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OCT 18 2012

DEPT. OF WATER RESOURCES
SOUTHERN REGION

October 17, 2012

Mr. Allen Merritt
Idaho Department of Water Resources
1341 Fillmore Street, Suite 200
Twin Falls, ID 83301

Re: Damasco Measuring Device

Dear Allen,

Enclosed is a memo requesting a waiver of the measuring device and controlling headworks for the Indian Creek flow into the Hiawatha Canal as required in the preliminary order for water permit 37-22354.

I am attaching an e-mail from Kevin Lakey, Watermaster District 37 in response to my request for his review of the Request for Waiver. Note that he has no problem with waiving the measurement condition at the mouth of Indian Creek.

Thank you for your assistance in this matter.

Sincerely,



Charles E. Brockway, P.E.

CHARLES E.
BROCKWAY,
PH.D., P.E.

CHARLES G.
BROCKWAY,
PH.D., P.E.

2016 NORTH
WASHINGTON
STREET • SUITE 4

TWIN FALLS,
IDAHO 83301

208•736•8543

FAX: 736•8506

Charles E. Brockway

From: Kevin Lakey [watermanager@cableone.net]
Sent: Tuesday, October 16, 2012 12:29 PM
To: 'Ann Pool'
Cc: 'Chuck Brockway Sr.'; Dave Cropper
Subject: RE: Waiver of Measure Device Required
Attachments: Waiver of a Measure Device Damasco.PDF

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Ann, Chuck, Dave

I looked back in my records for this application from 2008 and found I was asking for measurement from both the Hiawatha and Indian Creek. From later inspection of this sight, I now know there is no direct diversion from Indian Creek, because the Indian Creek water is already in the Hiawatha. I don't have a problem with waiving the measurement condition at the mouth of Indian Creek, but maybe we should have a waiver from the Hiawatha Canal Co.. Dave, are you OK with any losses your company may suffer during irrigation season from running Hiawatha, Big Wood water through this pond if/when Indian Creek goes dry. This is the old Jean Chesnel place.

Kevin Lakey

From: Ann Pool [mailto:ann.pool@brockwayeng.com]
Sent: Friday, October 12, 2012 3:04 PM
To: Kevin Lakey
Cc: Allen.Merritt@idwr.idaho.gov; Charles E. Brockway
Subject: Waiver of Measure Device Required

Re: Waiver of a Measure Device
For: The Jude P. and Julia Mandeville Damasco Trust

Kevin,

Attached is the memo supporting the waiver of the lockable head gate and measuring device required for Permit 37-22354.

This is a draft memo and has not been submitted, pending your review and discussion. Please review the memo and let me know your thoughts and concerns.

If you need copies of the permit and accompanying Transfer Application #73743 for mitigation of pond evaporation, please let me know.

Thanks

Chuck

C.E. Brockway

By:

Ann Pool
Hydrologic Technician
Brockway Engineering PLLC
2016 North Washington Street, Suite 4
Twin Falls, ID 83301
Off 208-736-8543
Fax 208-736-8506
ann.pool@brockwayeng.com

No virus found in this message.

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Version: 2013.0.2741 / Virus Database: 2614/5835 - Release Date: 10/16/12

*This doc is in Damasco
computer file*

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DEPT. OF WATER RESOURCES
SOUTHERN REGION



Memo

To: Allen Merritt
From: Charles E. Brockway
Cc: Julia Damasco, Jim Speck
Date: 10/17/12
Re: Request for Waiver of Measuring Device Requirement -Permit 37- 22354

The preliminary order dated September 25, 2012 for water permit No 37-22354 requires, for Condition 9 that prior to diversion of water under this right, the right holder shall install and maintain a measuring device and lockable controlling works of a type acceptable to the Department as part of the diverting works. This requires a measuring device on Indian Creek where Indian Creek flows into the Hiawatha Canal. This memo is to request a waiver of the measuring device and lockable controlling works at the confluence of Indian Creek and the Hiawatha Canal on behalf of the owners.

The preliminary order allows the diversion of .74 cfs of natural flow of Indian Creek to be diverted from the point on Indian Creek where it flows into the Hiawatha Canal, through the Hiawatha Canal to point where it is delivered through a Hiawatha Canal Company headgate into a Hiawatha Canal ditch where it is delivered through another headgate to a pond for non-consumptive, recreational, aesthetic, and wildlife purposes. The water then flows from the pond through a ditch to supply water rights on and adjacent to the Northridge Subdivision. This flow sinks in recharge ponds west of Buttercup road in the wintertime and either sinks or is used for irrigation on subdivision lands or by water user David Cropper during the irrigation season. Water has been provided to the pond through this system since 1974.

In addition, irrigation rights 37- 20359 and 37-297D from the Big Wood River are delivered to the same pond through the same headgates and the irrigation water is pumped from the pond to the Damasco property to irrigate 1.1 acres.

