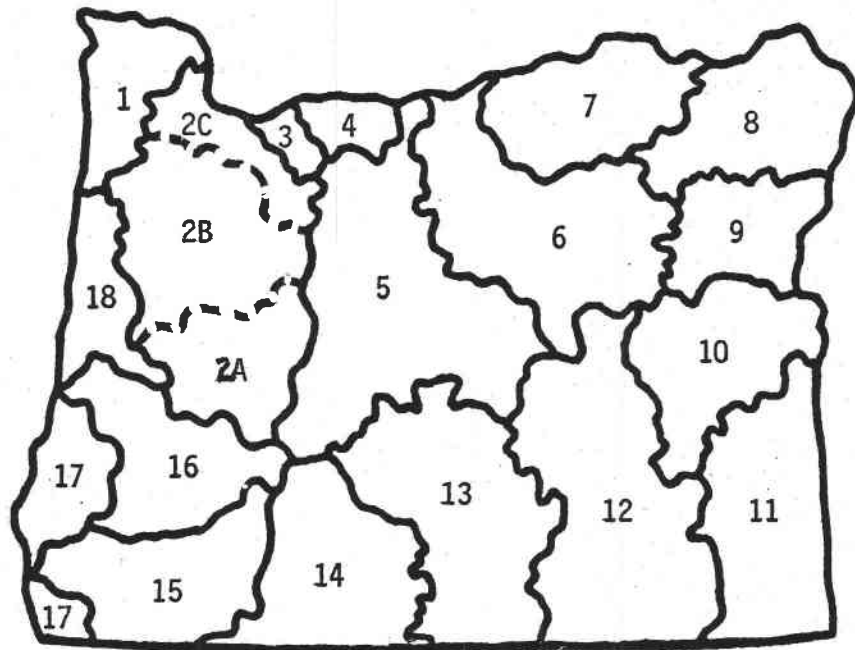


A RESOURCE SURVEY OF RIVER ENERGY
AND LOW-HEAD HYDROELECTRIC POWER POTENTIAL
IN OREGON

APPENDIX 9: POWDER BASIN



WATER RESOURCES RESEARCH INSTITUTE
Oregon State University
Corvallis, Oregon 97331

INDEX TO APPENDIX 9, POWDER BASIN

Drainage Basin Map 9-ii

Reach Hydro Potential Characteristics Sheets

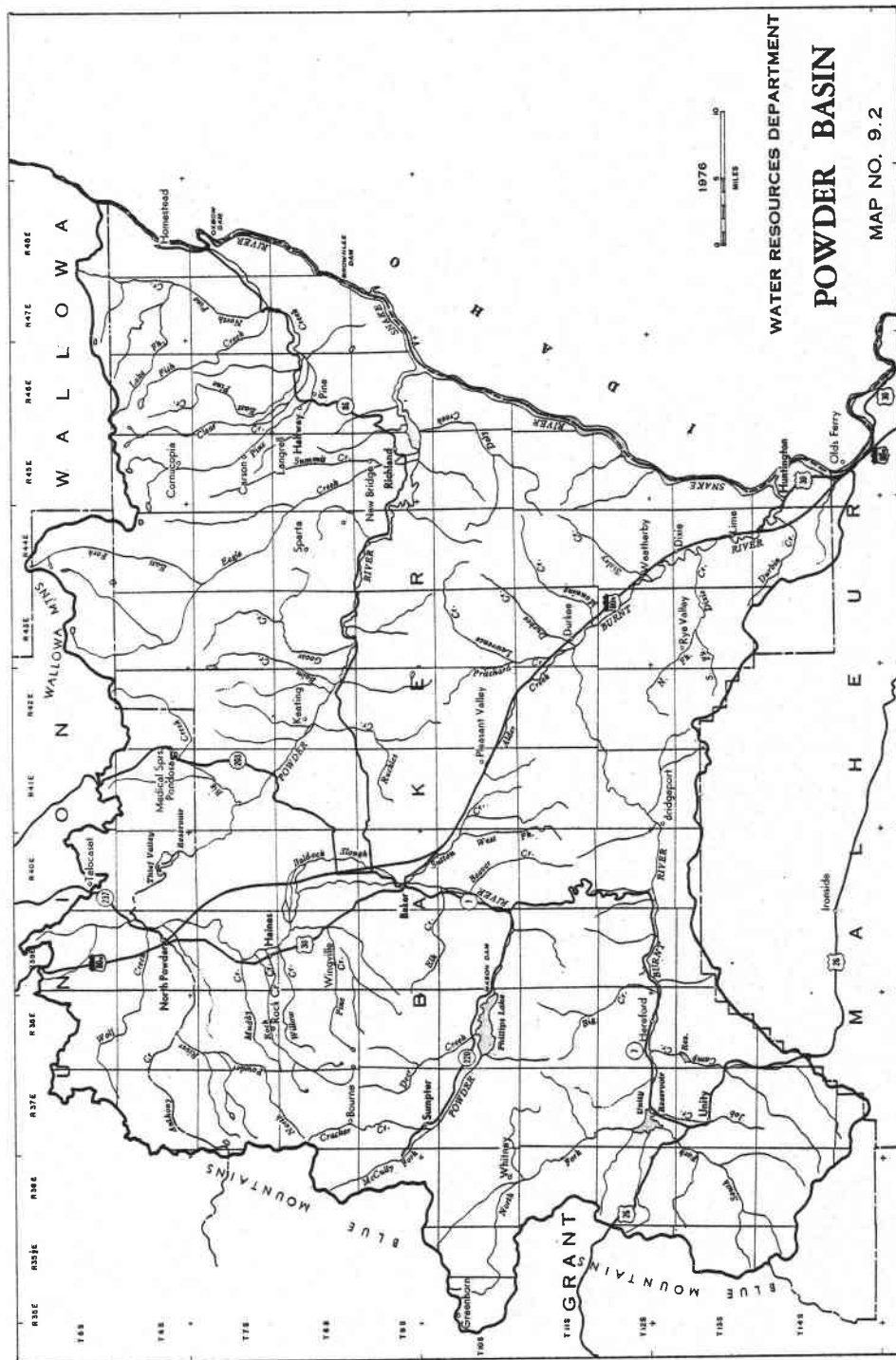
Pine Creek 9-1 to 9-3

Powder River Main Stem 9-4 to 9-17

Eagle Creek 9-18 to 9-21

Burnt River 9-22 to 9-31

Reach Feasibility Analysis Sheets 9-32 to 9-34



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-117-000-R0001

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 30, T7S, R48E
D. Latitude, Longitude	44°56'N, 116°54'W
E. Stream Name	Pine Creek
F. Major Basin Name	Powder
G. River Mile	0.0 to 7.8

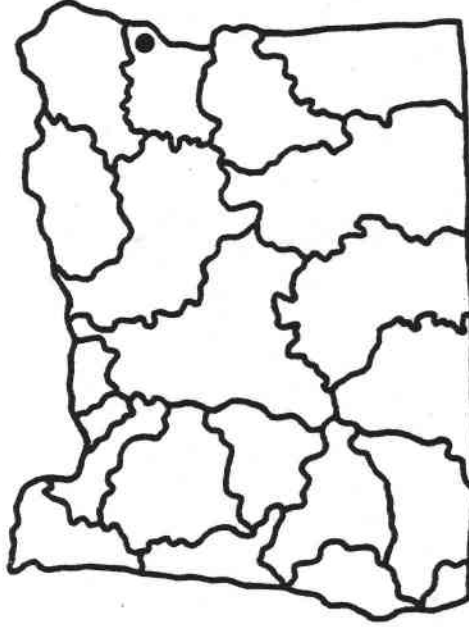
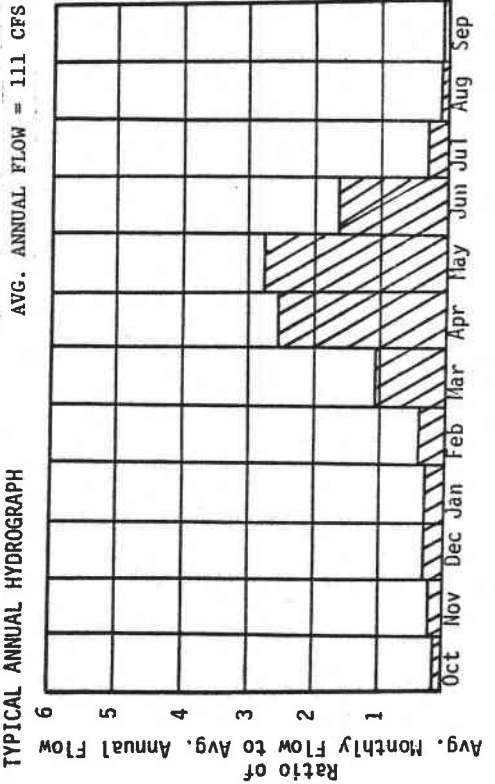
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	2240	Ft. MSL
B. Downstream Elevation of Reach	1680	Ft. MSL
C. Total Available Head in Reach	560	Ft.
D. Average Slope in Reach	71.8	Ft./Mi.
E. Drainage Area above Reach Mouth	302.1	Sq. Mi.
F. Inflow Classification	Natural	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

I EXCEEDANCE I	I DISCHARGE I	I THEORETICAL I	I ANNUAL ENERGY I	I PLANT I
I PERCENTAGE I	I CFS	I PLANT SIZE I	I AVAILABLE I	I FACTOR I
I	I	I MW	I GWH	I
I 95	I 8.0	I .38	I 3.33	I 1.000
I 80	I 17.5	I .83	I 6.80	I .932
I 50	I 47.9	I 2.28	I 15.01	I .753
I 30	I 106.2	I 5.04	I 24.70	I .559
I 10	I 287.0	I 13.62	I 39.73	I .333

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-117-000-R0002

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 8, T8S, R47E
D. Latitude, Longitude	44° 52' N, 116° 59' W
E. Stream Name	Pine Creek
F. Major Basin Name	Powder
G. River Mile	7.8 to 14.4

