



State of Idaho
DEPARTMENT OF WATER RESOURCES

900 N. Skyline Dr., Idaho Falls, Idaho 83402-1718 - (208) 525-7161 - FAX: (208) 525-7177

EASTERN REGION

CECIL D. ANDRUS
GOVERNOR
R. KEITH HIGGINSON
DIRECTOR

March 9, 1995

Pete Peterson
2483 Riverdale Road
Preston, Idaho 83263

RE: Theoretical flow data for Mink Creek diversions

Pete,

You'll find I've enclosed copy of a spreadsheet I created to calculate the theoretical splits for Twin Lakes, Preston and Riverdale Canals once the "divertible" flow drops below 60 c.f.s.

Please note that the figures I calculated are theoretical. You realize, as a watermaster, that achieving these flows can be extremely difficult, especially given the lack of stream gages and the great distance between diversions.

You'll note that I also included deliveries to Glencoe Irrigation from Twin Lakes and Riverdale Canals. These figures reflect the 2/3 and 1/3 split to Preston and Riverdale, respectively. The three steps in their decreed right is also reflected.

Again, I must emphasize that these figures are theoretical. In his effort to try to achieve these flows, the Mink Creek watermaster could spend several hours each day "chasing his tail" up and down the creek and never be able to reach the theoretical flows. The best that could probably be expected would be a correction made each day to account for the error from the day before.

If you have any questions, feel free to contact me. The phone number is 525-7161.

Sincerely,

A handwritten signature in black ink, appearing to read 'PRM', with a long horizontal flourish extending to the right.

Paul R. Meyer
Senior Resource Agent

enc.

Date	Divertible Flow	Twin Lakes Canal 04/01/01	Preston Canal 05/01/88	Riverdale Canal 05/01/88	Glencoe Irrigation 05/01/82	Glencoe from Twin Lakes	Glencoe from Riverdale	Twin Lakes minus Glencoe	Riverdale minus Glencoe
04/20/94	0.00								
04/21/94	0.00								
04/22/94	0.00								
04/23/94	0.00								
04/24/94	0.00								
04/25/94	0.00								
04/26/94	0.00								
04/27/94	0.00								
04/28/94	0.00								
04/29/94	0.00								
04/30/94	0.00								

Note: Divertible Flow is defined as total of Twin Lakes, Preston and Riverdale Canal diversions for given flows throughout the 1994 irrigation season.

As per Utah Power and Light Co. vs. Last Chance Canal Co. et. al. (a.k.a. "Dietrich") decree, when divertible flow drops to 60 c.f.s., water shall be divided between Twin Lakes, Preston and Riverdale Canals without regard to priority; Twin Lakes Canal receiving 2/5 of the divertible flow and the Preston and Riverdale Canals sharing the remaining 3/5, with 83.5% diverted by the Preston Canal and 16.5% diverted by Riverdale.

Glencoe Irrigation's water right is delivered through the Twin Lakes and Riverdale Canals on a 2/3 and 1/3 split, respectively. As per decree, Glencoe's water right is recorded as 5.58 c.f.s. from April 20 to July 25, 3.72 c.f.s. from July 25 to September 1, and 2.79 c.f.s. from September 1 to September 30.

This spreadsheet is designed to determine THEORETICAL diversions to the Twin Lakes, Preston and Riverdale Canals when divertible flow is less than or equal to 60 c.f.s. It is also designed to show THEORETICAL diversions to Glencoe Irrigation from Twin Lakes and Riverdale Canals when delivered as per the Dietrich decree. All flows are shown in cubic feet per second (c.f.s.).