The preliminary order Condition 9 requires, for this permit only, that a flow measuring device and lockable controlling works approved by the Department of Water Resources be installed and maintained by the Damasco's.

A flow measurement device at the entrance to the Hiawatha Canal will likely require a device capable of measuring the maximum flood flow expected from Indian Creek as well as the flow allowed under the permit, 0.74 cfs, and the minimum flow. The device will require the approval of the Watermaster, District 37 since he is responsible for the administration of the water right.

In the non-irrigation season, the only water in the Hiawatha Canal is Indian Creek flow and there are no other non-irrigation season water rights from Indian Creek on the Hiawatha Canal. So, if Indian Creek flow is zero or below the Damasco water right, the Damasco's can receive only zero or the maximum allowed under water right 37-22354. All of the flow in the Hiawatha Canal during the winter time can and does usually flow through the Damasco pond. There is therefore no administrative need for a measuring device on Indian Creek to administer the Damasco permit during the non-irrigation season.

During the irrigation season, the flow in the Hiawatha Canal consists of some 20 to 30 cfs of Big Wood River irrigation water rights plus the flow from Indian Creek, whatever amount that is. There are no irrigation season water rights from Indian Creek in the Hiawatha Canal except 37-22354. Therefore, the performance of a measuring device at the confluence of Indian Creek and the Hiawatha Canal would only be required to ascertain whether and when the flow of Indian Creek was at or below 0.74 cfs during the irrigation season. In the event that the non-irrigation season flow from Indian Creek was less than 0.74 cfs, theoretically, the Damasco delivery from the Hiawatha Canal for aesthetic, recreation and wildlife purposes could only be equal to or less than 0.74 cfs. However, irrigation water rights for Dave Cropper and for users in the Northridge Subdivision must be delivered from the Hiawatha Canal through the same delivery point as the Damasco pond to reach their place use. In addition, any water delivered to the Damasco pond from the Hiawatha Diversion flows back into the ditch which serves Cropper and the Northridge Subdivision. Therefore, the flow through the Damasco pond is part of the irrigation water right for the downstream users.

The minimum irrigation season flow of Indian Creek at the confluence is of primary concern and only if the minimum flow is 0.74 cfs or less. Local resident, Jim Baldwin, who has lived on the Lot of the Indian Creek Subdivision at the confluence and through which Indian Creek flows for 23 years indicates that he has never seen Indian Creek flows less than about 1.0 cfs during his tenure. Jim is the farm manager and irrigator for a large farming enterprise in the Big Wood Valley (see attached affidavit if necessary).

Installation of a lockable headgate on the Indian Creek natural stream which is the point of diversion for water right 37-22354 is not feasible. Indian creek flows unrestricted into the Hiawatha Canal and should continue to do so.

Installation of a measuring device to accurately measure the maximum expected discharge in Indian Creek and the minimum flow is hydraulically possible but not likely financially feasible. I have no flow measurements of high or low flows in Indian Creek but an analysis using USGS STREAMSTATS indicates a potential 100 year peak flow of 88 cfs. An 8 ft. Parshall flume could possibly be installed in the natural channel of Indian Creek for measurements up to 97 cfs if hydraulic conditions would allow a hydraulic head on the flume of 2.0 feet or more. However, measurement of flows below 5 cfs with this size flume or larger are below the minimum flow and are not recommended. The STREAMSTATS analysis, performed for monthly and annual streamflow statistics indicates that only for the August and September flows will the minimum expected flows in Indian Creek be below .7 to .8 cfs and then only 20% of the time. Therefore,

based on the STREAMSTATS analysis, a flow measuring device would only be necessary for administration of the Damasco water right 20% of the time and only in August and September. The remainder of the irrigation season and during the non-irrigation season, flows will likely be greater than the 0.74 cfs or above the maximum allowable flow under the permit.

Indian Creek flows through property owned by the Indian Creek Homeowners Association at the confluence site and obtaining an easement for installation and maintenance may not be possible. Access to a suitable flow measurement site would necessitate an easement through private property. Fish passage may be problematic. Depending on the type of instrumentation required by the Department and/or the Watermaster for head measurement or data logging, installation of an adequate prefabricated Parshall flume is estimated to cost up to \$13,000. Other, more sophisticated flow measurement devices may be possible to measure only minor flows but pass the flood flow, but would likely be more expensive.

Any discharge data made available by installation, maintenance, and reporting from the flow measurement device would benefit not just the Damasco's or the administration of the Damasco water right. The Hiawatha Canal may benefit by knowing what the contribution of Indian Creek is to the canal water supply, and IDWR may benefit by the knowledge of the contribution of this tributary to the water rights in the Hiawatha Canal. In addition, the Indian Creek Homeowners Association may benefit from the knowledge of flows at the end of their system. In any case, installation of a \$13,000 device which may or may not assist in administration of a single water right on the system and is paid for and maintained by a single water right holder is not justifiable or equitable.

On behalf of the Demascos, I am therefore requesting a waiver of the measuring device requirement under Permit 37-22354.