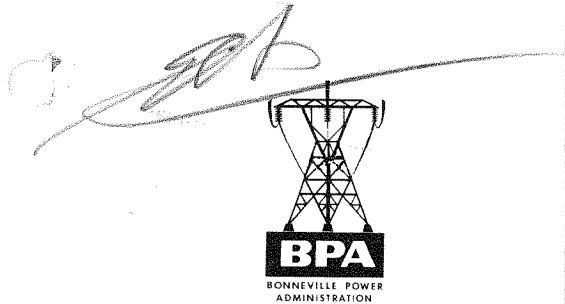


HANFORD
E18 Columbia River Temperatures
and Flows Reports (3 Yrs)
1973-1976

Memorandum



DATE : August 24, 1979

In reply
refer to : EIC

TO : E. C. Starr
Consulting Engineer - EIC

FROM : E. H. Hall
Mechanical Engineer - EIC

SUBJECT: HGP Operation During Occurrences of Comparatively High Columbia River
Temperatures

Pete MacDonald, HGP Plant Superintendent, was contacted by telephone on August 24, 1979, concerning the effect of river temperature on plant operation. He said that the general requirement is that no measurable heat be added to the Columbia when the river temperature is at 68°F or above. This requirement is shown to be satisfied by a series of temperature probes installed at the F reactor area by Battelle NW and monitored by Battelle upon request from people at HGP.

The immediate cause of load reduction at HGP is that the stream flows are so low in volume that even with four circulating water pumps in service, the flow to the condensers is limited to less than design quantities. The consequence is that load has been limited somewhat.

Handwritten signature of E. H. Hall in cursive.

EHHall:vbc

cc:
Official File - EIC

E18

August 24, 1979

EIC

E. C. Starr
Consulting Engineer - EIC

E. H. Hall
Mechanical Engineer - EIC

HGP Operation During Occurrences of Comparatively High Columbia River
Temperatures

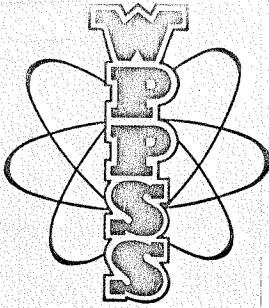
Pete MacDonald, HGP Plant Superintendent, was contacted by telephone on August 24, 1979, concerning the effect of river temperature on plant operation. He said that the general requirement is that no measurable heat be added to the Columbia when the river temperature is at 68°F or above. This requirement is shown to be satisfied by a series of temperature probes installed at the F reactor area by Battelle NW and monitored by Battelle upon request from people at HGP.

The immediate cause of load reduction at HGP is that the stream flows are so low in volume that even with four circulating water pumps in service, the flow to the condensers is limited to less than design quantities. The consequence is that load has been limited somewhat.

EHHall:vbc

cc:
Official File - EIC

*Handford
E18*



Washington Public Power Supply System
A JOINT OPERATING AGENCY

P. O. BOX 968 301 FIFTH AVE. RICHLAND, WASHINGTON 99352 TELEPHONE (509) 946-9681

September 18, 1973

Mr. John Biggs, Dept. of Ecology
Mr. Thor C. Tollefson, Director,
Washington Department of Fisheries
Mr. Donald R. Johnson, Regional Director,
National Marine Fisheries Service
Mr. Carl Crouse, Department of Game


Dear Sir:

Please find attached our summary of Columbia River water temperatures and flows for the period 9-11 through 9-17.

Electrical generation at Hanford No. 1 for the period covered averaged 822.4 MW.

With your agreement, this will conclude the transmittal of these summaries.

Very truly yours,


R. B. PETTUS
Plant Superintendent

RBP:CHG:ep

Attachments

cc: RC Foleen
JJ Stein
DL Renberger
SK Billingsley
V St. Clair

DAILY TEMPERATURES

THERMOGRAPH

<u>Date</u>	1 Priest Rapids		2 Plant Intake		3 Plant Condenser		4 F Area	
	<u>Ave.*</u>	<u>Max.</u>	<u>Ave.*</u>	<u>Max.</u>	<u>Ave.*</u>	<u>Max.</u>	<u>Ave.*</u>	<u>Max.</u>
9-11-73	64.7	65.9	65.8	67.9	65.2	67.0	66.2	67.3
9-12-73	64.3	64.6	65.9	67.0	65.1	66.0	66.4	66.9
9-13-73	64.2	64.8	65.9	67.2	64.9	66.0	66.2	66.9
9-14-73	63.3	64.0	65.0	66.0	64.0	65.0	65.7	66.4
9-15-73	63.6	64.4	64.1	66.0	63.4	64.0	65.4	66.2
9-16-73	63.4	65.3	64.7	67.0	63.8	65.0	65.8	66.7
9-17-73	62.9	63.0	64.6	66.0	63.8	65.0	65.4	66.0

* The numerical average of hourly readings made during each day. The number of significant figures shown should not be interpreted as an ability to measure river temperature to this accuracy. The qualifying remarks made in the initial submittal still apply to these data.

Table 1

PRIEST RAPIDS THERMOGRAPH

September 1973

	<u>11th</u>	<u>12th</u>	<u>13th</u>	<u>14th</u>	<u>15th</u>	<u>16th</u>	<u>17th</u>
0000	64.0	*	*	63.9	*	63.0	63.0
0100	64.0	*	*	63.3	63.4	63.0	62.6
0200	*	*	*	63.3	63.5	63.0	62.6
0300	*	*	*	63.0	63.7	63.1	62.6
0400	*	*	*	62.8	63.7	63.1	63.0
0500	*	*	*	62.6	63.5	63.1	62.6
0600	*	*	63.5	62.6	63.5	62.8	62.1
0700	63.9	*	63.5	62.6	63.5	62.6	62.6
0800	64.0	*	63.5	63.1	63.7	62.6	63.0
0900	64.6	63.1	63.9	63.5	63.7	62.5	63.0
1000	64.6	63.5	64.0	63.5	64.0	62.4	63.0
1100	64.4	64.4	64.2	63.3	64.0	63.3	63.0
1200	65.1	64.4	64.4	63.3	64.0	63.9	63.0
1300	65.3	64.6	64.6	63.5	64.0	64.2	63.0
1400	65.5	64.6	64.6	63.9	64.4	64.8	63.0
1500	65.9	64.6	64.8	64.0	64.2	65.3	63.0
1600	65.6	64.5	64.6	64.0	64.0	64.2	63.0
1700	65.3	64.4	64.4	64.0	63.9	64.0	63.0
1800	65.1	64.4	64.2	64.0	63.7	64.0	63.0
1900	64.8	64.4	64.4	64.0	63.3	63.9	63.0
2000	64.6	64.4	64.4	63.3	63.1	63.5	63.0
2100	64.5	64.4	64.2	63.0	63.0	63.5	63.0
2200	64.5	64.0	64.2	63.0	63.0	63.5	63.0
2300	64.4	64.0	64.4	63.0	63.0	63.5	63.0
2400	*	*	63.9	62.8	63.0	63.0	63.0

* Thermograph inoperable

Table 2

PLANT FOREBAY THERMOGRAPH

September 1973

	<u>11th</u>	<u>12th</u>	<u>13th</u>	<u>14th</u>	<u>15th</u>	<u>16th</u>	<u>17th</u>
0000	65	65.7	65.8	65.7	63.9	64.1	64.4
0100	64.9	65.7	65.5	65.7	63.8	64.0	64.2
0200	64.8	65.6	65.2	65.7	63.5	63.8	64.0
0300	64.7	65.5	65.1	65.1	63.2	63.4	63.8
0400	64.7	65.2	65.0	65.0	63.0	63.5	63.7
0500	64.2	65.1	65.0	64.8	63.0	63.3	63.5
0600	64.1	64.9	64.8	64.6	62.8	63.0	63.2
0700	64.0	64.8	64.8	64.1	62.7	63.1	63.2
0800	64.0	64.8	64.8	64.1	62.7	63.3	63.5
0900	64.2	64.9	65.0	64.1	62.8	63.6	63.8
1000	65.0	65.3	65.3	64.1	62.8	63.8	64.0
1100	65.7	65.5	65.6	64.5	63.4	64.0	65.0
1200	65.8	65.8	65.9	65.0	64.0	64.9	65.0
1300	65.9	66.3	66.2	65.3	64.6	65.0	65.5
1400	66.1	66.4	66.7	65.5	65.0	65.9	65.8
1500	67.6	66.5	67.0	65.5	65.2	66.0	66.0
1600	67.6	66.9	67.0	66.0	65.5	67.0	65.9
1700	67.9	67.0	67.2	66.0	65.8	67.0	65.9
1800	67.9	67.0	67.2	66.0	66.0	67.0	65.9
1900	67.8	67.0	67.0	65.8	65.8	67.0	65.5
2000	67.0	66.9	67.0	65.0	65.2	65.5	65.1
2100	66.9	66.5	66.6	65.0	65.0	65.2	65.0
2200	66.5	66.2	66.1	64.2	64.9	64.9	64.9
2300	66.1	66.0	66.0	64.0	64.3	64.8	64.8
2400	65.7	65.9	65.8	63.9	64.1	64.4	64.5

Table 3

CIRCULATING WATER SYSTEM
IN-PLANT RECORDER

September 1973

	11th	12th	13th	14th	15th	16th	17th
0000	65	65	65	65.0	63.0	63.0	63
0100	64	65	65	64.0	63.0	63.0	63
0200	64	65	64	64.0	63.0	63.0	63
0300	64	65	64	64.0	63.0	63.0	63
0400	64	65	64	64.0	63.0	63.0	63
0500	64	65	64	64.0	63.0	63.0	63
0600	64	65	64	64.0	63.0	63.0	63
0700	64	64	64	63.0	63.0	63.0	63
0800	64	64	64	64.0	63.0	63.0	63
0900	64	64	64	64.0	63.0	63.0	63
1000	65	64	65	64.0	63.0	63.0	63
1100	65	65	65	64.0	63.0	64.0	64
1200	65	65	65	64.0	63.0	64.0	64
1300	65	65	65	64.0	64.0	64.0	64
1400	66	66	66	64.0	64.0	65.0	65
1500	67	66	66	64.0	64.0	65.0	65
1600	67	66	66	65.0	64.0	65.0	65
1700	67	66	66	65.0	64.0	65.0	65
1800	67	66	66	65.0	64.0	65.0	65
1900	67	66	65	65.0	64.0	65.0	65
2000	66	65	65	64.0	64.0	65.0	65
2100	66	65	65	64.0	64.0	64.0	64
2200	65	65	65	63.0	64.0	64.0	64
2300	65	65	65	63.0	64.0	64.0	64
2400	65	65	65	63.0	63.0	63.0	63

