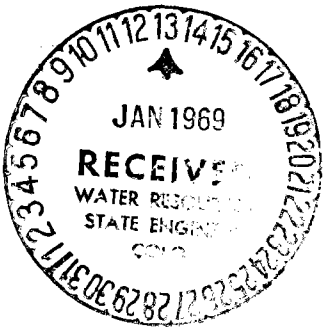
STATE OF COLORADO
IRRIGATION DIVISION NO. 6
STEAMBOAT SPRINGS

WESLEY E. SIGNS
Irrigation Division Engineer

January 10, 1969



Mr. A. Ralph Owens
Colorado State Engineer
101 Columbine Building
1845 Sherman Street
Denver, Colorado 80203

Dear Mr. Owens:

I herewith present my Annual Report for Irrigation Division No. 6 for the year 1968.

Attached to this report are the tabulations of the Water Commissioner's Ditch and Reservoir Reports for 1968 for Water Districts No. 43, 44, 54, 57 and 58, along with the Water Commissioner's report for Pot Creek in Water District No. 56 for 1967. This report is always one year behind as it is not submitted by the Utah Commissioner until March of the following year.

A total of 914 ditches were reported in the Division with a total of 581,514 acre feet being diverted for the irrigation of 146,358 acres, making an average diversion of approximately 4 acre feet per acre. This figure for an average is probably ideal for proper use of water in this area, however, this figure is an average and does not reflect the true picture in areas of abundant water as the use is considerably higher than this. The irrigation season extended from March 15th, the starting date in Water District No. 43, through November 12th, the last recorded day in Water District No. 54.

Commissioner reports show a May 1st reservoir storage of 41,144 acre feet with capacity of 44,142 acre feet in 64 reservoirs.

The November 1st storage is reported as 28,138 acre feet. Of this storage, 20,438 acre feet is recreational reservoirs which, for the most part, remain

full during the entire year.

The May 1st snowpack was above normal with forcasts for the Yampa, Elk, Little Snake and White Rivers ranging from 107% to 115% of normal. What appeared to be material for a damaging spring runoff turned out to be an orderly flow, due to a late cold spring. The snowpack as of June 1st was probably one of the heaviest on record.

With an outstanding water supply, weather conditions throughout the growing season were such that a below normal crop was realized. A killing frost was experienced on the last day of June and the first day of July which did untold damage throughout the Division. A frost was experienced in almost every weather station in the Division in every month of the summer. This was particularly hard on small grain crops and hay. Some ranchers estimated a one-third below average hay crop.

Water administration in Water District No. 43 was near normal, with most of the work being on Piceance Creek. The town of Rangely is still working on its reservoir project without too much success, due to opposition of a large oil company.

Adjudication proceedings are still underway in Water District No. 44 with a good many claims being presented at each hearing. Feasibility investigation is still scheduled to start on the Juniper Project this coming season with some of the monies being furnished by the Colorado River Conservation District, The Juniper Conservancy District and the Great Northern Conservancy District.

Water District No. 54 will be without a Water Commissioner after next season, due to a forced retirement because of age. Every effort will be made to find a capable Commissioner for this coming season.

Work on the Savory Pot Hook Project is progressing slowly even though the project has been authorized by Congress for a number of years.

There hasn't been much activity in Water District No. 55 and 56, however, it will probably be advantageous to have one commissioner in these two districts some time in the future.

Mr. Mattern came in and attended the Pot Creek Water Users meeting with the Division Engineer on March 7th. Mr. Dave Rasmussen again appointed Water Commissioners for 1968.

Mr. James Sellers was appointed Water Commissioner in District No. 57 before the start of the irrigation season. He did a good job and seems to like both the job and the District.

Probably the highlight in Water District No. 58 was the filling of the Steamboat Lake, the new Game and Fish Recreation Reservoir at Hahns Peak. It was not expected to fill in one season, but the above normal snowpack filled it early in June. Complications arose in the well house when negative pressures, due to water spilling over the overflow, caused the well house door to collapse. No major damage was done, however, with the door replaced with a screened type door it is stillpractically impossible to open when over 30 cfs is discharging. It is contemplated that the well house will be remodeled in the coming season to remedy this fault.

Fred Paddock and Mark Davidson were in the Division on August 13, 14 and 15th and went over the Steamboat Reservoir, as well as many more irrigation reservoirs in the Division.

Adjudication proceedings are underway in Water Districts No. 54, 57 and 58 with considerable activity in each proceeding.