Date	Divertible Flow	Twin Lakes Canal 04/01/01	Preston Canal 05/01/88	Riverdale Canal 05/01/88	Glencoe Irrigation 05/01/82	Glencoe from Twin Lakes	Glencoe from Riverdale	Twin Lakes minus Glencoe	Riverdale minus Glencoe
05/01/94	46.40	18.56	23.25	4.59	5.58	3.72	1.86	14.84	2.73
05/02/94	46.40	18.56	23.25	4.59	5.58	3.72	1.86	14.84	2.73
05/03/94	49.82	19.93	24.96	4.93	5.58	3.72	1.86	16.21	3.07
05/04/94	49.82	19.93	24.96	4.93	5.58	3.72	1.86	16.21	3.07
05/05/94	49.82	19.93	24.96	4.93	5.58	3.72	1.86	16.21	3.07
05/06/94	77.02				5.58	3.72	1.86		
05/07/94	134.02				5.58	3.72	1.86		
05/08/94	163.32				5.58	3.72	1.86		
05/09/94	163.32				5.58	3.72	1.86		
05/10/94	188.55				5.58	3.72	1.86		
05/11/94	195.35				5.58	3.72	1.86		
05/12/94	208.55				5.58	3.72	1.86		
05/13/94	195.85				5.58	3.72	1.86		
05/14/94	209.74				5.58	3.72	1.86		
05/15/94	203.54				5.58	3.72	1.86		
05/16/94	209.74				5.58	3.72	1.86		
05/17/94	197.30				5.58	3.72	1.86		
05/18/94	202.80				5.58	3.72	1.86		
05/19/94	202.40				5.58	3.72	1.86		
05/20/94	200.20				5.58	3.72	1.86		
05/21/94	198.00				5.58	3.72	1.86		
05/22/94	189.50				5.58	3.72	1.86		
05/23/94	195.90				5.58	3.72	1.86		
05/24/94	189.50				5.58	3.72	1.86		
05/25/94	186.85				5.58	3.72	1.86		
05/26/94	182.55				5.58	3.72	1.86		
05/27/94	170.35				5.58	3.72	1.86		
05/28/94	178.35				5.58	3.72	1.86		
05/29/94	172.25				5.58	3.72	1.86		
05/30/94	172.25				5.58	3.72	1.86		
05/31/94	164.35				5.58	3.72	1.86		

Date	Divertible Flow	Twin Lakes Canal 04/01/01	Preston Canal 05/01/88	Riverdale Canal 05/01/88	Glencoe Irrigation 05/01/82	Glencoe from Twin Lakes	Glencoe from Riverdale	Twin Lakes minus Glencoe	Riverdale minus Glencoe
06/01/94	160.25				5.58	3.72	1.86		
06/02/94	154.45				5.58	3.72	1.86		
06/03/94	144.95				5.58	3.72	1.86		
06/04/94	141.25				5.58	3.72	1.86		
06/05/94	136.15				5.58	3.72	1.86		
06/06/94	132.25				5.58	3.72	1.86		
06/07/94	120.65				5.58	3.72	1.86		
06/08/94	120.25				5.58	3.72	1.86		
06/09/94	109.15				5.58	3.72	1.86		
06/10/94	104.95				5.58	3.72	1.86		
06/11/94	101.35				5.58	3.72	1.86		
06/12/94	99.04				5.58	3.72	1.86		
06/13/94	94.64				5.58	3.72	1.86		
06/14/94	94.64				5.58	3.72	1.86		
06/15/94	86.95				5.58	3.72	1.86		
06/16/94	86.95				5.58	3.72	1.86		
06/17/94	88.25				5.58	3.72	1.86		
06/18/94	85.55				5.58	3.72	1.86		
06/19/94	81.55				5.58	3.72	1.86		
06/20/94	81.55				5.58	3.72	1.86		
06/21/94	75.25				5.58	3.72	1.86		
06/22/94	75.25				5.58	3.72	1.86		
06/23/94	71.75				5.58	3.72	1.86		
06/24/94	71.75				5.58	3.72	1.86		
06/25/94	71.75				5.58	3.72	1.86		
06/26/94	69.45				5.58	3.72	1.86		
06/27/94	66.71				5.58	3.72	1.86		
06/28/94	64.81				5.58	3.72	1.86		
06/29/94	59.61	23.84	29.86	5.90	5.58	3.72	1.86	20.12	4.04
06/30/94	59.34	23.74	29.73	5.87	5.58	3.72	1.86	20.02	4.01