Table 4

F AREA THERMOGRAPH

September 1973

	<u>11th</u>	<u>12th</u>	<u>13th</u>	<u>14th</u>	<u>15th</u>	<u>16th</u>	<u>17th</u>
0000	65.3	66.6	66.0	66.0	65.1	65.5	66.0
0100	65.3	66.2	65.8	66.0	64.9	65.5	65.7
0200	65.3	66.6	65.8	66.0	64.8	65.3	65.3
0300	65.1	66.2	66.0	65.7	64.8	65.3	65.3
0400	65.1	66.0	66.0	65.5	64.8	65.3	65.1
0500	65.1	66.0	65.8	65.3	64.8	65.3	64.9
0600	65.5	66.2	65.8	65.3	64.8	65.1	64.9
0700	65.7	66.0	65.8	65.3	64.9	65.3	64.9
0800	65.8	66.4	65.8	65.7	64.8	65.3	65.1
0900		66.2	65.7	65.7	64.9	65.3	65.1
1000		66.2	65.8	65.7	65.3	65.3	65.3
1100	66.2	66.4	66.0	65.7	65.8	65.5	65.5
1200	66.6	66.7	66.2	65.5	66.0	65.7	65.5
1300	66.7	66.9	66.6	65.8	66.2	66.0	65.2
1400	66.7	66.9	66.7	66.2	66.2	66.2	65.8
1500	67.1	66.9	66.7	66.4	66.2	66.4	66.0
1600	67.3	66.9	66.9	66.4	66.0	66.6	65.8
1700	67.1	66.9	66.9	66.2	66.0	66.7	65.7
1800	67.1	66.7	66.7	66.0	65.8	66.6	65.7
1900	66.9	66.6	66.6	65.8	65.8	66.4	65.7
2000	66.9	66.4	66.4	65.7	65.7	66.4	65.5
2100	66.7	66.2	66.2	65.5	65.5	66.4	65.3
2200	66.7	66.2	66.2	65.3	65.5	66.2	65.3
2300	66.6	66.2	66.2	65.1	65.5	66.2	65.3
2400	66.6	66.0	66.0	64.9	65.5	66.0	65.1

Table 5

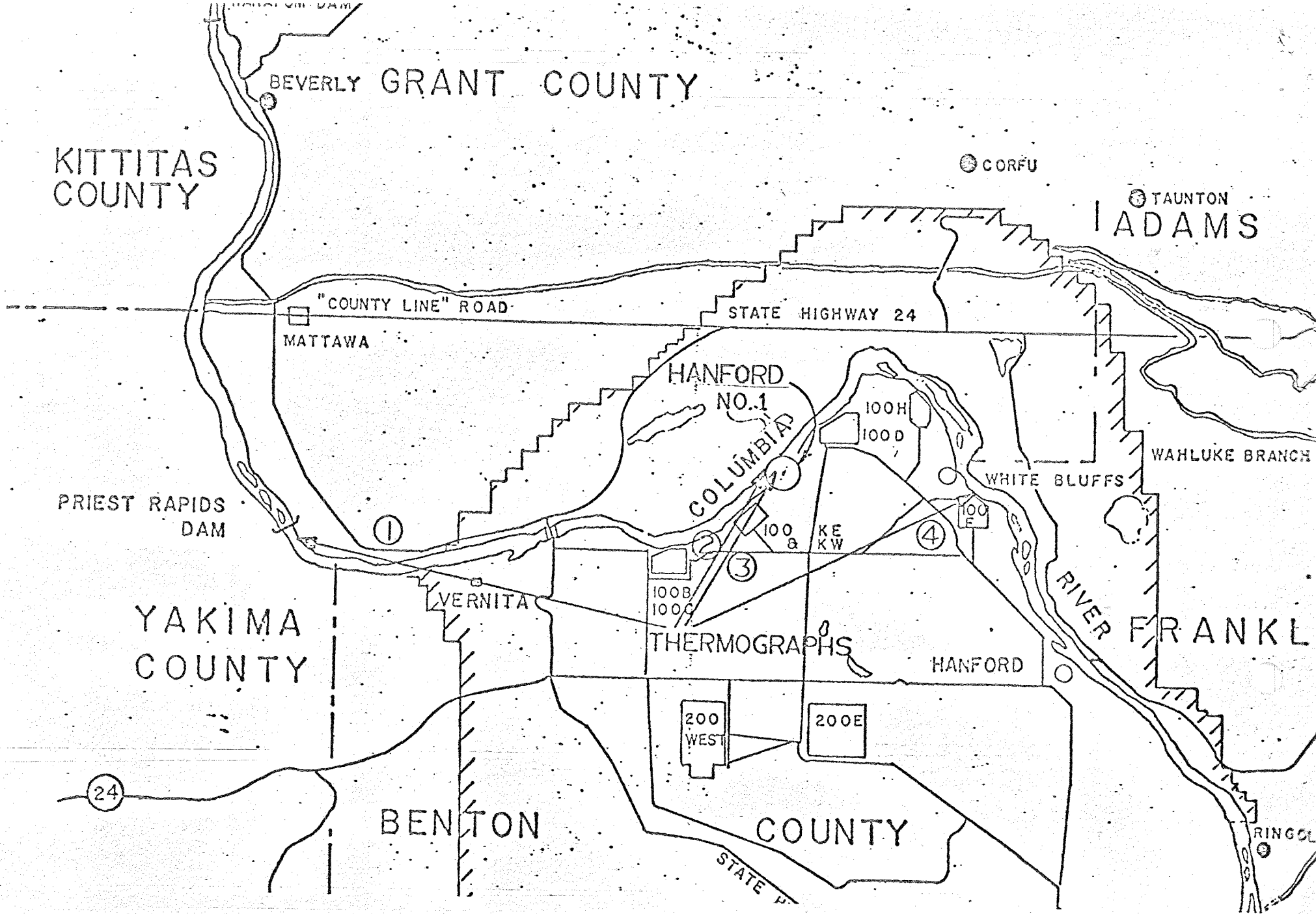


Figure 1

PRIEST RAPIDS FLOW

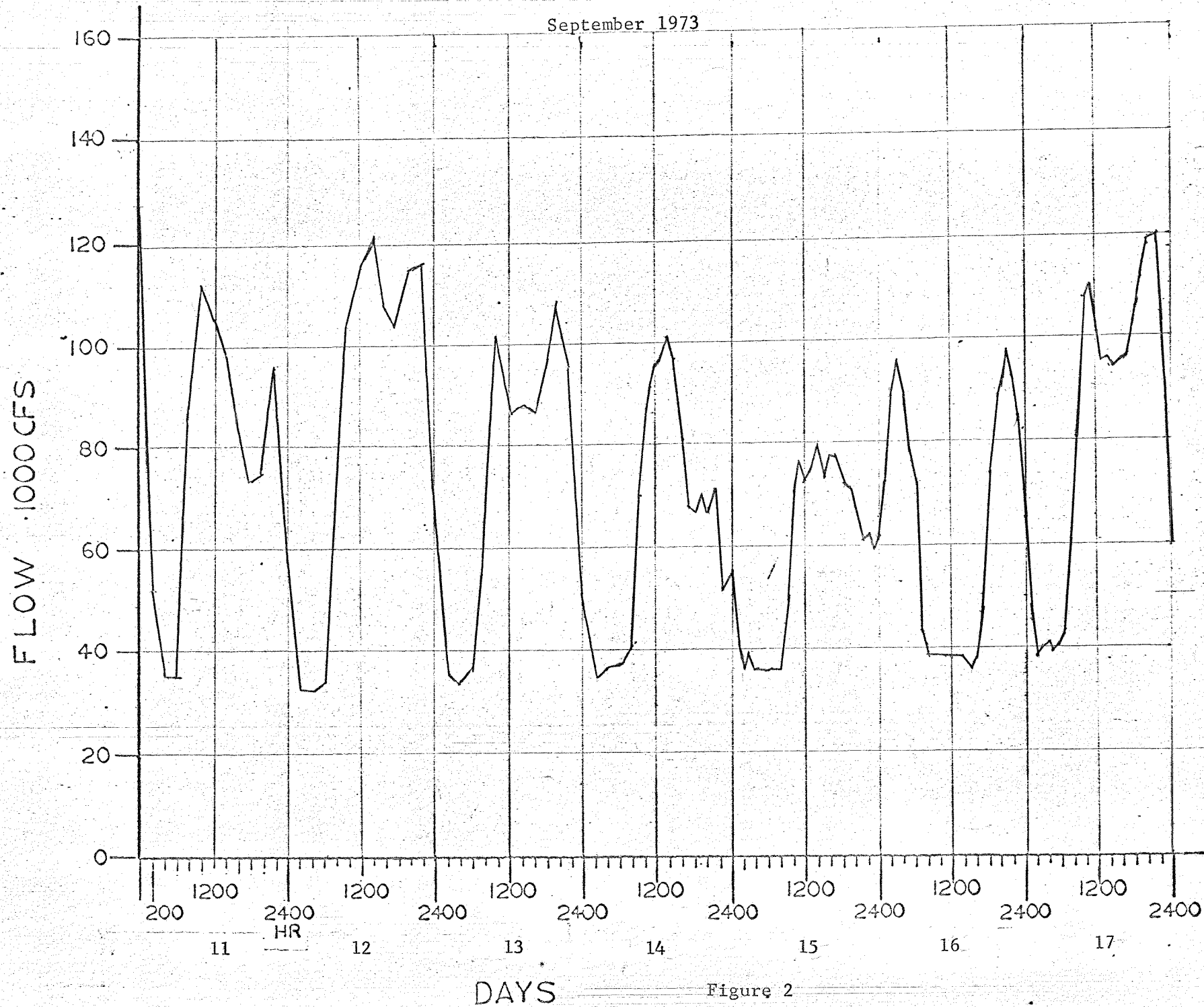


Figure 2

BPA 16 Rev. Apr. 1965
U. S. DEPARTMENT OF THE INTERIOR

Date 9/17
ADDRESS (Symbol, area or field location)

ROUTE TO

~~1. [Handwritten Name]~~
2. E. C. Staver - ELC

- Action
- Approval Per request or conversation
- Comments Information Return File



REMARKS

SEP 19 1973

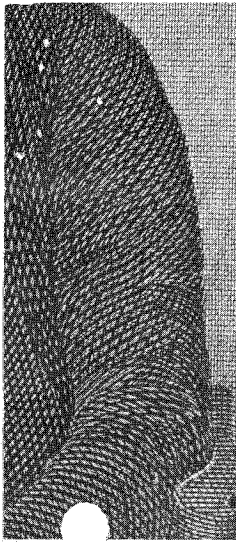
ECS
~~BJ~~
~~MB~~
~~EJW~~
~~BHH~~
~~NOB~~
AJH
EIS

Fold here for return

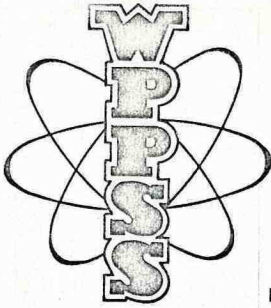
FROM

Code ADDRESS

a



Roger Sherman became the surveyor of Litchfield County, Connecticut, in 1745. In Volume 3 of a work entitled, "Biography of the Signers of the Declaration of Independence" (which was published by R. W. Pomeroy, Philadelphia, 1823), it is mentioned that, though brilliant, Roger Sherman often seemed bashful and embarrassed in large gatherings. He was said to be taller than average, "erect and well proportioned, his complexion very fair, and his countenance manly, and agreeable" Apparently ladies found him agreeable and not too bashful; his biography states that he had two wives and fathered 15 children.



