

**MERRIMACK VILLAGE DISTRICT
BOARD OF COMMISSIONERS
JUNE 20, 2022
MEETING MINUTES
(approved July 18, 2022)**

A regular meeting of the Board of Commissioners was conducted on June 20, 2022, at 5:06 p.m. at 2 Greens Pond Road, Merrimack, NH.

Chairman, Donald Provencher presided:

Members of the Board present: Kenneth Ayers, Vice Chairman
 Wolfram von Schoen, Personnel Liaison
 John Lyons (electronic participation)

Members of the Board Absent: Paul McLaughlin

Also in Attendance: Ron Miner, Superintendent
 Jill Lavoie, Business Manager

FINANCE/HUMAN RESOURCES REVIEW

Michele Holton, Finance/H.R. Director, was unavailable and the board tabled this discussion.

A. Analysis of Revenue and Expenditures Report

B. Bank Account Summary Review

REGULAR SESSION

1. Board of Commissioners to conduct the annual review of the Investment Policy

Business Manager Lavoie informed the commissioners that the investment policy has no changes but requires an annual review and re-approval. The dates were amended to read, "Fiscal Year July 1, 2022, through June 30, 2023."

MOTION BY COMMISSIONER K. AYERS TO ACCEPT THE INVESTMENT POLICY, AS AMENDED

MOTION SECONDED BY COMMISSIONER W. VON SCHOEN

A Viva Voce was conducted, which resulted as follows:

Yea:	Donald Provencher, W. von Schoen, Kenneth Ayers, John Lyons
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Nay:	
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MOTION CARRIED

4-0-0

2. Board of Commissioners to receive an update from Underwood Engineers for ongoing projects to include:

a. Wells 7 & 8

Peter Pitsas informed the commissioners that Wells 7 & 8 are online, pumping water into the system. The cause behind the previously reported high levels of iron are unknown and still being investigated. It was noted that Underwood is not seeing high iron levels in the column tests that are currently running.

Commissioner W. von Schoen asked about a previous discussion regarding a cost contribution from the supplier of the media. Superintendent R. Miner noted that this is still pending, and Peter Pitsas confirmed that Underwood is drafting a letter. Pitsas also noted that Underwood is working through the logistics of the maintenance bond. He informed the commissioners that Underwood wanted a 5-year maintenance bond but has heard that a 5-year bond is not possible – it requires five consecutive 1-year bonds. Underwood is working with attorneys on the wording of this. Commissioner W. von Schoen clarified that he was discussing the cost contribution since MVD burned through media attempting to flush out iron. Superintendent R. Miner reiterated that a letter is being drafted regarding cost contribution. Superintendent R. Miner also noted that the Board of Commissioners may not be aware of the backwash that has had to be done at Wells 7 & 8. Pitsas explained to the commissioners that the operators were running the plant when suddenly, through the month of May, there was a high differential pressure across vessel 1. Underwood contacted Evoqua, and consulted the O&M manual, which directed that the vessel be backwashed. The cause of the high differential pressure was unknown. It was determined that most of the head loss was taken up in the first 25% of the vessel. Pitsas stated that Underwood is assuming the cause was something covering the top of the GAC. During the backwash Evoqua took samples of the raw water going into the greensand, water coming out of the greensand before GAC, and water coming out of the GAC. Samples were also taken of the backwash water at various intervals. Pitsas noted that all of the backwash water was clean to the naked eye, but samples were taken for analytics. That information is not yet available. Pitsas stated that Underwood put in a change order item for an iron analyzer between the greensand and the GAC. Underwood is currently taking grab samples, but the analyzer will allow them to record and historically trend the data. The analyzer has been on order since January 2022 with no known delivery date. It was initially due in in March, but they are still waiting on parts for assembly. Vice Chairman K. Ayers asked if this was the same tank involved in the accident earlier this year. Pitsas confirmed that it was the same tank but noted that he does not think that has anything to do with this issue. Pitsas explained that there is a pressure gauge at both the beginning and end of the vessel. This can measure differential pressure across the vessel. High differential pressure is telling that something is wrong with the vessel. In this instance, the differential pressure started to rise in April, going into May, to the point of it needing to be backwashed. Pitsas stated that the vessel was functioning properly up until that point. Chairman D. Provencher asked if the lead was always flushed through the lag during the initial conditioning of the two carbon vessels. Pitsas confirmed that it was always flushed lead to lag. Pitsas stated that one thought Evoqua had is that some of the iron bacteria is not getting killed off by the chlorine before going through the greensand and is being killed afterwards and slowly being filtered out onto the bed of the GAC. Commissioner W. von Schoen asked where the wastewater went. Pitsas answered that it went into the infiltration basin. Commissioner W. von Schoen asked if that was a concern from a contamination standpoint. It was clarified that this was not a concern. Commissioner W. von Schoen stated that reason for his question was because that was one of the major concerns of the Town regarding sewer connection and this would have been a great opportunity to prove this not to be a concern. He asked if