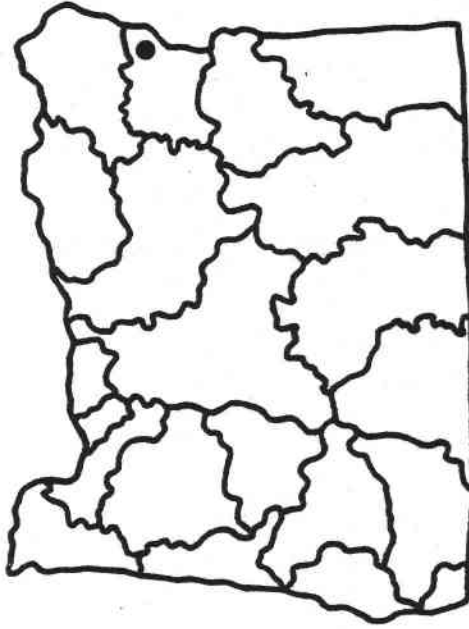
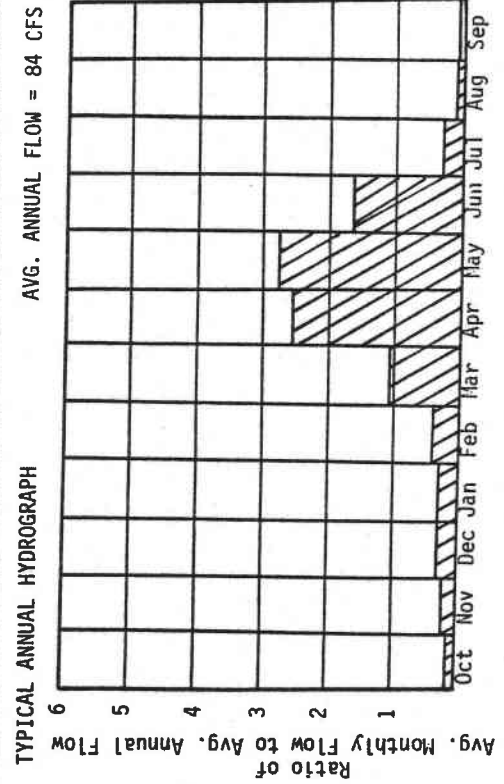
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	2430	Ft. MSL
B. Downstream Elevation of Reach	2240	Ft. MSL
C. Total Available Head in Reach	190	Ft.
D. Average Slope in Reach	28.8	Ft./Mi.
E. Drainage Area above Reach Mouth	197.0	Sq. Mi.
F. Inflow Classification	Natural	

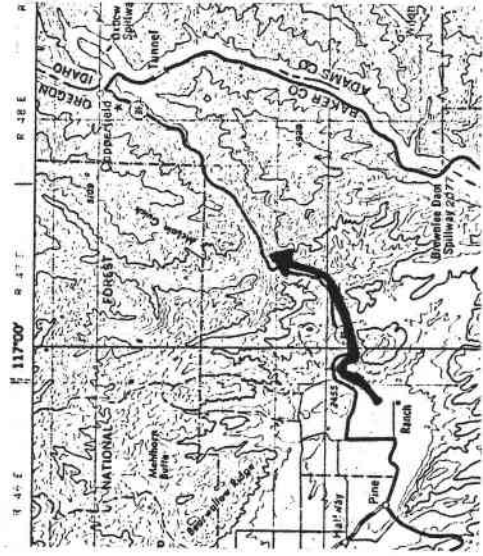
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS	I THEORETICAL I PLANT SIZE I MW	I ANNUAL ENERGY I AVAILABLE I GWH	I PLANT I FACTOR I
I 95 I	I 6.0 I	I .10 I	I .84 I	I 1.000 I
I 80 I	I 13.4 I	I .22 I	I 1.76 I	I .931 I
I 50 I	I 37.7 I	I .61 I	I 3.99 I	I .750 I
I 30 I	I 80.8 I	I 1.30 I	I 6.42 I	I .563 I
I 10 I	I 209.1 I	I 3.37 I	I 10.04 I	I .340 I

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-117-000-R0003

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 18, T8S, R47E
D. Latitude, Longitude	44° 53' N, 117° 02' W
E. Stream Name	Pine Creek
F. Major Basin Name	Powder
G. River Mile	14.4 to H.W.

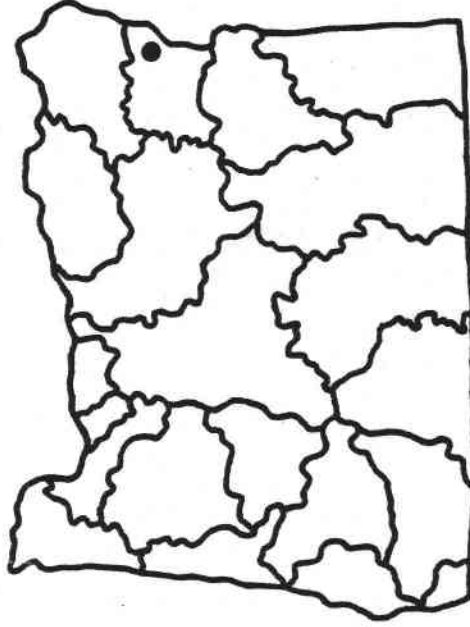
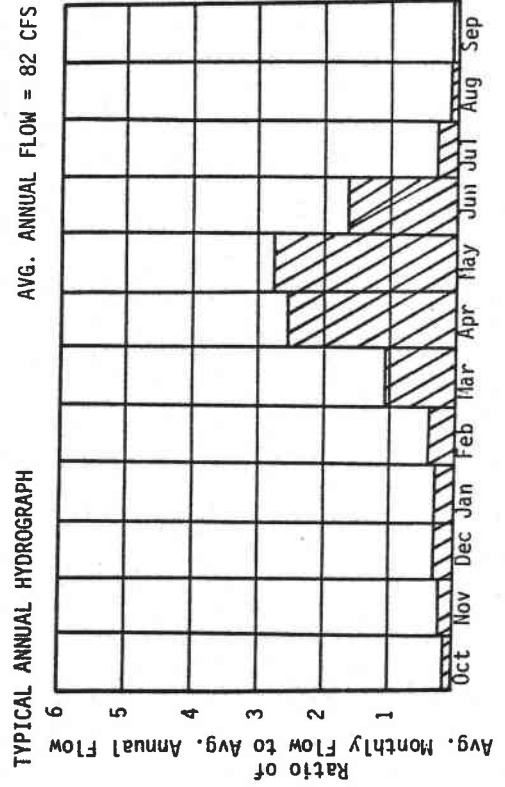
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	--	Ft. MSL
B. Downstream Elevation of Reach	--	Ft. MSL
C. Total Available Head in Reach	66	Ft.
D. Average Slope in Reach	--	Ft./Mi.
E. Drainage Area above Reach Mouth	157.2	Sq. Mi.
F. Inflow Classification	Natural	

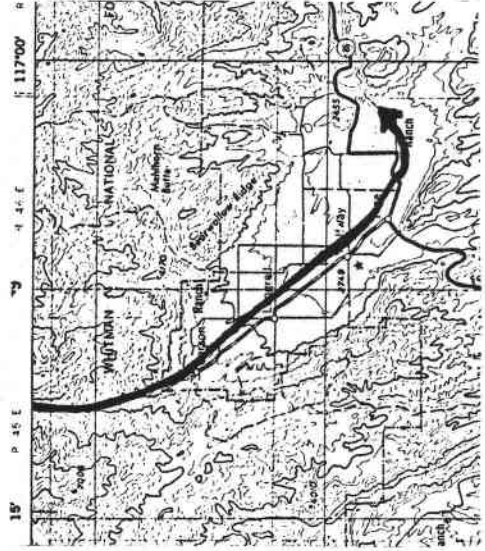
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS				REACH FLOW DURATION AND THEORETICAL POTENTIAL			
I EXCEEDANCE I	I DISCHARGE I	I THEORETICAL I	I ANNUAL ENERGY I	I PLANT I	I FACTOR I	I	I
I PERCENTAGE I	I CFS I	I PLANT SIZE I	I AVAILABLE I	I GWH I	I	I	I
I 95 I	I 5.8 I	I .03 I	I .28 I	I 1.000 I	I	I	I
I 80 I	I 13.0 I	I .07 I	I .59 I	I .931 I	I	I	I
I 50 I	I 36.7 I	I .21 I	I 1.35 I	I .750 I	I	I	I
I 30 I	I 78.4 I	I .44 I	I 2.17 I	I .564 I	I	I	I
I 10 I	I 202.0 I	I 1.13 I	I 3.38 I	I .341 I	I	I	I

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-000-R0002

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 29, T9S, R45E
D. Latitude, Longitude	44°45'N, 117°14'W
E. Stream Name	Powder River
F. Major Basin Name	Powder
G. River Mile	9.5 to 21.3

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	2250	Ft. MSL
B. Downstream Elevation of Reach	2077	Ft. MSL
C. Total Available Head in Reach	173	Ft.
D. Average Slope in Reach	14.7	Ft./Mi.
E. Drainage Area above Reach Mouth	1414	Sq. Mi.
F. Inflow Classification	Regulated	

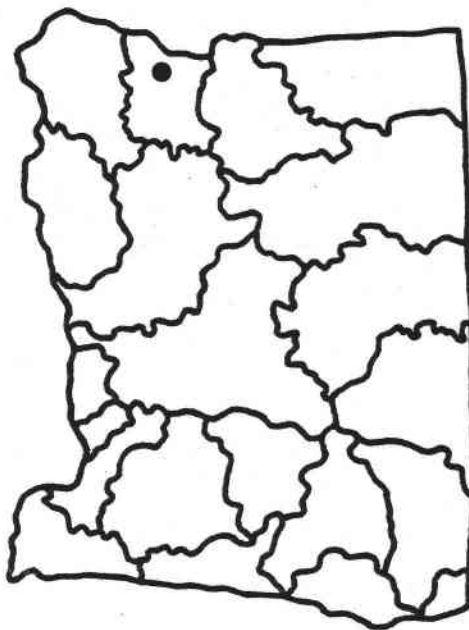
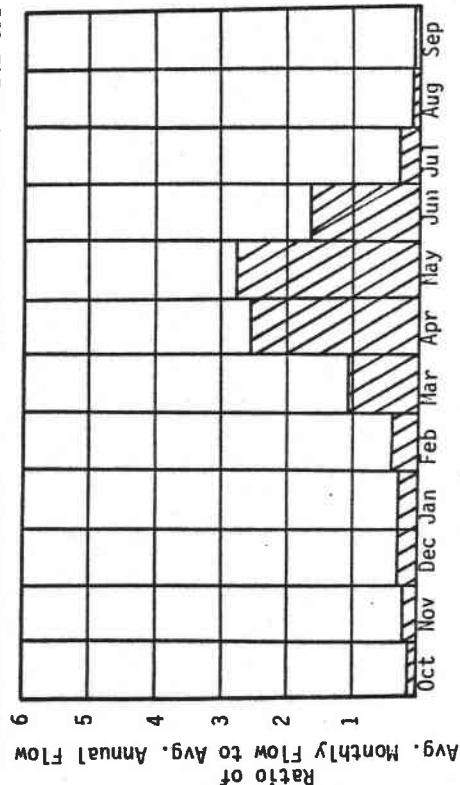
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

