

# WATERMASTER'S REPORT

RECEIVED

APR 19 2018

Department of Water Resources  
Eastern Region

From January 1, 2017 To December 31, 2017

Water District No. 11

Name of Watermaster Josh Hanks

Mailing Address 85 Crayon Ct, Logan, UT 84321

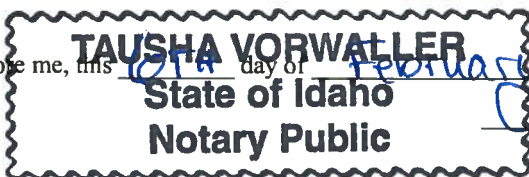
## AFFIDAVIT OF WATERMASTER

STATE OF IDAHO )  
COUNTY OF Caribou ) ss.

Josh Hanks, being first duly sworn, deposes and says that he/she is Watermaster of Water District 11 Bear River, having been lawfully appointed by \_\_\_\_\_, Director, Idaho Department of Water Resources, and that the volumes of water, as stated in this report and prorated by him/her to the water right holders of the district are correct.

Josh Hanks  
(Deputy) Watermaster District No. 11

Subscribed and sworn to before me, this 10th day of February, 2018



Tausha Vorwaller  
Notary Public

(SEAL)

My Commission expires 12-8-2021

Boise, Idaho April 19, 2018

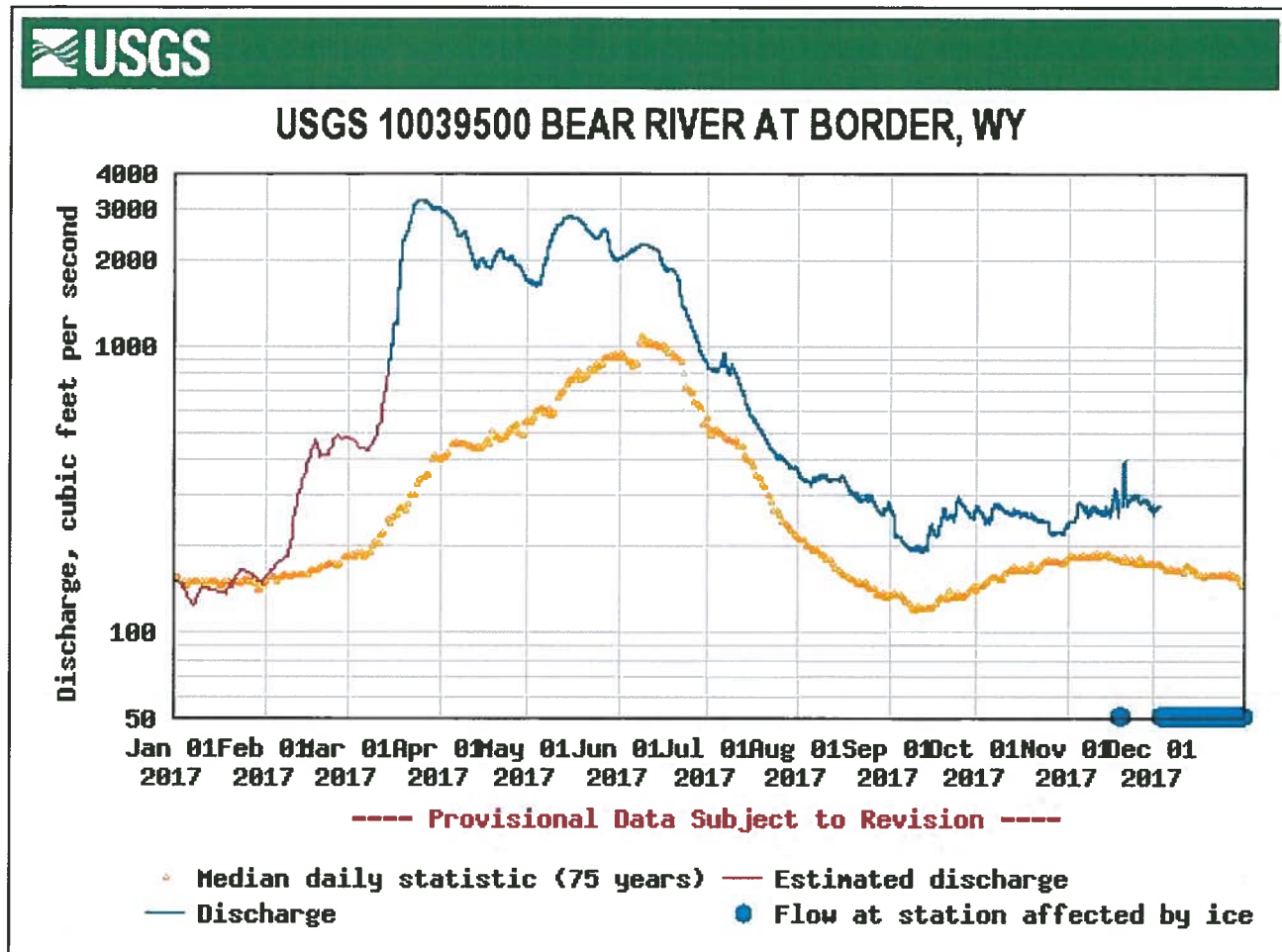
I HEREBY CERTIFY, that Josh Hanks was lawfully appointed by me as Watermaster of Water District No. 11, and that the information contained in this report, as herein sworn to, is, to the best of my knowledge and belief, correct.