samples were taken and if the ability to provide that information remains. Pitsas stated that Brian Hieken took duplicate samples, but he was unsure of what was done with them. Superintendent R. Miner was also unsure of what had been done with the samples but stated that he could find out. Commissioner W. von Schoen asked if backwashing had jumbled the media, possibly leading to a difference in readings moving forward. Superintendent R. Miner stated that the first round of sampling for the media would take place tomorrow, June 21, 2022. Commissioner W. von Schoen stated that the date of the flushing should be recorded on the chart. Pitsas explained that the jumbling of media, which in turn could affect the results coming out of each port, is a concern longer into the life of the media, but not this early on. Pitsas also clarified that there are higher levels of PFAS at Wells 4 & 5 and that is where Underwood would be looking to go to the sewer. He stated that Underwood would not be looking to go to the sewer at Wells 7 & 8, and there currently is no possibility for that. The Town's wastewater pump station by Giorgio's is currently at capacity and would not accept waste. Chairman D. Provencher clarified that they were just wondering if the Wells 7 & 8 data could be used as an analogy to Wells 4 & 5. Pitsas stated that he would like to see this when MVD does the change out of vessel 4/5 when there is more water in the system that has been treated for PFAS. Lynette Carney, of Underwood, stated that there are backwash samples from the initial backwash at Wells 7 & 8, and she believes from Wells 4 & 5 as well. It was noted that samples are \$250 each. Commissioner J. Lyons asked if PFAS free backwash water could be put into the ground. Pitsas answered that it can be put into the ground. Commissioner Lyons asked if this was feasible and why MVD would be sending it down the sewer. Pitsas explained that at Wells 4 & 5 they wanted the option to send it to the sewer to allow some flexibility. Wells 4 & 5 are very close to the sewer system, and this provided an alternative if MVD did not have the room in the infiltration basin. Chairman D. Provencher added that there was a concern that some of the GAC had arsenic in the backwash and there was a concern about that being sent to the infiltration basin. MVD was rejected from using the sewer system and had to pay extra to use the carbon with acid wash and no arsenic. Pitsas clarified that it was not acid treated, however there are other carbons that require acid wash to reduce the arsenic. The board decided that Underwood should move forward with the samples if available. Superintendent R. Miner stated that he would find out if the original samples were still available.

b. Wells 2 & 3 (9)

Pitsas informed the commissioners that the Wells 2 & 3 project is moving along. He noted that the exterior is completed aside from the siding. The building is enclosed and watertight, and work is being done inside. Pitsas stated that a lot of work has been done on the interior, including the ceiling of the GAC room. He informed the commissioners that the attic will be insulated this week if it hasn't been done already. The staging will then be pulled from the GAC room, and the process piping will be started. According to Pitsas, the electrical and mechanical systems are moving along decently. Pitsas informed the commissioners that the butterfly valves that were reported to be arriving in April 2022, have arrived on site, except for the class 250 valves. Standard valves are class 150 and are being used everywhere except for the existing Well 2 building and anything on the influent side of the vessels. The 250 valves are being used in the case that additional treatment is needed before or after the GAC. If this were to be the case, Underwood estimated there would be head loss across those vessels and there would be increased pressure on the raw water side. This scenario would go above the rating of the 150 valves.

