



DEDHAM-WESTWOOD WATER DISTRICT PFAS Pilot Presentation

Hybrid Meeting

In-person attendance: 50 Elm Street, Dedham, MA 02026

Thursday, March 14, 2024 | 6:30 PM

Announcement of the Audio and/or Video Recording

The Chair, Mark Phillips, called the meeting to order at 6:30p.m. and announced the meeting would be audio- and video-recorded.

Mark Phillips, Chair

Eric Merithew, Vice-Chair

Gary Yessaillian, Member

Robert Lexander, Member

Blake Lukis, Executive Director & Assistant Treasurer

Bob Marsh, Business Manager

Pauline Donoghue, Treasurer

Steve Locke, Operations Manager

Absence

Louis Kustwan, Clerk; John Healy, Member

Also Present

Weston & Sampson:

Associate/Senior Team Leader Michael Warner

Water Senior Technical Leader Andy Reid

Project Manager Allie Goldberg

Engineer III Sara Francis

Mary Chehwan, Owner of 32 Orchard Street in Dedham

Roll-Call Attendance

Messrs. Phillips, Merithew, Yessaillian, Lexander Present

Mr. Phillips confirmed a quorum present.

Public Participation

No public participants were present to address the Board.

Presentation on PFAS Pilot Programs

- Presentation from Weston & Sampson on the results of the PFAS Pilot program at the White Lodge and Bridge Street Water Treatment Facilities. Further discussion on future steps required at Bridge Street Facility.

The Weston & Sampson Engineers Project Team was welcomed to the meeting.

Associate/Senior Team Leader Michael Warner introduced himself and the Project Team

Members: Water Senior Technical Leader Andy Reid, Project Manager Allie Goldberg, and Engineer III Sara Francis.

Ms. Goldberg shared her screen to display the PFAS Pilot Programs presentation for the Project Team to highlight and to address questions:

- Agenda - Pilot design & setups, PFAS piloting at White Lodge & Bridge Street, and next steps
- Overview of Terminology
- Purpose of Piloting - 4 points listed
- Pilot Design & Setups - Media, Operation, Design described

Q: Treatment is downstream of the existing treatment?

A: Correct

Q: With pre-treaters?

A: Yes

Q: Details of resin, GAC, volume?

A: Resin has smaller footprint than GAC, an advantage of using resin.

Q: Is there a price difference?

A: Pricing will be covered later in the presentation.

Q: There are six PFAS requirements - Have any EPA statements been made regarding expansion, which additional contaminants would not be covered?

A: All contaminants are taken into consideration by Massachusetts. One hazard is not included - No treatment facilities have been close to the maximum level. EPA regulations are monitored.

Additional PFAS compounds were further explained.

Q: Do other compounds react the same way?

A: Other compounds react differently, depending on makeup. The focus is on the main compounds, regulating based on health effects.

Q: Is Bridge Street chlorine-tested?

A: Chlorine levels are monitored at Bridge Street after dechlorination.

- Estimated PFAS Breakthrough - Data summarized, PFOA breakthrough will drive media replacement

- White Lodge PFOA Breakthrough - Diagram on GAC, media, EPA-proposed PFOA MCL

Q: Does pilot study equate to a flow rate?

A: What affected plant ratios was listed. Flows-through are designed to meet designated characteristics.

Q: Is the design for maximum flow through each plant?

A: Correct

Q: How long has Dowex been used in treatment?

A: Dowex is on the approved Massachusetts technology list; not sure of longevity.

Q: Is Dowex used for other chemicals' removal?

A: Dowex is targeted for PFAS.

- Operational Data - White Lodge - Stable DP shown
- Operational Data - Bridge Street - DP increased after three months, steps taken in response to DP restricted flow
Head loss potential causes, DP limiting factor

Q: Is there a pressure drop across the cartridge filters at Bridge Street?

A: Significant increase as seen, replaced twice.

Q: Was sampling done to get the nature of why the DP increased?

A: Metals were sampled. The next pilot is targeting water quality to identify cause if DP increases again

Q: Are dissolves precipitating?

A: It is a theory.

Q: Are samples taken before the plant (raw water)?

A: No, the pilot takes water post treatment process so that is all that was sampled.

Q: Knowing levels beforehand may be advantageous, with all wells running.

A: We have historical data.