Darryl Shackman  
Director, Department of Water Resources

By Dennis Dunn

# 2017 Annual Watermaster Report

## Water District 11- Bear River



Graph shows the higher than average flows that were measured at the Wyoming-Idaho border gage for the 2017 water season.

**Submitted by Josh Hanks**  
**Bear River Watermaster**  
**February 6, 2018**

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- Pacificorp 2017 Summary of Water Year
- Watermaster Affidavit
- Income and Expense Reports
- Budget Report

## **Section 1 – Season Summary & Comments**

*Data within this report has been provided by the Idaho Department of Water Resources, PacifiCorp and Bear River watermaster records.*

The 2017 season has been an amazing water year for quantity of flows coming into Idaho. In the central division high flows caused flooding in the Pegram area. The land around the river was mostly flooded all the way into the Dingle area until June. The Gentile valley, just above the Oneida Reservoir, was also flooded causing many challenges for planting this season. None of our flow measurement sites were lost or damaged due to the flooding.

Natural flow was impressive all season. There was a peak bear lake inflow at rainbow canal measured at 3,828 cfs on March 29. The central division experienced a flow regulation trigger in early August, at the wyoming border, but due to water usage in the central division no actual regulation was necessary.

### **2017 Bear Lake Water Supply**

10-01-2016	Bear Lake Beginning Elevation - 5,910.69 ft
9-25-2016	Bear Lake Low Elevation - 5,910.61 ft (37% Full)
7-14-2017	Bear Lake High Elevation - 5,922.32 ft
8-12-2017	Outlet Canal Maximum Release - 1,336 cfs
9-30-2017	Bear Lake Ending Elevation - 5,920.68 ft (87% Full)

There was zero irrigation storage delivered for this season. There was 154,000 acre feet released over a 94 day period, for flood control operations.

*Note: At the end of this report is more information concerning the 2017 irrigation season provided by Pacificorp.*

### **2017 Water Delivery Cost**

112,586.60 (24 Hour CFS) total delivered for irrigation and 721,341 (24 Hour CFS) delivered for power generation. Total delivered for the 2016 season is 833,927.60 (24 Hour CFS) with \$78,214 total expenses.

