

Julie Klein Fischer
 MORROW & FISCHER, PLLC
 332 North Broadmore, Suite 102
 Nampa, Idaho 83687
 Telephone: (208) 475-2200
 Facsimile: (208) 475-2201
 ISB No.: 4601
jfischer@morrowfischer.com

Attorneys for Owyhee Motorcycle Club

DISTRICT COURT-SRBA Fifth Judicial District County of Twin Falls - State of Idaho	
MAR 30 2010	
By _____	_____ Clerk
	_____ Deputy Clerk

IN THE DISTRICT COURT OF THE FIFTH JUDICIAL DISTRICT OF
 THE STATE OF IDAHO, IN AND FOR THE COUNTY OF TWIN FALLS

In Re SRBA

Case 39576

SUBCASE NO. 63-18957

AFFIDAVIT OF PAUL E. DRURY,
 P.E.

STATE OF IDAHO)

)ss.

COUNTY OF ADA)

Paul Drury, being first duly sworn, deposes and says:

1. I am an engineer employed by ERO Resources Corp. in Boise Idaho.
2. On about March 5, 2009 I prepared a report regarding Water Right Claim No. 63-18957, at the request of Julie Klein Fischer, attorney for Owyhee Motorcycle Club. A true and correct copy of said report is attached hereto as Exhibit A.

DATED this 29th day of March, 2010.

Paul E. Drury
Paul E. Drury, P.E.

SUBSCRIBED AND SWORN TO Before this 29th day of March, 2010.



Staci Welsh
NOTARY PUBLIC FOR IDAHO
My commission expires: 2/3/2011

CERTIFICATE OF SERVICE

I, the undersigned, do hereby certify that on the 30 day of March, 2010, a true and correct copy of the above and foregoing document was served upon the following by:

IDWR Document Depository
PO Box 83720
Boise, ID 83720-0098

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Chief, Natural Resources Division
Office of the Attorney general
State of Idaho
PO Box 44449
Boise, ID 83711-4449

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Edwards Family LLC
c/o Dana Hofstetter
Hofstetter Law Office, LLC
608 West Franklin Street
Boise, ID 83702

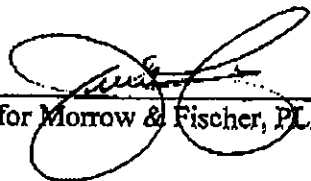
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for Morrow & Fischer, PLLC

**OWYHEE MOTORCYCLE CLUB
WATER RIGHT CLAIM NO. 63-18957
ADA COUNTY, IDAHO**

Prepared for—

Julie Klein Fischer, Esq.
Morrow Dinius & Fischer, PLLC
5680 E. Franklin Rd., Ste. 220
Nampa, Idaho 83687

Prepared by—

Paul E. Drury, P.E.
ERO Resources Corporation
3314 Grace St.
Boise, Idaho 83703
(208) 373-7983

March 5, 2009

ERO

**OWYHEE MOTORCYCLE CLUB
WATER RIGHT CLAIM NO. 63-18957
ADA COUNTY, IDAHO**

MARCH 5, 2009

Introduction

This report provides additional evidence to support the Idaho Department of Water Resources (IDWR) recommendation for water right 63-18957 owned by the Owyhee Motorcycle Club (OMC). To prepare this report, ERO Resources Corp. (ERO) reviewed the claim, recommendations, and adjudication back file obtained from the IDWR website online data base. ERO also performed site visits on June 24 and July 17, 2008 to collect data regarding the diversion and distribution system, acquire information to describe the water system operations, and to conduct flow measurement tests to verify the diversion capacity.

The diversion and distribution system has been developed to provide domestic, irrigation, and commercial water to the Owyhee Motorcycle Club located in Township 4 North, Range 2 East SW¼ SE¼ Section 15 in Ada County, Idaho. This property is located north of Boise off of Cartwright Road.

IDWR Claim Review

IDWR conducted a desk top review of claim 63-18957 to verify elements of the water right including the rate of flow and annual diversion volume. IDWR contracted Intrepid Engineering Services (Intrepid) to conduct the on-site investigation portion of the review.

The online water right back file for 63-18957 contains a field report prepared by Intrepid dated November 19, 2001 for the Snake River Basin Adjudication as part of the IDWR claim review. This field report describes the diversion works as an 8 inch casing, 120 feet deep, with a 5 horsepower submersible pump.

Intrepid's field report concludes that the flow rate from the subject well is 0.16 cfs based on a 5 hp pump, a lift of 50 feet, a discharge pressure of 60 psi, and an efficiency of 70%.

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IDWR's recommended annual volume limit is 142.4 acre-feet per year, but is in error. Notes in the water right back file indicate the annual volume should be 19 acre-feet and not 142.4 acre-feet as recommended.

Description of Diversion and Distribution

The OMC diversion works consist of a well located near the south property line in the SW¼ SE¼ Section 15. The well drillers report could not be located for this well. There is no name plate data for the pump available. There is no meter installed on the diversion works. A photograph of the diversion works is shown in Figure 1. The motor starter in the pump house indicates the pump is 5 horsepower. The pump and motor is submersible. Access to the nameplate data for make, model and serial number is not possible without pulling the pump.



