

Gene Spangrude

My comments relate directly to the Lower Snake River downstream of Clarkston, Washington; and to the current concept of trying to maintain Water Temperatures at less than 68 Degrees Fahrenheit; primarily through the controlled release of Dworshak Reservoir water.

The United States Geological Survey (USGS) regularly collected daily Water Temperature data for several years on the Lower Snake River in the 1950's; which was 'prior to the construction of the four (4) Lower Snake River Dams' (Ice Harbor, Lower Monumental, Little Goose, and Lower Granite Dams). This USGS Water Temperature Data therefore represents 'Natural Conditions' along the Lower Snake River; defined as being 'pre-Lower Snake River Dams.' The USGS Water Temperature Data was published in their Water Supply Papers; and copies of this Data are attached to this Comment Submittal as a PDF. As can be seen from this published USGS Water Temperature Data, exceeding 68 Degrees F was an 'annual occurrence' for days/weeks at a time; even on the 'pre-Dammed Lower Snake River.' Maximum Water Temperatures noted in the USGS Data reached into the 'high 70s F' on occasion.

I request that this Published USGS Water Temperature Data obtained under 'pre-Lower Snake River Dams Conditions' be considered as part of the current process of discerning the Washington State Water Quality Standards for Water Temperatures on the Lower Snake River; and be considered as part of the 'Scientific Determination' of acceptable Maximum Water Temperatures on the Lower Snake River. Based on the 1950s USGS Data, the 68 Degrees F upper limit currently targeted appears to be quite unrealistic; and appears to be 'quite Un-Natural' based on the actual 'pre-Lower Snake River Dam' conditions experienced and scientifically documented in the 1950s by the United States Geological Survey (USGS).

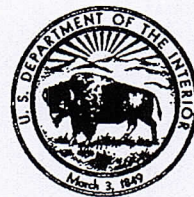
Quality of Surface Waters of the United States 1952

Parts 9-14. Colorado River Basin to Pacific
Slope Basins in Oregon and Lower Columbia
River Basin

Prepared under the direction of S. K. LOVE, Chief, Quality of Water Branch

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1253

*Prepared in cooperation with the States of
California and Utah, U. S. Bureau of
Reclamation, and with other agencies*



UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1957

Encl 3-1

SNAKE RIVER MAIN STEM--Continued

SNAKE RIVER NEAR CLARKSTON, WASH.--Continued

Temperature (°F) of water, November 1951 to September 1952

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		--	40	--	39	38	46	51	56	63	71	63
2		--	--	--	39	38	46	51	57	64	72	65
3		--	37	--	39	39	46	52	59	64	72	64
4		--	35	35	40	39	47	52	61	70	72	64
5		--	--	35	38	39	49	54	61	65	72	65
6		--	39	38	38	39	50	52	60	66	72	65
7		--	40	35	39	39	50	53	59	66	71	65
8		--	39	36	38	40	48	56	61	66	73	63
9		--	--	35	39	40	47	54	60	66	73	64
10		--	39	36	39	41	47	53	60	69	73	64
11		--	--	35	38	42	48	54	59	70	73	63
12		--	38	37	38	42	48	55	58	72	72	63
13		--	39	38	38	42	49	56	52	72	71	61
14		43	39	32	37	42	49	56	57	71	73	61
15		--	40	38	37	42	49	56	57	71	71	59
16		42	--	37	37	43	49	53	59	71	69	60
17		42	42	37	37	43	50	54	59	70	70	60
18		--	--	36	37	43	51	55	61	69	--	60
19		40	--	36	37	42	52	56	62	69	68	61
20		41	--	35	37	43	51	56	63	70	67	61
21		40	--	37	--	43	50	55	62	67	69	62
22		--	--	34	36	43	49	54	61	67	68	62
23		--	--	34	--	43	51	56	60	68	69	59
24		--	--	35	36	46	53	56	61	67	69	61
25		--	--	36	37	44	55	58	58	68	69	61
26		43	--	37	37	45	55	57	59	69	67	62
27		43	--	37	38	46	56	57	60	70	65	65
28		38	--	38	39	46	56	57	63	71	68	60
29		46	--	38	38	46	54	57	59	71	65	59
30		--	--	39	--	46	51	56	62	71	64	62
31		--	--	39	--	45	--	56	--	72	66	--
Aver-		--	--	36	38	42	50	55	60	69	70	62
age												

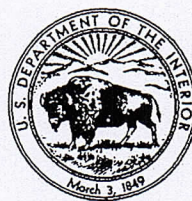
Quality of Surface Waters of the United States 1953

Parts 9-14. Colorado River Basin to Pacific
Slope Basins in Oregon and Lower Columbia
River Basin

Prepared under the direction of S. K. LOVE, chief, Quality of Water Branch

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Encl 4-1

SNAKE RIVER MAIN STEM--Continued
 SNAKE RIVER NEAR CLARKSTON, WASH.--Continued

Temperature (°F) of water, water year October 1952 to September 1953
 (Once-daily measurement at approximately 8 a.m.)