Pitsas informed the commissioners that some items have been arriving earlier than expected while others have been delayed. Last month, the contractor estimated the substantial completion date to move from mid-October to mid-December. When asked why, the contractor informed Pitsas that

he would review the details and provide an update to Underwood. A new schedule was provided, which also showed a substantial completion date of mid-December. Pitsas stated that he will go through the new schedule to see where the time got lost.

Chairman D. Provencher asked if there were doors on the building and if the inside was now secure. Pitsas answered that there are doors, but there is no hardware. The garage doors to the GAC room are also not up. This is due, in part, to the staging in the GAC room. Chairman D. Provencher asked what the other long lead items were. Pitsas answered that some of the longer lead items were the generator (expected August 2022), and the VFD for Well 9 (expected December 2022). Pitsas stated that it may be possible that the VFD is what is delaying the substantial completion. Pitsas noted that it may be possible to run the plant with just Well 2 for some time. He stated that Underwood has requested that the work on Well 2 be postponed until August 29, 2022. This will allow MVD to use Well 2 if necessary, during summer months. Once work is started on Well 2, Well 2 will remain offline until the treatment plant is up and running. This may have also minimally delayed substantial completion.

It was noted that MVD's reduced rate with Pennichuck Water Works (PWW) goes through October 2022, and MVD should be past peak usage by then.

c. Draft Rate Study update

Keith Pratt reminded the commissioners that Director Holton and the MVD staff were concerned with where the rates stood. He noted that Underwood has been working on the old rate model that was done around 2017/2018 with some assumptions. Pratt stated that there had been a rate increase as well as an adjustment when MVD switched to the tiered rate structure. Pratt informed the commissioners that MVD is still roughly a year away from having an understanding of the operational costs of the new facilities. There is a plan to do a full rate update in the next year or two when the operational costs are better defined. Underwood updated the current model and made recommendations for an interim rate adjustment for the upcoming fiscal year. Underwood is still projecting what the final rate adjustments will be in 2024 or 2025 but are suggesting spreading it out over two years. At this time, Underwood still believes that an increase of 24% is needed based on the budgets, the assumptions, and the operation estimates. Underwood is recommending an interim increase of 11%. If the current assumptions hold true, Underwood would recommend roughly a 12% increase the following year. Pratt noted that the budget is a little higher than originally estimated, and costs have gone up. Pratt explained to the commissioners that MVD is showing lower consumption than Underwood had originally estimated, and the actual consumption is now being used in the rate model. Pratt noted that this was offset by grants MVD had been awarded that had not been anticipated at the time of the original rate model. Pratt explained that if all the assumptions hold true, Underwood is estimating an 80% increase over the life of the project, which had originally been estimated to be a 79% increase.

Vice Chairman K. Ayers asked if other municipalities had shared their increases. He also noted that MVD is still currently below the state average for rates, even with an 11% rate increase. Pratt answered that Underwood does a lot of rate work and believes Merrimack's rate increase to be higher but highlighted the unique situation of the operating costs and capital costs related to PFAS. Pratt stated that they are seeing rate adjustments in the 3-5% range. It was clarified that despite an 11% increase, MVD rates would still be below the state average.

Chairman D. Provencher expressed disappointment in the high cost, stating that he was hoping to see a reduction in cost since there are no longer plans for iron and manganese treatment at Well 3. Pratt explained that the money was put towards building a larger plant with the new wells and was essentially diverted from Well 3 to Well 2, and that there were also substantial construction cost increases.

It was asked when this would be implemented and Pratt answered that he believed MVD was going to implement the new rates as quickly as possible, which is why Underwood expedited the task. Vice Chairman K. Ayers asked about delaying the rate increase as everything else rises in cost. Pratt stated that MVD would be able to break the increase up slightly but should target roughly 11% this year and 12% in the next year or two. However, at the end of the day, the end result will be 80%. Commissioner J. Lyons stated that he likes the set up for the recommended increases and feels people will be more receptive to the smaller increase now, rather than a significant increase later, and will understand the need as costs continue to rise in all areas. Due to public hearing requirements, Superintendent R. Miner stated that it will be at least two meetings before the increase would take effect. Chairman D. Provencher stated that he would be in favor of moving forward with the 11% increase, with public hearings at the July and August regular Board of Commissioners meetings, if possible.