Cost per 24 Hour Second Foot delivered = \$0.094

*Note: This is a combination of storage water and natural flow.*

### **2018 Scenario**

The water outlook for 2018 is a reversal of last season. The water supply outlook as of January 2018 has been estimated at 79% of average. But, the

good news for the coming season is that Bear Lake will be nearly full and water delivery will be at 100% allocation for the lower division. The challenge will be in the central division with a high probability that we will be in water regulation very early in the water season. The users below bear lake will receive the full allotment, but natural flows may be limited and so storage water will be used beginning earlier than many past years. Water usage decisions will be important this season to take full advantage of the storage flows, and lack of natural flow, that will be available.

*Note from the NRCS Utah Water Outlook Report*

"Snowpack in the Bear River Basin is below normal at 85% of normal, compared to 125% last year. Precipitation in December was much below average at 69%, which brings the seasonal accumulation (Oct-Dec) to 79% of average. Soil moisture is at 69% compared to 76% last year. Reservoir storage is at 79% of capacity, compared to 38% last year. Forecast streamflow volumes range from 62% to 92% of average. The surface water supply index is 79% for the Bear River, 46% for the Woodruff Narrows, 48% for the Little Bear."

**Telemetry System and Website**

The cellular repeater station in the Pegram area was not able to connect to the cellular network this season. This year I will move the site to a location that has better cellular coverage.

I will be adding telemetry to 2 sites this season. They will be uploading data to the [bearriverbasin.org](http://bearriverbasin.org) web site. One site is in the Riverdale area and one site is in Dingle.

## **Section 2 - Individual Diversions Report**

**Note:** The site numbers below are the Idaho Department of Water Site ID numbers.

### **#10043105 Miller Ditch**

The very high flows caused some challenges with a very high amount of mud and silt. It was also difficult to get into this site early in the season. Hopefully the cellular site will be up and running for the 2018 season to allow this site to show flow data on the website.

### **#10043110 Rigby Pump**

### **#10043120 Nuffer Canal**

The Area Velocity Sensor quit working this season. The water users will need to replace it for the 2018 water year.

### **#10043140 Sorenson Ditch**

### **#10043150 Ure North Hills Diversions**

Nothing has changed at this location, it still is in need of an approved measuring device and a lockable head gate.

### **#10043180 Smith/Lloyd Ditch**

The flume at this location does not read correctly due to sediment in the ditch. It needs to be raised. I will work with the user to get the flume installed correctly.

### **#10043160 Jensen Ditch**

This site was flooded for a few months at the beginning of the water season. The sensor and telemetry system are still in need of repair.

### **#10044060 Dingle Canal**

This ditch has an issue with accurately measuring flows when water is turned into a certain diversion ditch that is close to the measuring point. This season I hope to work with the water users to add a sensor that will measure velocity to give us a more accurate flow reading all season long.

### **#10044070 Ream/Crockett Canal**

The flume at this site needs to have the brush and trees cut back, the vegetation is beginning to grow into the flume and that does affect the flumes ability to read flows correctly.

### **#10044200 Black Otter**

The stilling well at this location is starting to lean over and there needs to be cleanup and tree/brush removal done around the flume.

**#10044450 Preston/Montpelier Canal**

**#10044450 Todd Lloyd Pump (Preston/Montpelier use)**

**#10044700 Keetch (Larocco-Kent) Pump**

Magmeter is no longer working, needs to be replaced.

**#10044714 Fern Keetch Pump**

I will be adding radio telemetry to this site and sending the data to the website for the 2018 season.

**#10044800 Pugmire Pump**

**#10045800 West Fork Canal**

Still using a water level sensor to calculate flow based on an old flow rating formula. It tracked fairly accurately, but still has issues when flow changes in large amounts. This site will need an area velocity sensor, or flume, installed to be able to read this flow accurately throughout the season.

**#10067831 Charles Kunz (Pacificorp #3)**

**#10047305 Wayne Kunz Pump**

**#10067705 Hardcastle Pump**

**#10067725 - L STEVENS (Rockin G Ranch)**

This site now has a pivot and pump installed with a Magmeter for tracking and recording flows.

