

Cefalo, James

From: Cefalo, James
Sent: Monday, October 27, 2014 10:26 AM
To: 'Bruner, Daniel J.'
Cc: Donald Brown (browdona@cableone.net); Brad Christenson (mistysmasters@cableone.net); 'tholmesid@gmail.com'
Subject: RE: Transfer Application 78862

Mr. Bruner,

Thank you for your letter and phone message. Your letter describes a set of measurements conducted in mid to late September, which you assert demonstrate a hydrologic connection between the Brown's spring source and Cedar Creek. You have asked if any additional testing/information is required. Specifically, you asked whether a dye test is needed.

Transfer Application 78862 proposes to add a point of diversion on Cedar Creek to Mr. Brown's water right. Currently, Mr. Brown's water right only lists a spring as the source (authorized point of diversion). If the transfer application were approved, Mr. Brown would also be able to divert water directly from Cedar Creek, adding a second source to the water right. As you are aware, the transfer application was protested by the Cedar Hills Homeowners Association and by Terry Walsh.

Transfer applications are governed by Idaho Code Section 42-222. A transfer applicant bears the burden of satisfying all of the review criteria set forth in Section 42-222. For example, Mr. Brown, as the transfer applicant, must show that the proposed transfer will not injure other water rights, including downstream water rights on the Portneuf River and Snake River. Please refer to Idaho Code Section 42-222 for the other review criteria. Section 42-222 does not specifically provide for a change in source. However, an application proposing a change in source may be approved if an applicant can demonstrate that the existing source and the proposed source are so interconnected that they constitute the same source for purposes of the proposed change. Generally, transfer applicants seek to change from surface water sources to ground water. This application is unique because it proposes moving from a spring to a creek.

In his application, Mr. Brown argues that changes in the Cedar Creek watershed have led to a diminishment of his spring flow. He is attempting to recapture the spring flow which has been lost as a result of the watershed changes. Mr. Brown must demonstrate that there is a hydrologic connection between Cedar Creek and his spring. He also needs to quantify how much the spring flow has been diminished. In other words, absent any changes to the watershed, what portion of the flow in Cedar Creek would have naturally emanated from Mr. Brown's spring.

Ultimately, Mr. Brown, his attorney, and you as his consultant, need to assemble the information needed to satisfy the review criteria described above. Because this is a contested case, I cannot discuss the merits of the case or the sufficiency of the tests conducted. If a hearing is conducted in this matter, the protestants will have the ability to challenge the technical information provided, present their own technical data, and cross-examine you as the technical expert for the applicant. So, in answer to your question, it is up to Mr. Brown to determine whether a dye test is needed to satisfy his burden of proof. You may consider contacting the consultant hired by the homeowners association. You might find that you and the other consultants agree on much of the hydrologic data.

James Cefalo

From: Bruner, Daniel J. [<mailto:dan.bruner@valmont.com>]
Sent: Wednesday, October 22, 2014 4:43 PM
To: Cefalo, James
Cc: Donald Brown (browdona@cableone.net); Brad Christenson (mistysmasters@cableone.net)
Subject: Transfer Application 78862

Mr. Cefalo,

On behalf of Dr. Donald Brown, CES has prepared the attached letter summarizing a hydrologic investigation that was recently completed in support of transfer application 78862. We are requesting IDWR's consideration of this information and a response. I would be happy to address any questions.

Thank you for your consideration in this matter.

Dan Bruner, PG, CHG | Managing Geologist
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October 22, 2014

James Cefalo
Idaho Department of Water Resources, Eastern Regional Office
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Idaho Falls, ID 83402-1718

SUBJECT: Results of Hydrologic Investigation, Transfer Application 78862

Dear Mr. Cefalo:

As you may be aware, Cascade Earth Sciences (CES) prepared a study plan (dated June 5, 2014) to perform a dye tracer test to determine whether Cedar Creek is a source of recharge to the spring box that is the point of diversion for Water Right 29-4391. Water flows from the spring box have declined to less than one gallon per minute (gpm) from the authorized diversion of 0.12 cubic feet per second (54 gpm). Establishing that Cedar Creek is recharging the spring box would provide the information needed by the Idaho Department of Water Resources (IDWR) to grant Transfer Application 78862. The transfer will add a point of diversion in Cedar Creek to restore the authorized diversion rate to Water Right 29-4391.