Washington Public Power Supply System
A JOINT OPERATING AGENCY

P. O. BOX 968 301 FIFTH AVE. RICHLAND, WASHINGTON 99352 TELEPHONE (509) 946-9681

OFFICIAL FILE COPY	
No.	Date
	SEP 12 1973
Referred To:	
Action Taken:	
<input type="checkbox"/> ANS.	<input type="checkbox"/> NO REPLY
By	Date
	(509) 946-9681

September 11, 1973

E18

Mr. John Biggs, Dept. of Ecology
Mr. Thor C. Tollefson, Director, Wash.
Dept. of Fisheries
Mr. Donald R. Johnson, Regional Director,
National Marine Fisheries Service
Mr. Carl Crouse, Department of Game

Dear Sir:

Please find attached our summary of Columbia River water temperatures and flows for the period 9-4 through 9-10.

Electrical generation at Hanford No. 1 for the period covered averaged 679.5 MW.

Very truly yours,

R. B. PETTUS
Plant Superintendent

RBP:JRW:ep

Attachment

cc: RC Foleen ←
JJ Stein
DL Renberger
SK Billingsley
V St. Clair

RECEIVED
SEP 12 1973
PROJECT
MANAGER

RECEIVED
SEP 12 1973
PROJECT
MANAGER

DAILY TEMPERATURES

THERMOGRAPH

<u>Date</u>	1		2		3		4	
	Priest Rapids		Plant Intake		Plant Condenser		F Area	
	<u>Ave.*</u>	<u>Max.</u>	<u>Ave.*</u>	<u>Max.</u>	<u>Ave.*</u>	<u>Max.</u>	<u>Ave.*</u>	<u>Max.</u>
9-4-73	63.3	63.9	65.0	66.4	65.5	67.0	65.8	66.4
9-5-73	63.5	64.6	**	**	65.8	67.0	65.4	66.2
9-6-73	63.5	64.2	64.6	66.0	65.1	66.0	65.5	66.2
9-7-73	63.3	64.2	64.0	65.2	63.6	65.0	65.3	66.0
9-8-73	62.3	63.7	63.4	65.0	63.1	64.0	64.8	65.8
9-9-73	63.2	64.4	64.2	67.5	63.5	65.0	64.8	66.0
9-10-73	63.9	64.0	64.9	67.0	64.6	66.0	64.9	65.7

* The numerical average of hourly readings made during each day. The number of significant figures shown should not be interpreted as an ability to measure river temperature to this accuracy. The qualifying remarks made in the initial submittal still apply to these data.

** Recorder inoperable.

Table 1

PRIEST RAPIDS THERMOGRAPH

SEPTEMBER 1973

	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	<u>8th</u>	<u>9th</u>	<u>10th</u>
0000	62.6	63.3	63.3	63.7	62.2	62.8	*
0100	62.6	63.3	63.3	63.5	62.1	62.8	*
0200	62.6	63.1	63.1	63.5	61.7	62.8	*
0300	62.8	63.1	63.1	63.1	61.3	62.6	*
0400	63.0	62.8	63.1	63.1	61.3	62.2	*
0500	63.1	62.6	63.0	63.0	61.2	62.1	*
0600	63.1	62.6	63.0	63.1	61.3	61.9	*
0700	63.1	62.6	63.0	63.1	61.3	61.7	63.7
0800	63.5	62.8	63.1	63.0	61.5	62.1	63.7
0900	63.7	63.0	63.1	62.8	61.7	62.6	63.9
1000	63.7	63.1	63.1	63.1	61.9	63.0	63.9
1100	63.9	63.5	63.1	63.5	62.6	63.5	64.0
1200	63.9	63.7	63.5	63.9	62.7	63.9	64.0
1300	63.7	64.0	63.7	64.0	62.7	64.4	64.0
1400	63.7	64.2	63.9	64.2	62.7	64.2	64.0
1500	63.7	64.4	64.0	64.2	62.7	64.0	64.0
1600	63.7	64.6	64.0	64.0	63.1	64.0	*
1700	63.5	64.6	64.2	64.0	63.7	64.0	*
1800	63.5	64.0	64.2	63.9	63.5	64.0	*
1900	63.3	64.0	64.0	63.7	63.1	64.0	*
2000	63.3	64.0	64.0	63.3	62.7	63.9	*
2100	63.3	63.3	64.0	62.8	62.6	63.9	*
2200	63.5	63.5	64.0	62.6	62.6	63.7	*
2300	63.5	63.5	64.0	62.2	62.7	63.5	*
2400	63.3	63.3	63.7	62.6	62.8	-	

* RECORDER INOPERABLE

TABLE 2

PLANT FOREBAY THERMOGRAPH

SEPTEMBER 1973

	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	<u>8th</u>	<u>9th</u>	<u>10th</u>
0000	65	*	64.5	64.3	63.1	63.2	64.7
0100	65	*	64.3	64.0	63.1	63.1	64.5
0200	65	*	64.0	63.8	63.1	63.0	64.4
0300	65	*	64.0	63.5	62.8	62.9	64.4
0400	64	*	63.9	63.5	62.5	62.7	64.3
0500	64	*	63.9	63.4	62.2	62.6	64.1
0600	63.5	*	63.0	63.2	62.1	62.4	63.8
0700	63.5	*	63.0	63.2	62.1	62.0	63.3
0800	63.4	*	62.9	63.2	61.9	62.1	63.3
0900	63.8	*	64.0**	63.3	62.1	62.3	63.4
1000	64.0	*	64.2	63.3	62.5	62.8	63.8
1100	64.9	*	64.9	64.0	62.8	63.2	64.2
1200	65.4	*	65.7	64.1	63.1	63.9	64.8
1300	65.8	*	65.2	64.7	63.6	64.3	65.0
1400	66.0	*	65.3	65.0	64.0	65.0	65.3
1500	66.3	*	65.8	65.2	64.2	65.5	65.8
1600	66.3	*	66.0	65.2	64.8	65.8	66.0
1700	66.3	*	66.0	65.2	64.8	66.0	66.6
1800	66.4	*	65.8	65.2	64.8	66.8	67.0
1900	66.5	*	65.5	64.8	65.0	67.5	66.9
2000	65.8	*	65.2	64.0	64.8	66.4	66.0
2100	64.1	*	65.0	64.0	64.0	66.0	66.0
2200	*	*	64.6	64.0	64.0	65.2	65.5
2300	*	65	64.5	63.5	63.6	64.9	65.1
2400	*	64.5	64.3	63.2	63.2	64.7	65.1

* RECORDER INOPERABLE

** INSTRUMENT CALIBRATED - adjusted upwards approximately 1° F

TABLE 3

CIRCULATING WATER SYSTEM
IN-PLANT RECORDER

	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	<u>8th</u>	<u>9th</u>	<u>10th</u>
0000	66	65	66	64	63	63	64
0100	65	65	66	64	63	63	64
0200	65	65	66	63	63	63	64
0300	65	65	66	63	62	62	64
0400	65	65	66	63	62	62	64
0500	64	65	65	63	62	62	64
0600	65	65	65	63	62	62	64
0700	64	65	65	63	62	62	64
0800	64	65	65	63	62	62	64
0900	64	65	65	63	62	63	63
1000	65	65	65	63	62	63	63
1100	65	65	65	63	62	63	63
1200	65	66	66	63	63	63	64
1300	66	66	65	64	63	63	64
1400	66	67	65	64	64	64	65
1500	67	67	65	64	64	-	66
1600	67	67	65	65	64	-	66
1700	67	67	65	65	64	65	66
1800	67	67	65	65	64	65	66
1900	67	67	65	64	64	65	66
2000	67	67	65	64	64	65	65
2100	66	66	64	64	64	65	65
2200	65	66	64	63	63	64	65
2300	65	66	64	63	63	64	65
2400	65	66	64	63	63	64	65

TABLE 4

F AREA THERMOGRAPH

SEPTEMBER 1973

	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	<u>8th</u>	<u>9th</u>	<u>10th</u>
0000	65.8	65.1	65.3	65.3	64.8	64.4	64.9
0100	65.8	65.1	65.3	65.3	64.8	64.4	65.1
0200	65.7	64.9	65.3	65.3	64.6	64.4	64.4
0300	65.7	64.9	65.3	64.9	64.8	64.2	64.4
0400	65.7	65.1	65.3	64.9	64.6	64.1	64.4
0500	65.5	65.1	65.1	65.1	64.4	64.2	64.2
0600	65.5	65.1	65.1	64.9	64.4	64.1	64.1
0700	65.3	65.1	64.9	65.1	64.4	63.9	64.4
0800	65.5	65.3	64.9	65.3	64.4	64.2	64.4
0900	65.3	64.9	65.1	65.3	64.4	64.4	64.4
1000	65.1	65.1	65.1	65.3	64.4	64.4	64.4
1100	66.0	65.3	65.3	65.1	64.6	64.4	64.4
1200	66.2	65.3	65.7	65.3	65.8	64.8	64.4
1300	66.2	65.5	66.0	65.7	65.1	64.9	64.8
1400	66.4	65.5	66.2	66.0	65.3	65.3	65.1
1500	66.2	65.7	66.2	65.7	65.1	65.7	65.3
1600	66.2	66.2	66.2	65.8	65.3	66.0	65.5
1700	66.4	66.2	65.8	66.0	65.1	65.8	65.7
1800	66.2	65.8	65.7	65.7	64.9	65.8	65.5
1900	66.0	65.7	65.7	65.7	64.8	66.0	65.5
2000	65.8	65.7	65.5	65.5	64.8	65.3	65.5
2100	65.7	65.8	65.3	65.3	64.8	65.3	65.7
2200	65.3	65.5	65.3	65.1	64.8	65.1	65.3
2300	65.1	65.3	65.3	64.9	64.6	64.9	65.3
2400	65.1	65.3	65.3	64.8	64.4	64.9	65.3