I EXCEEDANCE I	I DISCHARGE I	I THEORETICAL I	I ANNUAL ENERGY I	I PLANT I
I PERCENTAGE I	I CFS I	I PLANT SIZE I	I AVAILABLE I	I FACTOR I
I	I	I MW I	I GWH I	I
I 95 I	I 18.4 I	I .27 I	I 2.36 I	I 1.000 I
I 80 I	I 37.5 I	I .55 I	I 4.51 I	I .936 I
I 50 I	I 95.2 I	I 1.40 I	I 9.32 I	I .763 I
I 30 I	I 231.3 I	I 3.39 I	I 16.32 I	I .549 I
I 10 I	I 707.4 I	I 10.37 I	I 28.55 I	I .314 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 242 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-000-R0003

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 5, T9S, R44E
D. Latitude, Longitude	44°48'N, 117°21'W
E. Stream Name	Powder River
F. Major Basin Name	Powder
G. River Mile	21.3 to 34.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	2630	Ft. MSL
B. Downstream Elevation of Reach	2250	Ft. MSL
C. Total Available Head in Reach	380	Ft.
D. Average Slope in Reach	29.9	Ft./Mi.
E. Drainage Area above Reach Mouth	1352	Sq. Mi.
F. Inflow Classification	Regulated	

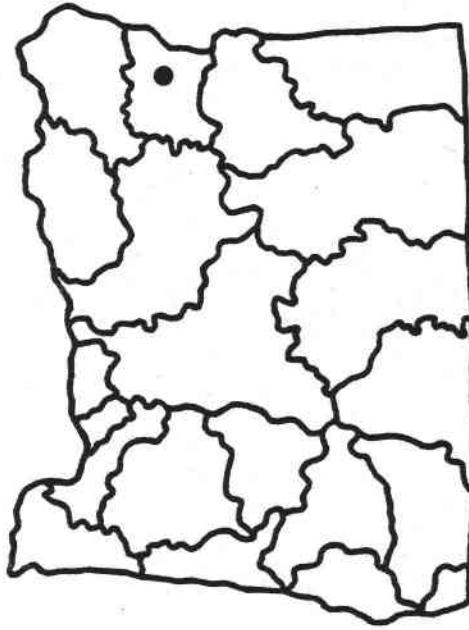
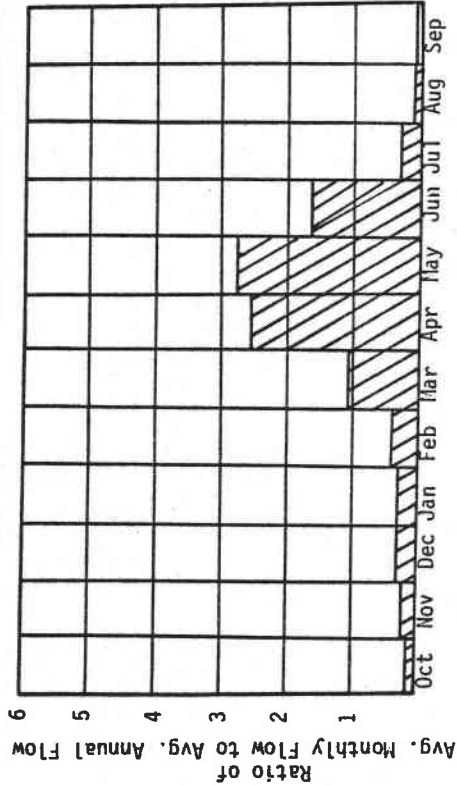
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS I	I THEORETICAL I PLANT SIZE I MW I	I ANNUAL ENERGY I AVAILABLE I GWH I	I PLANT I FACTOR I
I 95 I	I 17.8 I	I .57 I	I 5.02 I	I 1.000 I
I 80 I	I 36.4 I	I 1.17 I	I 9.62 I	I .936 I
I 50 I	I 92.7 I	I 2.99 I	I 19.95 I	I .762 I
I 30 I	I 224.6 I	I 7.23 I	I 34.82 I	I .550 I
I 10 I	I 683.7 I	I 22.02 I	I 60.73 I	I .315 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 236 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-000-R0004

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 31, T8S, R43E
D. Latitude, Longitude	44°44'N, 117°29'W
E. Stream Name	Powder River
F. Major Basin Name	Powder
G. River Mile	34.0 to 43.0

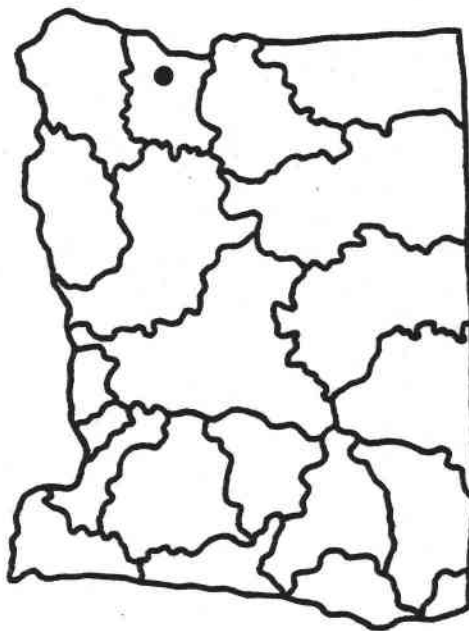
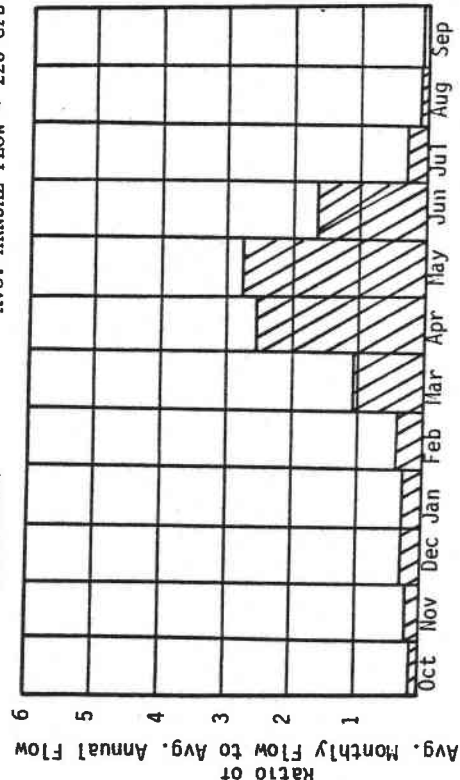
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	2650	Ft. MSL
B. Downstream Elevation of Reach	2630	Ft. MSL
C. Total Available Head in Reach	20	Ft.
D. Average Slope in Reach	2.2	Ft./Mi.
E. Drainage Area above Reach Mouth	12.77	Sq. Mi.
F. Inflow Classification	Regulated	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS I	I THEORETICAL I PLANT SIZE I MW I	I AVAILABLE I ENERGY I GWHR I	I PLANT I FACTOR I I
I 95 I	I 17.1 I	I .03 I	I .25 I	I 1.000 I
I 80 I	I 35.1 I	I .06 I	I .49 I	I .936 I
I 50 I	I 89.6 I	I .15 I	I 1.01 I	I .762 I
I 30 I	I 215.9 I	I .37 I	I 1.76 I	I .550 I
I 10 I	I 653.4 I	I 1.11 I	I 3.06 I	I .316 I

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-000-R0005

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 22, T8S, R42E
D. Latitude, Longitude	44° 52' N, 117° 33' W
E. Stream Name	Powder River
F. Major Basin Name	Powder
G. River Mile	43.0 to 53.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	2720	Ft. MSL
B. Downstream Elevation of Reach	2650	Ft. MSL
C. Total Available Head in Reach	70	Ft.
D. Average Slope in Reach	7	Ft./Mi.
E. Drainage Area above Reach Mouth	1181	Sq. Mi.
F. Inflow Classification	Regulated	

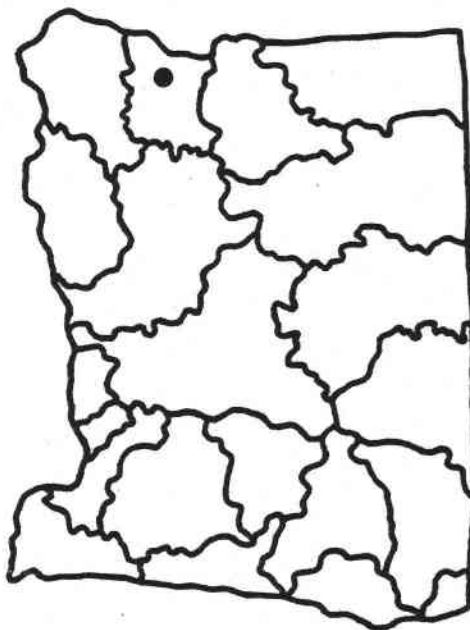
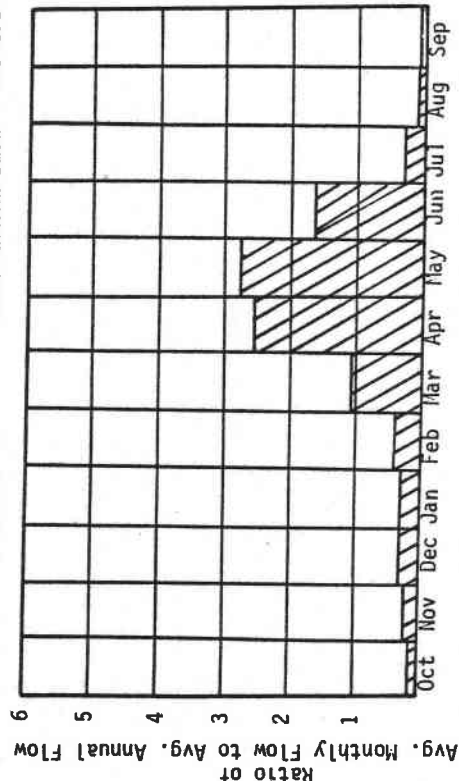
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