The Bureau of Reclamation's Weather Modification Project is still being operated with Bollay Associates, Inc. Apparently, a relative amount of success is being shown with an apparent increase in snowpack and runoff from the target

area. The Forest Service, Soil Conservation Service and U. S. Geological Survey are all cooperating in evaluation of the project through snow and water measurements.

William Mattern attended the Annual Water Commissioner's Meeting the first of April. Many problems were discussed and solved. The Water Commissioners had many questions which Mr. Mattern ably answered. A movie on water was shown which everyone enjoyed.

The fall moisture is high, with the snowpack starting to build up in the higher areas which would indicate a possible good water-year in 1969.

I would like to thank the Water Commissioners in Division No. 6 for cooperating in doing a good job during the past year. I would like to take this opportunity to thank the State Engineer's office for their cooperation and help during the past year.

Respectfully submitted,

Wesley E. Signs

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Irrigation Division Engineer
Division No. 6

TABULATION OF WATER COMMISSIONER'S ANNUAL
DITCH REPORTS FOR IRRIGATION SEASON OF 1968

District No.	No. of Ditches Reported	Amount of Appropriation Cubic Feet Per Second	Capacity of Ditches Cubic Feet Per Second	First Day Water Was Used	Last Day Water Was Used
43	274	1,809.36	2,506.1	3-15	11-1
44	198	815.46	1,133.8	4-15	10-10
54	72	161.52	601.5	4-16	11-12
55 & 56		No Water Commissioner Report			
57	70	457.54	450.0	5-14	10-18
58	300	1,680.10	1,730.0	5-1	11-1
TOTALS	914	4,923.98	6,421.4	3-15	11-12

District No.	Average No. Days Water Carried	Average Daily Amount Carried Cubic Feet Per Second	No. of Acre Feet Used	Total No. Of Acres Irrigated	Water Use Acre Feet Per Acre
43	95	1,274.8	257,211	37,440	6.8
44	38	604.6	84,217	29,104	2.9
54	92	235.3	50,581	10,160	5.0
55 & 56		No Water Commissioner Report			
57	52	258.97	48,359	15,050	3.2
58	60	1,079.0	141,146	54,604	2.6
TOTALS		3,452.67	581,514	146,358	3.97

TABULATION OF WATER COMMISSIONER'S ANNUAL RESERVOIR REPORTS FOR IRRIAGTION SEASON OF 1968

District No.	Use of Water	No. of Reservoirs Reported	Area of H.W.L. Acres	Capacity in Cubic Feet	Capacity in Acre Feet
44	Irrigation	12	144	69,707,557	1,600
	Stock Water	4	85	16,204,320	372
	Fish and Recreation	3	144	43,446,341	997
	Not Used	10	97	19,979,330	459
	TOTAL	29	470	149,337,548	3,428
54	Irrigation	1	30	17,345,000	398
	Stock Water	3	10	2,103,739	48
	Not Used	3	4	1,700,000	39
	TOTAL	7	44	21,148,739	485
57	Irrigation	7	185	101,038,721	2,320
	Domestic	1	33	42,971,878	986
	Not Used	4	38	22,554,734	518
	TOTAL	12	256	166,565,333	3,824
58	Irrigation	13	500	512,701,149	11,770
	Domestic	3	1,220	1,073,104,000	24,635
	TOTAL	16	1,720	1,585,805,149	36,405
TOTAL ALL DISTRICTS REPORTED		64	2,490	1,922,856,769	44,142

RESERVOIR TABULATION (CONTINUED)

District No.	Quantity of Water In Reservoir May 1, 1968		Quantity of Water In Reservoir November 1, 1968		First Day Water Used From Reservoir	Last Day Water Used From Reservoir
	Cubic Ft.	Acre Ft.	Cubic Ft.	Acre Ft.		
44 Irrig.	69,707,557	1,600	3,284,136	76	6-18	8-20
Stock	16,204,320	372	---	--	---	---
Fish	43,446,341	997	43,446,341	997	---	---
TOTAL	129,358,218	2,969	46,730,477	1,073	6-18	8-20
54 Irrig.	17,345,000	398	0.0	--	6-4	10-14
Stock	2,103,739	48	1,370,890	32	---	---
Not Used	1,700,000	39	1,700,000	39	---	---
TOTAL	21,148,739	485	3,070,890	71	6-4	10-14
57 Irrig.	50,182,103	1,152	30,419,603	698	5-10	9-25
Domestic	42,971,878	986	11,810,500	271	7-17	10-10
Not Used	22,544,734	518	1,497,593	35	---	---
TOTALS	115,708,715	2,656	43,727,696	1,004	5-10	10-10
58 Irrig.	452,969,838	10,399	198,143,804	4,549	6-13	7-25
Domestic	1,073,104,000	24,635	933,973,970	21,441	8-17	11-1
TOTAL	1,526,073,838	35,034	1,132,117,774	25,990	6-13	11-1
TOTAL ALL DISTRICTS	1,792,289,510	41,144	1,225,646,837	28,138	5-10	11-1