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	51	35	37	45	42	49	50	56	61	70	65
2	62	48	36	38	45	42	47	50	58	61	68	65
3	61	48	37	38	45	41	49	50	56	62	70	65
4	61	45	37	39	45	43	48	52	56	63	70	64
5	58	46	37	39	45	42	49	54	55	64	--	64
6	57	--	37	39	45	42	50	56	55	64	71	64
7	57	44	39	40	45	44	50	56	55	65	72	64
8	57	42	39	40	44	46	50	55	55	61	72	65
9	58	42	37	42	42	44	50	53	55	61	71	66
10	57	45	39	42	42	47	47	51	55	66	70	64
11	58	47	38	42	43	47	48	53	57	67	70	66
12	56	44	39	42	42	46	48	53	57	69	71	68
13	60	47	39	42	43	47	48	54	57	70	70	67
14	52	46	39	43	42	45	49	54	57	70	70	67
15	52	44	38	42	42	46	48	55	57	70	69	67
18	53	44	40	43	43	47	50	56	58	69	71	68
17	53	45	40	42	42	46	52	57	58	70	70	65
18	56	44	39	42	43	45	52	56	58	--	69	65
19	55	44	39	43	41	45	50	56	58	70	70	65
20	53	45	39	43	41	45	49	55	57	69	71	60
21	51	44	40	43	43	45	51	54	57	69	70	60
22	55	40	36	44	39	47	50	53	58	69	67	61
23	55	40	39	43	39	45	50	53	58	69	69	62
24	56	40	37	44	39	47	52	53	59	67	66	60
25	51	39	36	45	40	49	50	52	59	69	66	56
26	51	39	36	44	42	48	56	53	59	67	66	59
27	52	37	36	43	45	49	50	54	59	68	67	59
28	50	36	36	41	45	49	49	54	60	68	67	61
29	52	34	37	42	--	50	51	56	59	69	66	57
30	51	34	37	43	--	49	50	55	60	69	70	57
31	52	--	38	43	--	49	--	55	--	70	65	--
Average	55	43	38	42	43	45	50	54	57	67	69	63

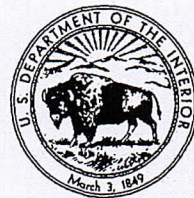
Quality of Surface Waters of the United States 1954

Parts 9-14. Colorado River Basin to Pacific
Slope Basins in Oregon and Lower Columbia
River Basin

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GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1353

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Encl 5-1

SNAKE RIVER MAIN STEM--Continued

SNAKE RIVER NEAR CLARKSTON, WASH.--Continued

Temperature (°F) of water, water year October 1953 to September 1954												
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	57	51	46	38	42	45	45	50	54	61	69	67
2	55	49	46	41	45	46	46	54	54	63	69	66
3	59	47	45	38	43	44	46	51	55	63	69	66
4	55	48	48	41	43	42	47	51	55	68	65	65
5	55	48	44	42	43	45	47	54	56	69	65	66
6	55	48	44	41	43	45	47	54	55	68	69	65
7	58	49	--	42	41	44	47	55	56	70	65	65
8	55	51	--	42	44	45	49	56	57	69	67	61
9	--	47	--	42	43	47	--	56	56	68	69	61
10	56	49	--	39	42	47	48	57	55	68	67	62
11	60	46	--	--	41	46	51	55	56	68	65	64
12	57	47	43	39	44	47	50	54	56	68	66	66
13	56	47	39	39	42	46	51	55	56	69	67	64
14	62	47	41	38	44	45	52	54	56	69	67	--
15	57	48	41	38	44	44	50	56	60	70	67	63
16	57	47	41	37	44	46	50	59	58	71	67	63
17	60	45	42	36	44	43	52	59	56	71	68	61
18	59	47	42	36	44	45	50	58	55	70	68	62
19	59	48	41	37	43	46	52	57	58	70	68	61
20	58	46	41	36	45	45	52	57	56	70	68	61
21	53	46	41	35	44	43	53	56	58	70	67	63
22	50	45	39	39	47	43	51	55	60	68	66	61
23	55	44	40	37	45	45	54	57	59	--	66	60
24	55	46	38	38	46	46	--	55	61	69	65	61
25	53	46	--	38	45	45	53	55	60	68	65	62
26	48	47	39	38	46	47	54	54	62	69	65	--
27	--	--	38	38	44	47	54	54	61	68	67	61
28	54	48	39	38	45	46	54	54	60	68	65	59
29	56	45	40	39	--	46	--	55	61	68	64	58
30	56	47	38	41	--	45	52	54	60	69	68	55
31	50	--	38	39	--	44	--	54	--	70	66	--
Average	56	47	41	39	44	45	50	55	57	68	67	62