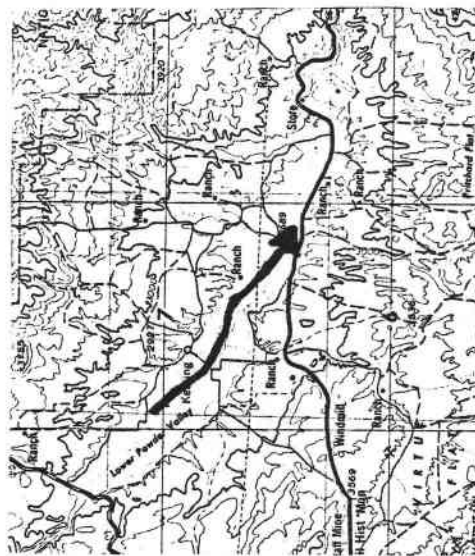
I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS I	I THEORETICAL I PLANT SIZE I MW I	I ANNUAL ENERGY I AVAILABLE I GWH I	I PLANT I FACTOR I I
I 95 I	I 16.1 I	I .10 I	I .84 I	I 1.000 I
I 80 I	I 33.3 I	I .20 I	I 1.62 I	I .936 I
I 50 I	I 85.5 I	I .51 I	I 3.38 I	I .761 I
I 30 I	I 204.8 I	I 1.21 I	I 5.86 I	I .551 I
I 10 I	I 614.4 I	I 3.64 I	I 10.12 I	I .317 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 215 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH # 02-500-240-120-000-R0006

I. LOCATION

A.	State	Oregon
B.	County	Baker
C.	Township, Range	Sec. 2, T8S, R41E
D.	Latitude, Longitude	44°54' N, 117°39' W
E.	Stream Name	Powder River
F.	Major Basin Name	Powder
G.	River Mile	53.0 to 63.4

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

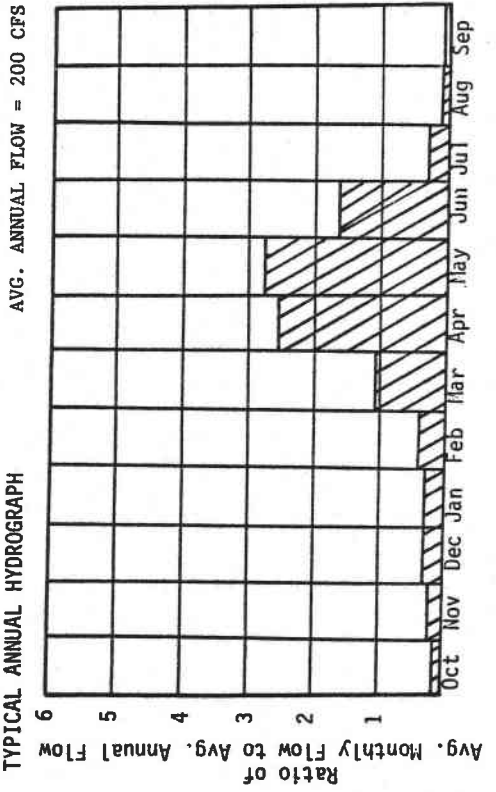
	Ft.	Msl
A. Upstream Elevation of Reach	2825	
B. Downstream Elevation of Reach	2720	
C. Total Available Head in Reach	105	
D. Average Slope in Reach	10.1	%
E. Drainage Area above Reach Mouth	1070	Sq. Mi.
F. Inflow Classification	Regulated	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

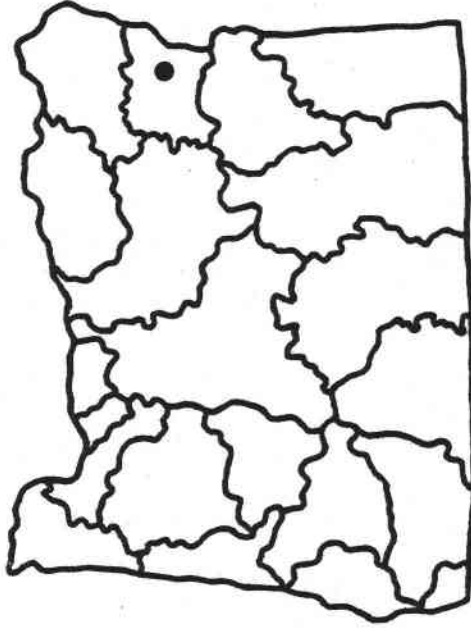
ENERGY CHARACTERISTICS

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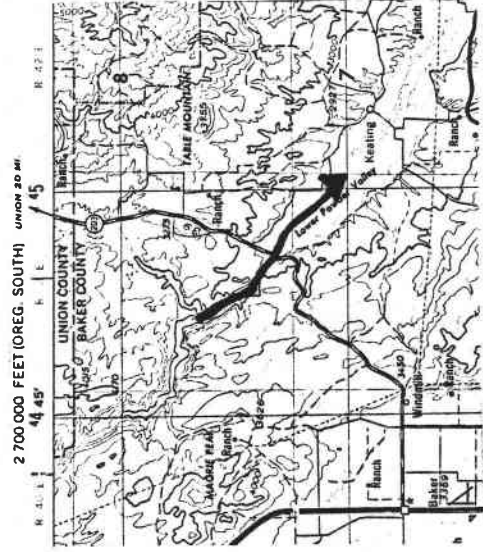
IV. TYPICAL ANNUAL HYDROGRAPH



AVG. ANNUAL FLOW = 200 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-000-R0007

I. LOCATION

A. State	Oregon
B. County	Baker-Union
C. Township, Range	Sec. 12, T7S, R40E
D. Latitude, Longitude	44°52'N, 117°45'W
E. Stream Name	Powder River
F. Major Basin Name	Powder
G. River Mile	63.4 to 71.8

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	3150	Ft. MSL
B. Downstream Elevation of Reach	2825	Ft. MSL
C. Total Available Head in Reach	325	Ft.
D. Average Slope in Reach	22.9	Ft./Mi.
E. Drainage Area above Reach Mouth	934	Sq. Mi.
F. Inflow Classification	Regulated	

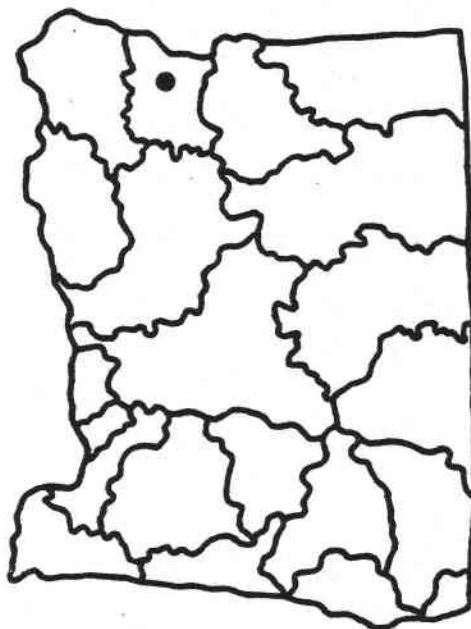
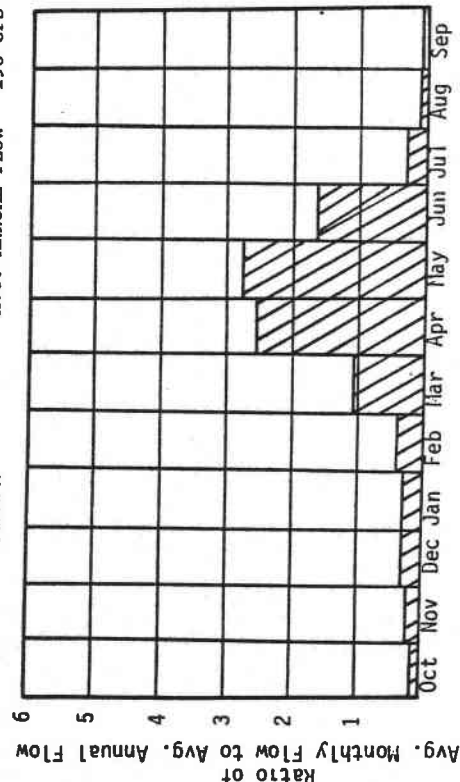
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

I EXCEEDANCE I	I DISCHARGE I	I THEORETICAL I	I ANNUAL ENERGY I	I PLANT I
I PERCENTAGE I	I CFS I	I PLANT SIZE I	I AVAILABLE I	I FACTOR I
I	I	I MW I	I GWH I	I I
I 95 I	I 14.3 I	I .39 I	I 3.44 I	I 1.000 I
I 80 I	I 29.8 I	I .82 I	I 6.71 I	I .935 I
I 50 I	I 77.3 I	I 2.13 I	I 14.16 I	I .760 I
I 30 I	I 182.5 I	I 5.03 I	I 24.32 I	I .552 I
I 10 I	I 537.7 I	I 14.81 I	I 41.46 I	I .320 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 190 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER-GRANGEVILLE



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-000-R0008

I. LOCATION

A. State	Oregon
B. County	Baker-Union
C. Township, Range	Sec. 7, T6S, R40E
D. Latitude, Longitude	45°03'N, 117°52'W
E. Stream Name	Powder River
F. Major Basin Name	Powder
G. River Mile	75.0 to 83.2

