Gibson, Deborah

From:

Spackman, Gary

Sent:

Friday, March 27, 2015 10:26 AM

To:

Gibson, Deborah

Subject:

FW: In anticipation of your breakfast with Norm and Scott

From: Weaver, Mathew

Sent: Tuesday, February 24, 2015 5:23 PM

To: Spackman, Gary

Subject: In anticipation of your breakfast with Norm and Scott

Gary,

Please find on your chair a blue folder containing the following documents.

1. One-page brief description of "the list"

- 2. A copy of the list and the one page memo that describes how the list was queried
- 3. Slides describing and summarizing the results of Liz Cresto analysis of potential impacts of juniors on refill
 - a. Analysis 1: Impacts to reservoir fill from juniors as determined through historical water right accounting data
 - b. Analysis 2: Impacts to reservoir fill from juniors based on all water rights meeting a set of query conditions, assuming they divert their full legal diversion rate, over a period of time between the end of flood control operations and the day of allocation. The period of time when impacts might have occurred was determined by a joint technical working group consisting of the Department, the Bureau, and the Boise Project.
- 4. Basin 63 FAQ

I have prepared these resources for you in anticipation of your breakfast tomorrow with Norm Semanko and Scott Bedke. They hopefully will provide you with additional details regarding "the list" and our previous analysis of potential impacts from juniors.

Good luck,

Mathew Weaver, PE
Deputy Director
Idaho Department of Water Resources
www.idwr.idaho.gov
(208) 287-4800

Basin 63 Refill "List" - Talking Points

1. What is the list?

- a. The list was prepared in its final form to meet requests of the water users.
- b. List Title: "List of Water Rights Proposed to Have Subordination in the Basin 63 Reservoir Refill Matter"
- c. The list was poorly named, what it really represents is all water rights junior to the Arrowrock Storage WR (i.e. 1/12/1911) that divert natural flow that otherwise would be available for storage, irrespective of priority date and physical availability to individual reservoirs.

MEMORANDUM

(Settlement Document Subject to I.R.E. 408)

TO:

Mat Weaver

FROM:

Shelley Keen, Michael Ciscell, Dan Nelson, and Paula Dillon

O.A.N -

DATE:

February 6, 2015

SUBJECT: Proposed Subordination List for Basin 63 Reservoir Refill Claims

We have attached a list of 225 water rights we believe should enjoy the subordination benefits in the Basin 63 reservoir refill matter. The list of rights is based on the selection criteria you provided to us. Taken at face value, the 225 rights total 592.13 cfs.

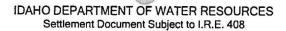
To conduct the research, we divided into two teams working independently from each other. The purpose of employing two independent research groups was to increase our confidence in the results. Shelley Keen and Dan Nelson prepared a list by starting with the Department's tabular database records, while Michael Ciscell and Paula Dillon prepared a similar list starting from spatial data and employing GIS tools.

The selection criteria, numbered 2 through 9, can be summarized as follows:

- Condition 2: Priority date must be junior to 1/13/1911.
- Condition 3: No condition on the water right or recommendation preventing interference with refill.
- Condition 4: No condition of full subordination to all other rights.
- Condition 5: Diversion from surface water sources. (Ground water rights were excluded.)
- Condition 6: Downstream of Lucky Peak dam, allow only diversions from the Boise River or named side channels that are essentially the Boise River.
- Condition 7: No non-consumptive uses upstream of Lucky Peak dam, but include non-consumptive uses downstream of the dam
- Condition 8: Diversions from the Boise River downstream from Lucky Peak must be upstream of the Middleton gage.
- Condition 9: Diversion rate greater than 0.1 cfs.

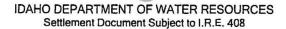
After each group completed the initial research phase, the two groups met to reconcile differences in their final lists, which were minor. The handful of differences centered mainly on understanding the nature of non-consumptive uses and on approval conditions relating to things like mitigation requirements. (Rights that are mitigated were excluded from the final list because their consumptive use is offset.) The attachment is the result of this reconciliation process.

An Excel spreadsheet called *B63 Rights 01141911 to 02042015 working copy.xlsx* contains our work.