d. RSSCT Work Plan

Before starting, Lynette Carney, of Underwood, stated that this is not truly an RSSCT Work Plan, but rather a Pilot Work plan. She informed the commissioners that Underwood had subcontracted with Loureiro Engineering Associates, Inc (LEA) to do a design and work plan for pilot systems for Wells 4 & 5. She noted that with each plan there was space left on and empty wall at the Wells 4 & 5 treatment plant, for a future pilot area. LEA did a schematic of 4” diameter pilot columns with test ports that could be put on the wall. This would mimic the 25 %, 50%, and 75% ports that are on the vessels and would allow for the testing of new medias. Carney stated that there are alternatives to GAC and resin that are being tested, a few of which have been tested more than others. Now that the work plan has been laid out, Underwood has requested that LEA provide the cost to build the pilot. The following media are under consideration for column testing:

1. Media #1 – Granular Activated Carbon (GAC) – as currently in use at MVD, suggested to be included in the study for comparative purposes
2. Media #2 – GAC #2 / from alternative supplier
3. Media #3 – Clarosafe™ by Claros Technologies
4. Media #4 – Fluoro-Sorb® Cetco, Inc.
5. Media #5 – DEXSORB+® by Cyclopure, Inc.
6. Control Column (empty/no media)

Chairman D. Provencher asked what medias 3, 4, 5, were. Carney answered that they were some of the new media. She stated that Fluoro-Sorb® is likely the furthest along in testing and is a clay-based media. Carney stated that the Clarosafe™ is some type of nanoparticle material and noted that she does not recall what DEXSORB+® is. Other GACs and Resin could be substituted in the column testing. Chairman D. Provencher noted that in Massachusetts Purolite’s Purofine® PFA694E seems to be used frequently. At this time, it was clarified that this column testing is not an RSSCT, but rather a full pilot using a 4” diameter pipe and would run in parallel with the plant. The Purofine® needs a 3-minute empty bed contact time and would likely require an increased flow rate to get less contact time if MVD chose to test this resin. Carney explained that

the issue that the manufacturers have with the resin is the chloride levels, which is why Underwood had not pursued the resin during the design. It was noted that in general, resins are expected to have a longer life than GAC and remove the short chains at a slightly better level, but cost 10x what the GAC costs. Commissioner W. von Schoen stated that it was important to also include costs in the comparisons. It was noted that there are so many variables, including O&M costs, that should be considered.

At this time, Chairman D. Provencher mentioned zeolite, and Commissioner W. von Schoen stated that he was also going to mention zeolite. Chairman D. Provencher asked whether zeolite was NSF approved or not. Carney stated that she was unsure but thought that some testing had been done via LEA and that it had not panned out. Commissioner W. von Schoen shared that there is someone in town who has been using Zeolite for roughly 18 months and has high confidence in Zeolite.

Commissioner W. von Schoen asked for clarification on what role LEA is playing in all of this. Based on the presentation of certain manufacturer's products, he questioned if LEA is a reseller. Carney answered no and explained that their scope of work was strictly to do a work plan. Carney explained that LEA is more experienced in that area, so Underwood chose to contract with them. It was noted that these will be permanent fixtures that are not rented. Once it is built, the MVD staff can monitor and sample. Chairman D. Provencher stated that he feels it makes sense to get a proposal to move forward. He expressed wanting to see how the zeolite and resin do and asked if one of the media options should be substituted. He then asked if the media that was presented showed more promise than the zeolite. Carney answered that the first one she would remove from the list is another GAC, because Underwood had initially tested quite a bit of GAC via the RSSCT process. She stated that she would want to look into the other media's before deciding which direction to move forward with, noting that NSF approval is important. Superintendent R. Miner stated that he would contact Lou Niles for information on Zeolite test results and whether or not it is NSF approved. Carney was tasked with getting a proposal from LEA about moving forward.

Keith Pratt reviewed his notes and shared that there was a pilot study on zeolite that was getting started in the Fall of 2020.

