

**WATER MASTER REPORT
WATER DISTRICT #11
2007**

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Watermaster

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General Summary

Data assembled from IDWR, Rocky Mountain Power, and watermaster records

Comments

The drought in 2007 resulted in greatly reduced availability of natural flow, rationed irrigation storage water deliveries from Bear Lake and an early beginning to the delivery of storage water below Bear Lake. Because of the drought conditions coordination on the river was tightly managed with twice-a-week conference calls to discuss and plan for flow changes. Above Bear Lake where no storage water is available and natural flow availability was greatly reduced, restrictions were early and severe. The manual nature of the irrigation diversion reading collection and water rights accounting modeling process resulted in a cyclical change of allowed diversions and 'wasted water' at the bottom of the system that could reduce irrigation efficiency. Real-time monitoring would reduce the waste water and improve irrigation efficiency on the Bear River in the area above Bear Lake in Idaho and in the areas remaining to be automated below Bear Lake on the Bear River.

Bear Lake Water Supply

May 18, 2007	5912.58	Maximum elevation
April 15, 2007	5912.22	
September 30, 2007	5907.85	
November 04, 2007	5907.63	Low elevation

A decline of 4.73'

Irrigation usage attributed to 2.16' of that.

Bear Lake storage release started early on May 16, 2007

33,826 AC Ft of storage was saved for next year due to conservation by irrigators.

Funding For Needed Upgrades

Drought funding was applied for through the USBR (Roger Hansen) in the \$200K range. The proposed money would help automation of diversions and pumps and further develop a comprehensive real-time monitoring system for the Bear River Basin. Rock worked up a needs-by-site list, not attached. However that money became unattainable. 2025 money is also being looked into.

Individual Diversions Report (sites that have been visited, contacts established, flows measured, GPS recorded & pictures taken.) “ The State will probably mandate changes”

Miller Ditch

Used and regulated by Keith Rigby.

Has a 2ft parshall measuring flume which overflows when taking maximum flow. Needs a 30” flume. Also, flume is located one third of a mile from the diversion point.

Rigby Pump

Keith Rigby operates 30 hp measured at 391 gpm on 6/12/07 by Corbin Knowles. Time clock installation is a possibility.

Nuffer Canal

Jim Jensen, Keith Rigby, Demar Romrell and Bill Robison have shares. They built up the river diversion dam this summer. Now has a 4ft parshall flume which is not adequate for the amount required to fill this non-sloped ditch. Needs a ramped flume to handle around 40cfs. One of the two head gates will not seal tightly.

Jensen Ditch

Mariner and Sid Jensen, owners, has two diversion points. One screw gate and one stop log. Neither has a measuring device. Operated by John Scott. Needs a 4ft ramped flume. Stop log device sealed in 2007.

Ur N. Hills Diversion

Owner David Ure. These rights are under the Lloyd Ditch. There is no head control or measuring device. Needs 4ft ramped measuring flume & control structure.

Sorenson Ditch

Carolyn Nebeker 1/3 owner with Jim Smith and Dick Weber. Sale pending to Brad Oger. Has a dilapidated measuring device. Needs a 4ft ramped flume. This was the source that

Black Bear Mt. Resort was looking at for their water transfer rights. As of the end of Nov.07 their request has been denied by IDWR. Assumed it will be re-submitted.

Lloyd Ditch

Jim Smith, owner. Dustin Smith, operator. It has a 48" dilapidated weir. Needs to be a 4ft ramped flume.

Dingle Canal

Evan Skinner, watermaster. It has a Stevens Axsyst electronic recording device. Rock replaced the faulty depth probe with an encoder float tape device. It has an adequate two six foot sectioned cement weir. Proposed to upgrade to new Campbell scientific data logger equipment with radio telemetry for computer web site access, *if dollars become available.*

Ream/Crockett Canal

Lee Ream, watermaster. Has adequate 8ft parshall cement flume. Has Stevens recording equipment. Proposed to be upgraded same as Dingle. Rock replaced faulty depth probe with float tape encoder device. Diversion was not adequate to take full flow this year.