Q: Historical data does not have the same quality as current data, as qualities change; it might be advantageous to know what is coming in.

A: We will look into more samples for next phases.

Q: Could Polymer potentially be overdosed?

A: That is a possibility; dosing is being reviewed.

Polymer dosing at plants had to be within a window, not outside of compliance.

- Cost Analysis - Estimated Annual Media Replacement, Media Replacement Costs for White Lodge & Bridge Street

Q: What is the downtime to replace the media?

A: Approximating a week, 3-5 days - Replace lead vessel media, make lag the new lead.

Four total vessels running in-parallel - Further described the process - Full-scale design annual media replacement costs assumption infeasible from an operational standpoint.

Q: Not all O&M costs are included?

A: Correct

Q: What other factors should be considered?

A: All other O&M costs, electrical and HVAC are a couple of examples - Media replacement drives the largest factor.

Discussion was held regarding the new White Lodge building O&M.

Q: Asked about auto valves.

A: A few modulating valves are in the design - All valve tree is manual on resin, with flow equally split.

Q: Are targeted filters upstream?

A: Yes

Discussion included of filters, backwash, and split actuating valve.

Q: Resins cannot be regenerated?

A: No regeneration; must be disposed of - Lead times on media about six months.

Q: Virgin media each time? Media must be incinerated?

A: Yes

This explains why the disposal cost is so high.

Q: Time could change based on testing?

Why continuous plant PFAS monitoring

Q: Any in-line analyzers to test?

A: No

A: Final vessel design will have intermediate sample taps to track media.

Q: Are all three sampled until breakthrough?

A: Yes

Further description was shared.

Resin delivery was explained.

- Next Steps - White Lodge WTP
- White Lodge Final Design
- White Lodge Project Schedule - to construction 6/25-12/26

EPA final regulations allow for three years to compliance - Construction is scheduled for completion just before.

Discussion included SRF funding, roof, and solar.

- Next Steps - Bridge Street WTP - Proposed pilot - Targeted water quality sampling program aimed to identify issues of first pilot.

Mr. Lukis shared Weston & Sampson's memo regarding additional sampling, and further explained.

Q: The January 25 memo noted seven pilots - Has the number been scaled down?

A: Yes, to understand what's there.

Q: Dosing was questioned.

A: Targeting and dosing was explained - Will deep-dive in next phase.

Q: Is salt density index testing performed?

A: This can be looked into.

Q: Is FluoroSorb well-used within the industry?
A: Yes, and it is also on the MA-improved technology list. W&S has piloted a few communities, and FluoroSorb is doing well.

Q: In piloting cases, is FluoroSorb addressing those issues?
A: FluoroSorb has been effective in removing PFAS.

During the timeline, Orange City, CA tested technology and did well dealing with PFAS.

Q: Filter issues were experienced at TOC levels of 2.5-3 PPM?
A: We would like to see less than 2, as 3 may be a concern.

Q: Is seeing such a differential across expected?
A: Differential pressure was not expected.

Discussion was held regarding media clogging and data gathering.

Q: Was the media tested?
A: No, but the media was discolored.

Q: Any benefits to THMs with FluoroSorb?
A: Targeted to PFAS removal in presence of high TOC; no effect to TTHMs.

Q: Must de-chlor for FluoroSorb?
A: No, some chlorine can be handled.

Q: Will the pilots have an impact on TOC?
A: Yes, aimed to reduce the TOC ahead of it.

Discussion included replacement cycle, backwash, GAC, and GAC targeting TOC.

Q: Do you plan to bench test first to determine the nature of the contaminants before initiating the pilots?
A: More data needs to be collected before the pilots.

Sampling was discussed.

Q: Are other clients in a similar situation? Are they taking proactive steps?
A: Communities are designing for proposed regulations and taking steps needed.

Discussion was held regarding timeframe, DEP, sampling, and time compliance extension.

- Estimated Costs – Bridge Street – Pilot Program, Estimated Range of Potential Construction Costs

Q: Is the operation cost impact known?
A: We do not know how data will be performing.

Q: Are costs with a 20% contingency?
A: They are.

Mr. Lukis made the recommendation to go forward with the next pilot stage to determine what is needed at Bridge Street. Last year's budget included an appropriation for pilot testing and design. Pilot testing without design YTD has been underspent. A motion is not necessary as the additional piloting falls within the scope of the appropriation.

