of concerns that were communicated to the District. The information could help us isolate areas and explore reasons why it is occurring in the distribution system.

A question was asked: do we call every time we have discolored water? Chairwoman Leccese said yes, please call if there is an issue. We will log it and if need be, we will send it someone out. Elaine Sistare said there will always be oddball times it will happen but we will try to determine a trend. When water quality hits a dead-end pipe, it could be a maintenance issue to address. Other components could be a seasonal issue. Is it worse in the summer; the answer could be yes because of the demands. If we have a list and data, it gives us factual information. This is ongoing. In addition to what is going on at the tap, we want to know what's going on at the sources. The discolored water is associated with higher levels of manganese. We have been sampling to determine if that's the case. The last few months the district has been sampling at their sources as a secondary contaminant. The requirement has been for sampling once a year but we have been making efforts to sample more frequent. We are learning about certain sites and neighborhoods and we are trying to have more discussions with members of the District.

Optimization: Right now we are in the high demand summer months and it will continue to go down. It's hard to optimize when we are trying to meet the demand of water in the system.

The distribution system is the pipes in the system; there are 48 miles of pipes throughout the District. Where possible we want to understand how the water flows through the system.

Short term actions: The District meets state and federal regulations. A few months ago there was discussion of a house filter and whether it can improve the water at your home. The District has voted for \$100 rebate for house filters and \$100 rebate for a licensed plumber.

Glen Drive treatment – the source has manganese sometimes above the secondary contaminant. The manganese causes some discoloration and can be an aesthetic issue. We know to treat manganese with green sand filters. We worked with the District to meet the DEP deadline of August 23rd for scope and budget for a green sand filter. The application was for low interest funding (SRF) that provides funding for drinking water projects and offer rates as low as 2% for 20 years. The DEP wants to encourage water suppliers to use this funding. CDM is continuing to work on facilities planning and making sure we can plan for construction at that site.

Distribution flushing was performed in the spring. Almost any water supply cannot do flushing in the summer because they can't meet demands. During high demands, it is wasteful and not possible. Another flushing is planned for the 3rd or 4th week in September. The manganese that enters the distribution system may settle in the pipes. There may be sediment in the pipes and by flushing we hope to remove the sediment from the pipe completely. This is the industry standard to flushing.

A member of the District asked will there be a notice for us so we don't get it in our pipes? Elaine Sistare said the District will post it on their website, place advertisements in the newspaper, place electronic signage in town and issue a Reverse 911 call.

Superintendent Burnham further mentioned we may flush after 9 PM at night and put signs in the area. We will try to get a schedule of the streets for consistency. We may schedule the flushing from 9 PM to 2 AM for least disturbance for the homeowners. The District purchased equipment to flush at a higher rate to get maximum amount of flow/velocity to the material that may be adhering to the pipe (cement lined pipe). If we can flush before winter, we will flush again. We can't flush in the winter because of the ice. This will make a big difference. We plan on flushing continually, in the spring and until we build a treatment plant.

Mrs. Rauseo asked if you happen to be at end of line, doesn't this flush to the end of the line.

Elaine Sistare said the hydrant will be removed to flush the end of the line. Mrs. Rauseo asked if we keep faucets closed will it get into my pipes. What is concerning is we didn't know this before. Is it sticking to your pipes, is it sticking to my pipes? It could already be in our pipes. Elaine Sistare replied the District has tested several homes and we have data at these homes. Elaine recommended the hot water heater should be drained from the bottom. The pipes in your home are used every day. Mrs. Rauseo asked we have been told to flush and keep faucets on wouldn't it be better to run the hose outside? Elaine Sistare replied: don't run hot water where it could be collected. Flush only the cold water. Mrs. Campbell spoke up saying

that you need to understand that the people watering their lawns are making flushing less likely. Elaine Sistare responded that is true.

Mrs. Campbell asked are we levying fines and how many people that are watering are getting fined? There is no reason as we have had rain all summer. Elaine Sistare replied that even a rainy summer there is still an increase in demand and in some communities it could be pool usage and car washes that happen in summer. Water Foreman Couris responded that we have repeat offenders that receive \$100 fines and we fine about 5 to 6 people a day. There is no consistency. We are looking to elevate the rates so the people that water their lawns will be paying higher rates. Another ratepayer said \$100 won't matter to them. Water Foreman Couris said we are limited to fining per the public utility law. The rates will hopefully get people to conserve. Mrs. Rauseo asked if the MWRA has water bans. Elaine Sistare responded no, they are not in a stressed water basin.