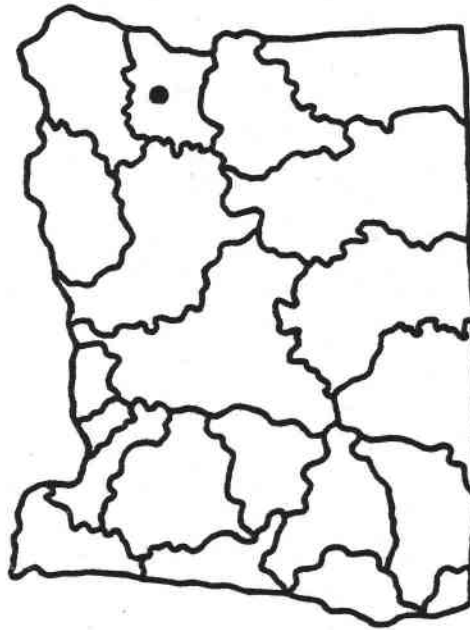
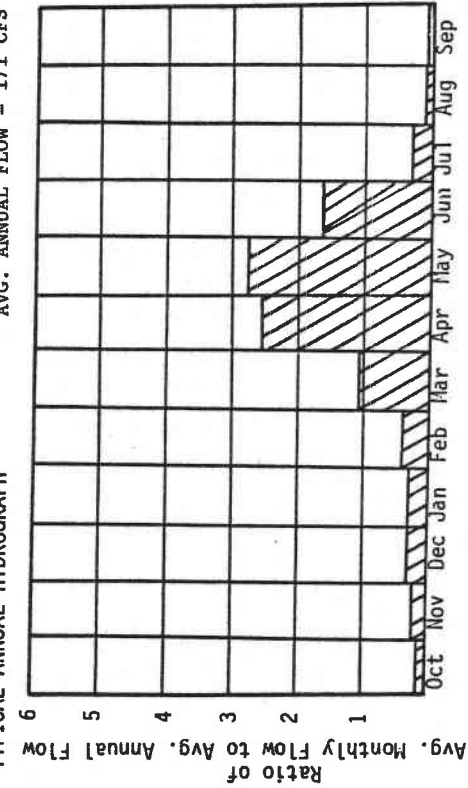
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	3200	Ft. MSL
B. Downstream Elevation of Reach	3150	Ft. MSL
C. Total Available Head in Reach	50	Ft.
D. Average Slope in Reach	8.9	Ft./Mi.
E. Drainage Area above Reach Mouth	892	Sq. Mi.
F. Inflow Classification	Regulated	

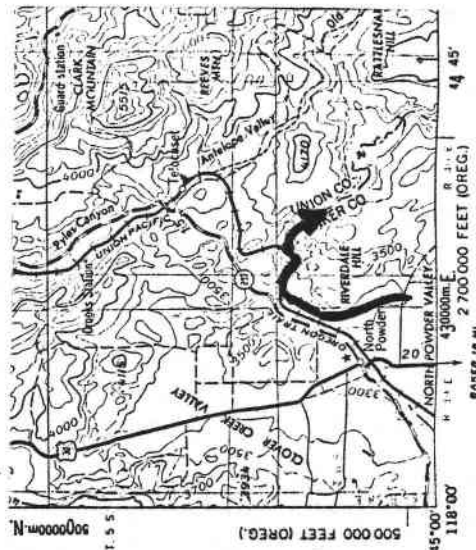
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS									
I	I	I	I	I	I	I	I	I	I
PERCENTAGE	DISCHARGE	THEORETICAL	PLANT SIZE	ANNUAL ENERGY	PLANT	FACTOR	AVAILABLE	GW	
95	12.7	.05	.47	1.000					
80	26.7	.11	.92	.934					
50	70.0	.30	1.97	.758					
30	163.1	.69	3.35	.554					
10	471.9	2.00	5.64	.322					

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: GRANGEVILLE



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-000-R0009

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 36, T6S, R39E
D. Latitude, Longitude	45°00'N, 117°53'W
E. Stream Name	Powder River
F. Major Basin Name	Powder
G. River Mile	83.2 to 95.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	3300	Ft. MSL
B. Downstream Elevation of Reach	3200	Ft. MSL
C. Total Available Head in Reach	100	Ft.
D. Average Slope in Reach	8.5	Ft./Mi.
E. Drainage Area above Reach Mouth	648	Sq. Mi.
F. Inflow Classification	Regulated	

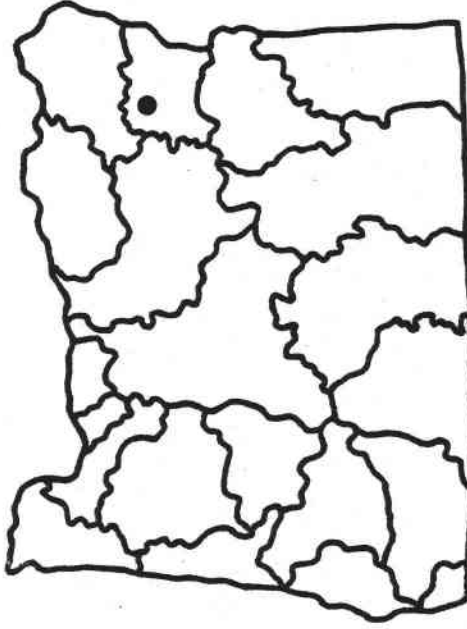
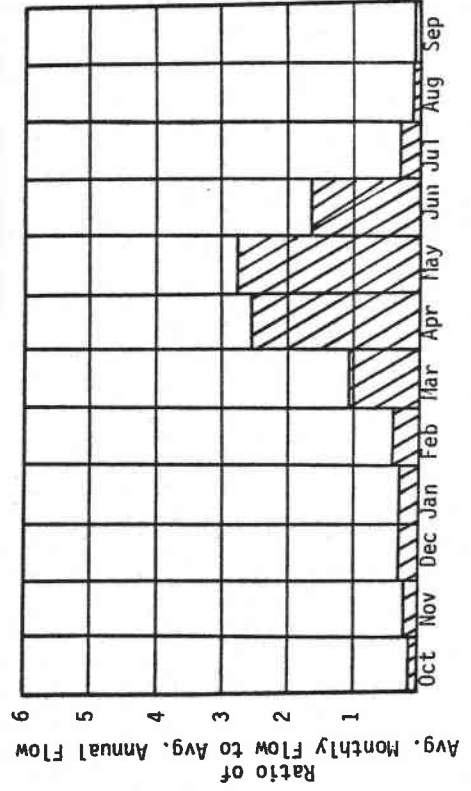
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

I	PERCENTAGE	I	DISCHARGE	I	THEORETICAL	I	ANNUAL ENERGY	I	PLANT
I	I	I	CFS	I	PLANT SIZE	I	AVAILABLE	I	FACTOR
I	I	I	I	I	MW	I	GWH	I	I
I	95	I	11.1	I	.09	I	.83	I	1.000
I	80	I	23.7	I	.20	I	1.64	I	.934
I	50	I	62.9	I	.53	I	3.53	I	.757
I	30	I	144.4	I	1.22	I	5.95	I	.555
I	10	I	410.0	I	3.47	I	9.90	I	.325

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 152 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: GRANGEVILLE-JORDAN VALLEY



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-000-R0010

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 21, T7S, R39E
D. Latitude, Longitude	44° 56' N, 117° 56' W
E. Stream Name	Powder River
F. Major Basin Name	Powder
G. River Mile	95.0 to 103.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	3341	Ft. MSL
B. Downstream Elevation of Reach	3300	Ft. MSL
C. Total Available Head in Reach	41	Ft.
D. Average Slope in Reach	5.1	Ft./Mi.
E. Drainage Area above Reach Mouth	593	Sq. Mi.
F. Inflow Classification	Regulated	

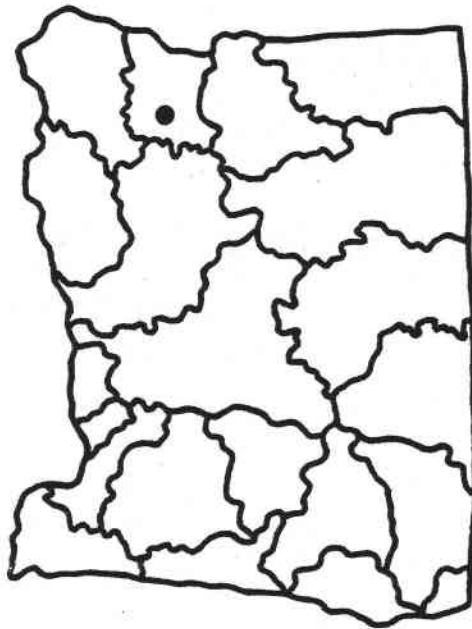
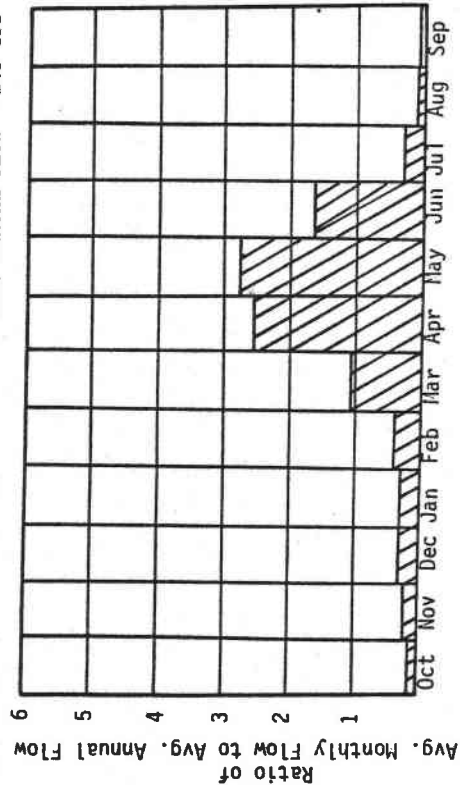
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