TABLE 5

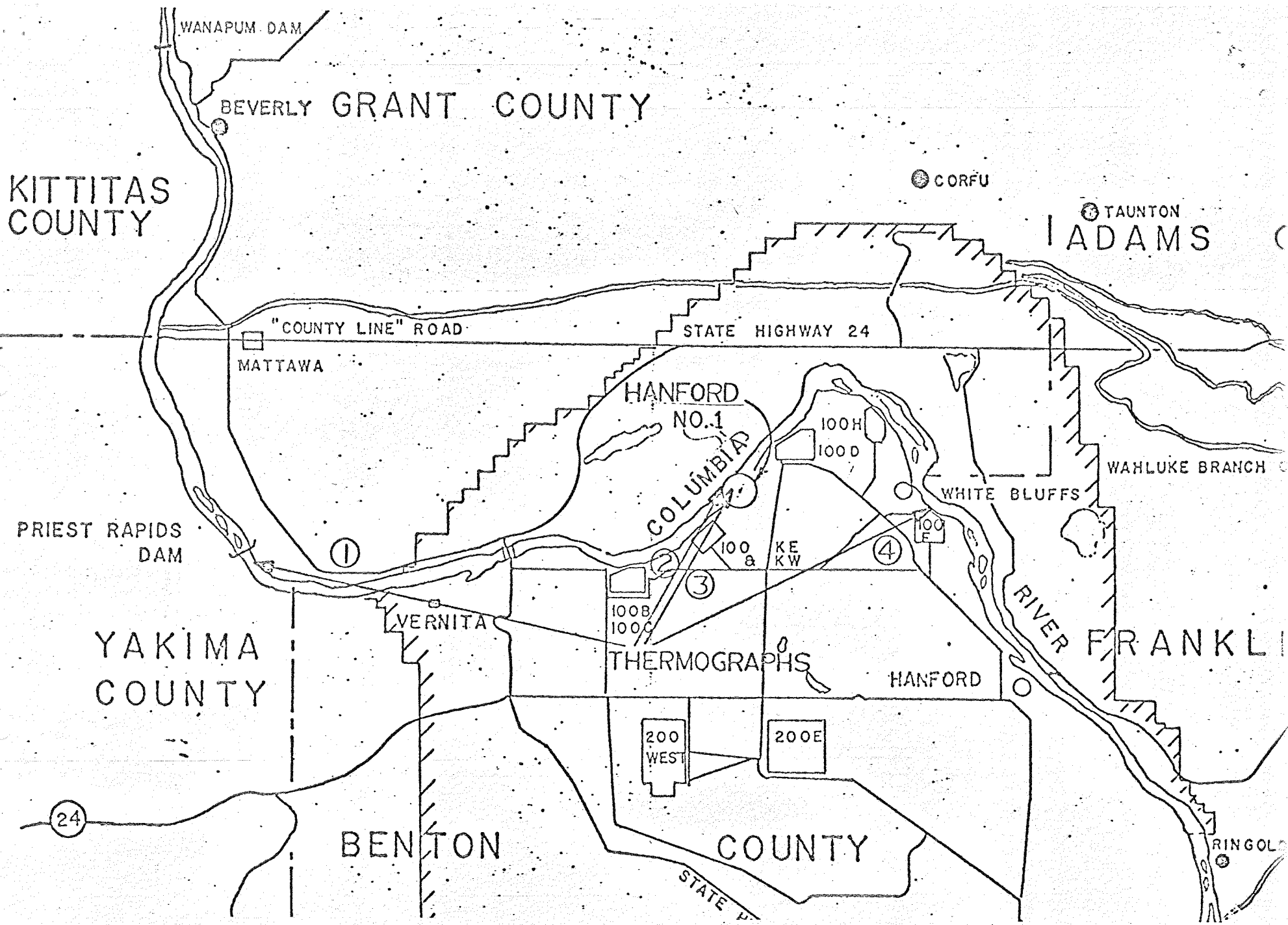
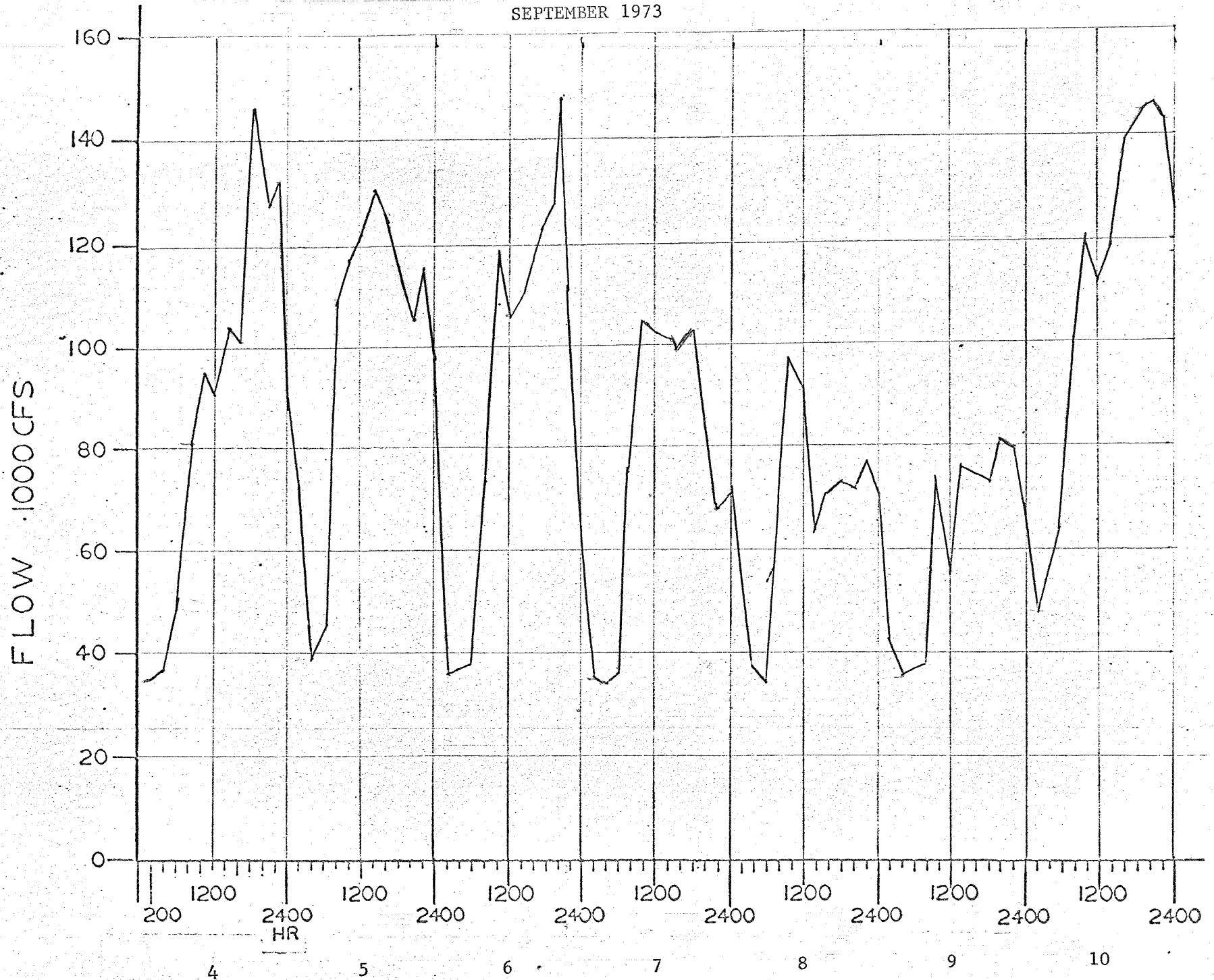


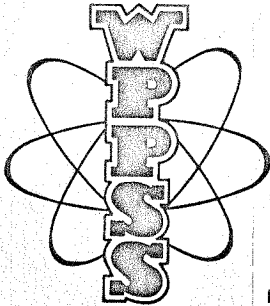
Figure 1

PRIEST RAPIDS FLOW

SEPTEMBER 1973



DAYS
Figure 2



Washington Public Power Supply System
A JOINT OPERATING AGENCY

P. O. BOX 968 301 FIFTH AVE. RICHLAND, WASHINGTON 99352 TELEPHONE (509) 946-9681

September 4, 1973

Mr. John Biggs, Dept. of Ecology
Mr. Thor C. Tollefson, Director
Wash. Dept. of Fisheries
Mr. Donald R. Johnson, Regional
Director, National Marine
Fisheries Service
Mr. Carl Crouse, Dept. of Game

Dear Sir:

Please find attached our summary of Columbia River water temperatures and flows for the period 8-28 through 9-3. Included in the attachments is a corrected Table 1 for the period of 8/21-27. *also 9/4-10/73*

Electrical generation at Hanford No. 1 for the period covered averaged 640.2 MW.

Very truly yours,

R. B. Pettus
R. B. PETTUS
Plant Superintendent

RBP:JRW:nh

cc: RC Foleen
JJ Stein
V St. Clair
E Warchol
DL Renberger
SK Billingsley

E. C. Star
Emory EA 98
EW

[Handwritten signature]
E18

DAILY TEMPERATURES

THERMOGRAPH

<u>Date</u>	1 Priest Rapids		2 Plant Intake		3 Plant Condenser		4 F Area	
	<u>Ave.*</u>	<u>Max.</u>	<u>Ave.*</u>	<u>Max.</u>	<u>Ave.*</u>	<u>Max.</u>	<u>Ave.*</u>	<u>Max.</u>
8-28-73	62.9	63.9	63.9	65.0	63.9	65.0	64.5	65.3
8-29-73	63.2	63.8	64.0	66.0	64.8	66.0	64.8	65.2
8-30-73	63.1	63.7	64.0	65.0	65.1	68.0	64.4	65.1
8-31-73	62.1	63.0	63.2	64.9	64.6	65.0	63.8	64.4
9-1-73	62.0	62.8	63.1	65.0	63.9	65.0	63.8	64.4
9-2-73	62.3	63.0	63.8	66.7	64.8	66.0	64.5	65.7
9-3-73	64.4	66.0	64.8	67.0	65.7	67.0	65.3	66.2

* The numerical average of hourly readings made during each day. The number of significant figures shown should not be interpreted as an ability to measure river temperature to this accuracy. The qualifying remarks made in the initial submittal still apply to these data.

Table 1

PRIEST RAPIDS THERMOGRAPH

Aug/Sept. 1973

	<u>28th</u>	<u>29th</u>	<u>30th</u>	<u>31st</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>
0000	62.6		63.7	62.4	61.7	62.8	62.1
0100	62.6	63.0	63.7	62.2	61.5	62.6	61.3
0200	62.6	62.8	63.7	62.1	61.2	67.2	61.3
0300	62.6	62.6	63.3	62.1	61.0	61.9	61.3
0400	62.6	62.6	63.1	62.1	60.8	61.3	61.3
0500	62.6	62.6	63.0	62.1	60.8	61.3	61.3
0600	62.42	62.6	63.0	62.0	60.8	61.3	60.8
0700	62.42	62.6	63.1	62.0	60.8	61.2	60.8
0800	62.78	62.6	63.1		61.2	61.2	61.0
0900	62.96	62.8		61.3	61.3	61.7	
1000	62.96	63.0	63.1	*	61.5	61.3	63.0
1100	62.96	63.1	63.1	*	61.9	61.3	63.5
1200	63.14	63.3	63.1	*	62.2	61.5	64.4
1300	63.50	63.5	63.1	*	62.6	63.1	65.2
1400	63.68	63.5	63.1	*	62.6	63.7	65.6
1500	63.86	63.5	63.1	*	62.8	64.4	66.0
1600	63.50	63.5	63.1	*	62.8	64.4	65.4
1700	63.14	63.5	63.1	63.0	62.8	64.2	65.3
1800	63.14	63.3	63.1	62.0	62.8	63.6	64.4
1900	62.96	63.3	63.1	62.0	62.8	63.3	64.4
2000	62.96	63.5	63.1	62.0	62.6	62.6	63.5
2100	62.60	63.8	63.1	62.0	62.6	62.2	63.1
2200	62.60	63.8	63.1	62.0	62.8	62.1	63.0
2300	62.60	63.7	62.8	62.0	62.8	61.7	62.8
2400			62.4	62.0	62.8	62.1	62.1