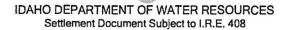
Water Right No.	Water Right Type	Source	Tributary	Priority Date	Diversion Rate (cfs)	Diversion or Storage Volume (af)	Water Use(s)	
63-31773	Water Right	SOUTH FORKBOISE RIVER	BOISE RIVER	6/1/1911	1.77		IRRIGATION, STOCKWATER	
63-31774		SOUTH FORKBOISE RIVER	BOISE RIVER	6/1/1911	0.11		IRRIGATION	
63-4005D	Water Right	SOUTH FORKBOISE RIVER	BOISE RIVER	6/1/1911	0.84		IRRIGATION, STOCKWATER	
63-4005J	Water Right	SOUTH FORKBOISE RIVER	BOISE RIVER	6/1/1911	0.15		IRRIGATION, STOCKWATER	
63-4005K	Water Right	SOUTH FORKBOISE RIVER	BOISE RIVER	6/1/1911	0.12		IRRIGATION	
63-2171	Water Right	INDIAN CREEK	MORES CREEK	7/3/1911	0.70		IRRIGATION	
63-2188	Water Right	CAT CREEK	LITTLE CAMAS CREEK	12/28/1911	2.84	1380.1	IRRIGATION FROM STORAGE, IRRIGATION STORAGE, IRRIGATION	
63-15373	Water Right	UNNAMED STREAM	MORES CREEK	3/15/1912	0.30		IRRIGATION	
63-20139	Water Right	LITTLE CAMAS CREEK	SOUTH FORK BOISE RIVER	5/20/1912		22910.0	IRRIGATION FROM STORAGE, IRRIGATION STORAGE	
63-15093		SPRINGS	MORES CREEK	6/1/1912	0.53		DOMESTIC, IRRIGATION, STOCKWATER	
63-15094	Water Right	UNNAMED STREAM	MORES CREEK	6/1/1912	0.49		IRRIGATION, STOCKWATER	
63-382B	Water Right	BOISE RIVER	SNAKE RIVER	6/14/1912	0.44		IRRIGATION	
63-4138	Water Right	PINE CREEK	GRIMES CREEK	8/16/1912	1.78	241.5	IRRIGATION, STOCKWATER	
63-2214	Water Right	CAT CREEK	LITTLE CAMAS CREEK	2/1/1913	1.80		IRRIGATION FROM STORAGE, IRRIGATION STORAGE, IRRIGATION	
63-19768	Water Right	DRY BUCK CREEK	DEER CREEK	6/25/1913	0.14		DIVERSION TO STORAGE, STOCKWATER FROM STORAGE, STOCKWATER STORAGE, STOCKWATER	
63-119	Water Right	DIXIE CREEK	SOUTH FORK BOISE RIVER	6/28/1913	0.37		IRRIGATION	
		GROUSE CREEK	SOUTH FORK BOISE RIVER	10/27/1913	0.36		COOLING, IRRIGATION	
		SPRING	SINKS	4/13/1914	0.23		STOCKWATER	
			LITTLE CAMAS CREEK	4/13/1914	0.23		STOCKWATER	
63-31669			LITTLE CAMAS CREEK	4/13/1914	0.23		STOCKWATER	
63-31670		SPRING	LITTLE CAMAS CREEK	4/13/1914	0.23		STOCKWATER	
		The state of the s	SOUTH FORK BOISE RIVER	7/16/1914	0.60		DOMESTIC, IRRIGATION	
63-5236		SLAUGHTERHOUSE GULCH CREEK		7/26/1914	2.00		MINING	
			MIDDLE FORK BOISE RIVER	10/20/1914	3.00		DOMESTIC, IRRIGATION	
		ROCK CREEK	SOUTH FORK BOISE RIVER	2/4/1915	1.00		IRRIGATION	
		BOISE RIVER	SNAKE RIVER	10/2/1915	0.58		IRRIGATION	
		CLEAR CREEK	GRIMES CREEK	1/1/1916	0.35		IRRIGATION, STOCKWATER	
		SMITH CREEK	CLEAR CREEK	1/1/1916	1.25		IRRIGATION, STOCKWATER	
			DAGGETT CREEK	1/1/1916	0.18		DOMESTIC, IRRIGATION, STOCKWATER	
			BOISE RIVER	8/16/1916	1.81		IRRIGATION, STOCKWATER	
			BOISE RIVER	9/2/1916	0.24		DOMESTIC, IRRIGATION	
			SINKS	1/1/1919	0.38	2.5	IRRIGATION FROM STORAGE, IRRIGATION STORAGE, IRRIGATION, STOCKWATER	
63-2336B	Water Right	SOUTH FORKDEER CREEK	DEER CREEK	9/18/1919	0.30		IRRIGATION	
			GRIMES CREEK	11/12/1919	2.00		MINING	
			SINKS	6/15/1920	0.11		DOMESTIC, STOCKWATER	
		the state of the s	BOISE RIVER	7/26/1920	0.38		IRRIGATION, STOCKWATER	
			BOISE RIVER	7/26/1920	0.12		IRRIGATION	
			SOUTH FORK BOISE RIVER	8/18/1920	0.35		IRRIGATION	
			BOISE RIVER	1/1/1921	0.58		RRIGATION, STOCKWATER	
			SOUTH FORK BOISE RIVER	1/1/1921	0.74		RRIGATION, STOCKWATER	
			SOUTH FORK BOISE RIVER	3/1/1921	0.80		IRRIGATION, STOCKWATER	
			BOISE RIVER	3/1/1921	1.71		IRRIGATION, STOCKWATER	
			SOUTH FORK BOISE RIVER	3/1/1921	1.54		IRRIGATION, STOCKWATER	
			SOUTH FORK BOISE RIVER	6/1/1921	0.12		MUNICIPAL	
			SNAKE RIVER	7/19/1921	1,20		IRRIGATION	
			MORES CREEK	1/23/1923	0.20		COMMERCIAL, FIRE PROTECTION, STOCKWATER	
			WOLF CREEK	1/23/1923	0.20		COMMERCIAL, FIRE PROTECTION, STOCKWATER	