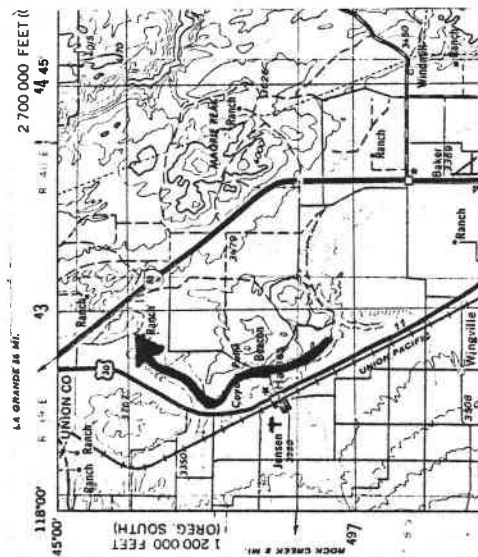
I EXCEEDANCE I	I DISCHARGE I	I THEORETICAL I	I ANNUAL ENERGY I	I PLANT I
I PERCENTAGE I	I CFS I	I PLANT SIZE I	I AVAILABLE I	I FACTOR I
I	I	I MW I	I GWH I	I
I 95 I	I 10.5 I	I .04 I	I .32 I	I 1.000 I
I 80 I	I 22.4 I	I .08 I	I .64 I	I .933 I
I 50 I	I 59.7 I	I .21 I	I 1.37 I	I .756 I
I 30 I	I 136.3 I	I .47 I	I 2.31 I	I .556 I
I 10 I	I 383.2 I	I 1.33 I	I 3.81 I	I .327 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 143 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: JORDAN VALLEY



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-000-R0011

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 32, T7S, R40E
D. Latitude, Longitude	44° 53' N, 117° 50' W
E. Stream Name	Powder River
F. Major Basin Name	Powder
G. River Mile	103.0 to 116.2

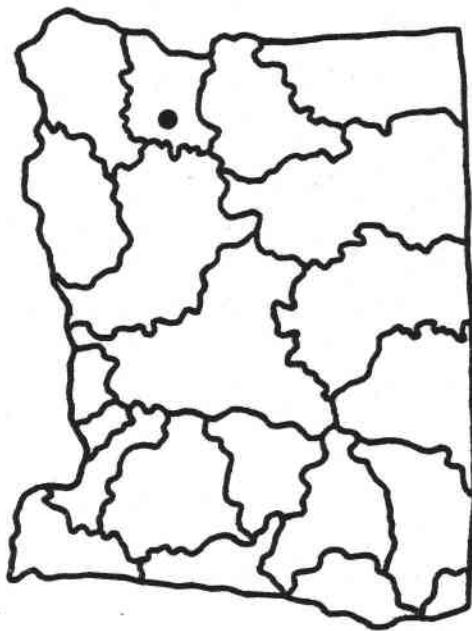
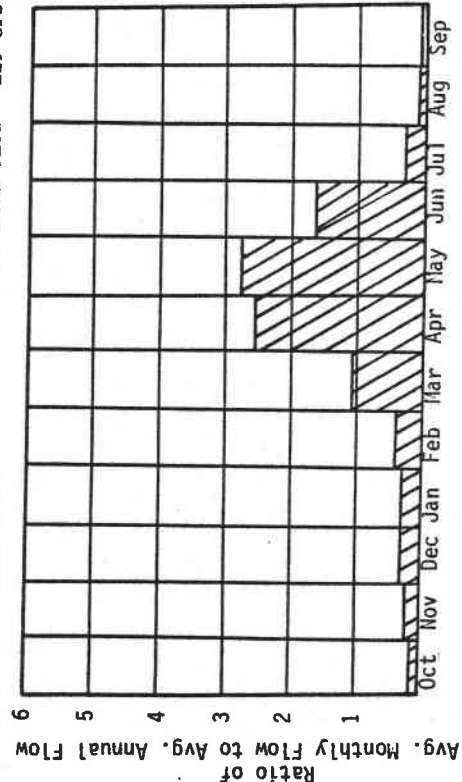
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	3383	Ft. MSL
B. Downstream Elevation of Reach	3341	Ft. MSL
C. Total Available Head in Reach	42	Ft.
D. Average Slope in Reach	3.2	Ft./Mi.
E. Drainage Area above Reach Mouth	511	Sq. Mi.
F. Inflow Classification	Regulated	

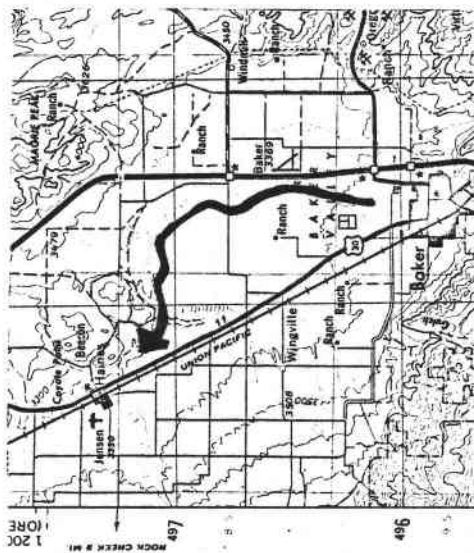
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS									
I	EXCEEDANCE I	DISCHARGE I	THEORETICAL I	ANNUAL ENERGY I	PLANT I				
I	PERCENTAGE I	CFS I	PLANT SIZE I	AVAILABLE I	FACTOR I				
I	I	I	MW I	GWH I	I				
I	95	I	9.4 I	I	.29 I				
I	80	I	20.2 I	I	.59 I				
I	50	I	54.6 I	I	1.28 I				
I	30	I	122.9 I	I	2.14 I				
I	10	I	340.2 I	I	3.49 I				
I				I	1.000 I				
I				I	.933 I				
I				I	.755 I				
I				I	.557 I				
I				I	.329 I				

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-000-R0012

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 8, T9S, R40E
D. Latitude, Longitude	44°47'N, 117°50'W
E. Stream Name	Powder River
F. Major Basin Name	Powder
G. River Mile	116.2 to 121.8

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

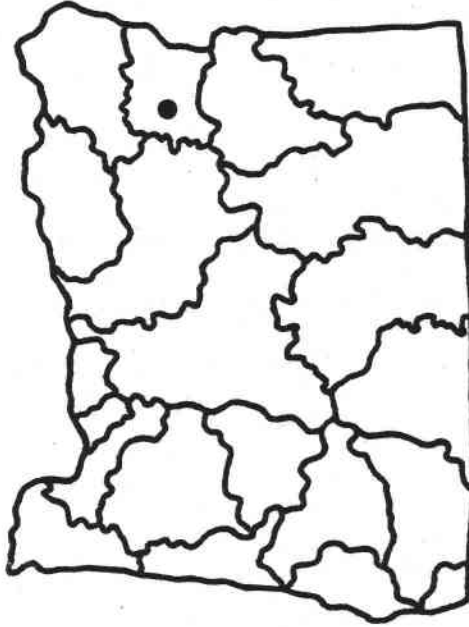
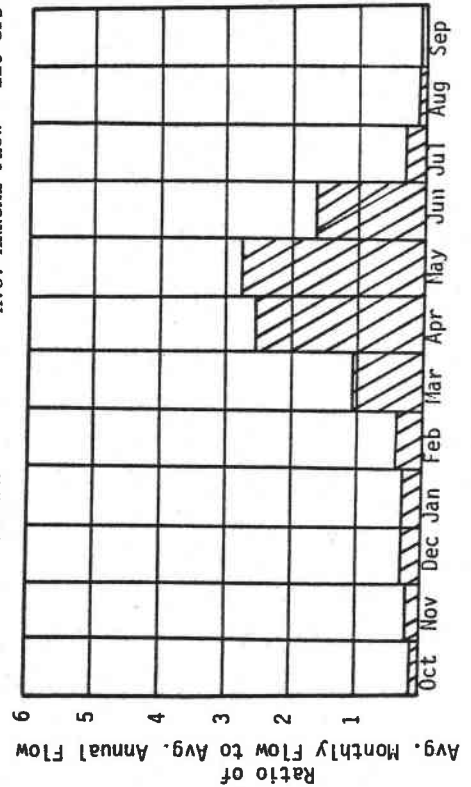
A. Upstream Elevation of Reach	3440	Ft. MSL
B. Downstream Elevation of Reach	3383	Ft. MSL
C. Total Available Head in Reach	57	Ft.
D. Average Slope in Reach	10.2	Ft./Mi.
E. Drainage Area above Reach Mouth	398	Sq. Mi.
F. Inflow Classification	Regulated	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

I EXCEEDANCE I	I DISCHARGE I	I THEORETICAL I	I ANNUAL ENERGY I	I PLANT I
I PERCENTAGE I	I CFS I	I PLANT SIZE I	I AVAILABLE I	I FACTOR I
I	I	I MW I	I GWH I	I
I 95 I	I 8.4 I	I .04 I	I .36 I	I 1.000 I
I 80 I	I 18.3 I	I .09 I	I .72 I	I .932 I
I 50 I	I 49.9 I	I .24 I	I 1.59 I	I .754 I
I 30 I	I 111.0 I	I .54 I	I 2.63 I	I .559 I
I 10 I	I 302.3 I	I 1.46 I	I 4.24 I	I .332 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 116 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-000-R0013

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 8, T10S, R40E
D. Latitude, Longitude	44°43'N, 117°50'W
E. Stream Name	Powder River
F. Major Basin Name	Powder
G. River Mile	121.8 to 129.0

