

## Informational Question and Answer Meeting

### Terry Ranch/Wingfoot Aquifer vs. Milton Seaman Reservoir Enlargement

Date of Meeting: November 17, 2020

Time: 9:00 AM-11:00 AM

Subject: Terry Ranch/Wingfoot Aquifer vs. Milton Seaman Reservoir Enlargement

The following discussion is from John Gauthiere's notes taken during the meeting between Gauthiere, the Water Board Chairman Harold Evans, City Staff and their Consultants

#### Attendees

1. John G. Gauthiere, P.E. President of Gauthiere Engineering, Inc.
2. City Staff and Water Board: Harold Evans P.E., Chairman of the Water Board, Adam Jokerst, P.E., Deputy Director of Water & Sewer, Peter Champion P.E., Water System Engineer, Mary J. Gearhart, P.E., Special Projects Engineer
3. LRE Water: Cortney Brand, PG
4. Brown and Caldwell: Laurie Sullivan, P.E., Samantha Kepley, P.E., Scott Higbee, P.E.
5. Daniel B. Stephens & Associates, Inc.: Christopher P. Wolf, PG

#### Discussion Points

1. Question: Is the Terry Ranch aquifer a non-replenishing aquifer?  
*Answer: Cortney Brand, PG answered that the aquifer did receive some recharge which was estimated to be about 1,300 acre-feet per year.*
2. Question: Where is the recharge outcropping?  
*Answer: Consultants were not sure.*  
I informed them that the outcropping was on the Meadow Spring Ranch which is located adjacent to and west of Terry Ranch Aquifer site.
3. Question: Regarding the diligence being performed, I asked if the consultants were investigating what potential watershed protection hazards might exist in the aquifer recharge outcropping on the Meadow Springs Ranch.  
*Answer: The consultants stated that they had not considered any hazards in the aquifer recharge areas.*
4. Question: I asked if they knew what the Meadow Springs Ranch was being use for.  
*Answer: Consultants did not know.*

Comment: I informed them that the City of Fort Collins is using the ranch for land application of the City's municipal sewage sludge. I showed the consultants a photo of the City of Fort Collins sludge trucks dumping sewage sludge at the Meadow Springs Ranch at a rate of 2,355 metric dry tons per year.

*At this point, Chairman Harold Evans interjected that he knew about the sewage sludge and that former Mayor Tom Norton had "designed it". Evans did not think the application of sewage sludge to the aquifer recharge area was a problem.*

I warned Evans that the application of sewage sludge could contaminate the aquifer with pharmaceutical contaminants and fluorochemicals, known as PFAS, among other things, since those contaminants are not filtered out by the aquifer. (Around the industrialized world, fluorochemicals rank among the most problematic in an expanding multitude of unregulated toxic "emerging contaminants" detected in drinking water, soil, and groundwater.) In addition to potential contamination of the aquifer posed by the sewage sludge, I advised Chairman Evans that the water customer's perception of the sewage sludge application to the aquifer recharge site would not be favorable nor would the public perception of Greeley.

5. Questions: The initial claim regarding availability of 1.2 million acre-feet of water storage capacity in the Terry Ranch aquifer was questioned after Cortney Brand, PG stated that during recent testing the southern half of the aquifer would not produce water and that the deeper portion of the northern half would not produce water. Does this recent discovery indicate that the 1.2 million acre-feet claim of water storage would not be valid or be less than anticipated?

*Answer: Cortney indicated that he now thinks that 1.9 million acre-feet of water storage capacity would be available because of "aquifer characteristics".*

Comment: At this point my impression is that Courtney is practicing a rather soft science and may be more hopeful rather than reliable.

6. Question: I questioned whether the State Land Board square mile sections, which checkerboard the Terry Ranch, made the Wingfoot water right vulnerable to damage by others drilling wells on the State Land Board Property. Ownership of the land is the only sure-fire way to protect the water right from damage by other drillers and appropriators. The Wingfoot Water Right is inferior because of this vulnerability.