Page 1 of 5

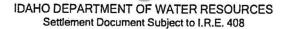


Water Right No.	Water Right Type	Source	Tributary	Priority Date	Diversion Rate (cfs)	Diversion or Storage Volume (af)	Water Use(s)
63-5336	Water Right	CLEAR CREEK	GRIMES CREEK	5/1/1923	0.20		COMMERCIAL, FIRE PROTECTION, STOCKWATER
63-5338	Water Right	MACKS CREEK	GRIMES CREEK	5/1/1923	0.20		COMMERCIAL, FIRE PROTECTION, STOCKWATER
63-5340	Water Right	DEADHORSE GULCH CREEK	GRIMES CREEK	5/1/1923	0.20		COMMERCIAL, FIRE PROTECTION, STOCKWATER
63-5342		EAST FORKCLEAR CREEK	CLEAR CREEK	5/1/1923	0.20		COMMERCIAL, FIRE PROTECTION, STOCKWATER
63-33782	Water Right	SPRING	SINKS	3/26/1924	0.12		STOCKWATER
63-33783	Water Right	SPRING	SINKS	3/26/1924	0.12		STOCKWATER
63-2388A	Water Right	BOISE RIVER	SNAKE RIVER	8/18/1924	298.83		IRRIGATION
63-2388B	Water Right	BOISE RIVER	SNAKE RIVER	8/18/1924	0.99		IRRIGATION
63-2388C	Water Right	BOISE RIVER	SNAKE RIVER	8/18/1924	0.18		IRRIGATION
63-19772	Water Right	SPRING	SPRING CREEK	1/1/1925	0.14		STOCKWATER
63-5373	Water Right	PLACER CREEK	THORN CREEK	1/1/1925	0.50		DOMESTIC, INDUSTRIAL, IRRIGATION
63-5335	Water Right	MORES CREEK	BOISE RIVER	5/1/1925	0.20		COMMERCIAL, FIRE PROTECTION, STOCKWATER
63-31936	Water Right	WASTE WATER	BOISE RIVER	8/13/1925	15.00		IRRIGATION
63-3422B		SCHOONOVER GULCH	SOUTH FORKROBIE CREEK	3/15/1926	0.12		IRRIGATION
63-2414	Water Right	TRAIL CREEK	GRANITE CREEK	7/17/1928	1.20		IRRIGATION
63-4153	Water Right	STRAWBERRY CREEK	SMITH CREEK	9/1/1928	0.14		IRRIGATION, STOCKWATER
63-32579	Water Right	BOISE RIVER	SNAKE RIVER	2/15/1929		4060.0	IRRIGATION FROM STORAGE, IRRIGATION STORAGE
63-18700		BOISE RIVER	SNAKE RIVER	2/17/1929	0.91		IRRIGATION
63-19770		SPRING	SINKS	1/1/1930	0.14		STOCKWATER
63-31358		SOUTH FORKBOISE RIVER	BOISE RIVER	4/15/1930	0.73		IRRIGATION
		SOUTH FORKBOISE RIVER	BOISE RIVER	4/15/1930	0.87		IRRIGATION
63-4779		SPRINGS	ROBIE CREEK	1/1/1932	0.25		DOMESTIC
63-2472		SMITH CREEK	MORES CREEK	5/31/1932	1.60		IRRIGATION
63-19757		MENNECKE CREEK	SOUTH FORK BOISE RIVER	7/30/1932	0.27		IRRIGATION
		MENNECKE CREEK	SOUTH FORK BOISE RIVER	7/30/1932	0.16		IRRIGATION
		SPRING	WEST FORKSKELETON CREEK	5/1/1934	0.15		MINING
		WARM SPRINGS GULCH CREEK	ELK CREEK	12/31/1935	0.30		DOMESTIC, FIRE PROTECTION
		GRANITE CREEK	GRIMES CREEK	4/4/1936	2.00	50.0	FIRE PROTECTION FROM STORAGE, FIRE PROTECTION STORAGE, MINING
	Water Right	GRIMES CREEK	MORES CREEK	4/4/1936	18.30	135.0	DIVERSION TO STORAGE, FIRE PROTECTION FROM STORAGE, FIRE PROTECTION STORAGE, MINING
		GRIMES CREEK	MORES CREEK	4/4/1936	5.59		FIRE PROTECTION, IRRIGATION
		LITTLE SMOKY CREEK	BIG SMOKY CREEK	5/1/1936	0.30		IRRIGATION
		LITTLE SMOKY CREEK	BIG SMOKY CREEK	5/1/1936	0.59		IRRIGATION, STOCKWATER
		SPANISH FORK	ELK CREEK	5/25/1936	0.16		MINING, STOCKWATER
		ELK CREEK	MORES CREEK	5/25/1936	3.09		DOMESTIC, FIRE PROTECTION, MINING, STOCKWATER
		UNNAMED SLOUGH	BOISE RIVER	3/1/1937	0.12		IRRIGATION
		GREYLOCK CREEK	MIDDLE FORK BOISE RIVER	5/20/1937	0.30		IRRIGATION
		SPRING	GRIMES CREEK	7/14/1937	0.12		DOMESTIC, IRRIGATION
		MIDDLE FORKBOISE RIVER	BOISE RIVER	7/24/1937	0.92		IRRIGATION
	Water Right	SPRING	MORES CREEK	4/1/1938	0.20		IRRIGATION
63-5167	Water Right	JACKSON CREEK	MORES CREEK	4/1/1938	0.40		IRRIGATION
63-16362	Water Right	MORES CREEK	BOISE RIVER	12/31/1938	1.00	57.6	AESTHETIC STORAGE, AESTHETIC, WILDLIFE FROM STORAGE, WILDLIFE STORAGE, WILDLIFE
63-15677	Water Right	SPRING	MORES CREEK	6/1/1940	0.11		IRRIGATION, STOCKWATER
63-31074	Water Right	MORES CREEK	BOISE RIVER	12/31/1940	0.15		IRRIGATION
63-31360	Water Right	SPRINGS	GRANITE CREEK	4/1/1941			AESTHETIC
		BIG SMOKY CREEK	SOUTH FORK BOISE RIVER	6/1/1941	1.75		RRIGATION, STOCKWATER
63-2567	Water Right	TENMILE CREEK	MORES CREEK	7/1/1941	0.50		DOMESTIC