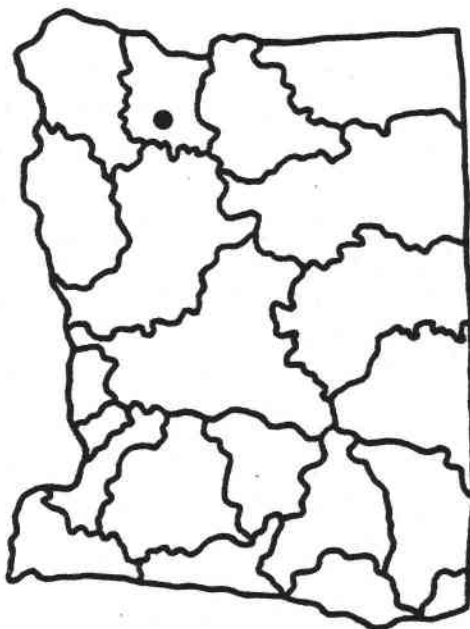
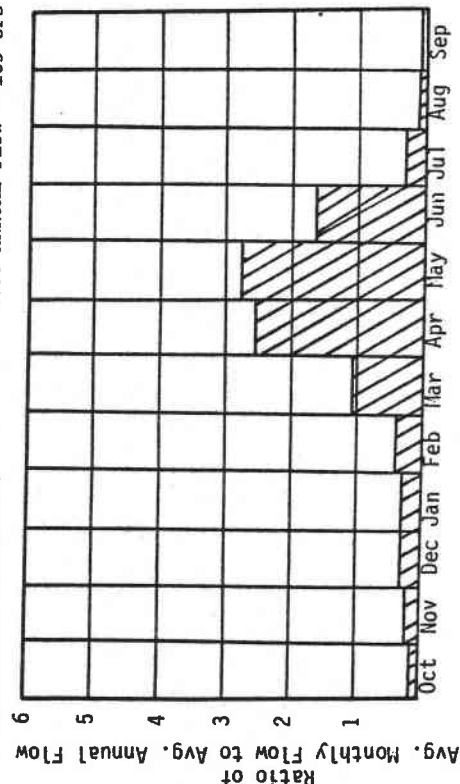
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	3600	Ft. MSL
B. Downstream Elevation of Reach	3440	Ft. MSL
C. Total Available Head in Reach	160	Ft.
D. Average Slope in Reach	22.2	Ft./Mi.
E. Drainage Area above Reach Mouth	313	Sq. Mi.
F. Inflow Classification	Regulated	

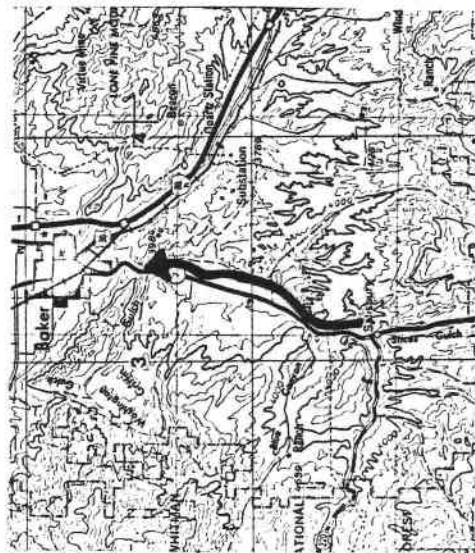
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

I EXCEEDANCE I	I DISCHARGE I	I THEORETICAL I	I ANNUAL ENERGY I	I PLANT I
I PERCENTAGE I	I CFS I	I PLANT SIZE I	I AVAILABLE I	I FACTOR I
I	I	I MW I	I GWH I	I
I 95 I	I 7.5 I	I .10 I	I .89 I	I 1.000 I
I 80 I	I 16.5 I	I .22 I	I 1.83 I	I .932 I
I 50 I	I 45.5 I	I .62 I	I 4.07 I	I .752 I
I 30 I	I 100.0 I	I 1.36 I	I 6.66 I	I .560 I
I 10 I	I 267.8 I	I 3.63 I	I 10.64 I	I .335 I

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-000-R0014

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 34, T10S, R39E
D. Latitude, Longitude	44°39'N, 117°55'W
E. Stream Name	Powder River
F. Major Basin Name	Powder
G. River Mile	129.0 to 139.4

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

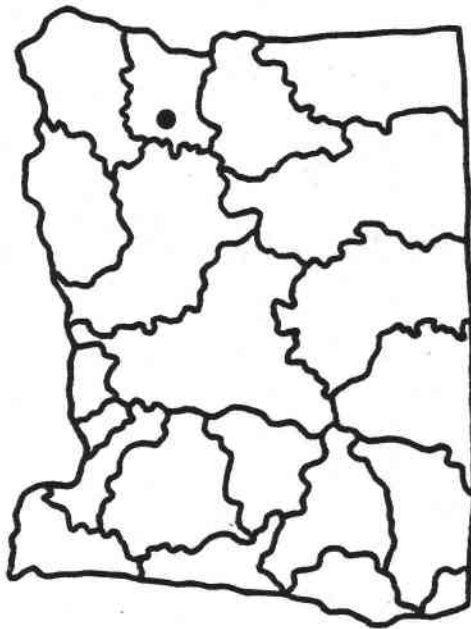
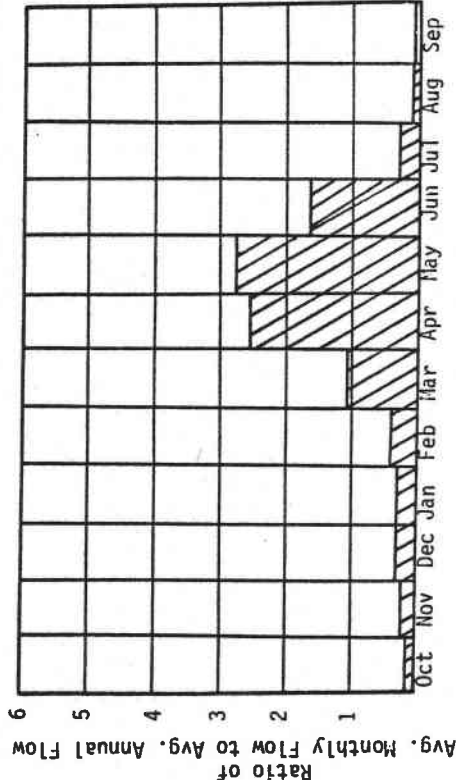
A. Upstream Elevation of Reach	3880	Ft. MSL
B. Downstream Elevation of Reach	3600	Ft. MSL
C. Total Available Head in Reach	280	Ft.
D. Average Slope in Reach	10.4	Ft./Mi.
E. Drainage Area above Reach Mouth	245	Sq. Mi.
F. Inflow Classification	Regulated	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

I EXCEEDANCE I	I DISCHARGE I	I THEORETICAL I	I ANNUAL ENERGY I	I PLANT I
I PERCENTAGE I	I CFS I	I PLANT SIZE I	I AVAILABLE I	I FACTOR I
I	I	I MW I	I GWH I	I I
I 95 I	I 6.6 I	I .16 I	I 1.36 I	I 1.000 I
I 80 I	I 14.6 I	I .35 I	I 2.83 I	I .931 I
I 50 I	I 40.7 I	I .96 I	I 6.35 I	I .751 I
I 30 I	I 88.1 I	I 2.09 I	I 10.29 I	I .562 I
I 10 I	I 231.1 I	I 5.48 I	I 16.23 I	I .338 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 92 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-000-R0015

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec.19, T10S, R38E
D. Latitude, Longitude	47°41'N, 118°00'W
E. Stream Name	Powder River
F. Major Basin Name	Powder
G. River Mile	144.5 to H.W.

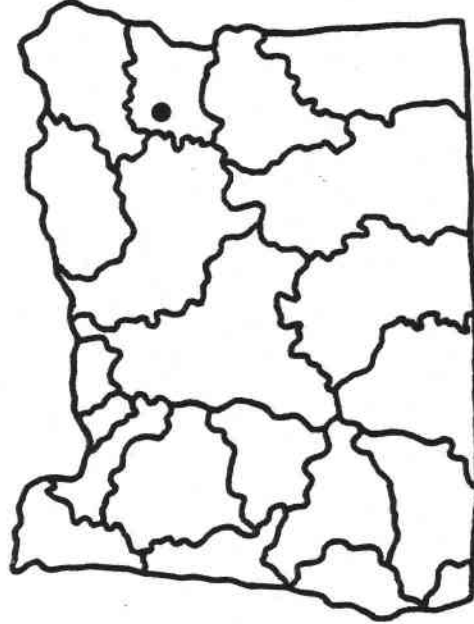
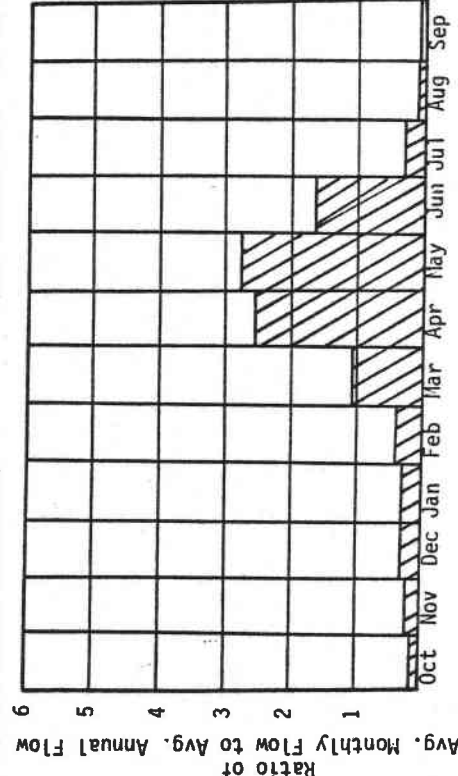
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	--	Ft. MSL
B. Downstream Elevation of Reach	--	Ft. MSL
C. Total Available Head in Reach	66	Ft.
D. Average Slope in Reach	--	Ft./Mi.
E. Drainage Area above Reach Mouth	92	Sq.Mi.
F. Inflow Classification	Natural	

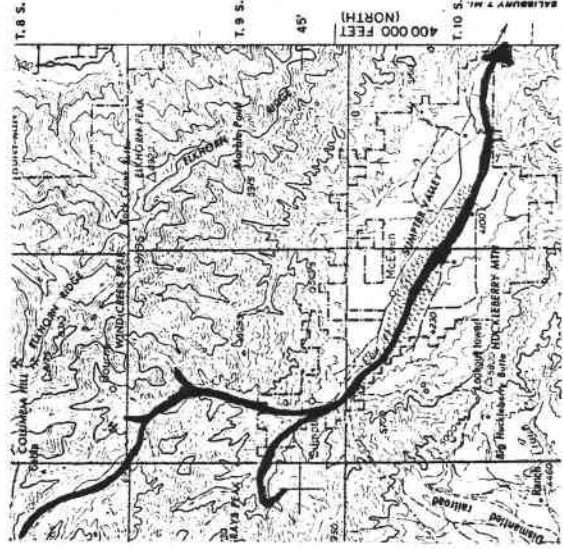
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