**#10067870 & 10067874 Paul Kunz Pumps #1, #2 (Pacificorp)**

The magmeter at pump 2 was replaced and is functioning, the battery died at site 3 right at the end of the season and needs replacement.

**#10067834 Steven Kunz Pump**

The batteries died this season before the site was used, they were brand new batteries from last season. I will replace again at the beginning of this season.

**#10067855 Dean Kunz**

**Storage contract - Allyn & Rhett Phelps Pump**

The magmeter failed in the 2016 season and needs to be replaced.

**#10068205 Chris Christensen or Alleman Pump**

**#10072550 Eight Mile (Harris Pump 1)**

This site (pearl creek) worked much better this season with the replaced area velocity sensor and new solar panel.

**#10072550 Eight Mile 2 (Harris Pump2)**

Changed the batteries in the magmeter this season, will need a new battery swapped out for next season.

**#10074805 Bear Meadows**

Not sure if the meter is working accurately at this site, will pay close attention for this coming season.

**#11-00449/11-00531C Soda Golf Transfer**

The flow was maintained by the City of Soda Springs and golf course crew. I visited the flume and checked the flow rate, when in the area, recording the flow and contacting users for maintenance. The flume needs cleaning a few times each season and I usually clean it every other visit.

**#10078905 Soda Golf Pump**

**#10079600 Last Chance Canal**

**#10079800 Bench B Canal**

**#10080105 Gentile Valley Canal**

**#10080355 Wheeler Pump**

**#10080385 Matthews Pump (Wanlass Pump)**

**#10081650 & 10082550 Skabelund Pumps**

**#10083505 Mussler (Fox) Pump**

This site was flooded out for much of the season. Was not able to test the new magmeter on the telemetry, that will be done this season.

**#10086950 Smith/Bosen Ditch**

Spoke to water users this past summer about a new flume to be installed. The old flume now becomes submerged during the season. Did not see that any progress was made by the end of the season for the new flume site.

**#10089820 Smith Pump (now the Boyack Pump)**

**#10089880 Upper Riverdale Canal and Pump**

The new area velocity sensor is installed in the head of the diversion and should be reading for the coming season.

**#10089850 Nelson Ditch**

**#10089950 Riverdale Irrigation Canal**

**#10089955 Higley Pump**

Needs a new battery or power supply of some type.

**#10089960 Riverdale/Preston Pump**

**#10089970 Lucia Pump**

Needs new batteries

### **#10090250 West Cache Canal**

#### **#10091120 Hodges Pump**

#### **#10091110 Johnson Pump**

#### **#10091495 Griffith Pump (Bastion Pump)**

#### **#10091455 Floyd Jensen Pump**

#### **#10091460 Bear Grove LLC (S. Bobka Pump)**

Meter seems to be reading but may need new batteries for next season.

#### **#10091503 Ingleet Lamont**

Changed the batteries in the magmeter this season.

#### **#10091563 M Curry**

New pivot and pumping site was installed. The new meter seemed to work well.

#### **#10092755 Carol Whitney Pump**

#### **#10092650 Cub River Pumps**

The newer pump site that pulls water before the flume still needs to be added flow rate that is transmitted to the website. I will work with their general manager this season to complete that project.

#### **#10092900 West Cache Pumps**

The Area velocity sensor is buried under a fair quantity of mud and will need maintenance to un-cover the sensor. It may be an issue that could be fixed if we move the sensor further up the pipe. I will talk to the irrigator about possible relocation of the sensor.

### **Section 3 - Individual Diversions Flow Data**

The data below is gathered from the Idaho Dept. of Water website. This data is collected throughout the water season by way of meters, flumes, dataloggers, and manual flow measurements.