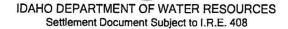
2/6/2015 Page 2 of 5



Water Right No.	Water Right Type	Source	Tributary	Priority Date	Diversion Rate (cfs)	Diversion or Storage Volume (af)	Water Use(s)
63-2598		SPRING CREEK	SMITH CREEK	7/27/1942	2.00		IRRIGATION
63-19703	Water Right	SMITH CREEK	SOUTH FORK BOISE RIVER	4/1/1945	1.93		IRRIGATION
63-2627		ELK CREEK	MORES CREEK	12/17/1945	0.36		MUNICIPAL
63-2613		ALEXANDER CREEK	MIDDLE FORK BOISE RIVER	7/4/1946	0.12	18.0	IRRIGATION
63-4956		FLY CREEK	MIDDLE FORK BOISE RIVER	10/29/1947	0.16		DOMESTIC
63-4139		BIRD GULCH CREEK	SOUTH FORK BOISE RIVER	4/1/1950	0.30		IRRIGATION, STOCKWATER
63-4960		BOISE RIVER	SNAKE RIVER	6/1/1950	24.26		IRRIGATION
63-4937		SPRING	QUEENS RIVER	7/1/1950	0.14		DOMESTIC
63-2916	Water Right	SPRING CREEK	SMITH CREEK	11/28/1952	2.00		IRRIGATION, STOCKWATER
63-3611	Water Right	SPRINGS	SPRING CREEK	3/3/1953	0.25	50.0	IRRIGATION
63-5161C	Water Right	SPRING	ROBIE CREEK	5/1/1955	0.12		DOMESTIC, IRRIGATION, STOCKWATER
63-31078		BOISE RIVER	SNAKE RIVER	12/31/1955	0.27		IRRIGATION
63-32350	Water Right	BOISE RIVER	SNAKE RIVER	8/30/1956		560.0	MUNICIPAL STORAGE
63-32351	Water Right	BOISE RIVER	SNAKE RIVER	8/30/1956		140.0	MUNICIPAL STORAGE
63-32352	Water Right	BOISE RIVER	SNAKE RIVER	8/30/1956		220.0	MUNICIPAL STORAGE
	Water Right	UNNAMED STREAM	MORES CREEK	12/31/1956		0.0	AESTHETIC STORAGE
63-19771	Water Right	SPRING	SINKS	1/1/1958	0.14		STOCKWATER
	Water Right	BOISE RIVER	SNAKE RIVER	7/1/1958	0.19		IRRIGATION
63-3144	Water Right	BOISE RIVER	SNAKE RIVER	12/29/1958	1.00		IRRIGATION
63-15154	Water Right	GRIMES CREEK	MORES CREEK	9/1/1959	1.95		IRRIGATION, STOCKWATER
63-15361		WARM SPRINGS GULCH CREEK	ELK CREEK	5/1/1961	0.14		IRRIGATION
		MUD SPRINGS	MORES CREEK	7/6/1961	0.20		DOMESTIC, MINING
		SMITH CREEK	SOUTH FORK BOISE RIVER	4/23/1963	8.80		IRRIGATION
		SMITH CREEK	SOUTH FORK BOISE RIVER	6/24/1963	0.50		IRRIGATION
	Water Right	SOUTH FORKBOISE RIVER	BOISE RIVER	7/10/1963	7.57		IRRIGATION
		SOUTH FORKBOISE RIVER	BOISE RIVER	7/10/1963	3.78		IRRIGATION
53-4005N	Water Right	SOUTH FORKBOISE RIVER	BOISE RIVER	7/10/1963	0.58		IRRIGATION
	Water Right	BOISE RIVER	SNAKE RIVER	12/31/1963	35.21		IRRIGATION
	Water Right	RUSH CREEK	MORES CREEK	3/3/1965			FIRE PROTECTION STORAGE
		UNNAMED STREAM	BIG SPRINGS CREEK	4/1/1965			STOCKWATER FROM STORAGE, STOCKWATER STORAGE
53-31068	Water Right	UNNAMED STREAM	BISWELL CREEK	4/1/1965			STOCKWATER FROM STORAGE, STOCKWATER STORAGE
53-31070	Water Right	CASEY CREEK	SOUTH FORK BOISE RIVER	4/1/1965			STOCKWATER FROM STORAGE, STOCKWATER STORAGE
		BOISE RIVER	SNAKE RIVER	4/30/1965	2.67		COMMERCIAL, FIRE PROTECTION
		ELK CREEK	MORES CREEK	1/6/1966	0.50		IRRIGATION, RECREATION, STOCKWATER
		UNNAMED STREAM	SOUTH FORK BOISE RIVER	4/21/1966	0.25		DOMESTIC
3-15101	Water Right	MITCHELL CREEK	ROBIE CREEK	6/2/1966	0.17		DOMESTIC, IRRIGATION, STOCKWATER
3-3540	Water Right	MORES CREEK	BOISE RIVER	9/6/1966	2.04		IRRIGATION, STOCKWATER
3-3619	Water Right	GRANITE CREEK	GRIMES CREEK	11/1/1966	1.54	1.5	DIVERSION TO STORAGE, FIRE PROTECTION FROM STORAGE, FIRE PROTECTION STORAGE, IRRIGATION FROM STORAGE, IRRIGATION STORAGE
3-3561	Water Right	GRANITE CREEK	GRIMES CREEK	12/9/1966	0.50		DOMESTIC
3-7059	Water Right	SPRING CREEK	SMITH CREEK	2/19/1968	2.00		IRRIGATION
		BOISE RIVER	SNAKE RIVER	4/9/1968	1.00		INDUSTRIAL
		UNNAMED STREAM	MORES CREEK	6/1/1968	0.11		DOMESTIC
		CLEAR CREEK	GRIMES CREEK	6/10/1968	0.20		IRRIGATION
		BEAVER CREEK	CLEAR CREEK	7/1/1968	0.20		RRIGATION, STOCKWATER
		UNNAMED STREAM	BEAVER CREEK	9/11/1968	0.11	6.0	DOMESTIC
		SPRINGS	SINKS	11/13/1968	0.25	15.0	DOMESTIC, IRRIGATION, STOCKWATER
		BEAVER CREEK	CLEAR CREEK	3/21/1969	0.12	27.01	RRIGATION