*Answer: Deputy Director Jokerst stated that the City would get a lease on the State Land Board Land.*

Comment: Apparently, the City cannot or does not want to purchase the property which is the only way to prevent drilling.

7. Question: Regarding the potential loss of the 9,992 acre-feet Milton Seaman Enlargement Conditional Decree and the 4,900 acre-feet Rockwell Ranch Conditional Decree if Milton Seaman is not enlarged, I discussed the fact that Milton Seaman

Reservoir is the decreed alternate diversion point for many of the City's Cache la Poudre River water rights and that the two conditional decrees totaling 14,892 acre-feet could only be effectively captured in an on-stream reservoir such as an enlarged Milton Seaman Reservoir. I further explained that the two conditional decrees were somewhat junior and would only deliver during a short period during the spring runoff. Since the diversion of these water rights would produce a very large flow rate in a very short period of time, this large runoff could only be diverted and stored by capturing it in a mainstem reservoir. Therefore, the two conditional decrees cannot be processed by the Bellvue Water Treatment Plant and transferred to the Terry Ranch aquifer because the required very high flow rate cannot be feasibly accommodated in the treatment plant or the aquifer.

*Answer: Jokerst said he thought the two conditional decrees could be temporarily stored in gravel pits and later transferred up to Bellvue Water Treatment Plant for treatment then back down to Windsor, pumped 40 miles north to Terry Ranch, then injected into the aquifer.*

8. Question: I asked how much storage is available in the City's gravel pits.

*Answer: Jokerst stated that he thought there was maybe 6,000 acre-feet of storage capacity in the existing pits.*

The reader should understand that the capacity of the gravel pits is already committed to other supplies such as capture of the wholly consumable reuse water from trans basin supplies and other non-potable water rights owned by the City. Even if more gravel pits are developed this would of course require the 14,982 acre-feet of conditional decrees that is temporarily stored in the gravel pits to be transferred upstream to Bellvue for Treatment, then sent back down the Bellvue Pipeline to about Windsor, then pumped 40 miles North to Terry Ranch and then injected into the aquifer. **This would be very energy inefficient and an operational, timing and logistics nightmare.**

*At this point Harold Evens said that "Oh well, we will just abandon the conditional decrees, they are not important".*

Comment: Reader should take note that using the current cash-in-lieu-of price of \$34,000 per acre-foot times 14,982 acre-feet, Greeley will lose \$509 million worth of water right assets.

9. Question: Why is Well No. 1 in the NW corner of the property much higher in uranium concentration than the rest of the wells? Would this not appear to be a huge red flag to you?

*Answer: Cortney Brand said he did not know.*

Comment: Since water flows in the aquifer from the NW to the SE, Well No. 1 would be the first well to experience a flow of high uranium bearing water from Wyoming. At this point in time, no diligence is being conducted N of the Colorado boundary.

10. Question regarding ethics and conflict of interest: The consultants, Brown and Caldwell, LRE Water, and Daniel B. Stephens & Associates, Inc., are entrusted to perform diligence and peer review and provide their opinion on the suitability of the Terry Ranch ground water supply for Greeley's drinking water. Should these same consultants be allowed to propose on and be awarded a very lucrative engineering contract to provide design and construction engineering services for the 40 mile pipeline and Terry Ranch water treatment plant?

*Answer: Peter Champion (City of Greeley) stated that he thought it was OK for the consultants making recommendations in favor of the Terry Ranch Project to be able to anticipate a lucrative engineering contract for the design and construction of the project. **The consultants present did not respond.***

Comment: Guarding against the perception of conflict of interest is critical to maintaining the public's continued trust in government. Can we really trust the diligence of parties with so much to gain financially? I'm sure the diligence on the water will show it to be just grand!

11. Question: I requested copies of the City's detailed construction cost estimates, mitigation assumptions, and plans for Milton Seaman Reservoir Enlargement that would support the City's recent claims concerning the cost of constructing Milton Seaman Reservoir Enlargement Project.

*Answer: Jokerst stated that he would check with the attorneys to determine whether the City could release any of that information.*

Comment: I have not yet received that information.