#### **Water District 11 Points of Diversion**

#### **Total 24 Hour CFS**

10043105 - MILLER CANAL	205.00
10043110 - RIGBY	89.00
10043120 - NUFFER CANAL	1,801.00
10043140 - TRANSTRUM (SORENSEN)	62.30
10043150 - URE NORTH HILLS	50.00
10043160 - WILLIAMSON (JENSEN)	0.00
10043180 - J SMITH (LLOYD)	34.40

10044060 - DINGLE IRRIGATION CANAL	4,220.00
10044070 - REAM-CROCKETT CANAL	4,822.50
10044200 - BLACK OTTER CANAL	4,868.00
10044450 - PRESTON-MONTPELIER CANAL	4,541.00
10044700 - KEETCH (LAROCCO-KENT)	178.50
10044714 - FERN KEETCH	141.10
10044800 - J KEETCH (PUGMIRE)	122.10
10045800 - WESTFORK CANAL	9,348.00
10047305 - STEWART	273.00
10067705 - HARDCASTLE	0.00
10067725 - L STEVENS (Rockin G Ranch)	137.50
10067831 - CHARLES KUNZ	0.00
10067834 - S R KUNZ	12.00
10067855 - PACIFICORP 3 (D. Kunz)	0.00
10067870 - PACIFICORP 2 (P. Kunz)	42.30
10067874 - PACIFICORP 1 (P. Kunz 2)	70.30
10068205 - ALLEMAN	0.00
10068210 - ALAN PHELPS	12.80
10072550 - EIGHT MILE RANCH (HARRIS)	617.50
10072554 - EIGHT MILE 2 (HARRIS)	28.70
10074805 - BEAR R MEADOWS LLC	42.00
10076000 - SODA CREEK TRANSFER FLOW	216.40
10078905 - SODA GOLF	51.50
10079600 - LAST CHANCE CANAL	27,071.50
10079800 - BENCH 'B' CANAL	19,781.50
10080105 - GENTILE VALLEY CANAL	5,506.50
10080355 - WHEELER	42.50
10080385 - MATHEWS, B	72.30
10081650 - SKABELUND 1	77.40
10082550 - DAVID SKABELUND	90.00
10083505 - MUSSLER (FOX)	42.00
10086950 - SMITH-BOSEN CANAL	42.60
10086975 - TWIN LAKES PUMPS	0.00

10089820 - BOYACK	52.60
10089850 - NELSON CANAL	373.20
10089880 - UPPER RIVERDALE CANAL	189.00
10089950 - RIVERDALE CANAL	1,049.30
10089955 - HIGLEY	0.00
10089960 - RIVERDALE-PRESTON PUMP	403.40
10089970 - T LUCHIA	10.00
10090250 - WEST CACHE CANAL	17,925.50
10091110 - B JOHNSON PUMP	0.00
10091120 - L BRYCE	0.00
10091455 - FLOYD JENSEN	71.20
10091460 - BEAR GROVE LLC	13.20
10091495 - GRIFFITH	30.00
10091503 - B LAMONT	85.60
10091563 - M CURRY	51.40
10092650 - CUB RIVER PUMPS	7,319.00
10092755 - C WHITNEY	0.00
10092900 - WEST CACHE NO.2 (UTAH)	300.00
Total 24 Hour CFS =	<b>112,586.60</b>

Daily use data for each of these sites is publicly available on the Idaho Department of Water website.