Water Right No.	Water Right Type	ht Source Tributary		Priority Date	Diversion Rate (cfs)	Diversion or Storage Volume (af)	Water Use(s)
63-7227	Water Right	SPRING	MORES CREEK	5/21/1969	0.16	5.4	COMMERCIAL, DOMESTIC
63-7242	Water Right	SPRINGS	LITTLE SMOKY CREEK	6/10/1969			DOMESTIC DOMESTIC
63-31424	Water Right	SPRING	SINKS	6/24/1969			DOMESTIC, IRRIGATION
63-23295	Water Right	SPRINGS	SINKS	7/1/1969			STOCKWATER
63-15353		SPRINGS	THORN CREEK	10/4/1969			DOMESTIC
63-7249	Water Right	SPRING	NORTH FORKTHORN CREEK	10/4/1969			DOMESTIC
63-7287	Water Right	BOISE RIVER	SNAKE RIVER	12/24/1969			INDUSTRIAL
63-27144	Water Right	GROUSE CREEK	SOUTH FORK BOISE RIVER	1/1/1970			DIVERSION TO STORAGE, RECREATION STORAGE, RECREATION
63-29689	Water Right	CURLEW CREEK	SOUTH FORK BOISE RIVER	1/1/1970			STOCKWATER FROM STORAGE, STOCKWATER STORAGE
63-23296A	Water Right	SPRINGS	SINKS	7/1/1970	0.13		STOCKWATER
63-23296B		SPRINGS	SINKS	7/1/1970	0.13		STOCKWATER
63-23360		SPRINGS	SINKS	7/1/1970	0.13		STOCKWATER
63-23362	Water Right	SPRINGS	SINKS	7/1/1970	0.13		STOCKWATER
63-5154		SPRING	SINKS	7/1/1970		0.1	STOCKWATER FROM STORAGE, STOCKWATER STORAGE
63-31946	Water Right	BOISE RIVER	SNAKE RIVER	1/26/1971	0.40		IRRIGATION
		SOUTH FORKLIME CREEK	LIME CREEK	5/1/1971	0.12		IRRIGATION
		BOISE RIVER	SNAKE RIVER	6/29/1971	0.15		IRRIGATION
		LOGGERS CREEK	BOISE RIVER	8/26/1971	0.20		AESTHETIC
		UNNAMED STREAM	SOUTH FORK BOISE RIVER	9/13/1972	1.00		MINING
		BEAR CREEK	SOUTH FORK BOISE RIVER	9/13/1972	1.00		MINING
		GREYLOCK CREEK	MIDDLE FORK BOISE RIVER	9/12/1973	0.48	235.0	DIVERSION TO STORAGE, IRRIGATION FROM STORAGE, IRRIGATION STORAGE, IRRIGATION
63-31290A	Water Right	ROCK CREEK	SOUTH FORK BOISE RIVER	4/1/1974	0.52		IRRIGATION
63-8004	Water Right	STRAWBERRY CREEK	SMITH CREEK	7/1/1974	0.20	45.6	DOMESTIC, IRRIGATION
63-19543	Water Right	UNNAMED STREAM	SOUTH FORK BOISE RIVER	1/20/1975	0.14	16.2	DOMESTIC, IRRIGATION
63-8199	Water Right	CHARLOTTE GULCH CREEK	GRIMES CREEK	8/29/1975	0.12	1.2	DOMESTIC, MINING
63-8380	Water Right	MORES CREEK	BOISE RIVER	10/26/1976	0.20		FIRE PROTECTION, IRRIGATION
53-8393	Water Right	SPRING	GRIMES CREEK	12/9/1976	0.20	6.0	DOMESTIC
53-8647	Water Right	UNNAMED STREAM	MONTEZUMA CREEK	4/1/1977	0.11	60.0	DOMESTIC
		CHARLOTTE GULCH CREEK	GRIMES CREEK	6/16/1977	0.18		DOMESTIC, MINING
63-9386A	Water Right	BOISE RIVER	SNAKE RIVER	6/4/1980	10.00		AESTHETIC
		BOISE RIVER	SNAKE RIVER	6/4/1980	20.00		AESTHETIC
3-31312	Water Right	BOISE RIVER	SNAKE RIVER	7/21/1980	0.48		AESTHETIC STORAGE, DIVERSION TO STORAGE, IRRIGATION, STOCKWATER
3-31313	Water Right	BOISE RIVER	SNAKE RIVER	7/21/1980	0.24	38.4	AESTHETIC STORAGE, DIVERSION TO STORAGE, IRRIGATION
63-9433	Water Right	BROWNS CREEK	BOISE RIVER	8/11/1980	0.76		MINING
63-9438	Water Right I	KELLY CREEK	SOUTH FORK BOISE RIVER	9/8/1980	0.11	2.0	STOCKWATER
3-9457	Water Right	SPRING	CHERRY GULCH CREEK	9/26/1980		0.1	STOCKWATER FROM STORAGE, STOCKWATER STORAGE
		SPRING	SINKS	9/26/1980			STOCKWATER FROM STORAGE, STOCKWATER STORAGE
3-9479	Water Right S	SPRING	WILLOW CREEK	9/26/1980		0.1	STOCKWATER FROM STORAGE, STOCKWATER STORAGE
		SPRING	WILLOW CREEK	9/29/1980		0.1	STOCKWATER FROM STORAGE, STOCKWATER STORAGE
3-9588	Water Right S	SPRING	WILLOW CREEK	9/29/1980		1.1	STOCKWATER FROM STORAGE, STOCKWATER STORAGE
	Water Right F	PHIFER CREEK	MIDDLE FORK BOISE RIVER	11/6/1980	0.44		MINING
3-9688	Water Right S	SPRINGS	HARDSCRABBLE GULCH	2/17/1981	0.15	0.6	DOMESTIC, MINING
3-9684	Water Right S	SPRING	MIDDLE FORK BOISE RIVER	2/27/1981	0.53	5.01	DOMESTIC, FIRE PROTECTION
		MIDDLE FORKBOISE RIVER	BOISE RIVER	3/31/1981	0.40		MINING
		SPRING	MIDDLE FORK BOISE RIVER	4/14/1981	0.20		HEATING
		BOISE RIVER	SNAKE RIVER	6/23/1981	3.21		AESTHETIC
3-9942	Nater Right S	SPRINGS	BENDER CREEK	7/16/1982	0.20	84.71	MINING



