

City of Concord

Regional Utility Utilization Committee

Minutes of May 11, 2022

Members Present: Councilor Fred Keach, Chair
Councilor Karen McNamara

City Staff Members: Ashley Hamilton, Deputy City Clerk
Carlos Baia, Deputy City Manager
Chip Chesley, General Services Director

Public Guest: Christopher Culberson, Commissioner of Pembroke Water Works
Matthew Gagne, Superintendent of Pembroke Water Works
Lynette Carney, Underwood Engineers
Dave Mercier, Underwood Engineers

1. Call to Order

The Chair called the meeting to order at 3:30 P.M.

2. Approval of Minutes

The minutes of the April 13, 2021 meeting were unanimously approved.

3. New Business

Councilor Keach asked the City of Concord's General Services Director, Chip Chesley, to elaborate on the water capacity and availability of the City's water supply.

General Services Director Chesley stated that the City of Concord could produce up to six million gallons of water per day, as a maximum safe yield. He noted that currently only half of that was pumped on a daily basis, but indicated that additional pumping took place during peak periods to balance demands within the overall capacity.

General Services Director Chesley reiterated that although Penacook Lake was one of the largest reservoirs in the state, but was not a water source for Concord, as it could not yield a sufficient supply of water. He stated that it was the ability of Concord being able to move water from the Contoocook River to Penacook Lake that allowed the sufficient capacities needed. He noted that as Concord's population and water demands increased, Concord would need to pull water from the Merrimack River to provide the additional capacity, to the community.

Councilor Keach asked for clarification on how water was transferred from the Contoocook River to Penacook Lake. General Services Director Chesley stated that there was a pump station by the Contoocook River and an extensive pipe line that ran from the river to the lake.

Councilor Keach asked, as a follow up, if the State regulated the daily amount of water that could be taken from the river, to which General Services Director Chesley stated that currently Concord had a permit from the State. He indicated that there were new regulations being discussed by the State, that could limit daily throttle and withdrawals allowed from the Contoocook River, but noted that nothing has been changed, and Concord did not see any potential threats to current operations. He acknowledged that it remained a variable and was watching the rule process carefully and cautiously to ensure it did not impact the City's ability to meet demands. General Services Director Chesley reaffirmed that once Concord's population hit 55,000 people, connecting to the Merrimack River would adequately meet all capacity demands.

Christopher Culberson, Commissioner of Pembroke Water Works, stated that Pembroke Water Works operated five production wells in three locations in the Town of Pembroke, wells #2 and #3 were located on Route 3, along the southeastern shore of the Soucook River, near the Concord-Pembroke Town line. He noted that Pembroke Water Works serviced Pembroke, Allenstown, and a few residential homes in Hooksett.

Mr. Culberson stated that harmful man-made contaminants Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) had been detected above the State's allowable maximum contaminant level (MCL) in the Concord #2 and #3 wells, which had caused them to modify operation of the wellfield in attempt to reduce PFAS concentrations to below MCLs in the finished water. He noted that in an attempt to mitigate contamination of the wells, and comply with NHDES set levels, they lowered their flow rate, lost pump capacity, and had been at a reduced/blended capacity for 14 months, and were not sure how long they could preserve the wells and meet increased capacity demands.

Mr. Culberson stated that Pembroke Water Works and the Board had taken a proactive approach, and had been monitoring the issue for several years, prior to NHDES changing the regulations. He noted that in 2021, Underwood Engineering was hired to perform an evaluation of alternatives for PFAS mitigation. They evaluated four primary alternatives, reflecting that the least expensive option was making a connection to the City of Concord on Route 106 or at Route 93.

Dave Mercier and Lynnette Carney, from Underwood Engineers, explained, as a point of reference, that it would only take a single drop of water containing PFAS to contaminate an entire Olympic-sized swimming pool. They noted that the levels being discussed and monitored were at a much higher concentration per volume and could not be destroyed, and only the resin byproduct could go to the landfill. They acknowledged that it had been difficult to identify and track the contamination source.