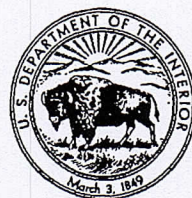
Quality of Surface Waters of the United States 1955

Parts 9-14. Colorado River Basin to Pacific
Slope Basins in Oregon and Lower Columbia
River Basin

Prepared under the direction of S. K. LOVE, Chief, Quality of Water Branch

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1403

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UNITED STATES GOVERNMENT PRINTING OFFICE, WASHINGTON : 1959

Encl 6-1

SNAKE RIVER BASIN

SNAKE RIVER MAIN STEM--Continued

SNAKE RIVER NEAR CLARKSTON, WASH.--Continued

Temperature (°F) of water, water year October 1954 to September 1955

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	55	48	38	38	38	39	46	49	54	57	71	65
2	--	47	38	38	36	39	45	51	53	59	72	68
3	55	46	39	36	35	39	47	51	53	57	70	68
4	59	47	40	35	34	33	46	53	54	56	71	72
5	56	47	38	37	36	--	45	54	57	59	70	69
6	55	50	38	37	36	39	45	54	55	56	70	68
7	57	47	38	37	40	45	--	54	56	59	69	--
8	56	49	39	37	42	39	45	55	56	59	70	68
9	60	47	39	36	37	38	49	53	57	59	69	71
10	59	47	43	35	35	39	47	54	57	61	70	68
11	56	46	43	34	36	41	47	54	58	61	72	67
12	57	47	40	35	39	41	47	54	58	64	70	64
13	58	47	39	36	40	41	47	54	59	64	70	62
14	55	--	39	35	39	40	47	51	57	65	71	66
15	56	48	39	35	38	39	47	49	57	67	67	63
16	58	48	36	35	39	39	47	50	57	70	71	61
17	55	47	36	38	37	38	47	52	57	69	69	61
18	59	48	35	36	34	38	47	52	56	70	70	59
19	53	46	37	35	35	38	47	54	57	70	68	60
20	52	46	34	36	36	41	47	56	58	71	70	60
21	--	46	35	36	33	41	49	55	60	71	67	58
22	52	47	35	37	38	43	50	54	61	73	68	58
23	58	49	39	37	37	45	50	54	60	74	68	57
24	59	48	36	36	40	40	50	54	59	74	67	--
25	52	50	35	37	40	39	50	53	59	74	66	50
26	59	47	34	36	38	39	50	54	58	72	66	58
27	47	45	34	38	37	--	48	53	59	72	65	56
28	46	43	34	35	39	44	48	54	59	70	68	60
29	46	44	35	35	--	44	50	54	58	70	60	56
30	47	40	38	35	--	45	49	52	--	69	66	55
31	47	--	40	35	--	45	--	54	--	70	61	--
Average	55	47	38	36	37	40	48	53	57	66	68	62

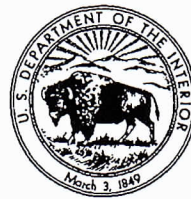
Quality of Surface Waters of the United States 1956

Parts 9-14. Colorado River Basin to Pacific
Slope Basins in Oregon and Lower Columbia
River Basin

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GEOLOGICAL SURVEY WATER-SUPPLY PAPER 1453