Date	Divertible Flow	Twin Lakes Canal 04/01/01	Preston Canal 05/01/88	Riverdale Canal 05/01/88	Glencoe Irrigation 05/01/82	Glencoe from Twin Lakes	Glencoe from Riverdale	Twin Lakes minus Glencoe	Riverdale minus Glencoe
07/01/94	59.34	23.74	29.73	5.87	5.58	3.72	1.86	20.02	4.01
07/02/94	54.14	21.66	27.12	5.36	5.58	3.72	1.86	17.94	3.50
07/03/94	54.11	21.64	27.11	5.36	5.58	3.72	1.86	17.92	3.50
07/04/94	54.11	21.64	27.11	5.36	5.58	3.72	1.86	17.92	3.50
07/05/94	53.81	21.52	26.96	5.33	5.58	3.72	1.86	17.80	3.47
07/06/94	53.81	21.52	26.96	5.33	5.58	3.72	1.86	17.80	3.47
07/07/94	53.81	21.52	26.96	5.33	5.58	3.72	1.86	17.80	3.47
07/08/94	54.05	21.62	27.08	5.35	5.58	3.72	1.86	17.90	3.49
07/09/94	54.05	21.62	27.08	5.35	5.58	3.72	1.86	17.90	3.49
07/10/94	52.05	20.82	26.08	5.15	5.58	3.72	1.86	17.10	3.29
07/11/94	52.05	20.82	26.08	5.15	5.58	3.72	1.86	17.10	3.29
07/12/94	52.05	20.82	26.08	5.15	5.58	3.72	1.86	17.10	3.29
07/13/94	48.53	19.41	24.31	4.80	5.58	3.72	1.86	15.69	2.94
07/14/94	48.53	19.41	24.31	4.80	5.58	3.72	1.86	15.69	2.94
07/15/94	44.13	17.65	22.11	4.37	5.58	3.72	1.86	13.93	2.51
07/16/94	44.13	17.65	22.11	4.37	5.58	3.72	1.86	13.93	2.51
07/17/94	44.13	17.65	22.11	4.37	5.58	3.72	1.86	13.93	2.51
07/18/94	44.97	17.99	22.53	4.45	5.58	3.72	1.86	14.27	2.59
07/19/94	44.97	17.99	22.53	4.45	5.58	3.72	1.86	14.27	2.59
07/20/94	44.97	17.99	22.53	4.45	5.58	3.72	1.86	14.27	2.59
07/21/94	44.97	17.99	22.53	4.45	5.58	3.72	1.86	14.27	2.59
07/22/94	44.97	17.99	22.53	4.45	5.58	3.72	1.86	14.27	2.59
07/23/94	44.97	17.99	22.53	4.45	5.58	3.72	1.86	14.27	2.59
07/24/94	41.35	16.54	20.72	4.09	5.58	3.72	1.86	12.82	2.23
07/25/94	41.35	16.54	20.72	4.09	3.72	2.48	1.24	14.06	2.85
07/26/94	41.35	16.54	20.72	4.09	3.72	2.48	1.24	14.06	2.85
07/27/94	45.87	18.35	22.98	4.54	3.72	2.48	1.24	15.87	3.30
07/28/94	45.87	18.35	22.98	4.54	3.72	2.48	1.24	15.87	3.30
07/29/94	45.87	18.35	22.98	4.54	3.72	2.48	1.24	15.87	3.30
07/30/94	45.87	18.35	22.98	4.54	3.72	2.48	1.24	15.87	3.30
07/31/94	41.26	16.50	20.67	4.08	3.72	2.48	1.24	14.02	2.84

Date	Divertible Flow	Twin Lakes Canal 04/01/01	Preston Canal 05/01/88	Riverdale Canal 05/01/88	Glencoe Irrigation 05/01/82	Glencoe from Twin Lakes	Glencoe from Riverdale	Twin Lakes minus Glencoe	Riverdale minus Glencoe
08/01/94	41.26	16.50	20.67	4.08	3.72	2.48	1.24	14.02	2.84
08/02/94	41.26	16.50	20.67	4.08	3.72	2.48	1.24	14.02	2.84
08/03/94	41.26	16.50	20.67	4.08	3.72	2.48	1.24	14.02	2.84
08/04/94	41.26	16.50	20.67	4.08	3.72	2.48	1.24	14.02	2.84
08/05/94	44.26	17.70	22.17	4.38	3.72	2.48	1.24	15.22	3.14
08/06/94	44.26	17.70	22.17	4.38	3.72	2.48	1.24	15.22	3.14
08/07/94	42.30	16.92	21.19	4.19	3.72	2.48	1.24	14.44	2.95
08/08/94	42.30	16.92	21.19	4.19	3.72	2.48	1.24	14.44	2.95
08/09/94	42.30	16.92	21.19	4.19	3.72	2.48	1.24	14.44	2.95
08/10/94	51.60	20.64	25.85	5.11	3.72	2.48	1.24	18.16	3.87
08/11/94	51.60	20.64	25.85	5.11	3.72	2.48	1.24	18.16	3.87
08/12/94	35.05	14.02	17.56	3.47	3.72	2.48	1.24	11.54	2.23
08/13/94	35.05	14.02	17.56	3.47	3.72	2.48	1.24	11.54	2.23
08/14/94	35.05	14.02	17.56	3.47	3.72	2.48	1.24	11.54	2.23
08/15/94	36.64	14.66	18.36	3.63	3.72	2.48	1.24	12.18	2.39
08/16/94	36.64	14.66	18.36	3.63	3.72	2.48	1.24	12.18	2.39
08/17/94	36.64	14.66	18.36	3.63	3.72	2.48	1.24	12.18	2.39
08/18/94	36.64	14.66	18.36	3.63	3.72	2.48	1.24	12.18	2.39
08/19/94	36.64	14.66	18.36	3.63	3.72	2.48	1.24	12.18	2.39
08/20/94	36.64	14.66	18.36	3.63	3.72	2.48	1.24	12.18	2.39
08/21/94	36.64	14.66	18.36	3.63	3.72	2.48	1.24	12.18	2.39
08/22/94	35.14	14.06	17.61	3.48	3.72	2.48	1.24	11.58	2.24
08/23/94	35.14	14.06	17.61	3.48	3.72	2.48	1.24	11.58	2.24
08/24/94	35.14	14.06	17.61	3.48	3.72	2.48	1.24	11.58	2.24
08/25/94	35.14	14.06	17.61	3.48	3.72	2.48	1.24	11.58	2.24
08/26/94	35.14	14.06	17.61	3.48	3.72	2.48	1.24	11.58	2.24
08/27/94	35.14	14.06	17.61	3.48	3.72	2.48	1.24	11.58	2.24
08/28/94	37.84	15.14	18.96	3.75	3.72	2.48	1.24	12.66	2.51
08/29/94	37.84	15.14	18.96	3.75	3.72	2.48	1.24	12.66	2.51
08/30/94	37.84	15.14	18.96	3.75	3.72	2.48	1.24	12.66	2.51
08/31/94	37.84	15.14	18.96	3.75	3.72	2.48	1.24	12.66	2.51