RESERVOIR TABULATION (CONTINUED)

District No.	Average No. Days Water Carried	Average Daily Amount Carried Cubic Ft.	No. of Acre Feet Reservoir Water Carried	Total Acres Irrigated	Remarks:
44	26	2.46	132	990	Some of acreage reported under ditches
54	72	2.50	360	800	Supplemental water to this acreage
57	64	14.6	1,908	1,050	Some of this acreage reported under ditches
58 Irrig.	35	6.00	4,900	---	Water supplemental to ditches reported
Domestic	30	53.3	3,194	---	Lowering lake levels for the winter
TOTALS	45	78.86	10,494	2,840	

SUMMARY OF 1967 POT CREEK DISTRIBUTION

Yeild of water from drainage above the Matt Warner Reservoir on Pot Creek fell far short of the previous 2 years. 1965 produced 3,857 acre feet, 1966 produced 2,122 A.F. as compared with 1,683.8 A.F. in 1967 - Due to the rather extended period of relatively low flows the Utah State Fish and Game right and the Colorado rights received comparable amounts to other years. The Calder right suffered since the peak flow was only 27 cfs during May 26, 1967 for the year. Max Rasmussen and Carl Searle were delivered their share of the Calder water as agreed to by Mr. Calder and Mr. Rasmussen and Mr. Searle. There was some confusion as to what this amounted to and a special meeting was held in Bob Guy's area office of the State Engineer Office to settle the matter. Mr. Calder was able to hold over in storage, 600 A.F. less 25 A.F. conveyance loss that was exchanged with the Fish and Game Department, by an agreement entered into on September 30, 1966, between Mr. Calder and the Department (see copy of this agreement on page 11, of the 1966 Comm. Report). This water, together with his share of 450 A.F., constituted the major portion of water held over into 1968, less releases made by Mr. Calder for irrigation and water sold for road construction purposes.

The Colorado rights received 390.0 A.F. for the season less transportation losses and evaporation. This water was released from the Matt Warner Reservoir, beginning June 26, 1967 and ending July 23, 1967, this same water was subsequently released on down to Colorado users beginning July 27, 1967 and ending August 8, 1967.

The Fish and Game Departments share over and above the 600 A.F. exchanged with Mr. Calder was released beginning August 8, 1967 and continued with some controversey with Mr. Calder until Approximately 235 A.F. less seepage and evaporation were released. The problem was compounded by the fact that Mr. Calder was already releasing 1.2 cfs and had no way of measuring the division of Fish and Game water and his own.

Water released to the Colorado Rights was used for some irrigation and primarily for stock use. The Fish and Game Department held the major end of their water in Crouse Reservoir for use in fish culture and development of a sports fishery at this location. Mr. Calder held over approximately 900 A.F. of his share of the Pot Creek water plus water traded for with the Fish and Game Department for use in fish culture and possible irrigation during 1968 irrigation season.

A total of eleven visits to the Pot Creek area were made during 1967. This amounted to one more than was budgeted for, however, this extra trip was authorized and deemed necessary to complete the distribution for the year. As a result of a rather short supply of water and a more complicated system of releases from one reservoir to another, more trips seemed to be the order.

Mr. Zelph Calder has compiled some data as to storage losses during September and October 1967, which indicate that the loss during warmer months may be of a much greater proportion than earlier indicated. The

average loss, based on Mr. Calder's figures, show a daily loss of approximately 2 acre feet for the 60 day period of September 9, 1967 through November 8, 1967. This could go as high as twice this much earlier in the summer months of July and August. More studies should be conducted along this line if we continue to hold water over in the Matt Warner or Crouse Reservoirs for later releases to other rights in order to come up with an equitable loss factor for all concerned.