3. Board of Commissioners to discuss EGGI's Road Salt Mitigation Change Order #3

At this time, Business Manager J. Lavoie shared that Jamie Emery had let her know that he is unsure of how much more work there will be on the salt mitigation and that the number he is presenting is a place holder. If more funds are needed, he will present the commissioners with another change order. The original amount has been exhausted. Based on this change order, Emery will provide additional salt mitigation support services relative to the promotion of reduction of use of sodium and chloride for winter applications on highways and parking areas in an effort to lessen such levels in the local Merrimack aquifers. This work will include attending meetings, preparing presentations as needed, general correspondence, general consulting, and other matters related to the salt mitigation program. Chairman D. Provencher stated that he feels it's best to keep the momentum going on this project or MVD could risk much more costly impacts by not continuing the salt mitigation efforts.

Commissioner W. von Schoen asked if Superintendent R. Miner receives a summary of Emery's work. Business Manager J. Lavoie answered that he bills hourly, with a breakdown. It was noted that MVD is generally at the same meetings that Emery is at related to the Salt Mitigation efforts.

**MOTION BY COMMISSIONER W. VON SCHOEN TO ACCEPT CHANGE ORDER NUMBER
3,
DATED MAY 23, 2022, BY EGGI, IN THE AMOUNT OF \$9500, AS PRESENTED, WITH
FUNDS TO COME FROM THE OPERATING BUDGET
MOTION SECONDED BY COMMISSIONER J. LYONS**

A Viva Voce was conducted, which resulted as follows:

Yea: Donald Provencher, John Lyons, Wolf von Schoen, Kenneth Ayers

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Nay:

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MOTION CARRIED

4-0-0

At this time, Chairman D. Provencher stated that a MVD was attempting to set up a salt committee meeting for July 21, 2020, at 2pm. It was also noted that MVD is still waiting on the salt policy from the town. Chairman D. Provencher stated that he wants to know which signs will be placed at what locations prior to them being put in. It was noted that the grant for the signs is all set. Chairman D. Provencher acknowledged that in the 1984 version of the bylaws it states that salt can be used, where usually restricted, in extenuating circumstances. Chairman D. Provencher stated that he would like the public to help police the salting, which will help relieve some of the burden from the commissioners. Superintendent R. Miner noted that MVD does occasionally receive calls from residents to report salt in no salt areas.

At this time, the commissioners were informed that a Project Manager/Developer had given a presentation to the Conservation Commission regarding an expansion for a local hospice center, which would include expanding the parking lot and walkways. At the meeting a concern was raised regarding de-icing, and it was brought up that both MVD and the Planning Board need to be consulted. Superintendent R. Miner will be composing a letter to address this.

4. Board of Commissioners to discuss a possible grant from NHDES to extend mainlines to private well areas affected by PFAS

Chairman D. Provencher informed the commissioners that the possible grant from NHDES to extend mainlines to private well areas affected by PFAS was brought to his attention by Councilor Nancy Murphy. He noted that there are grants available to individual well owners to connect to the public water supply, but there is no public water supply in that area. There is also grant money available for MVD to extend water mains to certain private wells that are contaminated. MVD staff was looking into where in Merrimack it would make sense to connect the most wells or the most contaminated wells. The funds won't go very far, buying just under a mile of pipe. Business Manager J. Lavoie stated that MVD staff is still reviewing the map, as the distribution map is out of date. Pratt offered to put a scope together to be passed by Amy and if they pay for it, Underwood can do it. Chairman D. Provencher said he believed it can be paid for with the grant. Superintendent R. Miner shared some areas that he thought may be feasible for this work. He stated that he would connect with Amy and would come up with a few areas that may work for this project. It was unknown when the grant application was due but believes it will be replenished. Superintendent R. Miner stated that Amy was looking into whether the Town of Merrimack could also apply, and therefore double the funding. Pratt asked if MVD would like Underwood to do any follow up. Chairman D. Provencher suggested that it would be helpful for Underwood to work with

Superintendent R. Miner. Pratt stated that he would reach out to Amy to determine if they would fund some work with Underwood for this.