Water Right No.	Water Right Type	Source	Tributary	Priority Date	Diversion Rate (cfs)	Diversion or Storage Volume (af)	Water Use(s)
63-9982	Water Permit	FLY CREEK	MIDDLE FORK BOISE RIVER	2/3/1983	0.20		MINING
63-10021	Water Right	UNNAMED STREAM	MORES CREEK	4/25/1983			IRRIGATION FROM STORAGE, IRRIGATION STORAGE
63-10138	Water Right	SPRING	BOUNDS CREEK	6/9/1983		0.1	STOCKWATER FROM STORAGE, STOCKWATER STORAGE
63-10077	Water Right	SPRINGS	COW CREEK	6/21/1983		0.2	STOCKWATER FROM STORAGE, STOCKWATER STORAGE
63-10143	Water Right	UNNAMED STREAM	CLEAR CREEK	7/15/1983			FIRE PROTECTION FROM STORAGE, FIRE PROTECTION STORAGE
63-10111	Water Permit	EAST FORKELK CREEK	ELK CREEK	7/20/1983	0.30		MINING
63-10254	Water Right	UNNAMED STREAM	MIDDLE FORK BOISE RIVER	7/19/1984	0.19	16.3	MINING
63-10272	Water Right	LITTLE CAMAS CREEK	SOUTH FORK BOISE RIVER	10/28/1984		380.0	IRRIGATION FROM STORAGE, IRRIGATION STORAGE
63-10279		MORES CREEK	BOISE RIVER	4/6/1985	0.13		IRRIGATION
53-10303	Water Right	SPRING	TRAIL CREEK	7/16/1985		0.1	STOCKWATER FROM STORAGE, STOCKWATER STORAGE
53-10324	Water Right	FALL CREEK	GRANITE CREEK	9/17/1985	0.36		MINING
33-10325	Water Right	OPHIR CREEK	WOOF CREEK	9/17/1985	0.36	31.8	MINING
63-10348	Water Right	BOISE RIVER	SNAKE RIVER	3/19/1986	5.29	40.9	AESTHETIC STORAGE, AESTHETIC, DIVERSION TO STORAGE, RECREATION STORAGE, RECREATION
3-10362	Water Right	SPRING	ELK CREEK	7/13/1986		0.1	STOCKWATER FROM STORAGE, STOCKWATER STORAGE
3-10363	Water Right	SPRING	ELK CREEK	7/13/1986	***		STOCKWATER FROM STORAGE, STOCKWATER STORAGE
63-9750	Water Right	SAWMILL CREEK	MIDDLE FORK BOISE RIVER	8/10/1987	1.00	91.0	MINING
3-10537	Water Right	UNNAMED STREAM	WAGONTOWN CREEK	10/5/1987		0.1	WILDLIFE STORAGE
3-10539	Water Right	SPRING	GREEN CREEK	10/5/1987		0.1	WILDLIFE FROM STORAGE, WILDLIFE STORAGE
3-10545	Water Right	SPRING	BOUNDS CREEK	10/20/1987		0.1	STOCKWATER FROM STORAGE, STOCKWATER STORAGE
3-10560	Water Right	SPRINGS	GROUSE CREEK	11/18/1987	0.96	694.0	DOMESTIC, HEATING, RECREATION
3-10776	Water Right	GRIMES CREEK	MORES CREEK	3/6/1989	0.20	23.8	MINING
3-7226	Water Right	CALIFORNIA GULCH CREEK	MORES CREEK	3/14/1989	0.17	21.0	IRRIGATION, MINING
3-11108	Water Right	BOISE RIVER	SNAKE RIVER	1/5/1990	0.65	470.6	AESTHETIC
3-11562A	Water Right	BOISE RIVER	SNAKE RIVER	7/11/1991	0.53	80.0	AESTHETIC
3-11562B	Water Right	BOISE RIVER	SNAKE RIVER	7/11/1991	0.33	50.0	AESTHETIC
3-11619	Water Permit	ELK CREEK	MORES CREEK	12/31/1991	0.18		MINING
3-11934	Water Right	BOISE RIVER	SNAKE RIVER	9/29/1992		20.0	IRRIGATION FROM STORAGE, IRRIGATION STORAGE
3-12055	Water Permit	BOISE RIVER	SNAKE RIVER	9/8/1993	24.80		MUNICIPAL
3-12093	Water Right	BOISE RIVER	SNAKE RIVER	1/14/1994	0.56	405.4	AESTHETIC
3-12315	Water Right	UNNAMED STREAM	CANYON CREEK	2/8/1996		2.0	FIRE PROTECTION STORAGE
3-12567	Water Permit	EDNA CREEK	CROOKED RIVER	8/13/1999	0.20		MINING
3-12550	Water Right	BOISE RIVER	SNAKE RIVER	10/12/1999	5.00	3620.0	AESTHETIC
3-12577	Water Right	BOISE RIVER	SNAKE RIVER	12/2/1999	0.11	79.6	AESTHETIC
3-31878	Water Right	BOISE RIVER	SNAKE RIVER	8/19/2003	4.50	3258.0	AESTHETIC
3-31869	Water Right	BOISE RIVER	SNAKE RIVER	1/23/2004	0.20	42.8	AESTHETIC
3-32016	Water Permit	SPRINGS	GROUSE CREEK	12/6/2004	1.76		HEATING
		SPRING	SINKS	6/17/2013	0.12		STOCKWATER
3-33794	Water Permit	SPRING	SINKS	6/17/2013	0.12		STOCKWATER





Analysis 1:

Junior Diverters in the Water Rights Accounting Impacts to Reservoir Fill





Determine Junior Rights

- Limit to those junior rights that are in the water rights accounting program and have data.
- Junior rights are rights with a priority date later than Lucky Peak (4/12/1963)
- Rights below Middleton were excluded from the analysis.

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Basin	Sequence	Year	Month	Day	CFS	Station	SiteID	Rights Sr to Lucky Peak (cfs)
63	10318	1985	08	09	0.45	WILDERNESS RANCH	13199924	0.45
63	12420	1997	06	06	15	SURPRISE VALLEY/MICRON	13203527	27.1326
63	12577	1999	12	02	0.11	SHAKESPEARE FESTIVAL	13203715	0.31
63	19098	1965	04	30	2.67	Harris Ranch		
63	12055	1993	09	08	24.8	UNITED WATER	13204200	5.83
63	31409	2001	11	16	20	UNITED WATER	13204200	5.83
63	9751	1981	06	23	3.21	RIVERSIDE VILLAGE	13205984	0
63	10348	1986	03	19	5.29	WOODS	13206096	0
63	9929	1982	07	08	0.44	EAGLE ISLAND PARK	13206274	0
63	31312	1980	07	21	0.48	MACE-CATLIN CANAL	13206292	10.92
63	31313	1980	07	21	0.24	MACE-CATLIN CANAL	13206292	10.92
63	31946	1971	01	26	0.4	SEVEN SUCKERS CANAL	13208740	1.48
63	32532	1971	01	26	0.1	SEVEN SUCKERS CANAL	13208740	1.48
63	12550	1999	10	12	5	CANYON COUNTY CANAL	13209990	93.05
				Total:	78.19			