Black Otter

Justin Skinner, watermaster. Has adequate 10ft cement parshall flume. Has Stevens recording equipment. Proposed to be updated same as Dingle. Also has lateral ditch (Peg Leg, watermaster Dole Lloyd). Also has return flow into the Rainbow Canal.

Preston/Montpelier Canal

President Paul Nelson. Has inadequate 12ft suppressed rectangular weir rating table. Has Stevens recording equipment. Rock replaced faulty depth probe. Proposed to be updated same as Dingle. Needs new rating table developed. Several wading rod measurements were taken during the season for this purpose. Also has part of its water rights shared by the Todd Lloyd pump.

Todd Lloyd Pump

Todd Lloyd owned and operated. Tested flow at 458 gpm by Cindy Bird. Again, shared water rights by Preston/Montpelier.

Larocco/Kent Pump

Dean Linford and Paul Keetch shared. Old ditch filled in and converted to an 1800 gpm pump operation, as measured by Corbin Knowles.

Pug Ditch

Lynn Keetch, watermaster. Has a 4ft cement rectangular weir. Not operated in 2007 for lack of diversion material in the river. Lynn said that they would be ready to take water in 08.

West Fork Canal

Kirk Rich, watermaster. Has gauge house with strip chart recorder. Maintained and read by PacifiCorp employees. Proposed to be upgraded same as Dingle.

Paul Kunz Pumps #1 & #2

Portable pumps leased by Brad Woolstenhulm. Number one pump 485 gpm. Number two pump 608 gpm, measured by Corbin Knowles.

Steven Kunz Pump

Has 306 gpm pumped from a mix of Ovid Creek and backup from the Bear River, measured by Corbin Knowles.

Dean Kunz Pump

A Roger Rigby has leased from UP&L Company in the past. Not operated in 2007.

Wayne Kunz Pump

Portable not operated for several years. May still has storage contract with PacifiCorp.

Hardcastle Pump

Portable owed by Leon Hardcastle, operated by James Hardcastle, measured at 499.3 gpm (may have file mixed up with a Rich Loveland for billing)

Allyn Phelps Pump

626 gpm as measured by Colin Knowles and Cindy Bird.

Lyle Stephens Pump

New owner Clyde Cook. Portable pump not operated in 2007.

Chris Christensen Pump

Owned by L. Alleman. Operated by James Hardcastle. Portable pump measured by Corbin Knowles at 470 gpm.

Cloyd Wallentine Pump

Sold to Richard Sorenson. Not operated in 2007.

Eight Mile

McGee Harris, owner. Operated by Wade Harris. Pump on the Bear River measured at 1712 gpm by Cindy Bird and Corbin Knowles. Also has a Bear River diversion for an irrigation canal both for flood and pump irrigation which was not allowed to be measured, by owner. Under McGee verbal instructions to Cindy and Corbin to charge eight mi. the max amount - Rock charged him a mean figure of approximately 4.6 cfs throughout the irrigation season realizing that they use an on-a-week and off-a-week irrigation practice.

Robert Harris Pump

PTO driven pump on the Bear River. Water rights are in Eight Mile name. Was not used in 2007. Robert needs to transfer rights.

Soda Golf XFR

The transfer flume was cleaned and a flow was maintained by the City of Soda Springs and golf course crew. Rock visited the flume and checked the flow bi-weekly.

Soda Golf Pump

I calculated and recorded the flow from the measurements Cindy Bird made on the pump of 1081 gpm considering their down time Rock used the figure of .8 cfs per 24 hr. period.

Last Chance Canal

Marc Gibbs, President. Bear River Basin real time river flow data/Idaho Canals. Maintained by USBR Provo office. Flow data recorded by Liz Cresto, IDWR.

Bench B Canal

Keith Rigby, watermaster. Real Time data same as Last Chance. Water rights are part of Last Chance.