5. Board of Commissioners to review the minutes from the May 16, 2022 regular BOC meeting.

APPROVAL OF MINUTES

Board of Commissioners Regular Meeting May 16, 2022

The following amendments were offered:

Page 1, line 48, reads, “...were on the books” and should read, “...were on the balance sheets.”

Page 8, line 33 reads, “...connection on Blood Road...” and should read, “...connection on Old Blood Road...”

**MOTION BY COMMISSIONER W. VON SCHOEN TO ACCEPT THE MEETING MINUTES OF THE MAY 16, 2022 BOARD OF COMMISSIONERS REGULAR MEETING AS AMENDED
MOTION SECONDED BY COMMISSIONER K. AYERS**

A Viva Voce Roll Call was conducted, which resulted as follows:

Yea: Donald Provencher, Wolfram von Schoen, Ken Ayers, John Lyons

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Nay:

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MOTION CARRIED

4-0-0

6. Board of Commissioners to review Action Items from previous meetings and items to be added from this meeting.

The Commissioners reviewed the list of Action Items, removing tasks that have been completed, and making necessary additions. Of this numbered list, Superintendent R. Miner addressed number 39, which is the noise complaint around the Turkey Hill Booster Station. He informed the commissioners that skirting will be put up around the building. He also noted that the privacy bushes that were placed on the property have died, and a three-section fence will be placed on the property instead.

7. Old Business

At this time, Chairman D. Provencher informed the public of an apparent premature breakthrough of PFOA through the lead vessel at Wells 4 & 5. L. Carney explained that the April results showed the first time PFOA was seen in the lead vessel effluent at just over two parts per trillion (ppt). This is still below the 12 ppt MCL, but above non-detect. This break through was earlier than anticipated and Carney explained that it had been running 5 months per port and had broken through the 75% port just the month prior and jumped to the effluent pretty quickly. The breakthrough was at 48,000 bed volume and the

warranty is for 60,000 bed volumes. The warranty requires a repeat sample to be done. The May samples were taken as soon as this was discovered. The May samples also had the PFOA in the lead vessel effluent at slightly over 4 ppt, which is still below MCL. Carney explained that what seems to be happening is the 75% port and the effluent port seem to be operating very close together whereas the upper ports had roughly 6 months between breakthroughs. MVD is still getting quite a bit of removal in the lower half of the vessel, but PFOA has broken through, and there is still full removal of PFOA in the lag vessel. The only thing coming out in the finished water is the PFBA and has been since November of 2021. Underwood will send Evoqua a notification that they are looking at a potential warranty claim. Underwood will be looking for Evoqua's opinion on continued operation of the system. Underwood's opinion is to continue operations, as there is still a lot of removal occurring in the lower half of the vessel. Carney also noted that this is MVD's high flow season, and it is not when you want to do the changeout. Additionally, continuing operations will allow MVD to gather information on the carbon and make informed decisions in the future. Pratt stated that Evoqua will argue that MVD reached 80% of the warranty and it is a prorated warranty, leaving MVD with a 20% return. Pratt stated that the real decision point is that if MVD chooses to run with the lead as it is, the warranty will likely be forfeited on the lag vessel because, according to the warranty, it should be swapped out at this time. Chairman D. Provencher asked if the warranty is as soon as PFOA breaks through the lead vessel. Pratt answered that it is something along the lines of if it is above two ppt for two consecutive weeks, but stated that regardless, MVD is now there. Pratt stated that there is still a lot of good carbon in the lead vessel and swapping it out would be giving that up, which will cost MVD money. Commissioner W. von Schoen noted that there is currently 9 ppt of PFBA being sent down the line to MVD customers. He asked if MVD should consider replacing the lag vessel in order to enable MVD to continue monitoring what happens with the lead vessel. Pratt stated that what Underwood is suggesting that MVD gains a benchmark. He acknowledged the breakthrough of non-regulated PFAS but stated that Underwood feels that if MVD doesn't find what this carbon is capable of, they will never truly know from a cost point of view. Commissioner W. von Schoen asked if that mattered because of the wording of the warrant articles. Pratt stated that if the commissioners want to remain true to the warrant article, they need to swap out now, and should have been swapped out in November. Commissioner W. von Schoen asked if it was increasing day by day. Carney explained that it was not, and the effluent is holding strong. Commissioner W. von Schoen noted that it was his opinion that no media is being saved. He explained that when looking at the compound that is breaking through the earliest, which is what the warrant articles are asking for, MVD has effectively spent the lag vessel (PFBA). Carney noted that if the change out were going to take place due to PFBA, the vessels would be changed out every 5-8 months, whereas a changeout based on regulated compounds brings it to almost two years. Commissioner W. von Schoen noted that the goal was to get data in order to present warrant articles in 2023. He stated that he does not want to ride this out any longer than necessary just to get data. Vice Chairman K. Ayers stated that continuing on would be to knowingly go against the warrant articles. Pratt noted that while he understands that he is not in the position to have to answer to constituents, the warrant article as he recalls states to "reduce PFAS." He stated that the term "PFAS" encompasses all PFAS and does not indicate that the breakthrough of one constitutes a change out. Pratt stated that at the end of the day, PFAS is still being reduced by quite a bit. Pratt stated that if MVD moves to changing out every 5 months, the rate increases that were discussed earlier will need to be higher than 12% next year. The 12% increase was not based on a 5 month swap out. Commissioner W. von Schoen read from the petition and stated that it does not say anything about non-detect. Chairman D. Provencher stated that his only question is whether MVD should continue planning on changing the media because of PFOA alone. He also stated that he is unsure what the warranty will do for MVD. Pratt stated that the warranty is important to consider when making decisions but that he does worry that operational decisions are being made to save a dollar, which may not happen. He reiterated that this seems like a great opportunity to get an understanding of the true value of the carbon. Chairman D. Provencher asked how much the cost of the change out can fluctuate. Vice Chairman K. Ayers questioned if Saint Gobain was responsible for

