

November 2, 2021

Crook County Court

Crook County Planning Commission



CROOK COUNTY
NOV 03 2021
PLANNING DEPT

This memo is to ask the Crook County Court and Planning Commission to keep the record open to allow Cascade Geoengineering, a licensed engineering, geology, and hydrogeology firm, time to complete their review of the data provided in the Knife River/Vanier application. This request is not intended to create a delay, but provide the opportunity to complete the engagement of Cascade Geoengineering due to the fact that I was set back approximately six weeks due to a bout with COVID.

GROUND WATER

Initial review by Cascade Geoengineering raises multiple flags regarding the hydrogeological investigation and testing done by Stantec including, but not limited to, the standards for such a report as required by the State of Oregon that were not followed. The standards that were not met may invalidate the hydrogeological investigation that was presented in the application for the Goal 5 site.

Additionally, Cascade Geoengineering indicates that well completions are not described in detail with adequate information to determine if there is enough flowable area to even run a pump test that would be accurate. Stantec appears to have not corrected the water levels in the test wells to ground elevation which would alter the results considerably.

Cascade Geoengineering is also looking at what happened to the water level behind the "boxcut" in a mining cell when the gravel is removed to a depth of 30' and then back filled with materials that are not permeable. This could raise the water table to the North and East of the mining by 12-15 feet creating an encroachment on hundreds of acres to the North and East of the site. The evidence of the raised water level is already present on the Vanier property from Knife River damming up the cells on the Woodward property. Significant flow increases are being observed in the drainage between the Vanier and Davis properties.

In the past three years, the post irrigation season flow has been approximately 1-1.5cfs (500-600gpm). The current flow is 3.5-4cfs (1500-1700gpm). This additional flow, I believe, can be accounted for by looking at the Woodward mine reclamation.

RECLAMATION

Stantec has repeatedly insisted that their reclamation plan requires little to no fertilizer or other soil amendments to grow crops equivalent to those produced before mining. However, the Butler property at Lone Pine said in order to grow economically viable crops, many soil amendments were necessary over several years to return the farmland to a suitable state. The topsoil on the Woodward property is still in the berms. How can reclamation be finished without the topsoil being replaced. I rented "reclaimed" ground in 2021 on the Woodward property that was represented as completely reclaimed and ready to plant. Currently, Knife River has now ripped that ground in two directions with a D-8 and is attempting to disc it to make a seed bed.

I believe there are many unanswered questions. For example:

- When the water table is raised by the Knife River activities, how do you fix the encroachment of water and who pays for it?
- Where does the water come from to irrigate the berms and for dust control?
- Did Knife River modify their permit in order to bury thousands of yards of construction site waste in the Woodward pit?
- Did Knife River account for how much material was buried and what it consisted of?

I respectfully ask that the Court and Planning Commission will allow the completion of Cascade Geoengineering's review of data before making any decisions regarding the Knife River application.

Regards,

Richard Zimmerlee