MEMORANDUM ON VISIT TO POT CREEK AREA, APRIL 21, 1967

TO: All interested parties

FROM: David Rasmussen, Commissioner

Upon the request of Users of the Pot Creek waters and reports that the area was open, a visit to the Pot Creek system was attempted on April 21, 1967, by the Commissioner, David Rasmussen and Gordon McCoy of Vernal, Utah.

No problem was encountered to the Crouse Reservoir. Storage to date in that reservoir amounted to approximately 700 A.F. + or -, with a leakage of approximately .6 cfs around the dam and .4 cfs through the headgate. Inflow to the reservoir amounted to approximately 4.0 cfs, which was being contributed in maximum from Cow Hollow drainage.

The access to the Matt Warner Reservoir was blocked by heavy snow drifts and mud. By working around these and through the sage brush, we were able to gain access to the Matt Warner. The gage Ht. on the staff read 98.0, with approximately .5 cfs leakage. Inflow to the reservoir as measured at the U.S.G.S. station above showed a gage ht. of .9= 10.0 cfs., or storage every 24 hours of approximately 20 acre feet.

It was noted that Beeler Creek, tributary to Pot Creek was being diverted into the Matt Warner Reservoir, rather than being allowed to flow in its natural channel back to Pot Creek at a point below the Matt Warner Reservoir dam. The flow in this tributary amounted to approximately 1.5 cfs on the date visited. While this in its self does not constitute a large loss at the time, the accrued amount could be considerable. In view of the fact that the former State Engineer, Wayne D. Criddle has ordered this diversion closed on the conclusion that this water should go to rights below the Matt Warner and not be included in the storage supply of the Matt Warner, that Mr. Zelph Calder take immediate steps to see that this order is followed and that Beeler Creek diversion dam and ditch be destroyed immediately.

The physical outlook for continued stream flow in the Pot Creek area seems good. Snow pack, with the exceptions of large snow drifts, in the lower elevations is gone, but apparent snow in the higher levels looks excellent. Depending on how the weather warms up, could determine if the Matt Warner and Crouse Reservoirs fill, as well as to how much runoff the Colorado Users should expect.

Continued visits will go on during the balance of this month and months to come in an effort to keep all interested parties posted and carry out whatever distribution chores and record-keeping are necessary.

Copies:
Al Heggen, Utah Fish and Game: User
Bill Karren, Jensen, Utah: User
Zelph Calder, Vernal, Utah; User
Donald Norseth, State Engineers Office S.L.C Utah: Distribution Eng.
Robert Guy, State Engineers Office, Vernal, Utah
Dayl Webb, U.S.G.S. Water Resources Branch, Vernal, Utah

MEMORANDUM ON VISIT TO POT CREEK AREA, JUNE 26, 1967

On June 26, I went to the Pot Creek system for the purpose of beginning releases from the Matt Warner Reservoir to down-stream rights. On this date the U.S.G.S. gaging station above the Matt Warner Reservoir showed a gage ht. of .82 or i.0 cfs. The Matt Warner Reservoir gage ht. was 103.5.

At 4:00 P.M. I began a release of 6.0 cfs downstream to be held in the Crouse Reservoir for later release to Colorado Users, William Karren and Massey Brothers. This arrangement for temporary storage in the Crouse was made by mutual agreement between the two parties for 1967 season.

It was noted that the Crouse Reservoir has dropped approximately 2.5 feet since April 21, 1967. This is due primarily to seepage around the north side of the dam and a leaking headgate, as well as evaporation to some degree. A marker was placed at the level on this date for a future reference point. It is recommended that the Fish and Game Department install a sloping gage on the face of the dam to better facillitate management and measurement on this reservoir.

The actual amount of water held in Matt Warner under the Colorado rights at this time cannot be computed. As soon as the records are worked up and received from the U.S.G.S. office this information will be analyzed and the final division of water made. Due to the wet spring and good snow pack, the creek appears to be yeilding above average flow this year and all rights should be nearly filled by the end of the season's flow.

The water released from the Matt Warner Reservoir will be held in the Crouse Reservoir and released from time to time as the Colorado Users request. A loss factor will be established for the Reservoir and the Colorado water will be assessed a proportion to help stand the loss through seepage and evaporation from the Crouse Reservoir between the time it enters the reservoir and leaves.

