

MEMORANDUM

Date: March 26, 2018
To: Water Right File 37-22545
From: Michele Edl
Re: monitoring plan review memo

Background

On March 8, 2018, SPF Water Engineering's Christian Petrich requested that IDWR review data that he submitted on behalf of his client the Blaine County School District (BCSD). Mr. Petrich asked IDWR to consider whether the ongoing monitoring plan for Permit 37-22545 could be amended.

General Recommendation

Based on data and analysis submitted by SPF to date, there does not appear to be an impact to ground water levels that can be attributed to the diversion and injection of ground water for Permit 37-22545. I recommend that the Department amend the monitoring plan for this permit to remove the requirement for monthly ground water level measurements

Source of Water

The source water for this water right is diverted from one, two or three cool ground water wells. And three separate injection wells each accept a third of the spent cooling/heating system water. The diversion and injection wells are all located within the Big Wood River Ground Water Management Area, so the water use is required to be non-consumptive overall.

Data Review

In addition to reviewing SPF's data, I queried IDWR's hydrologic database (Hydro-online) and the WMIS database for any records from nearby wells. Although available water level data is very limited, a combination of well depths and other data indicates a minimal impact to the ground water levels due to the diversion for and the injection of water from this system.

The City of Hailey's Woodside Well (WMIS #1001311) is nearby. The well remains capable of delivering volume of water required of it. No comments are showing in the available comments field for WMIS records.

USGS monitoring well #63CBB12D-DA00-4 (a.k.a. monitoring well #9) has only two depth measurements. But recent attempts to measure the water depth in that well are not showing that water levels have returned to above 57 foot where the borehole is blocked.

On 3/26/2018 I also phoned the Basin 37 Watermaster, Kevin Lakey, and asked if he had received any complaints from residents in the area that could be attributed to the BCSD heating and cooling system. He stated that he had not.

Discussion

If the injection water was negatively impacting the neighbors, we would expect to see ground water levels higher during the months of peak injection which are also the peak months for either heating or cooling demand. In this case, the ground water levels should increase during December/January for heating and during July/August for cooling. Instead, the highest ground water levels of each year have occurred during April/May, which is typical for annual seasonal ground water recharge.

The monitoring well water levels and the injection well water levels are all trending in the same direction. As a group, they represent the ground water levels in the immediate vicinity and those levels fluctuate around 60-65 feet below ground.

Conclusion and Recommendations

I concur with Christian Petrich's analysis of the trends in ground water levels. And because the trends have been consistent for several seasons, additional water level data isn't likely to show a significantly different trend.

The well water level measurements have served their purpose. They are showing that the exercise of this right has minimal impacts to the local ground water levels.

I recommend that the Department amend the monitoring plan for this permit, removing the requirement for periodic measurements of the injection well levels. But I also recommend that the Department reassert the plan's requirements that the permit holder maintain records of the water volume used. Those records are for the purpose of licensing the heating and cooling use and are expected to be submitted accompanying the proof of beneficial use statement.

I recommend that the Department provide the permit holder with updated instructions regarding the implementation of the amended monitoring plan for Permit 37-22545.