* Thermograph inoperable

Table 2

PLANT FOREBAY THERMOGRAPH

Aug/Sept. 1973

	<u>28th</u>	<u>29th</u>	<u>30th</u>	<u>31st</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>
0000	*	62.0		63.0	62.5	63.0	64.0
0100	*	63.0	64.0	63.0	62.8	63.0	64.0
0200	*	63	64	63	62.7	62.6	63.5
0300	*	63	64	62.8	62.2	62.4	63.5
0400	*	63	63.1	62.4	62.0	62.4	63.1
0500	*	62.8	63.0	62.1	62.0	62.0	63.0
0600	*	62.8	63.0	62.0	61.8	61.8	63.0
0700	*	62.7	63.0	62.0	61.7	61.8	62.8
0800	62.5	62.5	63.3	62.0	61.8	61.8	62.9
0900	63.0	62.8	63.5	62.0	61.8	61.8	63.0
1000	63.3		63.8	62.0	62.3	61.9	63.7
1100	63.5	*	63.9	62.0	62.5	62.2	64.1
1200	63.5	*	64.7	64.0	62.9	62.9	64.5
1300	64.0	*	65.0	64.9	63.3	64.5	65.2
1400	64.2	*	65.0	64.8	63.9	65.0	66.1
1500	64.8	*	65.0	64.8	64.0	66.0	66.5
1600	64.9	65.9	65.0	64.7	64.2	66.2	66.8
1700	65.0	66.0	64.9	64.5	64.6	66.4	67.0
1800	65.0	66.0	64.7	64.5	64.9	66.7	67.0
1900	65.0	66.0	64.6	64.3	65.0	66.4	67.0
2000	65.0	65.8	64.0	63.7	64.8	65.9	65.5
2100	64.8	65.2	63.8	63.4	64.1	65.0	66.2
2200	63.3	64.8	63.5	63.0	63.6	64.5	66.0
2300	63.1	64.2	63.0	62.7	63.4	64.5	65.5
2400	63.0	64.0	63.0	62.5	63.5	64.0	65.0

* Thermograph inoperable

Table 3

CIRCULATING WATER SYSTEM
IN-PLANT RECORDER

Aug/Sept. 1973

	<u>28th</u>	<u>29th</u>	<u>30th</u>	<u>31st</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>
0000	63	64	65	65	64	64	65
0100	63	64	65	65	64	64	65
0200	63	64	64	65	64	64	65
0300	63	64	64	65	63	64	65
0400	63	64	64	65	63	64	65
0500	63	64	64	65	63	64	65
0600	63	64	64	65	63	64	64
0700	63	64	64	64	63	63	64
0800	63	64	64	64	63	63	64
0900	63	64	65	64	63	64	64
1000	63	64	65	64	63	64	65
1100	63	65	66	64	63	65	65
1200	64	65	68	65	63	65	66
1300	64	65	68	65	64	65	66
1400	65	66	66	65	64	66	67
1500	65	66	66	65	65	66	67
1600	65	66	66	65	65	66	67
1700	65	66	66	65	65	66	67
1800	65	66	65	65	65	66	67
1900	65	66	65	65	65	66	67
2000	65	66	65	65	65	66	67
2100	65	65	65	65	65	65	67
2200	65	65	65	64	64	65	67
2300	65	65	65	63	64	65	66
2400	64	65	65	64	64	65	66

Table 4

F AREA THERMOGRAPH

Aug/Sept. 1973

	<u>28th</u>	<u>29th</u>	<u>30th</u>	<u>31st</u>	<u>1st</u>	<u>2nd</u>	<u>3rd</u>
0000	64.2	64.6	64.4	63.8	63.6	63.9	65.1
0100	64.1	64.4	64.4	63.8	63.6	63.9	65.3
0200	64.1	64.6	64.8	63.8	63.6	63.9	65.3
0300	63.9	64.6	64.4	63.6	63.6	63.9	65.1
0400	63.9	64.2	64.6	63.6	63.4	63.8	65.1
0500	63.9	64.1	64.2	63.6	63.3	63.8	64.9
0600	63.9	64.1	64.4	63.4	63.3	63.6	64.8
0700	63.9	64.2	64.4	63.6	63.3	63.8	64.4
0800	64.1	64.4	64.4	63.6	63.3	63.9	64.4
0900	64.1	64.4	64.2	63.6	63.3	63.9	64.4
1000	64.2	64.4	64.2	63.6	63.3	64.0	64.4
1100	64.4	64.5	64.2	63.6	63.4	64.0	64.4
1200	64.6	65.1	64.4	63.0	63.6	64.1	64.8
1300	64.8	65.2	64.4	64.0	63.8	64.4	64.8
1400	64.9	65.2	64.4	64.1	64.0	64.6	65.3
1500	65.3	65.2	64.9	64.2	64.1	65.1	65.2
1600	65.3	65.5	65.1	64.4	64.4	65.3	66.2
1700	65.3	65.5	64.8	64.4	64.4	65.7	66.2
1800	65.1	65.2	64.8	64.4	64.4	65.7	66.2
1900	64.9	65.2	64.4	64.4	64.4	65.7	66.2
2000	64.9	65.2	64.4	64.1	64.2	65.3	66.2
2100	64.9	65.1	63.9	64.0	64.1	65.3	66.2
2200	64.8	64.8	63.9	63.8	64.1	65.3	66.0
2300	64.6	64.6	63.9	63.8	64.0	65.1	66.0
2400	64.6	64.4	63.8	63.6	63.9	65.1	65.8

Table 5

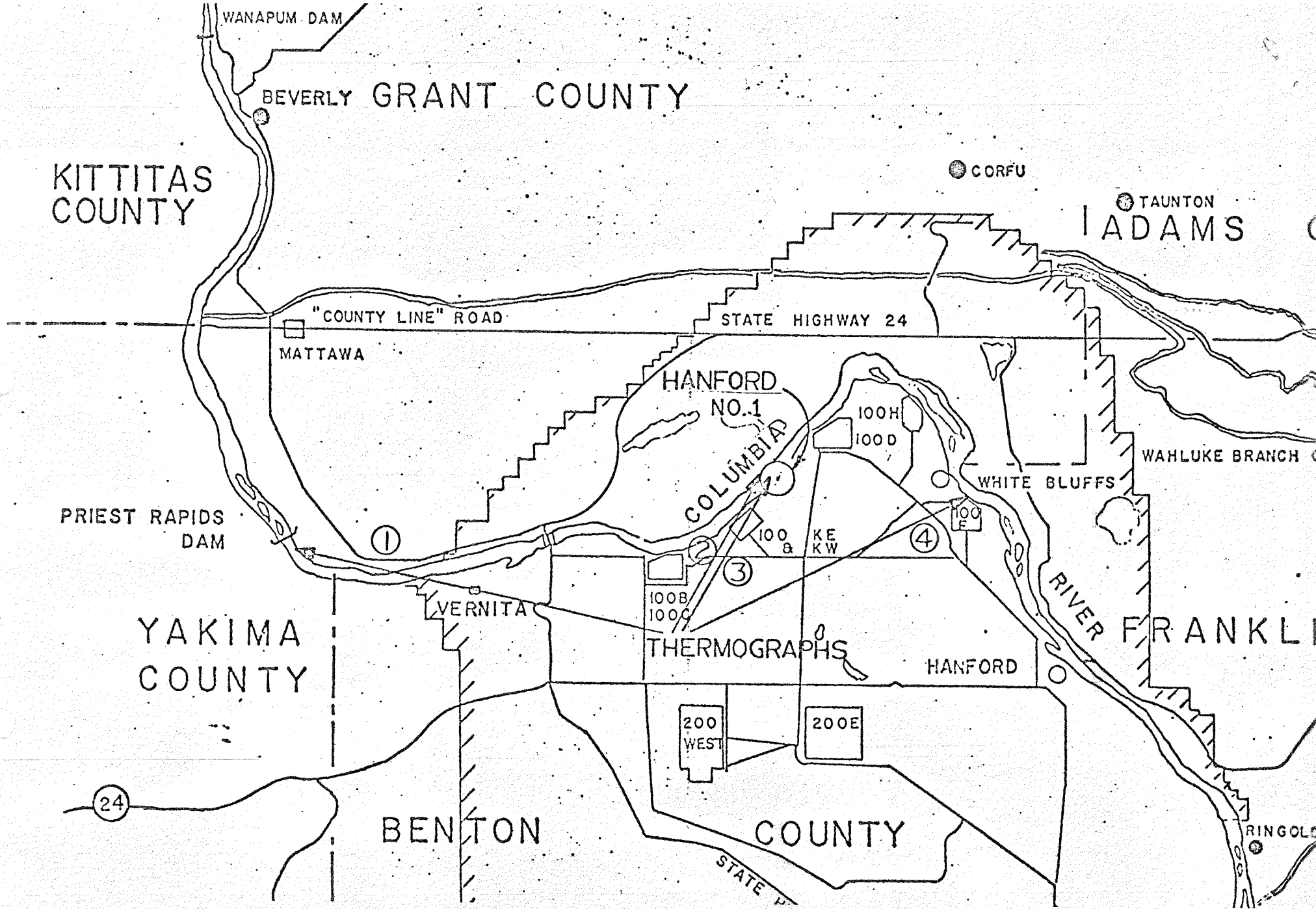
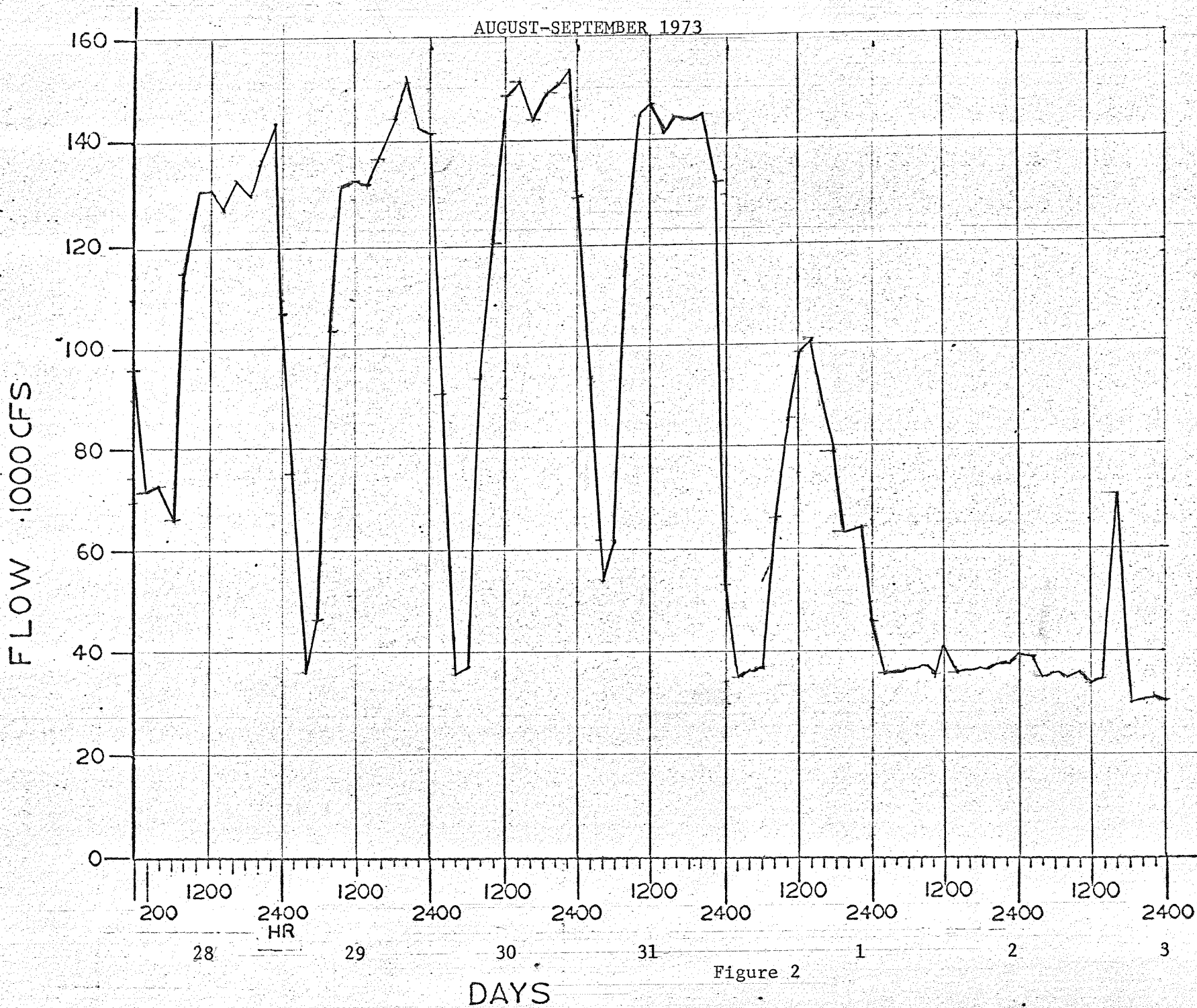