Summarizing Junior Diversions

- Priority on the river was greater than 1963.
- Limited to when the reservoir system was physically filling.
- Daily Junior Diversion = Actual Diversion –
 Senior water right.
 - This assumes that the senior right is used before the junior right.
- Remove times of Flood Control

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Junior Impacts to Reservoir Fill (AF)

Year	Wilderne ss Ranch	Shakespe are	United	Surprise Valley/M icron	Eagle Island Park	Mace Catlin	Seven Suckers	Canyon County	Total
1999	NA	0	0	0	0	0	0	0	0
2000	NA	0	630	0	15	0	0	0	645
2001*	NA	0	0	0	0	0	0	0	Ø
2002*	NA	0	13	0	2	0	0	0	15
2003*	NA	0	246	0	8	0	0	0	254
2004*	NA	0	222	0	8	0	0	0	230
2005*	NA	0	61	0	8	0	0	0	68
2006	NA	0	140	0	2	0	0	0	141
2007*	, NA	0	330	28	4	0	0	0	362
2008	NA	0	753	0	14	0	11	0	779
2009	NA	0	0	0	0	0	0	0	0
2010	0	0	429	0	8	0	0	0	437
2011	0	0	21	13	0	0	0	0	33
2012	0	0	265	0	6	0	0	0	271
2013*	0	0	0	0	0	0	0	0	0
Average	0	0	207	3	5	0	1	0	216

^{*}Years when the reservoirs did not fill.





Analysis 2:

Maximum Potential Impacts to Reservoir Fill by Junior Water Right Holder's

Assumption: Junior water right holders could impact the fill of the reservoir after flood control ended and prior to the day of allocation.

Collaborative analysis completed by IDWR and the USBR.





Water Right Review

Determined the maximum potential impacts AF/Day

- 1. Junior to Lucky Peak.
- 2. Limited to rights above Star Bridge.
- 3. Removed United Water 63-31871, as it can only be diverted as a part of an exchange.
- 4. Permits, Licenses, and Decrees (No applications).
- 5. Consumptive Water Use (does not include: fire, power, aesthetic, wildlife, recreation, fish propagation).
- 6. Does Not Include De Minimis Domestic and Stockwater Uses (<0.1 cfs).
- 7. Does not have mitigation or flood control limitations.

Water rights review completed by IDWR.





Determined the Number of Days Juniors Could Impact Reservoir Fill

Number of Days = Day of Allocation – Day when flood control ended.

 USBR and IDWR worked collaboratively to determine the dates when flood control releases ended.

	P	otential Imp	acts to F	Reservoir	Refill			
Water Year	Date When Flood Control Releases Ended	Day of Allocation	No. of Days	Mulitplier	Maximum Impact by Existing Rights 1963-1994 (AF)	Maximum Impact Existing Rights 1994- 2014 (AF)	Total	Rights 1994 - 2014 Percentage of Total System Storage
			a A	AF/Day:*	199	5		Average Automotive
1991	No Flood Control Discharges							
1992	No Flood Control Discharges							
1993	6/8/1993	6/29/1993	21		4,185	110	4,294	0.01%
1994	No Flood Control Discharges				Manager 1			
1995	7/15/1995	7/17/1995	2		399	10	409	0.00%
1996	6/26/1996	7/10/1996	14		2,790	73	2,863	0.01%
1997	6/29/1997	7/13/1997	14		2,790	73	2,863	0.01%
1998	7/9/1998	7/9/1998	0		0	0	0	0.00%
1999	6/29/1999	7/4/1999	5		996	26	1,022	0.00%
2000	5/16/2000	6/17/2000	32		6,376	167	6,543	0.02%
2001	No Flood Control Discharges							
2002	No Flood Control Discharges							
2003	No Flood Control Discharges							
2004	No Flood Control Discharges							
2005	No Flood Control Discharges							
2006	6/25/2006	6/30/2006	5		996	26	1,022	0.00%
2007	No Flood Control Discharges							
2008	5/28/2008	7/1/2008	34		6,775	177	6,952	0.02%
2009	6/11/2009	6/29/2009	18		3,587	94	3,681	0.01%
2010	6/25/2010	7/2/2010	7		1,395	37	1,431	0.00%
2011	7/2/2011	7/17/2011	15		2,989	78	3,067	0.01%
2012	5/24/2012	6/27/2012	34		6,775	177	6,952	0.02%
2013	No Flood Control Discharges							
2014	5/5/2014	6/15/2014	41		8,170	214	8,384	0.02%
	İ		Average Al	=:	3,444	90	3,535	

^{*} The multiplier used may be an over estimation of the maximum potential impacts. The water rights were not necessary examined individually. For example, the mining rights included, may not actually be consumptive.

Basin 63 (Boise River) Fill/Refill Issue - FAQs

What's the Problem?

1. In a nutshell, what's the fill/refill problem? Historically, refill of storage space evacuated in federal on-stream reservoirs as a result of flood control operations has occurred. Refill has occurred during the spring freshet when surplus water has been commonly available in the system for storage after all water rights, including water rights junior to the storage water rights, were satisfied. There is a concern that changing future conditions—including new in-basin development, federal ESA flow release requirements, and climate change—may diminish the volume of surplus water historically available to refill reservoir space, resulting in a decline of the overall water supply to storage water users.