12. Question: Why did the City stop pursuing the U.S. Army Corps of Engineers' Permit for the Enlargement of Milton Seaman Reservoir?

*Answer: Mary Gearhart (City of Greeley) said that Melissa McCoy from the EPA told her that there was only a 30 percent chance that the Permit could be obtained. Mary Gearhart also said that the City would have to mitigate 7.5 miles of stream bank loss. This was based on a 3:1 mitigation ratio.*

Comment: Permitting is a long, arduous process. City employees should not be so easily discouraged by NEPA reviewers' comments. My experience has been that skill, creativity and stubbornness are required to provide mitigation that would qualify for a 1:1 mitigation ratio rather than a 3:1. Reducing the ratio will greatly reduce the cost of mitigation and the cost of the overall project.

13. Question: When will construction of the 40-mile pipeline to Terry Ranch occur?

*Answer: Chairman Harold Evans stated the City would begin construction in 2021 as soon as possible.*

Comment: In a previous meeting between Harold Evans, Bob Ruyle and Gauthiere, Gauthiere asked what the hurry was to construct the pipeline. *Bob Ruyle said, "someone else needs the water".*

14. Question: Will Greeley collaborate with the City of Thornton to overcome Thornton's inability to move its Water Supply and Storage water through Larimer County since Larimer County rejected Thornton's request for a 1041 permit?

*Answer: Harold Evans denied that Thornton was involved in the Project.*

Gauthiere reminded him that an interview with Roy Otto was in the Greeley Tribune two years ago discussing Otto's desire to collaborate with Thornton.

*Harold Evans then stated that Thornton may be involved for the short term.*

15. Question: Who is financing the Project.

*Answer: Wingfoot Water Resources, LLC.*

Comment: *Wingfoot Water Resources LLC* is the agent for Talcot Capital, LLC and the Akin family who is looking for a source of long-term income from the project according to Harold Evans.

16. Question: Who can own the credits and where can the Terry Ranch Water be used?

*Answer: Harold Evans said the water can only be used in Greeley. He did not say who could own the credits. Harold also said that the City could rent the water to oil and gas frackers for \$8,000 per acre-foot.*

Comment: The agreement states that Wingfoot will be paid \$0.50/1,000 gallons for all water delivered outside Greeley. Rental to fracking operators and the agreement clause appears to allow water use outside of the City Limits, contrary to Harold's statement.

17. Question: The water treatment cost per thousand gallons to achieve non-detectable uranium concentration, the EPA maximum contaminate level goal (MCLG), is generally in a range of \$4.00 to \$10.00 per thousand gallons. Has the City's consultants determined the cost of treatment for the Terry Ranch well water to achieve the EPA MCLG of non-detectable uranium concentration?

*Answer: Laurie Sullivan said she thought the cost of treatment would be \$0.50 per thousand gallons to achieve the non-detectable uranium level.*

Question: How could the \$0.50 per thousand gallon treatment cost be possible?

*Answer: The private firm operating the new Terry Ranch Treatment Plant would sell the uranium collected on the ion exchange resin to a third party, which presumably will offset some of the cost of treatment.*

Comment: So, the City is actually conducting a uranium mining operation after all! I suspect that the "low ball" treatment cost presented by Laurie Sullivan was part of the consultant's compulsion to offer a sales pitch and that these results will not be achieved. For instance, if the market for uranium falls, then the price of treatment will

go up. The uranium market seems to crash every time a disaster occurs such as the Japanese Fukushima Daiichi power plant explosion. To be properly evaluated the consultant should have provided the actual treatment cost along with assumptions of any cost offsets.

18. Question: Oh, so you're mining uranium?

Answer: *Silence*

19. Question: Who will operate the Terry Ranch Water Treatment Plant?

Answer: *Laurie Sullivan put up a slide that showed a company called WRT that was treating Grande Isle Nebraska's drinking water and was reducing the uranium level from about 24 ug/L to a finished water quality of 8 ug/L.*

Comment: **WRT was obviously not treating the water to a non-detectable uranium concentration.**