<https://idwr.idaho.gov/apps/wm/DiversionDataApplication>

## SUMMARY OF WATER YEAR 2017 BEAR LAKE OPERATIONS

Date	Hydrologic Information/Event	Contents (% of Full) Discharge (% of Normal)
10-01-16	Bear Lake Beginning Elevation - 5,910.69 ft.	536,739 acre-feet (38%)
09-25-16	Bear Lake Low Elevation - 5,910.61 ft. (see note 1)	531,576 acre-feet (37%)
	Rainbow Inlet Canal Discharge	709,000 acre-feet (270%)
	Bear River Discharge Below Stewart Dam	1,839 acre-feet
	Bear Lake Net Runoff (Computed Total Inflow less Lake Evaporation)	856,000 acre-feet (265%)
07-14-17	Bear Lake High Elevation - 5,922.32 ft.	1,327,566 acre-feet (93%)
	Outlet Canal Releases: 6/22-9/23 (94 days)	154,000 acre-feet
08-12-17	Outlet Canal Maximum Release - 1,336 cfs	
	Bear Lake Storage Release	Not Applicable - Flood Control operations
09-30-17	Bear Lake Ending Elevation - 5,920.98 ft.	1,233,523 af (87%)
	Bear Lake Settlement Agreement "System Loss" Volume	Not Applicable - Flood Control operations

Notes: 1. Low contents prior to start of storage (occurred in previous water year).

### Current Status

Bear Lake elevation as of February 4, 2018 was 5919.42 feet. The Bear Lake Outlet Canal is open and passing a target flow of 700 cfs. There is 230 cfs in the Rainbow Inlet Canal and the flow pumped through Lifton is estimated at 500 cfs.

### Summary of Water Year 2017

The Bear Lake Irrigation Water Allocation for 2017 was 245,000 acre-feet. Runoff was much higher than normal, with Bear Lake net runoff at 856,000 acre-feet (265% of normal). The Bear Lake Outlet Canal was opened June 22. The peak inflow rate at the Rainbow Canal was 3,828 cfs on March 29.

### Operational Notes

- *Bear River Black Canyon Recreational Water Releases* occurred in 2017 and planned for 2018. The full available flow was passed through Black Canyon during each event.
- *2017 Alexander Reservoir Drawdown* – Alexander Reservoir was drawn down for bypass valve headgate seal work. Draw down began September 13, 2017 and refill is currently in progress, facilitated by increased flow from the Bear Lake Outlet Canal.
- *2017 Oneida Narrows Reservoir Drawdown* – Oneida Narrows Reservoir was drawn down in 2017 September 12 through October 6 to complete intake gate hoist installation.
- *2017 Grace Flowline Maintenance* – The timing of the Grace plant outage for the wood stave flowline maintenance, typically done in the spring, was shifted to the fall (Sept 26 to Oct 11) due to high flows in the Spring.

This information is provided by Pacificorp



**State of Idaho**

**DEPARTMENT OF WATER RESOURCES**

**900 N Skyline Dr., Ste A, Idaho Falls, Idaho 83402-1718**

**Phone: (208) 525-7161 FAX: (208) 525-7177 [www.idwr.idaho.gov](http://www.idwr.idaho.gov)**

**C.L. "BUTCH" OTTER**  
Governor

**GARY SPACKMAN**  
Director

April 19, 2018

Josh Hanks  
85 Crayon Ct  
Logan UT 84321

WATER DISTRICT #11

Dear Watermaster:

Enclosed herewith is a copy of the Watermaster's Annual Report for the past season.

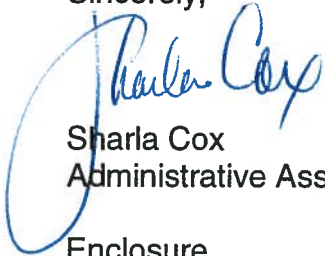
The same has been prepared by the watermaster and approved by this Department in conformity with Sections 42-610, 42-614 and 42-615, Idaho Code.

During the 1993 legislative session, the legislature enacted a new law which amends Section 42-619(9), Idaho Code and removes the independent financial audit requirement for most state water districts. The new law, referenced by Section 67-450B, Idaho Code (copy enclosed) identifies minimum audit requirements for all local government entities. Under the new statute, the governing body of any local government entity (i.e.; water district) whose annual budget does not exceed one hundred thousand dollars (\$100,000) has no minimum audit requirements under this section. This means that any district which handles its own money and whose budget is one hundred thousand dollars (\$100,000) or less does not have to have an independent public account firm conduct a financial audit every few years as previously required by Section 42-619(9).