Figure 1

PRIEST RAPIDS FLOW



DAILY TEMPERATURES

THERMOGRAPH

<u>Date</u>	1		2		3		4	
	Priest Rapids		Plant Intake		Plant Condenser		F Area	
	<u>Ave.*</u>	<u>Max.</u>	<u>Ave.*</u>	<u>Max.</u>	<u>Ave.*</u>	<u>Max.</u>	<u>Ave.*</u>	<u>Max.</u>
8-21-73	64.52	65.48	65.6**	67.2	65.72	67	66.1	67.1
8-22-73	63.97	64.4	65.55	67.0	65.48	67	65.68	66.6
8-23-73	63.6	63.86	64.64	66.0	64.78	66	65.08	65.8
8-24-73	63.24	63.86	64.1	65.8	64.36	66	65.22	65.7
8-25-73	64.23	66.7	64.23	66.7	64.76	66	65.18	65.8
8-26-73	64.08	65.3	64.08	65.3	64.4	65	65.37	65.7
8-27-73	63.27	64.2	63.91	65.9	63.96	65	64.95	65.7

* The numerical average of hourly readings made during each day. The number of significant figures shown should not be interpreted as an ability to measure river temperature to this accuracy. The qualifying remarks made in the initial submittal still apply to these data.

** Correction

TABLE 1

9/12/73 *ETW*
~~Erney~~ S-787
Nide

DAILY TEMPERATURES

THERMOGRAPH

Date	1		2		3		4	
	Priest Rapids		Plant Intake		Plant Condenser		F Area	
	Ave.*	Max.	Ave.*	Max.	Ave.*	Max.	Ave.*	Max.
9-4-73	63.3	63.9	65.0	66.4	65.5	67.0	65.8	66.4
9-5-73	63.5	64.6	**	**	65.8	67.0	65.4	66.2
9-6-73	63.5	64.2	64.6	66.0	65.1	66.0	65.5	66.2
9-7-73	63.3	64.2	64.0	65.2	63.6	65.0	65.3	66.0
9-8-73	62.3	63.7	63.4	65.0	63.1	64.0	64.8	65.8
9-9-73	63.2	64.4	64.2	67.5	63.5	65.0	64.8	66.0
9-10-73	63.9	64.0	64.9	67.0	64.6	66.0	64.9	65.7

* The numerical average of hourly readings made during each day. The number of significant figures shown should not be interpreted as an ability to measure river temperature to this accuracy. The qualifying remarks made in the initial submittal still apply to these data.

** Recorder inoperable.

Table 1

PRIEST RAPIDS THERMOGRAPH

SEPTEMBER 1973

	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	<u>8th</u>	<u>9th</u>	<u>10th</u>
0000	62.6	63.3	63.3	63.7	62.2	62.8	*
0100	62.6	63.3	63.3	63.5	62.1	62.8	*
0200	62.6	63.1	63.1	63.5	61.7	62.8	*
0300	62.8	63.1	63.1	63.1	61.3	62.6	*
0400	63.0	62.8	63.1	63.1	61.3	62.2	*
0500	63.1	62.6	63.0	63.0	61.2	62.1	*
0600	63.1	62.6	63.0	63.1	61.3	61.9	*
0700	63.1	62.6	63.0	63.1	61.3	61.7	63.7
0800	63.5	62.8	63.1	63.0	61.5	62.1	63.7
0900	63.7	63.0	63.1	62.8	61.7	62.6	63.9
1000	63.7	63.1	63.1	63.1	61.9	63.0	63.9
1100	63.9	63.5	63.1	63.5	62.6	63.5	64.0
1200	63.9	63.7	63.5	63.9	62.7	63.9	64.0
1300	63.7	64.0	63.7	64.0	62.7	64.4	64.0
1400	63.7	64.2	63.9	64.2	62.7	64.2	64.0
1500	63.7	64.4	64.0	64.2	62.7	64.0	64.0
1600	63.7	64.6	64.0	64.0	63.1	64.0	*
1700	63.5	64.6	64.2	64.0	63.7	64.0	*
1800	63.5	64.0	64.2	63.9	63.5	64.0	*
1900	63.3	64.0	64.0	63.7	63.1	64.0	*
2000	63.3	64.0	64.0	63.3	62.7	63.9	*
2100	63.3	63.3	64.0	62.8	62.6	63.9	*
2200	63.5	63.5	64.0	62.6	62.6	63.7	*
2300	63.5	63.5	64.0	62.2	62.7	63.5	*
2400	63.3	63.3	63.7	62.6	62.8	-	

* RECORDER INOPERABLE

TABLE 2

PLANT FOREBAY THERMOGRAPH

SEPTEMBER 1973

	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	<u>8th</u>	<u>9th</u>	<u>10th</u>
0000	65	*	64.5	64.3	63.1	63.2	64.7
0100	65	*	64.3	64.0	63.1	63.1	64.5
0200	65	*	64.0	63.8	63.1	63.0	64.4
0300	65	*	64.0	63.5	62.8	62.9	64.4
0400	64	*	63.9	63.5	62.5	62.7	64.3
0500	64	*	63.9	63.4	62.2	62.6	64.1
0600	63.5	*	63.0	63.2	62.1	62.4	63.8
0700	63.5	*	63.0	63.2	62.1	62.0	63.3
0800	63.4	*	62.9	63.2	61.9	62.1	63.3
0900	63.8	*	64.0**	63.3	62.1	62.3	63.4
1000	64.0	*	64.2	63.3	62.5	62.8	63.8
1100	64.9	*	64.9	64.0	62.8	63.2	64.2
1200	65.4	*	65.7	64.1	63.1	63.9	64.8
1300	65.8	*	65.2	64.7	63.6	64.3	65.0
1400	66.0	*	65.3	65.0	64.0	65.0	65.3
1500	66.3	*	65.8	65.2	64.2	65.5	65.8
1600	66.3	*	66.0	65.2	64.8	65.8	66.0
1700	66.3	*	66.0	65.2	64.8	66.0	66.6
1800	66.4	*	65.8	65.2	64.8	66.8	67.0
1900	66.5	*	65.5	64.8	65.0	67.5	66.9
2000	65.8	*	65.2	64.0	64.8	66.4	66.0
2100	64.1	*	65.0	64.0	64.0	66.0	66.0
2200	*	*	64.6	64.0	64.0	65.2	65.5
2300	*	65	64.5	63.5	63.6	64.9	65.1
2400	*	64.5	64.3	63.2	63.2	64.7	65.1

* RECORDER INOPERABLE

** INSTRUMENT CALIBRATED - adjusted upwards approximately 1° F

TABLE 3

CIRCULATING WATER SYSTEM
IN-PLANT RECORDER

	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	<u>8th</u>	<u>9th</u>	<u>10th</u>
0000	66	65	66	64	63	63	64
0100	65	65	66	64	63	63	64
0200	65	65	66	63	63	63	64
0300	65	65	66	63	62	62	64
0400	65	65	66	63	62	62	64
0500	64	65	65	63	62	62	64
0600	65	65	65	63	62	62	64
0700	64	65	65	63	62	62	64
0800	64	65	65	63	62	62	64
0900	64	65	65	63	62	63	63
1000	65	65	65	63	62	63	63
1100	65	65	65	63	62	63	63
1200	65	66	66	63	63	63	64
1300	66	66	65	64	63	63	64
1400	66	67	65	64	64	64	65
1500	67	67	65	64	64	-	66
1600	67	67	65	65	64	-	66
1700	67	67	65	65	64	65	66
1800	67	67	65	65	64	65	66
1900	67	67	65	65	64	65	66
2000	67	67	65	64	64	65	65
2100	66	66	64	64	64	65	65
2200	65	66	64	63	63	64	65
2300	65	66	64	63	63	64	65
2400	65	66	64	63	63	64	65

TABLE 4

F AREA THERMOGRAPH

SEPTEMBER 1973

	<u>4th</u>	<u>5th</u>	<u>6th</u>	<u>7th</u>	<u>8th</u>	<u>9th</u>	<u>10th</u>
0000	65.8	65.1	65.3	65.3	64.8	64.4	64.9
0100	65.8	65.1	65.3	65.3	64.8	64.4	65.1
0200	65.7	64.9	65.3	65.3	64.6	64.4	64.4
0300	65.7	64.9	65.3	64.9	64.8	64.2	64.4
0400	65.7	65.1	65.3	64.9	64.6	64.1	64.4
0500	65.5	65.1	65.1	65.1	64.4	64.2	64.2
0600	65.5	65.1	65.1	64.9	64.4	64.1	64.1
0700	65.3	65.1	64.9	65.1	64.4	63.9	64.4
0800	65.5	65.3	64.9	65.3	64.4	64.2	64.4
0900	65.3	64.9	65.1	65.3	64.4	64.4	64.4
1000	65.1	65.1	65.1	65.3	64.4	64.4	64.4
1100	66.0	65.3	65.3	65.1	64.6	64.4	64.4
1200	66.2	65.3	65.7	65.3	65.8	64.8	64.4
1300	66.2	65.5	66.0	65.7	65.1	64.9	64.8
1400	66.4	65.5	66.2	66.0	65.3	65.3	65.1
1500	66.2	65.7	66.2	65.7	65.1	65.7	65.3
1600	66.2	66.2	66.2	65.8	65.3	66.0	65.5
1700	66.4	66.2	65.8	66.0	65.1	65.8	65.7
1800	66.2	65.8	65.7	65.7	64.9	65.8	65.5
1900	66.0	65.7	65.7	65.7	64.8	66.0	65.5
2000	65.8	65.7	65.5	65.5	64.8	65.3	65.5
2100	65.7	65.8	65.3	65.3	64.8	65.3	65.7
2200	65.3	65.5	65.3	65.1	64.8	65.1	65.3
2300	65.1	65.3	65.3	64.9	64.6	64.9	65.3
2400	65.1	65.3	65.3	64.8	64.4	64.9	65.3