Figure 1. Owyhee Motorcycle Club Diversion Works

The distribution system consists of a 1.5 inch diameter steel pipe from the well to two pressure tanks located in the pump house. A pressure gage is installed on the distribution piping inside of the pump house. A total of four distribution lines lead from the pressure tanks to the place of use. A 1.25 inch line leads to the trailer house for domestic use. A 1.5 inch line leads to the club house for domestic use. A 2 inch and a 1.5 inch line lead to storage tanks located throughout the property. Water from the storage tanks is pumped with booster pumps through

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sprinkler systems and hoses for dust suppression and preparation of dirt tracks. A photograph of the distribution works is shown in Figure 2.

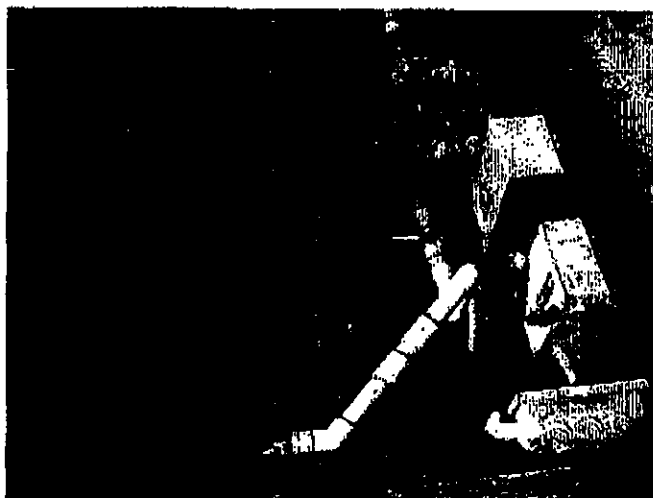


Figure 2. Owyhee Motorcycle Club Distribution Works

Six water storage tanks are located throughout the property. These tanks are used to store water prior to the application of water to the motorcycle tracks for dust suppression. Members of the OMC estimate the combined storage volume of the six tanks is about 46,000 gallons. Discussions with OMC and notes in the IDWR claim back file indicate that the OMC facility conducts approximately 60 races per year. In addition to race days, the facility is open for practice once a week during the summer months. Prior to opening and during races and practices, the storage tanks are filled and drained for track conditioning. At a discharge rate of 0.16 cfs for 80 days (60 race days plus 20 practice days), the annual volume pumped is approximately 25 acre-feet. This volume is sufficient to operate the facility.

Flow Measurement Test

Paul Drury, P.E., a water resource engineer with ERO, conducted two flow measurement tests on July 17, 2008. The first test utilized an ultra-sonic flow meter to measure the flow rate in a closed pipe. Discharge was measured in the 1.5 inch diameter steel discharge pipe using a Peck PolySonic meter, Model Number DCT-7088, Serial Number 33508, Calibrated June 2006. The meter requires temporary installation of transducers on the outside of the pipe. Transducers

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were installed on a straight run of pipe near the well head in a WW configuration at a spacing of 5.2 inches. Flow measurement was recorded to be 59.5 gpm (0.13 cfs) at an in line pressure of 83 psi at the pump house after the flow rate stabilized at a constant rate. The back pressure (83 psi) is higher than under normal operating conditions because only one discharge pipe was open for the test. Normal operations will have other pipes open for filling of tanks and other uses, which would lower the back pressure. A lower back pressure would result in a higher flow rate from the well.

The second test, used to confirm the results of the first test, utilized the time to fill a container of known volume. The test was started once the flow rate and pressure stabilized. The measured flow rate of 59.5 gpm was confirmed by the time to fill a 58.5 gallon drum (59 seconds) at an in line pressure of 83 psi at the pump house. The flow test configuration is shown in Figure 3.



Figure 3. Flow measurement at the Owyhee Motorcycle Club

Both tests determined the flow rate to be 0.13 cfs at a discharge pressure of 83 psi. This flow rate compares favorably with Intrepid's flow value of 0.16 cfs, which is based on a lower discharge pressure (60 psi). Paul Drury observed and recorded the flow meter and pressure gage during both tests.

The flow measurement tests conducted by Paul Drury reflect normal operating conditions during fill of the below ground tank at the Motocross Track with the exception that no other uses

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(domestic) or other tank filling was taking place at the same time. The pump discharges to this tank at atmospheric conditions; there is an air gap between the discharge pipe and the water level in the tank; and the discharge pressure is constant. The measured discharge of 0.13 cfs is a conservative estimate of the flow rate the water system is capable of producing. As mentioned above, only one of the four discharge lines from the pump house was open during the test. If all four discharge lines were open, the flow rate would be greater due to less back pressure. In addition, ground water pumping from nearby wells on the adjacent property to the south may have caused aquifer effects that reduced the flow rate measured during the tests.

Conclusion

IDWR should file an amended report indicating the recommended diversion rate of 0.16 cfs and annual volume limit of 25 acre-feet. Data collected by ERO supports conclusions made by Intrepid that the ground water pumping system at OMC is capable of a diversion rate of 0.16 cfs. IDWR recommendation for water right 63-18957 should reflect that diversion rate.

ERO estimates that an annual volume of 25 acre-feet is appropriate and sufficient for operations at OMC. An annual volume limit of 25 acre-feet represents a fair estimate of the annual use based on a diversion rate of 0.16 cfs for 80 days/year. IDWR recommendation for water right 63-18957 should reflect that annual volume.