covering the cost for the first five years. Pratt clarified that Saint Gobain is responsible for \$106,000. Chairman D. Provencher noted that the money is in MVD's escrow.

Chairman D. Provencher asked how long the wells would have to be offline if MVD were to proceed with a change out of the lead vessel now. Pratt answered that Underwood believes they would be offline for 1-2 weeks. He also stated that there is a two-month minimum, one month preferred, lead time to schedule a change out. Carney stated that the wells will be down while the carbon is being taken out and can potentially go back online with just the lag vessel while the carbon is out being regenerated. The wells would have to go back offline while the lead vessel is being conditioned and reloaded. Commissioner W. von Schoen questioned the process of the carbon being regenerated versus replaced. Carney answered that buying new carbon to replace the old is an option, but it is less expensive to regenerate it. Superintendent R. Miner stated that a swing load had been discussed. He shared that he had spoken with NHDES and MVD can operate off of the lag vessel if needed. Superintendent R. Miner stated that the prices that have been worked into the budget are for regenerated carbon, without a swing load. Pitsas stated that one benefit of regeneration is that MVD avoids any legacy issues involved with taking carbon to a landfill and potentially causing contamination. Carney added that if the carbon is replaced, the full load of carbon will need to be conditioned, whereas regenerated carbon only requires a portion to be conditioned. Commissioner W. von Schoen expressed that not replacing the carbon when there is any breakthrough of the lead vessel will only cause the need to change out the lag vessel. He stated his understanding of why Underwood would like to continue with the current carbon but expressed concern. Pratt noted that there is still available carbon in the lead vessel that Underwood believes is beneficial and will provide information on the carbon benchmark. Commissioner W. von Schoen asked how beneficial that answer really is if there is an understanding that the media is already spent. Pratt answered that he believes at some point there will need to be a cost-benefit discussion. Carney explained to the commissioners that this last month the blended influent was around 66 parts, and coming through the 50% port, there is 40 ppt. She continued to say that even in the upper half of the vessel that has technically been spent, there is still removal of over 20 ppt. In the lower part of the vessel the PFOA was 8 ppt at the 75% port and 4 ppt coming out of the vessel (and going into the second vessel). Carney noted that there was still a lot of removal, and it seems there is usable capacity. Commissioner W. von Schoen stated that it does not make sense to contaminate the lag vessel and waste it. Carney stated that it would not be wasteful, noting that if the lag vessel is moved to the lead position it will now be loaded at 66 parts, rather than 4 parts. Chairman D. Provencher stated that in Massachusetts the lead vessel is expected to be changed when the breakthrough is at half of the MCL. He also noted that in the settlement agreement with Saint Gobain it states to change the vessel when the PFOA breaks through to half of the influent, however this is not inline with the warranty. Commissioner W. von Schoen suggested working with Evoqua on a business deal that would allow replacing the lag vessel earlier, in order to capture data on the lead vessel, which would be beneficial to everyone, in exchange for not going after them for the warranty. Pratt stated that if MVD were to swap out now, there is still contaminated water, whereas once the entire system is online MVD is working towards the lowest PFAS. Pratt stated that Underwood had targeted a changeout in the fall (September/October), which is still possible, but that Underwood needs to know if MVD is going to want to do something sooner. Chairman D. Provencher suggested splitting the difference and aiming for an August/September changeout. Pratt noted that August may be tough due to high demands. Commissioner J. Lyons stated that MVD shouldn't be spending money that they do not have a mandate to spend and should be treating to be below MCLs only, otherwise MVD could be at risk. He also noted that MVD would not be in violation as long as they did not exceed the MCL. Chairman D. Provencher suggested planning on a changeout for September 2022. It was noted that the changeout should take place prior to the winter months. Commissioner J. Lyons asked if there was any chance the lag vessel would break through during the freezing winter months or if it would last until summer. Pratt explained that the current lag vessel will be the lead vessel and the fresh carbon will be the lag, which should easily make it through the winter. Pitsas asked Pratt how quickly the PFNA came through the lead