Angela Moulton further mentioned the DEP has standard practice for all utilities to use and that is directional flushing. We closed certain valves and opened hydrants and calculated how much water moves through the pipe. The key to unidirectional flushing is getting the correct flows and velocity out of the hydrants. Its common practice through communities including communities with MWRA.

Elaine Sistare mentioned with the data we have seen, we have a source with levels of manganese so we probably know where it's coming from. Another ratepayer asked how many houses we have tested. Water Foreman Couris responded we have tested 6 to 8 private residences and more than once at some of these houses. We also test at other houses and sites on a regular basis and all indications show the level of iron and manganese are lower than the source (Glen Drive). We don't see any rhyme or reason.

Mrs. Denehy said she strongly feels the levels you sample don't accurately capture the brown water. You only sample clear water.

Another ratepayer asked what is the budget for the greensand filter?

Elaine Sistare said the Glen Drive treatment is a long term solution. Another long term option is MWRA.

One ratepayer addressed the rebates for people that want water bubblers. Chairwoman Leccese responded no, it is for the filter coming into your house. The ratepayer responded if you have a water bubbler, at least you can drink the water. Another ratepayer was quoted \$4,000 for a house filter; it is not an insignificant cost. Chairwoman Leccese responded that we don't recommend a specific filter; there are multiple products out there. Some of these lower cost filters do the trick. Mrs. Lopez said you will have to change the filters every 3 weeks. Chairwoman Leccese said this is a short-term solution. We are trying to accomplish the treatment plant in a 14 to 18 month term. Mrs. Lopez asked does the District members need to vote for the plant to pass. Commissioner Lamusta replied that is correct. Elaine Sistare said regarding the timeframe, it is not a perfect answer. There will be some months you will see discoloration. During the winter months we can do better.

Mrs. Rauseo made mention of a Cornell study that says manganese is particulate or dissolved, depending on which it is, the pH level makes a difference. Elaine responded regarding the discussion of house filters, we looked at total manganese the District has both particulate and dissolved. Mrs. Lopez said her test came back very high.

We have 3 different alternatives for MWRA water: The District use 80% LCWD and 20% MWRA water to supplement our water supply. Another alternative is for 100% MWRA by installing new infrastructure tapped directly off MWRA and the 3rd alternative is taking 100% from South Lynnfield Water District. The cost breakdown shown on the poster is approximate. There is a fee associated with tying into MWRA and is based on the amount of water you take. The poster shows the estimated cost for annual household water usage. If you aren't watering and conserving, your water bill will be less. We took these values and capital improvements, usage, connection fee, and tie in to MWRA to demonstrate how water rates will change.

The average household spends \$140 per year for water which includes the \$60 service fee and an estimate of \$80 for water per year. By taking the average numbers the annual water rate for the green sand treatment plant would change the cost to approximately \$280. With the MWRA tie-in the cost goes to approximately \$880. People in the District may be paying over \$800 and the price will go up around 4 to 5% every year. This estimate is based on 2017 water usage and District water rates. The district could restructure their rate structure and could go up depending on your usage. We took the cost of infrastructure improvement and analyzed the cost per user but this is all preliminary.