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Encl 7-1

SNAKE RIVER BASIN

SNAKE RIVER MAIN STEM--Continued

SNAKE RIVER AT CENTRAL FERRY NEAR POMEROY, WASH.--Continued

Temperature (°F) of water, water year October 1955 to September 1956												
Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	59	--	41	37	32	39	--	51	60	66	71	68
2	--	46	42	39	32	40	47	51	59	64	71	68
3	59	46	41	37	32	40	48	52	54	64	71	67
4	57	47	--	--	32	--	47	53	55	64	72	67
5	58	46	39	39	33	41	47	--	55	64	70	67
6	--	44	--	38	34	40	47	--	55	65	72	62
7	58	45	--	38	33	41	48	53	58	67	73	61
8	55	--	39	--	34	41	--	49	61	68	74	61
9	55	47	39	40	35	40	50	51	63	72	74	--
10	54	38	38	39	36	40	50	50	61	73	74	61
11	54	--	--	39	36	--	51	50	59	73	74	68
12	54	39	39	39	--	40	51	51	60	75	74	69
13	55	--	37	38	37	42	53	--	61	74	75	70
14	--	35	36	--	--	43	53	53	60	74	75	69
15	58	33	34	--	35	42	--	55	52	74	75	69
16	58	--	--	39	34	40	50	--	54	73	75	70
17	58	33	35	--	35	44	52	--	59	74	76	71
18	57	34	--	--	--	--	52	58	61	76	76	70
19	59	35	35	--	--	44	52	58	60	76	77	71
20	58	--	35	39	34	45	53	--	62	75	77	--
21	58	34	36	40	36	46	52	55	62	75	76	--
22	56	33	--	40	--	46	--	56	62	75	76	--
23	57	--	--	42	36	45	52	55	60	77	--	--
24	55	--	--	41	39	40	51	55	--	78	--	--
25	56	39	--	33	39	--	51	55	62	79	72	--
26	--	40	41	37	38	44	51	54	64	76	71	--
27	--	--	39	37	39	46	--	56	67	77	71	--
28	52	38	--	35	40	47	--	55	66	77	61	--
29	51	40	--	32	39	47	--	54	66	77	61	--
30	--	40	--	31	--	--	50	--	67	76	68	62
31	48	--	--	32	--	--	--	--	--	76	69	--
Average	--	--	--	--	35	--	--	--	60	73	72	--

Quality of Surface Waters of the United States 1957

Parts 9-14. Colorado River Basin to Pacific
Slope Basins in Oregon and Lower Columbia
River Basin

Prepared under the direction of S. K. LOVE, Chief, Quality of Water Branch

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Encl 8-1

SNAKE RIVER BASIN

SNAKE RIVER MAIN STEM--Continued

SNAKE RIVER AT CENTRAL FERRY NEAR POMEROY, WASH.--Continued

Temperature (*F) of water, water year October 1956 to September 1957
 (Once-daily measurement at approximately 4 p.m.)

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60	46	40	38	--	--	40	45	62	68	73	73
2	60	45	40	--	--	35	40	45	62	69	75	73
3	62	45	40	38	--	35	40	45	62	70	74	73
4	61	45	39	38	--	35	43	45	62	--	--	73
5	60	45	--	38	--	35	43	--	62	70	73	--
6	60	45	--	38	--	35	43	45	60	--	74	73
7	61	45	--	36	--	35	43	45	60	72	74	73
8	61	45	40	36	--	--	--	45	60	71	75	--
9	62	45	40	36	--	35	43	45	58	72	75	--
10	59	45	40	--	--	35	43	45	60	73	75	72
11	59	45	--	36	--	35	43	45	60	74	--	72
12	59	45	--	34	--	--	43	--	60	74	--	72
13	59	45	40	34	--	--	43	53	60	74	--	--
14	58	45	42	34	--	37	43	53	60	--	--	--
15	56	45	42	34	--	35	43	--	60	73	75	--
16	56	--	42	--	32	37	43	--	--	73	74	--
17	56	--	42	34	32	40	--	53	60	72	74	--
18	55	--	--	34	32	40	43	53	60	72	--	70
19	54	--	42	34	--	40	43	--	62	73	--	70
20	54	--	42	34	32	40	45	--	64	73	--	71
21	54	--	42	--	35	40	--	--	63	--	--	--
22	--	--	40	--	--	--	45	--	63	74	74	--
23	50	--	40	--	--	40	45	57	--	72	--	70
24	50	--	40	--	--	40	45	58	64	75	--	69
25	51	--	--	--	35	40	45	60	65	76	--	65
26	50	--	40	--	35	40	45	60	65	73	75	--
27	48	--	38	--	35	40	45	60	66	74	72	65
28	47	40	40	--	35	40	45	62	--	--	74	67
29	47	40	40	--	--	40	45	62	68	74	74	65
30	47	40	40	--	--	40	48	60	--	75	74	65
31	47	--	38	--	--	40	--	--	--	73	73	--
Average	55	--	--	--	--	38	44	--	62	73	--	--