Gentile Valley Canal

Don Harris, watermaster. Lori Harris, ditch rider. Has Stevens recording equipment. Rock replaced a faulty probe with encoder float tape device. Proposed upgrade same as Dingle. It has adequate 8ft cement parshall flume.

Wheeler Pump

Operated by Miles Rassmussen. Measured by Corbin Knowles at 532 gpm.

Wanlass Pump

New owner, Blair Mathews. Flow measured by Corbin Knowles at 988 gpm.

Skabeland One Pump

Dr. David Skablend, owner. Reese Skinner, operator. Was being rebuilt and not operated in 2007.

Skabland Two Pump

Measured by Corbin Knowles at 1100 gpm.

Panter (Fox) Pump

Portable pump owned by Lawrence Fox. Farmed by nephew, John Mussler. Storage contract with PacifiCorp, not operated in 2007.

Smith/Bosen Ditch

Operated by Cliff Jensen. The inadequate cement weir needs replacement with a 6ft ramped measuring flume.

Smith Pump

W. Smith died, now owned by Kent Egley. Measured by Corbin Knowles at 452 gpm.

Nelson Ditch

Lyle Barington, operator. The diversion and the 24" parshall measuring flume are one mile apart. Measuring weir needs to be moved and needs to be larger.

Upper Riverdale Canal and Pump

Pump irrigates Riverdale Estates. Has two pumps in house at the end of a quarter mile underground pipe. Overflow runs back into the Bear River. Second pump designed to be used by Pete Peterson. Not used to date. Pete Peterson uses water from an upper canal. Rock relies on calls or by observation of use. Has not yet been measured.

Riverdale Irrigation Canal

Wynn Downey, watermaster. Has a 30" parshall measuring flume with Stevens recording equipment.

Higley Pump

Small pump used for irrigating a very small golf course. Not measured yet.

Riverdale/Preston Pumps

Steve Meek, operator. Has 2 large and 1 small pump. Number (1) 512 gpm., Number (2) 925 gpm., Number (3) 888 gpm. Measured by Corbin Knowles. Steve Meek asked me to look into funds that might be available for flow monitoring on two main lines which used to have old paddle wheel type metering.

Robert Henderson Pump

Robert Henderson operates portable pump on slow water from the end of the Nelson Ditch and sub from the Bear River, small acreage.

West Cache Canal

Ed Cottle, operator. Has an adequate 12ft cement parshall. Has Bear River Basin real-time river flow telemetry maintained by USBR. Info collected and recorded by Liz Cresto.

Hodges Pump

Portable pump owned by Dave Bosen. Only operated for 13 days in 2007.

Johnson Pump

Owned by Johnson Estates. Portable pump not operated in 2007.

Bastion Pump

Terry Porter pump operated by Loranzeo Griffith. Only operated 1 hour in 2007.

Floyd Jensen Pump

Brian Jensen, operator. Measured by Cindy Bird at 667 gpm.

S.Boka Pump

Ron Foster, owner. Trent Sutter, operator. Irrigates a small housing estates. Is a permanent pump on the Bear River, measured by Corbin Knowles at 306 gpm. Has a storage contract with PacifiCorp.

Alex Ingle (Same as Ingle/Lamont) Pump

New owner, Dave Bosen. Operated for only a few days in 2007. Not yet measured. Flow estimated at 485 gpm.

Carol Whitney Pump

New owner Robert Fitzgerald. Portable pump not operated in 2007.

Cub River Pumps

Operated by Regan Wheeler. Has 3 outside pumps capable of 10cfs each. Also has 4 inside pumps, capacity 25 cfs each. Feeds 2 canals. East canal has a 10ft rectangular measuring weir. South canal has a 6ft rectangular measuring weir. The site has an electronic monitoring station. Data is called to Rock by Regan for computer entry.

West Cache Pumps

Operated by Ed Cottle. Has 6 large pumps with a capacity of 15 cfs each. Two of the pumps have variable speed capabilities. Pump use is called to Rock and the assessments are included with the West Cache Canal. These pumps are located in Cornish, Utah.