TABLE 5

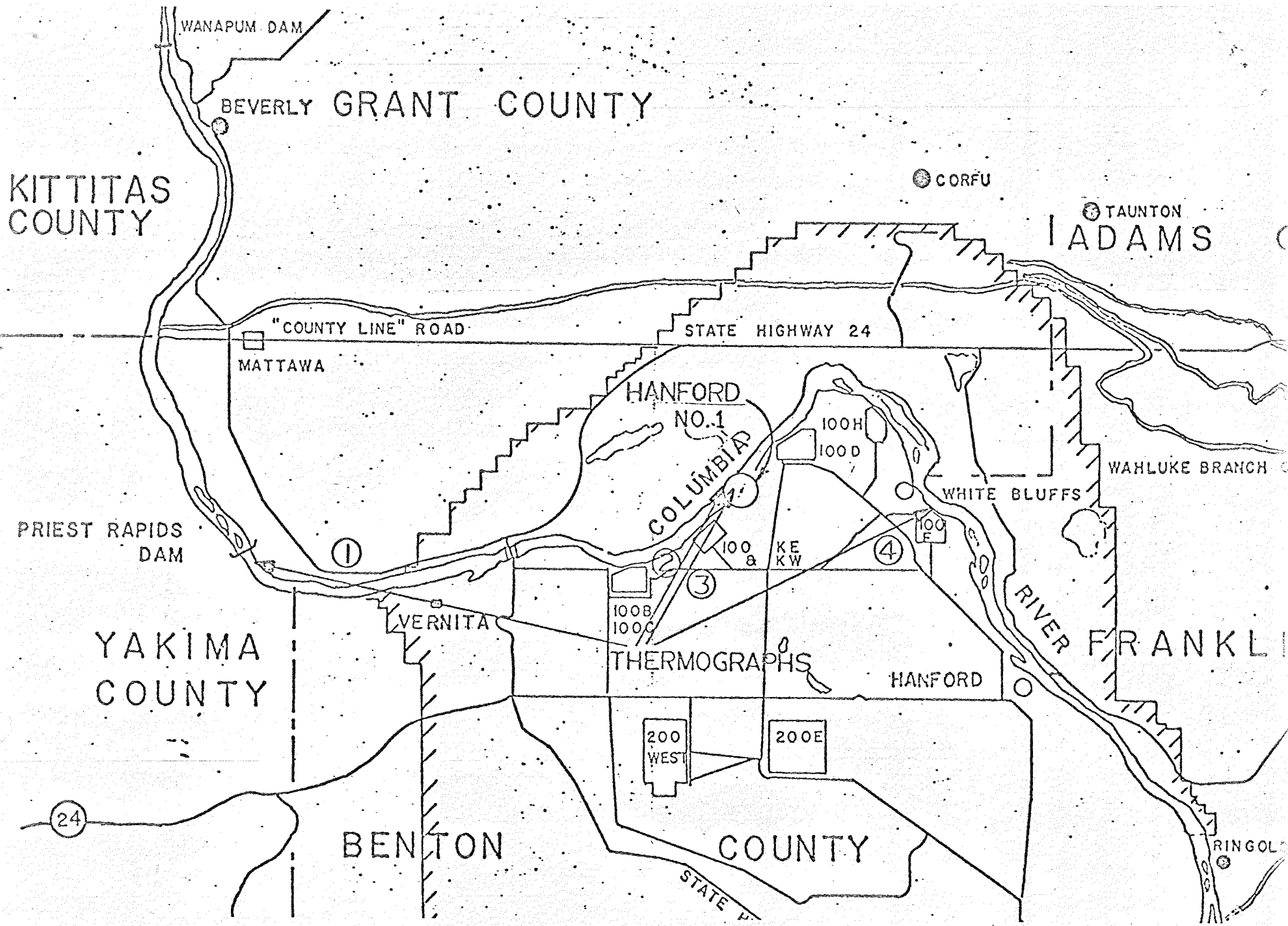


Figure 1

PRIEST RAPIDS FLOW

SEPTEMBER 1973

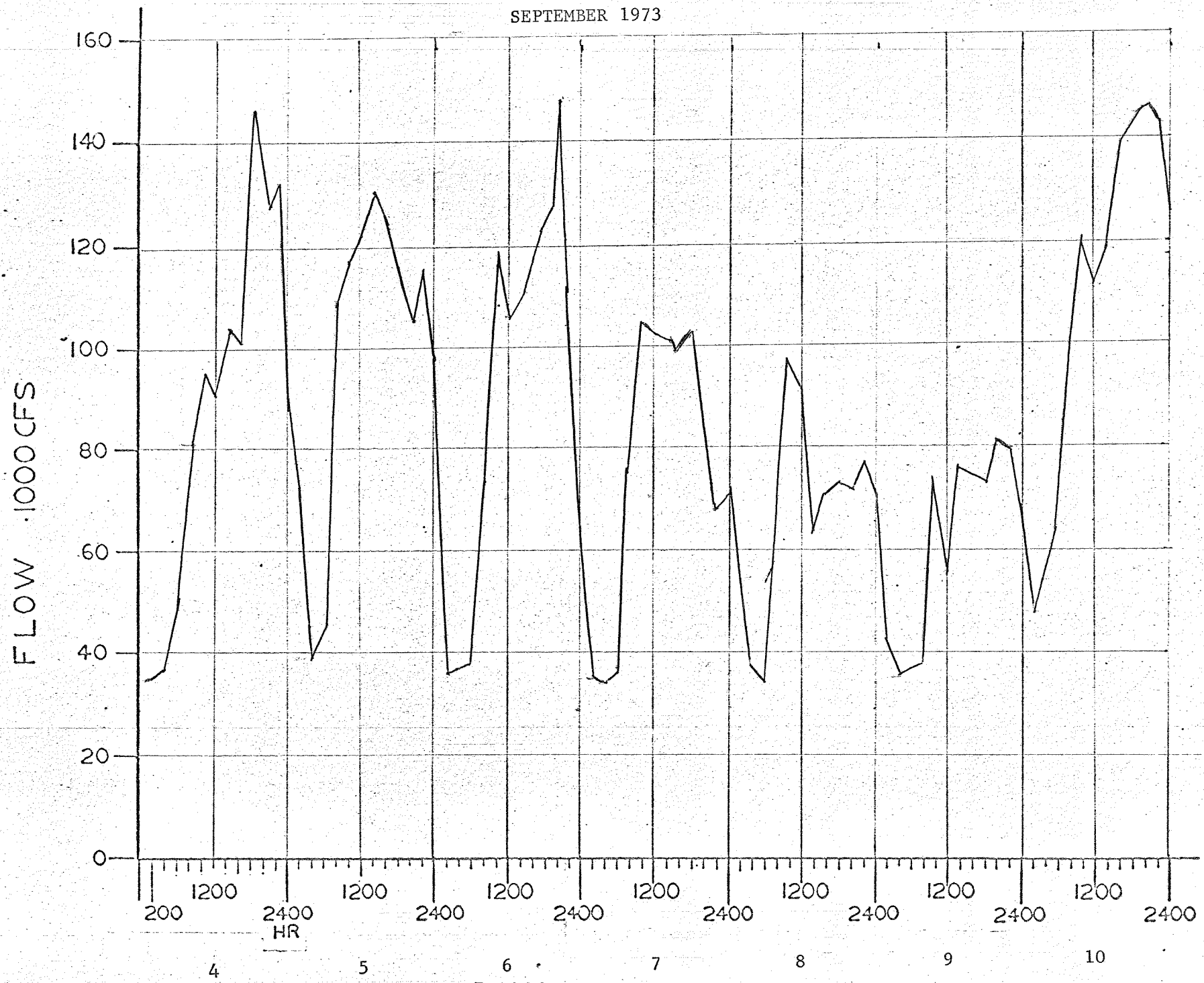


Figure 2

Hanford

AUG 27 1973

BCS
RJT
NEF
EJW
EHH
NGB
AJH
Code
518

P

August 27, 1973

Mr. J. J. Stein
 Managing Director
 Washington Public Power Supply System
 P.O. Box 968
 Richland, Washington 99352

Dear Jack:

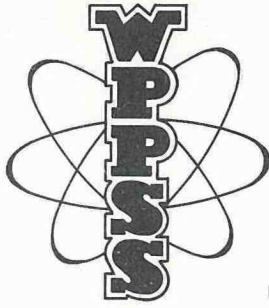
Approval is granted for the expenditure of an additional \$185.00 of Hanford No. 1 funds to cover the final cost for Columbia River Temperature Measurements by Battelle-Northwest. The total cost of the work is \$1785.00. Approval of the initial expenditure of \$1600.00 was granted in my letter dated August 21, 1973.

Sincerely,

(SGD) RICHARD C. NYLAND
 Richard C. Nyland
 Assistant to Power Manager

BJ Dodge:bd

cc:
 E. Starr - EIC
 Official File - EIC



Washington Public Power Supply System
A JOINT OPERATING AGENCY

P. O. BOX 968 301 FIFTH AVE. RICHLAND, WASHINGTON 99352

TELEPHONE (509) 946-9688

August 20, 1973

OFFICIAL FILE COPY	
No.	Date
	AUG 21 1973
Referred To:	
Action Taken:	
PLANS	<input type="checkbox"/> NO REPLY
By JCH	Date 8/27

Mr. Donald P. Hodel, Administrator
United States Department of the Interior
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

Subject: HANFORD NO. 1, WATER QUALITY CRITERIA
TEMPERATURE DATA COLLECTION

Reference: Letter, Hodel to Stein, August 7, 1973

Dear Mr. Hodel:

Confirmation and approval of the cost of \$1785.00 for the work specified in a contract with Battelle Pacific Northwest Laboratories is requested. The amount would be advanced during the fiscal year 1974 from funds budgeted for Hanford No. 1.

The work consists of a program to monitor Columbia River temperatures:

Verify the accuracy of a temperature reading station at Priest Rapids.

Establish and maintain a temperature recorder at Hanford No. 1 intake.

Establish and maintain a temperature recorder at "F" Area (river mile 369).

Prepare and submit a letter report to WPPSS by Sept. 19, 1973, summarizing the program and results of data collected.

The work is to provide data for compliance with an order of the Department of Ecology, State of Washington, Docket No. DE 73-169, which order results from a WPPSS request of August 10, 1973, in turn requested by BPA in the referenced letter.

