

Tour of the Lower Ogden River and Lower Weber River - 7/27/89

Attending: Blaine Johnson, River Commissioner; Lee H. Sim, and John Larsen.

John took some pictures associated with the diversions discussed below.

OGDEN RIVER

Once Blaine has the diversion set in the springtime, he said there is not a lot of need to regulate those diversions throughout the summer. He does monitor them and keeps track of the use but until the flows start dropping off in the fall, there isn't a lot of need for regulation.

The North Ogden Irrigation Co. diverts water from the river at the mouth of Ogden Canyon. The diversion and measuring device (4 ft. Parshall flume) are in good shape. There are no problems.

A penstock pipeline from Pineview Reservoir carries water down Ogden Canyon to the Power Plant. It has a capacity of between 230 - 240 cfs. The Western Irrigation Co. diverts water from the tail race of the Power Plant. They have a 4 ft. parshall flume which is in good shape. No problems with the diversion. Any water that is not diverted by the Western Irrigation Co. from the tail race flows into Mill Creek.

The Lynn Irrigation Co. diverts water from Mill Creek. The diversion is in good shape. There is no measuring device, however, Blaine feels one is not needed.

The Mound Fort # 1 diversion takes water from Mill Creek. They have a 4 foot cipoletti weir and the diversion is in good shape. Mound Fort # 2 diversion has a 9 or 12 " Parshall Flume and takes water also from Mill Creek. Mound Fort # 4 diverts from a structure on Mill Creek. There is a structure that divides the water three ways. The Mound Fort # 4 goes off to the north. There is a cipoletti weir on that diversion. The Mound Fort # 3 goes to the south. There is a measuring device there that doesn't work. Blaine feels it is too small a flow to worry about re-establishing the measuring device and then Mill Creek continues on to the West. Mound Fort # 5 diversion also takes water from Mill Creek. The measuring device is not working. There are annual flooding problems on this diversion because of the water user not operating it correctly. Blaine has to get in and make some adjustments every year in the Spring time to relieve the flooding. Once the flooding is relieved there are usually no more problems through the summer. Mound Fort # 6 also takes water from Mill Creek. It is used to only irrigate about 10 acres of alfalfa. The water user takes water for 18 to 30 hours every 5 weeks. There is no measuring device. Blaine feels one is not needed.

The Perry Irrigation Co. has a diversion on the Ogden Defense Depot. Blaine has a pass to get in to see that. The Depot keeps the diversion in very good shape. There is an 18 or 24" parshall flume.

The North Slaterville Irrigation Co. is the very last diversion on Mill Creek. They have a 4-ft. rectangular weir.

There is an exchange on the Ogden River made by the Weber Basin Water Conservancy District. The District delivers water out of either Willard Bay or Pineview Reservoir to users on the Lower Ogden River in exchange for water which the District stores in Echo Reservoir or which is sent through the gateway tunnel for delivery to North Ogden or North Salt Lake.

WEBER RIVER

The Wilson Irrigation Co. diverts water from the river near the bottom of the river. The measuring device (a Burnham orifice) and diversion are in good shape. The information needed to determine the flow at this device is the gate opening, the upstream and downstream heads, and the gate width. There are five gates in this measuring device.

The Old Wilson Ditch diverts water from the Wilson Canal. There is a good control and a good measuring device on that system.

The Weber Basin Water Conservancy District takes water from the Weber River through the Layton Intake Canal to deliver to the Layton Pumps. The Layton Intake Canal delivers water from Ogden River, Weber River, and also, Willard Bay. There are three pumps with a capacity of 75 cfs and one pump with the capacity of 38 cfs. The pumps have to be either completely on or completely off, although one or more of the pumps can be operated simultaneously. The flow is regulated by releasing unneeded water back into the intake canal. The pumps can deliver water into the Layton Canal which delivers water to the Layton area. Also, in times of low flows, water is diverted through the Layton Intake Canal and pumped into the Wilson Canal rather than being diverted at the Wilson Diversion. This reduces seepage losses. The Layton Pumps are used only in times of drought or water shortage. They are in use this year and were used last year but in years previous had not been used before.