Please note that only the statutory requirement regarding the independent financial audit has been changed. Districts handling their own fund (i.e.; districts who collect and / or disburse their own funds) must still submit their own statement of the water district's financial affairs at the end of each fiscal year. As recommended in the Department's February 16, 1993 letter and the 1993 Watermaster Handbook, a copy of the financial statement may be submitted either with the annual water masters report or with the minutes of the annual meeting for the ensuing year. An example of an annual financial statement may be found in Appendix C of the 1993 Watermaster Handbook.

The purpose of this letter is to remind all water districts that workers compensation insurance is required for all water district employees. This requirement applies to all water districts in Idaho, regardless of annual budget. Insurance should be applicable at least to all paid water district staff, including the water master as well as watermaster assistants, advisory committee, secretary and treasurer. The costs associated with workers compensation insurance is paid directly by the water district and should be considered an expense of the district. For information about obtaining insurance costs etc., please contact the Idaho State Insurance Fund. The State Insurance Fund has offices in Boise, Coeur d'Alene, Idaho Falls, Pocatello and Twin Falls, Water Districts are also reminded that all paid water district staff may be subject to state and federal taxes. These tax requirements will vary depending on salaries and total income of each watermaster or employee. In many water districts, particularly smaller districts with part-time staff, payment of watermaster or each employee. Districts may wish to contact the State Tax Commission or the Internal Revenue Service for information about state and federal withholding taxes.

Sincerely,



Sharla Cox  
Administrative Assistant

Enclosure



**State of Idaho**

**DEPARTMENT OF WATER RESOURCES**

900 N Skyline Dr., Ste A, Idaho Falls, Idaho 83402-1718

Phone: (208) 525-7161 FAX: (208) 525-7177 [www.idwr.idaho.gov](http://www.idwr.idaho.gov)

April 19, 2018

**C.L. "BUTCH" OTTER**  
Governor

**GARY SPACKMAN**  
Director

Water District 11  
Austin Moses  
800 W Judicial  
Blackfoot ID 83221

**WATER DISTRICT #11**

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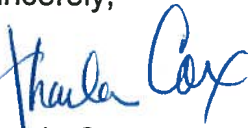
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Sincerely,



Sharla Cox  
Administrative Assistant

Enclosures



State of Idaho

DEPARTMENT OF WATER RESOURCES

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Phone: (208) 525-7161 FAX: (208) 525-7177 [www.idwr.idaho.gov](http://www.idwr.idaho.gov)

October 25, 2017

C.L. "BUTCH" OTTER  
Governor

GARY SPACKMAN  
Director



Water District 11  
Josh Hanks  
85 Crayon Court  
Logan UT 84321-5427

RE: Requesting Watermaster's Report / Daily Record Books

Dear Watermaster:

In accordance with Chapter 6, Section 42-614 of the Idaho Code, and department regulations, **the Watermaster of each district is required to submit an annual report to the Department of Water Resources, at 900 N Skyline Dr Ste A, Idaho Falls ID 83402 by December 31, 2017.** You should forward a copy to the County Treasurer, if applicable. Please be certain all of the report is complete.

In accordance with Chapter 6, Section 42-615 of the Idaho Code: Proposed budget for succeeding year. Each watermaster shall, at least fourteen (14) days prior to the annual meeting of the water users of the water district, also prepare a proposed budget for the succeeding year, together with a distribution of the amount of the budget to the respective water users, using the actual deliveries for the past irrigation season or seasons, as the basis for distribution. The proposed budget and distribution shall be submitted to the water users for consideration and approval at the next annual water meeting.

We are enclosing sufficient forms for filling out the Watermaster's Report and the Proposed Budget.

**Do not fail to send the Watermaster's Daily Record Books along with the Watermaster Report.**

Sincerely,

Sharla Cox  
Administrative Assistant