Mrs. Campbell asked what is the overall cost of the greensand filter and is that distributed over all ratepayers. What would the cost be for tying in? Angela Moulton responded the cost would be \$4.5 million to build the new treatment plant. Mrs. Campbell asked for ballpark cost for 100% MWRA. Angela Moulton responded if the District were to tie in to MWRA, it would involve a lot of infrastructure improvements and the cost would be \$10 million to \$15 million estimated. The closest MWRA line is the Saugus town line, which would involve miles of pipe. Mrs. Campbell asked the cost for tying in 20% MWRA. Angela Moulton responded it would be \$500,000 to \$1 million, if you want to supplement your water and still have a new treatment plant. Mrs. Campbell asked do we have a treatment plant at Phillips Rd. Angela Moulton responded yes we do. Mrs. Campbell said things are working well in her part of town. Mrs. Lopez said we wouldn't need the treatment plant if we go 100% MWRA. Mrs. Rauseo asked why build a treatment plant if the District will run out of water in 10-20 years. Chairwoman Leccese responded that the District needs to institute conservation to use less water. The District is built out and we should have plenty of water. The new housing developments are not part of the district. One ratepayer asked won't it come from the same aquifer as this new development abuts the District's property. It does not necessarily come from the same aquifer as we draw from the North Coastal Basin as well as the Ipswich River Basin. Mrs. Campbell said the new development won't be on the town's October agenda. Elaine Sistare replied the DEP regulators gave the District the amount we are allowed to withdraw. It will be up to the DEP to determine what those developments can withdraw. Mr. Prouty said why put \$5 million in to this treatment plant and in 5 years we need to spend more money in joining MWRA.

We need to do further hydraulic analysis if we were to tie into South Lynnfield. The purpose of the poster is to present some costs to show how it will affect your rates.

Mr. Prouty asked will there be 2 separate water districts or will you be merging the 2 districts? Superintendent Burnham responded it will remain two separate water districts. Another ratepayer mentioned looking at selling District land to offset the costs? Elaine Sistare responded no we did not look at that. Elaine Sistare further mentions Saugus is a direct tie-in to MWRA and in recent years they have become more flexible with wheeling through another community. Only in recent years, could Lynnfield wheel through another district. South Lynnfield has a different infrastructure and system.

One ratepayer inquired are we going to evaluate to understand our real options. Elaine Sistare responded this is a good question. CDM wanted more feedback from tonight's meeting. CDM and the District are moving forward with the greensand filter treatment plant. It will be 3 plus years for MWRA, with infrastructure improvements. Permitting with MWRA and DEP alone takes up to 2 years, which is an aggressive schedule.

A ratepayer asked did you only look at Saugus or did you look at other towns. Elaine responded there are possibilities, these are the only ones we can bring more meat to it. Mr. Prouty asked what the next step is, do we keep moving forward or go back and look at MWRA? Mrs. Lopez asked what is the timeline and what is the process.

Chairwoman Leccese responded we are going to open a warrant tonight. All details will be in paper and website. If anyone wants to add a warrant, the warrant will close on September 28, 2018. The Special meeting will be held on October 29, 2018 and to check the website for more details. Mrs. Lopez asked does that mean as a board you recommend greensand filter and how are you communicating to the members of the District the options being considered so the voting population knows? Chairwoman Leccese said the information will be on the website and in social media and we will advertise in the paper. We will look to you all to ask everyone you know to get out to vote. Mr. Prouty asked is there only a warrant for the greensand filter and nothing else. Another ratepayer spoke up and said you are hearing we are interested in MWRA so the District can't confidently make a decision. Chairwoman Leccese said we will let the people know. Mr. Prouty said the warrant needs to be for studying the alternative for joining MWRA. Superintendent Burnham stood up and said if the people would like to postpone the special meeting we can certainly postpone the special meeting. We will expand the timeframe to November to give you more information. We are trying to solve this problem so we will listen to you.

Mrs. Lopez said we know dead ends are a problem as well as certain areas. Are there any local options for the particular hot spots? Is there any focus that can be done? Superintendent Burnham replied no, because of the source, the aquifer, is where the iron and manganese is coming from.

A ratepayer asked how many people are in the district and how many are affected. Water Foreman Couris said there are approximately 8800 people, 2700 services and 400 services

affected. **(Nick needs to address at next meeting to clarify there are 400 services in the area. That is not the # of homes impacted)**

A ratepayer asked did the school experience any problems? Superintendent Burnham said we went up and looked at a faucet that wasn't used all summer long that contained particles. There is none detected in any of the schools. The issue is in the upper portion of Chestnut Street, Cortland Lane, North Hill Drive, upper Lowell Street and parts of Apple Hill Lane.

Mrs. Campbell said there are 2300 accounts that are being well served by the greensand filter at Phillips Road and 400 locations that are not being properly served. Elaine Sistare replied it is not just Phillips Road.

