

Date: March 4, 2019

To:

Nick Nelson, Planner
Jefferson County Planning and Zoning
100 Jefferson County Parkway

From:

Peter Barkmann
19009 Pleasant Park Rd
Conifer

Subject: Conifer Heights Rezoning 18-107113RZ Recharge Conditions

Hello Nick,

I attended the Planning Commission Hearing February 27 and had signed in to give testimony but was too far down the list to be able to provide comments. Unfortunately, I will not be able to return on March 6, so am providing these written comments.

I am a practicing hydrogeologist with a background that spans over 30 years in Colorado. Currently, I am the senior hydrogeologist for the Colorado Geological Survey at the Colorado School of Mines. I am also a long-time resident of the Conifer area and have been active in the Conifer Area Council. The comments herein are from myself as a professional hydrogeologist and resident of the Conifer area, and are not to be considered from my agency or the Conifer Area Council.

My main point in providing comments is that I think that the ODP for this proposed rezoning should include specific design requirements for recharge facilities on the site as well as a requirement for a hydraulic performance monitoring network to measure performance of the recharge system.

I want to point out that a driving assumption in assessing the adequacy of water supply for a given development is that 90 to 95% of the water pumped from the aquifer will be returned to that same aquifer in the area of the development. For this assumption to be valid there must be an effective local recharge facility with direct connection to the local aquifer. As was pointed out during the comment period on February 27th, data from existing facilities in the Conifer activity center indicate that actual recharge from those facilities has been far below the target 90 to 95%. If these data are correct, then the existing recharge operations are not being managed in a manner that protects our water supply within the watershed.

The final ODP for the Conifer Heights rezoning case (18-107113RZ), and documents on file on the Planning and Zoning website, do not seem to give specific designs and locations for recharge facilities within the proposed development. The only reference to recharge that I have found states that return flows from Conifer Metro District (CDM) treatment plant must be discharged following applicable federal, state and local regulations. There are no specifics for location(s) or for monitoring of recharge

effectiveness. Given that CDM will not be able to handle recharge from Conifer Heights, not providing specifics and standards for recharge is a critical omission from the current ODP.

Final approval of this proposed zoning change must require specific design details with standards for operation and monitoring of on-site recharge facilities. Standards might include installation of dual systems combined with adequate monitoring plans to allow real-time management for maximum recharge effectiveness. A plan to install a hydraulic performance monitoring network to measure performance of the recharge system(s) would at the very least provide a pathway to gather data and manage operations to better assure that recharge on site will reach the local target aquifer. I think this would be value added to the proposed change in zoning for the site.