vessel. It broke through the lag vessel after 13 months and may break through again in the March/April time frame. Pratt answered that Pitsas was correct but explained his mindset to be a “reduction of PFAS.” It was determined that MVD will target a September changeout, unless the data suggests otherwise.

Commissioner J. Lyons shared with the commissioners that he had received an email from a company claiming to be able to destroy PFAS at the source using a super critical fluid technique. He forwarded the email to the board members. Pitsas asked to also receive a copy of the email.

8. New Business

Chairman D. Provencher stated that there was a letter in the Board Packet requesting MVD submit all proposed capital expenditures to the Planning Board for review no later than July 22, 2022. Superintendent R. Miner stated that there will likely be an agenda item to review the Capital Improvement Plan (CIP) during the July BOC meeting. Chairman D. Provencher noted that the board is still waiting on Underwood to present a source alternatives evaluation that was supposed to be recalculated. He noted that this will tie in with the CIP.

Chairman D. Provencher informed the public that the EPA has released new health advisories for PFOA, which are much lower than before at .004ppt (which calculates to 4ppq). This amount cannot yet be measured. The EPA’s health advisory for PFOS is .02ppt (or 20ppq). It was noted that MCLs are based on feasibility whereas health advisories are not. Note: ppq refers to parts per quadrillion.

Commissioner W. von Schoen stated that the odd/even water restriction signs in town are not monitored very well and keep popping off. He noted that he has fixed the one on Bedford Road twice and the one on Continental Blvd appears to be much better. He suggested some updates including UV resistant zip ties.

9. Superintendent’s Report

Superintendent R. Miner informed the commissioners that the large groundwater permit for Mitchell Woods was renewed for another five years. He also noted that the CCR has been completed and posted on the [MVD website](#). A bulk mailing post card will be sent out to inform people of how they can retain a copy if they would like.

10. Questions from the Public/Press

None

ADJOURNMENT

MOTION BY COMMISSIONER J. LYONS TO ADJOURN
MOTION SECONDED BY COMMISSIONER W. VON SCHOEN

A Viva Voce Roll Call was conducted, which resulted as follows:

Yea: Donald Provencher, Wolfram von Schoen, Ken Ayers, John Lyons

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Nay:

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MOTION CARRIED

4-0-0

The June 20, 2022 meeting of the Board of Commissioners was adjourned at 8:20 p.m.

Submitted by Amanda McKenna, Recording Secretary