Superintendent Burnham spoke about the false bacteria test, we shut down the service and ground water and treated differently. At no time, the finish water was contaminated. We took more samples within 24 hours and all 5 samples came back fine. While it was shut down we did other work and it went back online after a week.

The High school issue was in a trainer's room; they had filled a 5 gallon pail and thought it was discolored water. The DPW director looked at it and it was aerated water. The Water is tested every week.

Mrs. Campbell asked if we tie into MWRA, is part of Saugus water supply from Reedy Water and if we tie in to that will it damage Reedy Water.

Mr. Prouty said it is not different than the aquifer we are in. Water Foreman Couris said it is different. The North Coastal basin is a non-stressed basin. Angela Moulton had to add when she referenced Saugus, she clarified that it is the MWRA's last metered location. It is a reference point. Saugus is an MWRA community; it is an MWRA line in Saugus. A ratepayer asked would we need another line or could we tie-in to South Lynnfield. We would have to look at it hydraulically. South Lynnfield has enough water to meet the demand their district but their system may not be able to meet our demands as we are two-thirds of the town to their one-third of the town.

A ratepayer asked how many votes do we need and what is the quorum needed for the special meeting. Attorney Casey replied we will post the information on the website. Superintendent Burnham said Topsfield has the same problem and when they put it towards the people of their district it took 3 times to get the money to build the treatment plant. Mrs. Lopez remarked that it doesn't help when you spoke to news and you said the problem is an isolated area.

Superintendent Burnham said the issue is not 24/7 and it comes and goes and I'm sympathetic to it. It doesn't happen every time and flushes out with cold water.

Debra DiMattia from Kimberly Terrace says it is a 24/7 problem in her shower. Her water pressure is bad; it takes 4 minutes to fill up the bowl. Superintendent Burnham responded some areas have lower pressure and you will notice this especially when people are watering. During Labor Day weekend we pumped almost 1 million gallons each day; this meant it was going on someone's lawns.

One ratepayer said you should be more proactive and fine these individuals. Another ratepayer said she researched a company that makes filters for people in Lynnfield and it's way more than \$1,000. We are paying a premium to live in this town and taking laundry somewhere else is awful.

Mrs. Rauseo asked how often can we bring a vote and can you bring a vote on something different. Attorney Casey replied you can as many times as you want; there needs to be a clear consensus and there needs to be a clear option and knowing and educated about the vote.

Mrs. Lopez doesn't understand this is the recommendation of the board, how do we justify this if we will not have enough water in 10 years.

Another ratepayer asked what is happening with the Peabody project. Angela Moulton replied those are 2 separate projects with different pipelines. LCWD would have to go through the same permitting process and can't tack on to a separate entity process. Elaine Sistare said the estimated cost of that construction is \$15 to \$20 million. One ratepayer spoke up saying we can do the greensand filter for \$4 million or \$10 million for MWRA water. Water Foreman Couris said going through South Lynnfield may be a misnomer. The Lynnfield Water District is a third of our size and may not be able to handle the demand of our district and that timeline is also 4+ years out. The \$10 to \$15 million is 100% construction costs and \$3 to \$4 million to buy-in and that price estimate doesn't include the additional cost of water. The idea that you don't have enough water is not true. We have enough water in the district, but for those who pay to water their lawns it is not fair to have the people who aren't excessive users pay more. We can sustain water as it is for the foreseeable future. If we have customers that use 250,000 gallons of water, we can't handle that. One ratepayer asked have you taken into account less water in the future because of global warming. Water Foreman Couris replied if we were growing at the rate of the town, we would be going to MWRA. We are under restrictions from the DEP that tells us we can only take x amount of water per day. The only way is to affect people's wallets and raise rates. It is hard to tell people who are getting discolored water and raise their rates; it is not fair. If you go to MWRA you pay 10 times the rates and still have color and chemical issues. A ratepayer asked why do they have color issues. Water Foreman Couris said you would be serviced from one source and if something went wrong you would have no water. Sustainability is what we are pushing in this district. Mr. Prouty said we have been calling for discolored water and frankly we trust MWRA to fix the problem. Mrs. Rauseo said you had an article in the paper and I didn't see one mention we are running out of water. That's why you aren't believable. Mrs. Lopez said you held up a report and told us we aren't sustainable. Water Foreman Couris said we are being honest. If the District continues to build out like the town we can't sustain. The District pumps 300,000 to 400,000 gallons a day in the winter and 1 million in the summer. Chairwoman Leccese said we have never had a water shortage. Water Foreman Couris further explained that is different than a water ban. The state tells us when we need to put on the ban. Because we fall in the Ipswich River Basin we will always have restrictions. Mrs. Lopez said no one has talked about additional water sources and it sounds like we are looking for an additional water source. Water Foreman Couris said we are looking at another source, the North Coastal Basin which is at our Phillips Road location. We are looking