The Hooper Irrigation Co. diverts water from the Layton Intake Canal. There is a good measuring device (8 Ft. or 10 Ft. parshall flume) and control structure which were built by the Bureau of Reclamation. These were built when the company's original point of diversion was moved from the river to the Layton Intake Canal. The Warren Irrigation Co. is the last diversion on the Weber River. There is a dry dam at this point unless the Bird Refuge needs water. The measuring device (seven foot parshall flume) and control structures are in good shape.

The South Slaterville Irrigation Co. uses a constant head orifice as its measuring device which is in good condition. It diverts water from the Willard Canal.

The Slaterville diversion dam diverts water from Weber River into the Willard Canal and also into the Layton Intake Canal. The Willard Canal was constructed so that water can flow either into Willard Bay by gravity (maximum capacity of 1000 cfs.) or be pumped back from Willard Bay into the diversion area. Water is usually diverted from the river into the canal and into Willard Bay during the winter time or during the spring run-off.

The Plain City Canal diverts out of the Willard Canal.

The Pioneer Irrigation Co. pump is located below Warren dam which is a collapsible dam. The collapsible dam is used by the Warren Irrigation Co. to impound about a 1000 ac/ft. which is used as exchange water for the Bird Refuge so the company can divert water from the sewer plant outflow. Below Warren dam the river flow is based on return flow or outflow from the sewage treatment plant. Warren Irrigation Co. has a right to take the sewage outflow (about 36 cfs.) into its canal.

The Uintah Central Irrigation Co. diverts water at the mouth of Weber Canyon. It has an 1852 priority right which is probably the second earliest priority on the river. A 3 or 4 foot cipoletti weir is located about a mile down the canal. There are no problems and the measuring devices are in good condition.

The Pioneer Ditch has an 1851 right. They have a right for 1.33 cfs. The diversion is through pipeline which has a capacity of only about 1-1/2 cfs. Since they can't take more than what the right allows, the Commissioner doesn't measure the water.

The Riverdale Bench diversion is out of the Weber River below the Uinta Diversion. It's a rubble concrete diversion dam with a parshall flume that is in good condition.

The South Weber Irrigation Co. has a diversion at the mouth of Weber Canyon. There are no problems there.

The Bamrough diversion is located at the mouth of Weber Canyon; It diverts water into the South Weber Diversion Ditch. There are two or three smaller canals which take water from that canal further downstream from the diversion.

The Davis and Weber Counties Canal diversion is just upstream from the mouth of Weber Canyon. There is a 12-ft. Parshall flume which Blaine feels has an accuracy of 2% . The diversion is in good condition though the control gates are very old.

Further upstream is located the Utah Power & Light diversion dam. There are no problems there.

The Gateway Canal diversion from the Weber River is located about 3 miles northwest of Morgan. The Canal has a capacity of about 700 cfs. It delivers water from the Weber River to a structure which is located on the south side of the valley just above where Weber Canyon opens up. At that point the water is split two or three ways: to the Weber Basin Power Plant at the bottom of the hill, to the Gateway tunnel which carries the water through the mountain, or to an overflow which takes excess water back to the Weber River.

There is a U.S.G.S. gage near the Power Plant. Blaine reads this gage twice a day to determine what the situation on the lower river will be in 12 hours. It takes about 12 hours for the water to get from that gage to the last diversion on the river.

The Willie Ditch is located on the Weber River about half way from the mouth of the canyon to Morgan. There are some problems associated with the ditch because highway and railway facilities have placed some limitations on the location of the canal. There is very little fall in the ditch so that it is not possible to put in a measuring device. There is a control structure on the dam. The canal has a limited capacity. If excess water is put into the canal, it just flows over the ditch bank and back into the river. Therefore, Blaine doesn't worry too much about the measurement at that point of diversion.

The Littleton-Milton Diversion is on East Canyon Creek just West of Morgan. It has no measuring device but the flows are estimated by the position of the control gate and the upstream and downstream head. The canal has the capacity of between 7 and 15 or 20 cfs.