To summarize, the dry study plan involves introducing food grade dye into temporary, 18-inch diameter infiltrimeters at two locations along Cedar Creek: one location at the edge of a swale along Cedar Creek on the east side of Cedar Hills Drive, about 50 yards from the spring box and the other location closer to the spring box. Charcoal detectors will be deployed in the spring box prior to introducing the dye, and collected periodically for laboratory analysis to detect the arrival time of the dye in the spring box. Detection of the dye will indicate that seepage from Cedar Creek is contributing water to the spring box.

At this juncture, permission has not been granted by the landowner, the Cedar Hills Subdivision Owners Association (CHSOA), to access their property for conducting the dye test. The purpose of this letter is to summarize an alternative hydrologic investigation that was conducted recently.

The investigation was recently conducted on an adjacent property east and further up the Cedar Creek drainage above the CHSOA property and below Johnny Creek Road (JCR). There are three culverts that have been used at various times to route Cedar Creek across JCR: one at the intersection of JCR with Cedar Lake Road (CLR), a second about 100 yards north of the intersection, and a third about 150 yards north of the intersection. The inlet to the first (southern) culvert on the west side of JCR had been buried and plugged with sediment for several years, so the creek was routed north along the west side of JCR into the second (middle) culvert. The third (northern) culvert is in another drainage that conveys tail water from a diversion of Cedar Creek further up the watershed. The creek and tail water flow down the hill through a ditch along the north side of a meadow. The landowners excavated the ditch to dry up the meadow. To perform the test, arrangements were made with the City of Pocatello to clean out the southern

culvert to restore flow to the original channel of Cedar Creek along the south side of the meadow.

Prior to cleaning out the southern culvert, on September 11, 2014, CES used a bucket and stopwatch to measure spring discharge at the point of use (POU). The POU is a polyethylene pipe that conveys water from the spring box into a small pond. The discharge rate at the POU was 0.875 gpm. The same afternoon, CES also measured Cedar Creek flow discharging from a 12-inch diameter PVC pipe just above the southern culvert at 80 gpm and less than 1 gpm emanating from the northern culvert.

On September 13-14, 2014, a temporary diversion below the southern culvert on JCR was constructed on private property with landowner permission. A diversion was constructed by installing a pipe in the dry creek bed to divert water to an existing earthen basin. About 80 feet of 4-inch diameter PVC pipe was extended north from the basin to divert some of the water onto the meadow. A spillway was constructed to allow the remaining creek water to overflow from the basin back into the creek bed.

On September 16, 2014, the City of Pocatello deployed a jet truck and cleaned out the southern culvert (at the intersection of CLR and JCR). The flow of Cedar Creek was restored into the original channel at about noon, a portion of which flowed onto the meadow. All of the diverted creek water infiltrated into the ground on the meadow and no runoff occurred during the entire test period. The discharge rate from the spring box at the POU increased from 0.88 gpm to 1.1 gpm on the evening of September 21, 2014, 1.4 gpm on the morning of September 25, 2014, and 3.0 gpm on the morning of September 29, 2014. This short-term test proves that restoring some of the flow from Cedar Creek into the meadow restored the hydraulic connection necessary to recharge the shallow alluvial aquifer that supplies groundwater to the spring box.

Given the results of this hydrologic study, please advise whether the dye test is still necessary. If so, please advise us of the criteria by which IDWR will evaluate the results, with respect to the pending water right transfer, at your earliest convenience. If the dye test is needed, it will need to be conducted before the ground freezes. It will take approximately 2 weeks to obtain supplies from the laboratory, coordinate with the landowner(s) and schedule our staff to conduct the test.

Thank you,
CASCADE EARTH SCIENCES


SR

Dan Bruner, Idaho PG #885
Managing Geologist

DJB/sjr
cc: Shawn Anderson, Donald Brown, Brad Christenson
PN: 2014240027
Doc: Transfer Application 78862 Letter to IDWR 10-22-2014.docx