Councilor McNamara asked if NHDES was supporting their efforts, to which Ms. Carney stated that, yes, funding was available, but that NHDES gave no direction on how to fix PFAS contamination. She noted that NHDES looked for the most cost-effective solution.

Mr. Culberson stated that water treatment was an option, but was not in practice due to their excellent natural sand filters and good ground water production. He noted that the water

treatment option required the new build of a water treatment plant. He stated that a connection to Concord was the easiest and most cost-effective solution to supplement and blend Concord water with their own production.

Deputy City Manager Development Baia asked for clarification on the costs associated with the other alternative options. Mr. Culberson stated that the approximate up-front cost to build a water treatment plant, was approximately \$18 million, which did not include operating costs.

Mr. Culberson stated that PFAS media could be removed from the water, but could not be destroyed. He stated that incineration was the only way to truly destroy the contaminants, but noted that no furnace existed yet, hot enough to burn it. He also noted that there was no real way to predict the flow of the contaminate plumes when in soluble water.

Deputy City Manager Development Baia asked for clarification on what the capacity request would be, to which Mr. Culberson stated that the peak demand range was approximately 600-1,000 gallons per minute.

Councilor Keach asked, if approved, how would Pembroke Water Works prevent cross contamination. Matthew Gagne, Superintendent of Pembroke Water Works, stated that a booster pump station, at a different elevation to Concord, would be needed at the interconnect, as well as metering facilities, and check valves or a backflow prevention configuration, to ensure the water was on a one-way street.

Deputy City Manager Development Baia stated that in order to make a recommendation to Concord's City Council, Pembroke would need to flush out and provide a capacity range of water needed, giving a best- and worst-case scenarios. He noted that Concord had approximately 1,500 new housing units being considered, which would increase Concord's current capacity demands, and reduce available capacity.

Councilor Keach acknowledged that Pembroke's request was different from the one received from Bow, but noted that historically Concord did not want to give away any economic advantages to other communities. He stated that Concord's City Council would have the authority to decide, noting that he fully trusted and relied on City staff to propose a recommendation.

Deputy City Manager Development Baia stated that, if approved, the water would be paid for through an agreement. He noted that the requested source capacity range was an important component. Mr. Mercier stated that the max capacity demand needed would be approximately 25 percent of Concord's production.

Mr. Culberson asked the Committee if pursuing a connection with Concord was feasible or even an option. General Services Director Chesley acknowledged that Pembroke's situation was dynamic and stated his opinion that PFAS contamination was a huge threat. He reiterated his belief that Concord would be connecting to the Merrimack River in the future,

and emphasized that by assisting Pembroke, it would increase Concord's demand and escalate Concord's connection time table.

Councilor Keach asked if there was a cap on the charge for shared water, to which Mr. Mercier stated that in other communities, the State negotiated the rates. Mr. Culberson stated that Pembroke was not the only community impacted by PFAS contaminations, and noted his belief that statewide community treatment was likely the solution.

Deputy City Manager Development Baia asked to clarify, if approved, who would the agreement be with, the Pembroke Water Works or the Town of Pembroke. Mr. Culberson stated that the Pembroke Water Works was separate from the Town of Pembroke and fully funded their own enterprise, but noted that they relied on the Town's people to vote on warrant articles.

Deputy City Manager Development Baia asked if Pembroke Water Works would fully support the costs of a pipe connection build, to which Mr. Culberson agreed, noting that there would be no cost to Concord.

Deputy City Manager Development Baia noted that putting together a recommendation and potential agreement would take time. Mr. Culberson acknowledged that and noted that he anticipated a connection, if approved, being implemented in three to five years. He thanked the Committee for their time and consideration.

4. Other Discussion Items – No additional items were discussed.

5. Adjourn

The meeting was adjourned by unanimous consent at approximately 4:19 P.M.

Action: Councilor McNamara moved to adjourn the meeting. The motion was duly seconded and unanimously passed with a roll call vote.

Yes: 2 – Councilor Keach, Councilor McNamara