for more sources. It is in the developmental stages. We have to find a significant supply to make it viable for long term.

Mrs. Campbell is intrigued saying this part of town isn't growing as other parts of town as we recently had several that were voted down. She asked if the private wells are pulling from the Ipswich River Basin. Elaine Sistare replied that the DEP regulates 100,000 per day to them. The District has the same amount of water. Water Foreman Couris said you can continue to take what you are permitted but you can't take any more. We don't regulate the homes that have their own wells. That would be at the town and state levels. Mrs. Campbell asked are the towns regulated from watering their fields as they have a new irrigation system. Superintendent Burnham responded both areas have their own wells. Water Foreman Couris said the schools are not in the Ipswich River Basin or North Coastal Basin.

Elaine Sistare said we have heard from a lot of people tonight and we can move forward at a reduced rate of speed. It sounds like MWRA should be looked at more in depth. A ratepayer said if we go to MWRA, we will be paying a lot more for our water. Angela Moulton explained MWRA is surface water and has different types of treatment. MWRA water tends to be slightly warmer with different chemicals and ph levels. Elaine Sistare said there are pros and cons to both types of water. Mrs. Lopez said all of that information should be captured: what are the choices, costs, trade-offs. Elaine said we have been moving along with months for the greensand filter but now we are hearing from the District and others for the last month about MWRA.

Superintendent Burnham mentioned the Phillips Road treatment plant was put in about 20 years ago and we knew there was manganese. Elaine Sistare said we would have put in the treatment plant at the original time of Glen Drive construction but didn't need it at that time. A ratepayer asked what the life of the Glen Drive area is and do we know when it won't be viable. Elaine Sistare stated that DEP said by 2030 you need to forecast or you will be fined. The DEP is saying 65 gallons per person per day is reasonable.

Mrs. Campbell asked if Peabody is having a problem with sulfur. Superintendent Burnham stated the treatment plant doesn't have an operating problem. The City of Peabody is looking at it for taste and odor problems. Peabody was looking at the MWRA coming up Route 1 through Lynnfield and down to Moulton and stop at Spinelli's. We were discussing taking a valve at Moulton which would be a 10" pipe near Huckleberry. We recently received a call from the MWRA that Peabody had backed out on this project. The MWRA is closing the books on this project for now. The golf course was going to be treated as a separate entity and that theory went out the window. This was going to be our other alternative. A ratepayer inquired about Middletown. Superintendent Burnham said the pipeline was designed to go to Danvers, Topsfield and up to Hamilton-Wenham, this was a big trunk line. He has a copy of the proposal. Danvers was looking to tie in by Route 114 and head to Ipswich. The project is now on hold and now the cost is substantially higher because we have to put in all the pipeline. The other issue is compatibility of their water. MWRA ph is up around 9, ours is 7-8. They also put gas in their water. South Lynnfield Water District has their own engineering firm that is looking to do a study

on the compatibility of the water and their hydraulics. The study will cost around \$100,000 for which our District would be responsible to pay for the study.

North Reading was going to get water from Reading but they made a 99 year contract with Andover. Their water is discolored 24/7.

Superintendent Burnham asked the ratepayers if they want us to hold off on the special district meeting until we have a more in-depth analysis. Mrs. Lopez responded by asking if the District send a mailing with detailed information with the pros and cons simplified. The Board agreed to conduct a more in-depth analysis of the options and do a mailing. Chairwoman Leccese closed the meeting thanking those who attended and said we heard you, we have a lot more work to do.

A motion was made and accepted to accept the minutes of the August 27, 2018 meeting.

A motion was made and seconded to adjourn the meeting at 9:00 PM.

Respectfully submitted,