Background

2. When were the federal reservoirs in the Boise Basin completed?

Basin 63 Reservoirs - Summar	У	
	Earli e st WR	Construction
Reservoir	Priority Date	Completion
Arrowrock Reservoir	1911	1915
Anderson Ranch Reservoir	1940	1950
Lucky Peak Reservoir	1955	1955

- 3. What is the purpose of the Boise River Basin reservoir system? The Boise River storage system was constructed over the course of 40 years and has been operated for almost 100 years. The system has come to have multiple, sometimes conflicting purposes over its history, including storing water for beneficial use, providing flood protection, meeting recreational needs, and providing year round flows in the Boise River downstream of Lucky Peak.
- 4. Who owns the storage water rights within the Boise Basin's federal reservoirs? The United States Bureau of Reclamation (USBR) owns nominal legal title to the storage water rights.
- 5. What are the beneficial uses associated with the Boise reservoir storage water rights? There are multiple beneficial uses recognized by Idaho State water law associated with the combined reservoir system including irrigation (886,511), stream flow maintenance (152,300 AF), municipal (5,200 AF), and industrial (5,200 AF). Hydropower is also a recognized beneficial use, but water can only be released for hydropower when it accompanies the release of water for another beneficial use. This is termed "incidental" beneficial use.
- 6. What about flood control? Isn't that a beneficial use? Flood control operations are of course generally beneficial to the public's health and safety, and protection against property damage. Flood control operations are conducted jointly by the USBR and the Army Corps of Engineers under Federal flood protection authorities. However, the release and storage of water for flood control operations are

- not beneficial uses recognized in Idaho State water law and there are no water rights associated with flood control operations in the Boise River Basin.
- 7. What is a space holder contract? A space holder contract is a contract between the owner of the reservoir (USBR) and the party putting the stored water to beneficial use (i.e. irrigators, municipal providers, etc.). These contracts are not water rights but they define the space allocations of water stored under USBR water rights. Individual space holders such as irrigation districts, canal companies, and municipal providers do not own storage water rights.
- 8. When was the current water right accounting first implemented? Current or modern era computerized water right accounting practices were first initiated in the Upper Snake River in 1977. Modern practices were adopted from the Snake and implemented in the Boise River Basin in 1986.
- 9. How does the current water right accounting accrue water to storage water rights? Under current water right accounting practices, any natural flowing water (i.e. water not released from an upstream reservoir) entering a reservoir, in priority, is accrued towards the satisfaction of the reservoir storage water right. Natural flow water entering a reservoir that is either immediately or subsequently released, even when not released for beneficial use, still counts towards the satisfaction of the water right. This practice is consistent with water right accounting practices for on-stream reservoirs in many western states and is termed the "store it or lose" principle.
- 10. Has refill historically occurred under a water right? Under water right accounting practices, the refill of space in a reservoir previously evacuated for flood control has occurred, but it has not occurred under a water right. A storage water right is only entitled to one fill.
- 11. How has refill historically been accomplished? During the spring freshet surplus natural flow water exists in the system (i.e. more water is in the river than is necessary to satisfy all water right needs), and the surplus water is captured and stored in empty reservoir space. The stored surplus water is subsequently allocated to storage water rights at the conclusion of the runoff season.
- 12. Are there any existing mechanisms in place that protect space holders from reservoirs that don't fill as a result of flood control operations? Yes, space holder contracts and current Endangered Species Act (ESA) flow augmentation release practices provide a first line of defense for space holders.
- 13. What happens in the Boise River basin if the reservoir system fails to fill due to flood control releases? If the reservoir system fails to fill due to flood control by 60,000 AF or less, all storage entitlements in Lucky Peak Reservoir receive 100% of their allocation except for the USBR's streamflow maintenance entitlement. Only when the volume of water that failed to fill is greater than 60,000 AF are space holders in Lucky Peak¹ impacted.

¹ This "shortfall" is subtracted from the Lucky Peak Reservoir entitlements because Lucky Peak Reservoir has the latest water right priority of the three Boise system reservoirs, and is the primary flood control facility.

- 14. How often has the Bureau of Reclamation missed filling the reservoir system by more than 60,000 acrefeet in a year when flood control releases were made? Other than 1989, there has never been a year that space holder's storage space was adversely affected by flood control releases, where the inability to "top off" the reservoir resulted in less than a full allocation of storage water to space holders other than the USBR.
- 15. What is the target volume of water associated with ESA flow augmentation releases (i.e. storage water releases for salmon recovery) in the Boise Basin? When available, 40,932 acre-feet of storage water is released from the Boise basin reservoir system for flow augmentation.
- 16. How is flow augmentation water released in the Boise Basin? In the Boise, the USBR releases flow augmentation water by the time the spring freshet concludes. It does so by targeting full reservoir volume as the actual physical volume less flow augmentation storage releases. When water is released for flood control operations after April 10, and the space vacated by the release does not subsequently refill, the water released can be counted towards flow augmentation requirements.

Is there a Solution?

- 17. Is anyone working on a solution to this fill/refill issue? Yes, the Department, the USBR, and the water users have been engaged in settlement discussion with the purpose of finding a solution to the fill/refill issue that is acceptable to all parties. Currently, a settlement solution has been proposed by the Department, whereby a pair of refill water rights would be decreed in the Snake River Basin Adjudication for each of the three on-stream federal reservoirs. This solution would create real property rights, for the first time, associated with the historical practice of refill, thereby preserving the existing status quo and guarding against future diminishment of the refill practice. The pair of water rights would include a fully subordinated Refill 1 water right, which would include as an element a very large storage volume that will allow for water to be stored in all but the wettest of water years. The Refill 2 water right having an effective priority date of 2014 will allow for prioritized refill of the last 154,000-264,000 acre-feet (i.e. reservoir "top off"), depending on the reservoir, in normal to very wet years. In dry years, when there are no flood control operations, the reservoirs will fill under their base water rights.
- 18. What are the priority dates and storage volumes for the proposed refill water rights?

Basin 63 - Refill WRs Summary									
Reservoir	Refill 1 Vol. (AF)	Refill 1 Priority Date ²	Refill 2 Vol. (AF)	Refill 2 Priority Date					
Arrowrock	3.286 MAF	1965/Subordinated	264,000	1984/2014					
Anderson Ranch	1.316 MAF	1965/Subordinated	247,000	1984/2014					
Lucky Peak	3.693 MAF	1965/Subordinated	154,150	1983/2014					

² Priority dates for Refill 1 and refill 2 water rights will have a priority date listed on the water right that is based on hydrologic analysis of years of maximum event and an effective priority date that is the result of the conditions of the settlement.