Discussion was held regarding the Weston & Sampson proposal and Mr. Lukis' recommendation.

The Board thanked the Weston & Sampson Team for their presentation, and the Team left the meeting.

Discussion with 32 Orchard Street

- The District neighbor located at 32 Orchard Street has requested to discuss the proposed garage with the Board of Water Commissioners.

Mr. Lukis informed that the neighborhood meeting was held February 27, when the building design and site plan for the proposed garage were shared. The owner of 32 Orchard Street was met with separately, and she requested to address the Board.

Ms. Mary Chehwan was welcomed to the meeting. Ms. Chehwan expressed her concern and unhappiness with the proposed plans, stating the current DWWD situation next to her property is enough. She fears losing property value, privacy, and peace of mind. She spoke with the Dedham Building Commission and Conservation Department, where no permit applications have been received. Ms. Chehwan requests the Board look for another solution for the garage.

Mr. Yessaillian asked Ms. Chehwan what of the plans she is not in agreement with. Ms. Chehwan stated privacy is the issue, with the DWWD building already on the right side of her property, in the residential area. She welcomes the Members to visit her property to see from her vantage point. Mr. Yessaillian asked if Ms. Chehwan is concerned with seeing two buildings; she confirmed that is her concern.

Mr. Yessaillian informed Ms. Chehwan that the DWWD has issues with the current building, with the Board trying to account for employee safety. Ms. Chehwan acknowledges the growth she has seen in her 20 years as a neighbor but suggests the proposed garage be added to an industrial area.

Mr. Yessaillian thanked Ms. Chehwan for her input, acknowledging the Board is sensitive to her view. Ms. Chehwan may plan to gather signatures door-to-door to bring to the Town. Mr. Yessaillian reiterated that these discussions are being held because the neighbors are being considered. Ms. Chehwan requested being kept apprised of the garage plans, and Mr. Yessaillian responded that the DWWD will continue to be transparent.

Mr. Merithew informed that alternative options will continue to be weighed, and reiterated portions of the neighborhood meeting information. Ms. Chehwan thanked the Board for their

time and effort in her want to protect her family, property, and peace of mind. With understanding, the Members thanked Ms. Chehwan for her address; and she exited the meeting.

Mr. Lukis introduced Ashley Dunn, the District's part-time water system engineer, to hold a brief discussion on going forward with the garage plans. He informed that a meeting is planned with the landscape and building architects, and the civil site engineer. It will be seen if neighbor comments can be incorporated into the proposed design.

The 32 Orchard Street property was discussed, including the traffic flow, plantings, safety, DWWD vehicle size, project survey, storm water, no conservation issues, fencing, and neighboring vacant lot aesthetics.

Mr. Lukis informed that permitting will be through the State rather than the Town. The project was brought to the Dedham Planning Board Administrator; and Town Counsel determined, since DWWD is a body politic of the Commonwealth of Massachusetts, it is not subject to local local by-laws and regulations. It was mentioned that all property line set backs are being met.

Discussion continued regarding neighbor's view, elevation/grade, property purchase, light-commercial 700 Canton Street, operation split, 38 Elm Avenue, zoning, trees, neighboring property value, landscaping, other neighbors' input, fencing, building design change, other property options, accommodations, storm water, retaining wall, fence, headlights, parking lot drainage, architect backyard rendering, construction season/pool season, and project schedule to 2025.

Mr. Yessaillian suggested continuing with neighbor discussion, knowing Ms. Chehan's concerns with the project but acknowledging the DWWD is expanding storage, not the operation, which will result in less traffic with the proposed flow.

Old/New Business*

No additional business was brought before the Board.

Next Meeting

The next District Board hybrid meeting is scheduled for Wednesday, March 27th, at 6:30 pm.

Mr. Phillips requested a motion to adjourn the meeting. A motion was made by Mr. Lexander to adjourn the meeting; the motion was seconded by Mr. Merithew, and a roll-call vote was taken. Roll-Call: Messrs. Phillips, Merithew, Yessaillian, and Lexander voted Aye. Motion passed unanimously.

The meeting was adjourned at 8:31p.m.

Respectfully Submitted,
Kathy Travers Reynolds
Recording Secretary