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August 19, 2020

John D. Buchanan
Buchanan Sperling & Holleman PC
1525 Spruce Street, Suite 200
Boulder, Colorado 80302

Re: INDEPENDENCE WATER & SANITATION DISTRICT
AUGMENTATION PLAN CASE NO. 2019CW3220

Dear Mr. Buchanan:

"As decreed in 2006CW59, actual out-of-priority replacements are required for the augmentation of the Upper Dawson aquifer.

At 100 years of pumping, assuming the full amount is pumped each year, the depletions are at 2.52% or 1.89 af/yr. There are sufficient irrigation return flows within the District, approximately 23.4 af/yr at full build-out from irrigation alone, to offset the actual replacement requirements for the use of the not-nontributary Upper Dawson aquifer."

- The report states that return flows from lawn irrigation use will be used to augment depletions caused to Cherry Creek and Running Creek. However, the report does not state whether irrigation return flows from the subdivision will actually flow to either of these creeks, or how much water will accrue to the streams, or where or when that will occur.

The report calculates stream depletions from well pumping that accrue to Cherry and Running Creek, however, the Independence Water and Sanitation District property has no streams that flow into the Cherry Creek Valley at all. The two creeks that are influenced by runoff from the Independence area are Running Creek and Coal Creek. Running Creek flows to Box Elder Creek and then to the South Platte near Watkins. Coal Creek flows to Sand Creek and empties into the South Platte near Commerce City. It appears Independence should have calculated depletions to Coal Creek instead of Cherry Creek. If Independence's wells will in fact cause depletions to Cherry Creek, then it will need planned to pump water to the Cherry Creek Valley, a minimum of 1½ miles away with a vertical rise of over 100' elevation. Independence has not provided evidence that it has access rights to the properties to lay a water pipe to get water to Cherry Creek. Construction of a 1.5 mile pipeline could conceivably cost over $300,000, which would not include obtaining access rights, permits, etc.

- The report also states that treated effluent from a wastewater treatment plant will be used to augment stream depletions, but as with the irrigation return flows, does not state how, when or where this effluent will be delivered to the streams.

"The non-potable irrigation demands will be met through a reuse system, whereby the wastewater from in-house uses will be treated to a level acceptable for irrigation use around residences and schools."

Independence's engineering report does not state where this treatment facility is going to be built, how it will receive all of the sewage water to be treated. Additionally, the report does not state how and where is the inflow and outflow from the treatment facility will be monitored to verify the actual replacement requirements? The report must provide these details so that other parties can review and verify Independence's claims.

- The applicant's response and revised decree state that, if irrigation return flows and treated effluent are not available as augmentation sources, the applicant will pump water from Laramie-Fox Hills and deliver that to the affected stream systems. The report briefly references this by stating on p. 4 that *"If the irrigation return flows prove to be insufficient, the District has the license to release treated effluent or to utilize the direct discharge of nontributary ground water."* There would be very high costs for infrastructure to pump and deliver nontributary water to both of the streams, including drilling a Laramie-Fox Hills well, constructing pipelines to the streams, and acquiring easements for the pipeline where public rights-of-way are not available.

"During pumping, actual stream depletions from the use of the not-nontributary Upper Dawson aquifer will be replaced with return flows from the irrigation within the District along with releases of treated effluent from the treatment plant and/or direct releases from nontributary wells. Postpumping replacements will be made from water reserved for ***direct discharge*** *from the nontributary Laramie-Fox Hills aquifer as originally decreed in 2006CW59."*

Beside the extraordinary costs for drilling a well down to the Laramie Fox-Hills Aquifer, ≈ 2500-3000' down at over a million dollars, water from this aquifer is not of suitable quality to provide a substitute supply for downstream water users as evidenced by the town of Bennett constructing a more than 2 million dollar special treatment facility for it, Castle Rock diminishing related construction credits to nearly zero, and Highlands Ranch Water Treatment facility using a combination of treatment, dilution, and very selected use to minimize danger to populations which occasionally must be exposed to it. Yet Independence Water & Sanitation District plans to dump this water directly into the stream systems to replace depletions from its well pumping.

Harry Ranney

President, CHL Engineering Inc.