Very truly yours,

J. J. STEIN
Managing Director

JJS:nh

cc: DR Renberger
RB Pettus

AUG 23 1973

EOS
RJT
AMF
EW
EMH
NCB
AJH
Code E18

August 21, 1973

P

Hanford

Mr. J. J. Stein
Managing Director
Washington Public Power Supply System
P.O. Box 968
Richland, Washington 99352

Dear Jack:

Approval is granted for the expenditure of Hanford No. 1 funds for Columbia River Temperature Measurements by Battelle-Northwest. The work is estimated at \$1,600. The data is necessary to provide information in regard to State water quality standards.

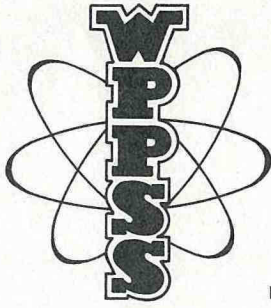
Sincerely,

(SGD) RICHARD C. NYLAND

Richard C. Nyland
Assistant to Power Manager

RCNyland:bd

cc:
E. Starr - EIC
Official File - EIC



Washington Public Power Supply System
A JOINT OPERATING AGENCY

P. O. BOX 968 301 FIFTH AVE. RICHLAND, WASHINGTON 99352 TELEPHONE (509) 946-9681

OFFICIAL FILE COPY	
No.	Date
	AUG 15 1973
Referred To:	
Action Taken:	
<input checked="" type="checkbox"/> ANS.	<input type="checkbox"/> NO REPLY
By <i>ack</i>	Date <i>8/21/73</i>

August 10, 1973

Mr. R. C. Nyland
Bonneville Power Administration
P. O. Box 3621
Portland, Oregon 97208

Subject: HANFORD NO. 1 OPERATION
RIVER TEMPERATURES MEASUREMENTS IN
SUPPORT OF HANFORD NO. 1 OPERATION

Dear Mr. Nyland:

Supply System staff has identified the need for special Columbia River water temperatures measurements to support Hanford No. 1 operation during the remainder of August 1973. The measurements include intallation, calibration, and maintenance of instruments in the plant forebay and downstream six miles at the AEC's F area. Battelle-Northwest has agreed to do the required work and estimates the cost at \$1,600. Based on our telephone conversation we have directed Battelle to proceed.

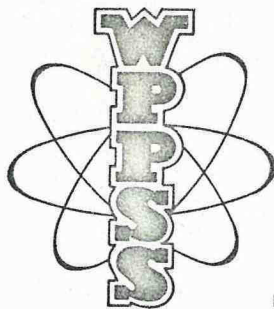
We would like BPA concurrence with this expenditure.

Very truly yours,

J. J. STEIN
Managing Director

JJS:KRW:mdm

3,000 *ass. Em*



Washington Public Power Supply System
A JOINT OPERATING AGENCY

P. O. BOX 968 301 FIFTH AVE. RICHLAND, WASHINGTON 99352 TELEPHONE

August 20, 1973
WPUE-73-329

*PC Otness
BPA*

OFFICIAL FILE COPY	
No.	Date
	AUG 21 1973
Referred To:	
(509) 946-9681 Action Taken:	
<input type="checkbox"/> ANS. By	<input type="checkbox"/> NO REPLY Date

Mr. R. B. Brocklebank
United Engineers & Constructors Inc.
1401 Arch Street
Philadelphia, Pennsylvania 19105

Subject: W.O. 9779
WPPSS NUCLEAR PROJECT NO. 1
OPERATION OF HANFORD NO. 1
WITH HIGH RIVER TEMPERATURES

*Janet,
Please obtain
copy of Bmw
report. Ed*

AUG 29 1973

ECS
RJT
NEP
EJW
EEH
NCB
AJH
Code
<i>Hanford #1</i>
<i>E18</i>

Dear Dick:

Attached for your information are the following:

- 1) "An Evaluation of the Environmental Effects of the Hanford No. 1 Power Plant During High Ambient Columbia River Temperatures" dated August 15, 1973, Battelle Memorial Institute.
- 2) Copy of Washington State Department of Ecology Order allowing increase in river water temperature for Hanford No. 1 operation.

No reply required.

Very truly yours,

J P Thomas

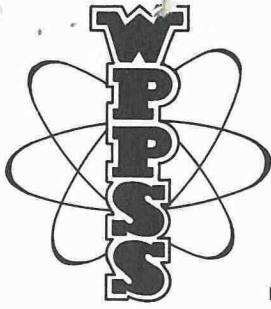
J. P. THOMAS
Project Manager

JPT:mac
Attachments

cc: PC Otness - BPA

copy: R. Ryland

RECEIVED
AUG 21 1973
PROJECT
MANAGER



Washington Public Power Supply System
A JOINT OPERATING AGENCY

P. O. BOX 968 301 FIFTH AVE. RICHLAND, WASHINGTON 99352 TELEPHONE (509) 946-9681

OFFICIAL FILE COPY	
No.	Date
	AUG 14 1973
Referred To:	
Action Taken:	
<input type="checkbox"/> ANS.	<input type="checkbox"/> NO REPLY
By	Date

AUG 20 1973

~~BOS~~
~~RJT~~
~~NEF~~
EJW
EHH
~~NCB~~
~~AJH~~

Code
E18

August 13, 1973

Mr. C.R. Foleen,
Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208

Dear Ray:

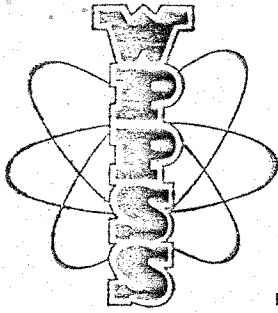
Attached are copies of our correspondence with the Washington Department of Fisheries and the National Marine Fisheries Service. We will provide you with copies of the river water temperature monitoring data also so that you will be fully informed of our reports to these two agencies.

Very truly yours,

J. J. STEIN
Managing Director

JJS/df

Inc - Stans
cy - Foleen
Galdhammer/Nyland
Olness
Hodel
Kropitzger



Washington Public Power Supply System
A JOINT OPERATING AGENCY

P. O. BOX 968 301 FIFTH AVE. RICHLAND, WASHINGTON 99352 TELEPHONE (509) 946-9681

August 13, 1973

Mr. Donald R. Johnson, Regional Director
National Marine Fisheries Service
1700 Westlake Avenue North
Seattle, Washington 98109

Dear Mr. Johnson:

Thank you for your comments of August 10, 1973.

We will send you copies of the weekly summary of the river water temperature monitoring data.

Very truly yours,

J. J. STEIN
Managing Director

JJS/df
bcc: DL Renberger, WPPSS
✓CR Foleen, BPA



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
1700 Westlake Avenue North
Seattle, Washington 98109

August 10, 1973

Mr. J. J. Stein, Managing Director
Washington Public Power Supply System
P. O. Box 968
Richland, Washington 99352

Dear Mr. Stein:

We have been very much concerned about the start-up of Washington Public Power Supply System's Hanford No. 1 project in view of the critical temperature conditions that exist in the Columbia River at present.

We concur in and strongly support the views expressed by the Washington Department of Fisheries in its letter of August 8 to you regarding this matter. We would also appreciate receiving copies of the weekly summary of your temperature monitoring data.

We would like to point out that the temperature problem would be mitigated if the existing Hanford facility were designed to provide offstream cooling.

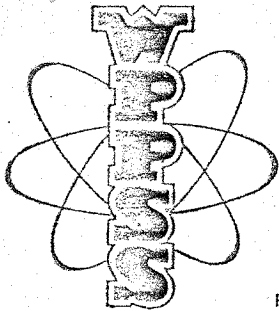
Thank you kindly for your assistance.

Sincerely,

A handwritten signature in cursive script, appearing to read "D. Johnson", is written over a horizontal line.

Donald R. Johnson
Regional Director

cc: Washington Department of Ecology
Washington Department of Game
Fish Commission of Oregon
Oregon State Game Commission
Idaho Fish & Game Department
Joseph Lightfoot, Thermal Power Plant Site
Evaluation Council
Mr. Agee, EPA, Seattle w/cc WDF letter
Regional Director, BSWF, Portland w/cc WDF letter
Washington Department of Fisheries



Washington Public Power Supply System
A JOINT OPERATING AGENCY

P. O. BOX 968 301 FIFTH AVE. RICHLAND, WASHINGTON 99352 TELEPHONE (509) 946-9681

August 13, 1973

Mr. Thor C. Tollefson, Director
Washington Department of Fisheries
Room 115, General Administration Building
Olympia, Washington 98504

Dear Mr. Tollefson:

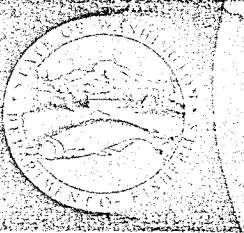
In accordance with your request of August 8, we will send you
copies of the weekly summary of the river water temperature
monitoring data.

Very truly yours,

J. J. STEIN
Managing Director

JJS/df

bcc: ~~DI~~ Renberger, WPPSS
✓ CR Foleen, BPA



WASHINGTON
Department of
FISHERIES

RECEIVED

AUG 9 1973

J. J. STEIN

DANIEL J. EVANS
GOVERNOR

ROOM 115, GENERAL ADMINISTRATION BUILDING • PHONE 753-8600
OLYMPIA, WASHINGTON 98504

THOR C. TOLLEFSON
DIRECTOR

August 8, 1973

Mr. J. J. Stein, Managing Director
301 Fifth Avenue
P.O. Box 968
Richland, WA 99352

Dear Mr. Stein:

This Department is concerned regarding the August 7, 1973 scheduled start-up of Washington Public Power's nuclear steam supply system at Hanford No. 1 and the resulting heated effluent that will be discharged into the Columbia River. We base our concern on the fact that water temperatures are presently 66 F at Priest Rapids Dam, 70 F in the Snake River and 69 F at McNary Dam. At the present time summer chinook adults are migrating up the Snake River and through the Hanford section of the Columbia River. In addition, summer chinook juveniles are migrating downstream past the Hanford section to the sea. Since temperatures in the area are already at critical levels for salmonids we feel any increase would result in an adverse effect on salmon runs upstream from McNary Dam.

We are therefore recommending to your agency that water temperatures in this area be monitored daily and that "Water Quality Criteria" as established by the Washington State Department of Ecology be strictly adhered to. Specifically we request that the special conditions regarding water temperature in the Columbia River from the Washington-Oregon Border (River Mile 309) to Priest Rapids Dam (River Mile 397) not be violated. In addition, we would like to receive a weekly summary of your temperature monitoring data.

Your cooperation will be appreciated in the protection of the valuable salmon resource utilizing this section of the river.

Very truly yours,
Thor C. Tollefson
Thor C. Tollefson
Director

- cc: Washington Department of Ecology
- Washington Game Department
- Oregon Fish Commission
- Oregon Game Commission
- Idaho Fish and Game Department
- National Marine Fisheries Services, Portland
- Joseph Lightfoot - Thermal Power Plant Site
- Evaluation Council