Date	Divertible Flow	Twin Lakes Canal 04/01/01	Preston Canal 05/01/88	Riverdale Canal 05/01/88	Glencoe Irrigation 05/01/82	Glencoe from Twin Lakes	Glencoe from Riverdale	Twin Lakes minus Glencoe	Riverdale minus Glencoe
09/01/94	37.84	15.14	18.96	3.75	2.79	1.86	0.93	13.28	2.82
09/02/94	37.84	15.14	18.96	3.75	2.79	1.86	0.93	13.28	2.82
09/03/94	37.84	15.14	18.96	3.75	2.79	1.86	0.93	13.28	2.82
09/04/94	37.84	15.14	18.96	3.75	2.79	1.86	0.93	13.28	2.82
09/05/94	37.84	15.14	18.96	3.75	2.79	1.86	0.93	13.28	2.82
09/06/94	37.84	15.14	18.96	3.75	2.79	1.86	0.93	13.28	2.82
09/07/94	37.84	15.14	18.96	3.75	2.79	1.86	0.93	13.28	2.82
09/08/94	37.84	15.14	18.96	3.75	2.79	1.86	0.93	13.28	2.82
09/09/94	37.84	15.14	18.96	3.75	2.79	1.86	0.93	13.28	2.82
09/10/94	37.84	15.14	18.96	3.75	2.79	1.86	0.93	13.28	2.82
09/11/94	33.44	13.38	16.75	3.31	2.79	1.86	0.93	11.52	2.38
09/12/94	33.44	13.38	16.75	3.31	2.79	1.86	0.93	11.52	2.38
09/13/94	33.44	13.38	16.75	3.31	2.79	1.86	0.93	11.52	2.38
09/14/94	33.44	13.38	16.75	3.31	2.79	1.86	0.93	11.52	2.38
09/15/94	33.44	13.38	16.75	3.31	2.79	1.86	0.93	11.52	2.38
09/16/94	33.44	13.38	16.75	3.31	2.79	1.86	0.93	11.52	2.38
09/17/94	33.44	13.38	16.75	3.31	2.79	1.86	0.93	11.52	2.38
09/18/94	33.44	13.38	16.75	3.31	2.79	1.86	0.93	11.52	2.38
09/19/94	33.44	13.38	16.75	3.31	2.79	1.86	0.93	11.52	2.38
09/20/94	33.44	13.38	16.75	3.31	2.79	1.86	0.93	11.52	2.38
09/21/94	30.93	12.37	15.50	3.06	2.79	1.86	0.93	10.51	2.13
09/22/94	30.93	12.37	15.50	3.06	2.79	1.86	0.93	10.51	2.13
09/23/94	30.93	12.37	15.50	3.06	2.79	1.86	0.93	10.51	2.13
09/24/94	30.93	12.37	15.50	3.06	2.79	1.86	0.93	10.51	2.13
09/25/94	38.15	15.26	19.11	3.78	2.79	1.86	0.93	13.40	2.85
09/26/94	38.15	15.26	19.11	3.78	2.79	1.86	0.93	13.40	2.85
09/27/94	38.15	15.26	19.11	3.78	2.79	1.86	0.93	13.40	2.85
09/28/94	38.15	15.26	19.11	3.78	2.79	1.86	0.93	13.40	2.85
09/29/94	38.15	15.26	19.11	3.78	2.79	1.86	0.93	13.40	2.85
09/30/94	38.15	15.26	19.11	3.78	2.79	1.86	0.93	13.40	2.85