Copies:
Al Heggen, Utah State Fish and Game, Vernal, Utah
Zelph Calder, Vernal, Utah
William Karren, Jensen, Utah
Julian Massey, Jensen, Utah
Donald Norseth, Dist.Engineer, State Engineer's Office, S.L.C., Utah
Robert Guy, Area Engineer, State Engineer's Office, Vernal, Utah
Dayl Webb, U.S.G.S., Water Resources Branch, Vernal, Utah

1967 Prior to April 1, 1967 3.8 cfs 7.6 A.F. Fish & Game Rt.

APRIL	P.C. Flow	Fish & Game Rt.	Calder Rt.
1	0.5	0.5	
2	.8	.8	
3	1.0	1.0	
4	1.5	1.5	
5	2.0	2.0	
6	2.5	2.5	
7	3.0	3.0	
8	4.0	4.0	
9	4.5	4.5	
10	5.0	5.0	
11	10.0	5.0	5.0
12	15.0	5.0	10.0
13	16.0	5.0	11.0
14	16.0	5.0	11.0
15	14.0	5.0	9.0
16	13.0	5.0	8.0
17	12.0	5.0	7.0
18	12.0	5.0	7.0
19	11.0	5.0	6.0
20	8.1	5.0	3.1
21	8.1	5.0	3.1
22	8.1	5.0	3.1
23	7.8	5.0	2.8
24	7.0	5.0	2.0
25	7.6	5.0	2.6
26	7.0	5.0	2.0
27	6.7	5.0	1.7
28	6.7	5.0	1.7
29	6.5	5.0	1.5
30	5.0	5.0	
TOTAL FOR APRIL		124.8	98.4

MAY	U.S.G.S. STATION POT CREEK FLOW	FISH & GAME RIGHT	COLO. RIGHT	CALDER RIGHT
1	6.4	5.0	1.4	
2	4.4	4.4	-	
3	4.8	4.8	-	
4	4.7	4.7	-	
5	4.5	4.5	-	
6	4.8	4.0	-	
7	5.6	5.0	.6	
8	6.7	5.0	1.7	
9	7.4	5.0	2.4	
10	8.9	5.0	3.9	
11	10.0	5.0	5.0	
12	9.3	5.0	4.3	
13	9.1	5.0	4.1	
14	8.7	5.0	3.7	
15	7.8	5.0	2.8	
16	7.2	5.0	2.2	
17	7.2	5.0	2.2	
18	8.3	5.0	3.3	
19	11.0	5.0	6.0	
20	12.0	5.0	6.0	1.0
21	12.0	5.0	6.0	1.0
22	13.0	5.0	6.0	2.0
23	14.0	5.0	6.0	3.0
24	14.0	5.0	6.0	3.0
25	22.0	5.0	6.0	11.0
26	27.0	5.0	6.0	16.0
27	24.0	5.0	6.0	13.0
28	24.0	5.0	6.0	13.0
29	24.0	5.0	6.0	13.0
30	26.0	5.0	6.0	14.0
31	26.0	5.0	6.0	15.0
TOTAL FOR MAY		153.2	115.6	105.0

JUNE	P.C. FLOW	FISH & GAME RIGHT	COLO. RIGHT	CALDER RIGHT
1	22.0	5.0	6.0	11.0
2	16.0	5.0	6.0	5.0
3	13.0	5.0	6.0	2.0
4	12.0	5.0	6.0	1.0
5	12.0	5.0	6.0	1.0
6	9.9	5.0	4.9	-
7	8.3	5.0	3.3	-
8	7.9	5.0	2.9	-
9	7.8	5.0	2.8	-
10	7.8	5.0	2.8	-
11	9.1	5.0	4.1	-
12	11.0	5.0	6.0	-
13	13.0	5.0	6.0	2.0
14	11.0	5.0	6.0	-
15	9.3	5.0	4.3	-
16	7.4	5.0	2.4	-
17	5.5	5.0	.5	-
18	4.8	4.8	-	-
19	3.8	3.8	-	-
20	3.5	3.5	-	-
21	5.3	5.0	.3	-
22	4.5	4.5	-	-
23	4.7	4.7	-	-
24	5.0	5.0	-	-
25	5.6	5.0	.6	-
26	7.6	5.0	2.6	-
27	4.8	4.8	-	-
28	4.7	4.7	-	-
29	3.8	3.8	-	-
30	-	-	-	-
TOTAL FOR JUNE		139.6	79.5	22.0
TOTAL FOR APRIL, MAY, JUNE 29		417.6	195.1	225.4
TOTAL MAY 1 to JUNE 29		292.8 X 2	195.1 X 2	127.0 X 2
		835.2 AF	390.2 AF	450.8 AF