I EXCEEDANCE I	I DISCHARGE I	I THEORETICAL I	I ANNUAL ENERGY I	I PLANT I
I PERCENTAGE I	I CFS I	I PLANT SIZE I	I AVAILABLE I	I FACTOR I
I	I	I MW I	I GWH I	I
I 95	I 4.1 I	I .02 I	I .20 I	I 1.000 I
I 80	I 9.5 I	I .05 I	I .43 I	I .929 I
I 50	I 27.5 I	I .15 I	I 1.01 I	I .746 I
I 30	I 56.6 I	I .32 I	I 1.58 I	I .568 I
I 10	I 138.4 I	I .77 I	I 2.38 I	I .351 I

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: JORDON VALLEY-ADEL



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-010-R0001

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 23, T9S, R45E
D. Latitude, Longitude	44°46'N, 117°10'W
E. Stream Name	Eagle Creek
F. Major Basin Name	Powder
G. River Mile	0.0 to 4.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

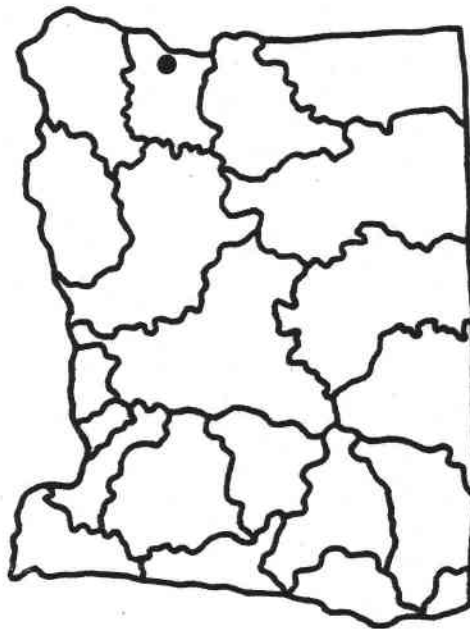
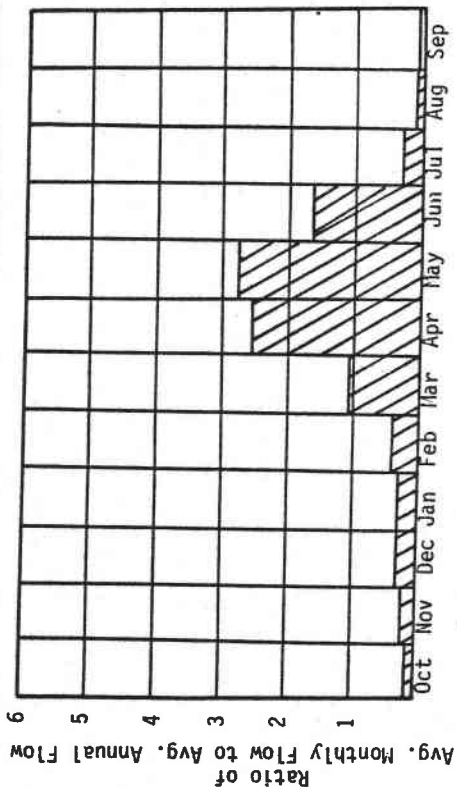
A. Upstream Elevation of Reach	2480	Ft. MSL
B. Downstream Elevation of Reach	2078	Ft. MSL
C. Total Available Head in Reach	402	Ft.
D. Average Slope in Reach	100.5	Ft./Mi.
E. Drainage Area above Reach Mouth	195	Sq. Mi.
F. Inflow Classification	Natural	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS I	I THEORETICAL I PLANT SIZE I MW I	I ANNUAL ENERGY I AVAILABLE I GWH I	I PLANT I FACTOR I I
I 95 I	I 7.7 I	I .26 I	I 2.29 I	I 1.000 I
I 80 I	I 16.9 I	I .57 I	I 4.69 I	I .932 I
I 50 I	I 46.3 I	I 1.58 I	I 10.39 I	I .753 I
I 30 I	I 101.9 I	I 3.47 I	I 17.04 I	I .560 I
I 10 I	I 273.8 I	I 9.33 I	I 27.30 I	I .334 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 107 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-010-R0002

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 29, T8S, R45E
D. Latitude, Longitude	44° 51' N, 117° 14' W
E. Stream Name	Eagle Creek
F. Major Basin Name	Powder
G. River Mile	4.0 to 12.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

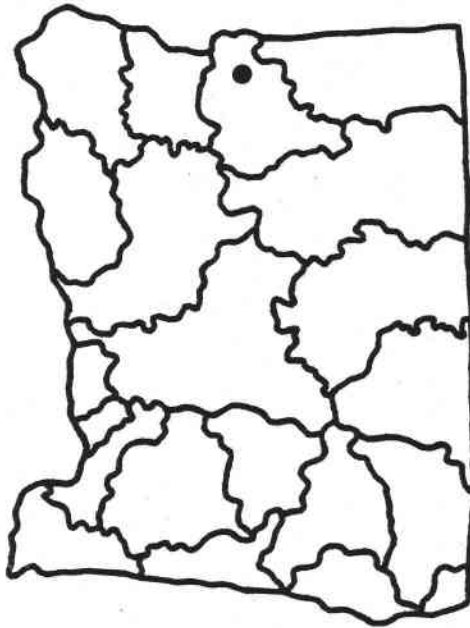
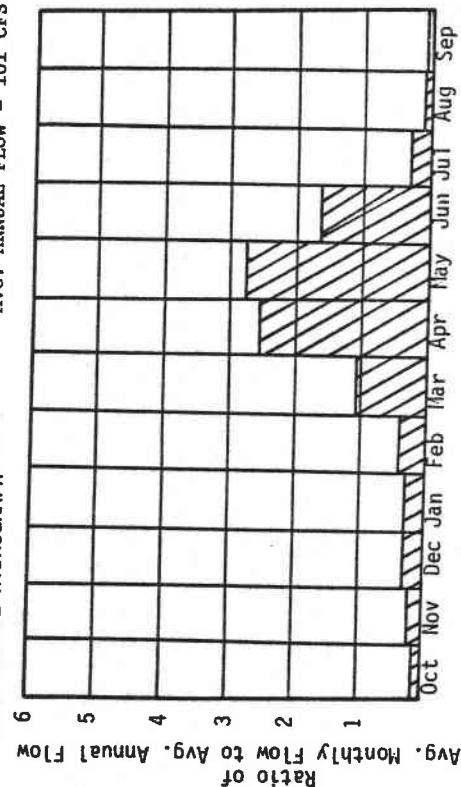
A. Upstream Elevation of Reach	2940	Ft. MSL
B. Downstream Elevation of Reach	2480	Ft. MSL
C. Total Available Head in Reach	460	Ft.
D. Average Slope in Reach	57.5	Ft./Mi.
E. Drainage Area above Reach Mouth	181	Sq. Mi.
F. Inflow Classification	Natural	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

I	PERCENTAGE	I	DISCHARGE	I	THEORETICAL	I	ANNUAL ENERGY	I	PLANT	I	FACTOR	I
I	I	I	CFS	I	PLANT SIZE	I	AVAILABLE	I	I	I	I	I
I	I	I	I	I	MW	I	GW	I	I	I	I	I
I	95	I	7.2	I	.28	I	2.47	I	1.000	I		I
I	80	I	15.9	I	.62	I	5.07	I	.932	I		I
I	50	I	44.0	I	1.72	I	11.30	I	.752	I		I
I	30	I	96.3	I	3.76	I	18.45	I	.561	I		I
I	10	I	256.4	I	10.00	I	29.38	I	.336	I		I

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-010-R0003

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 34, T7S, R44E
D. Latitude, Longitude	44°54'N, 117°17'W
E. Stream Name	Eagle Creek
F. Major Basin Name	Powder
G. River Mile	12.0 to 18.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	3360	Ft. MSL
B. Downstream Elevation of Reach	2940	Ft. MSL
C. Total Available Head in Reach	420	Ft.
D. Average Slope in Reach	70.0	Ft./Mi.
E. Drainage Area above Reach Mouth	140	Sq. Mi.
F. Inflow Classification	Natural	

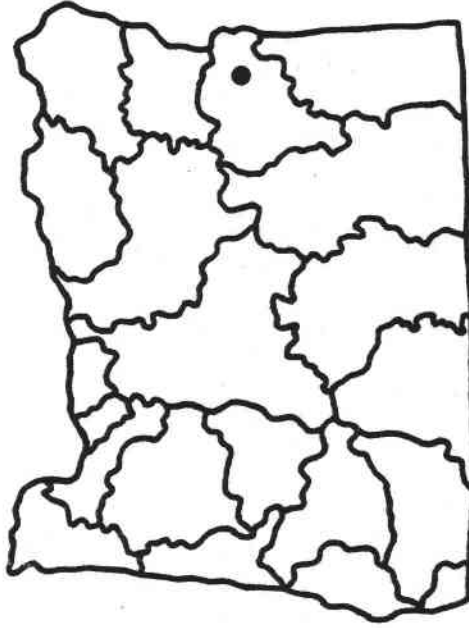
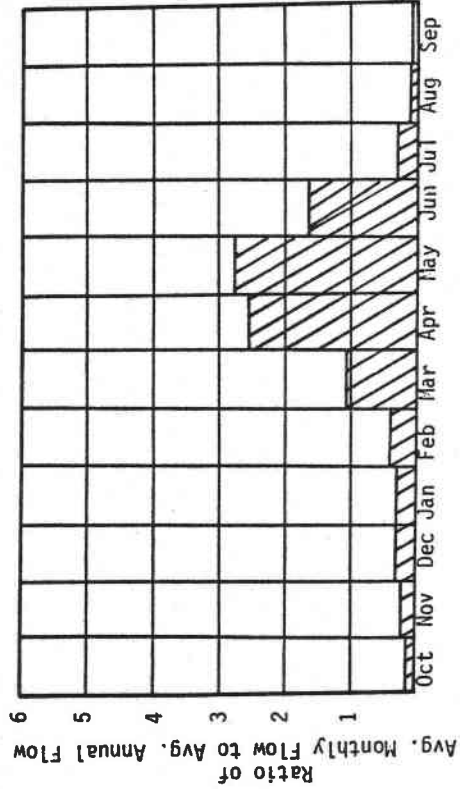
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

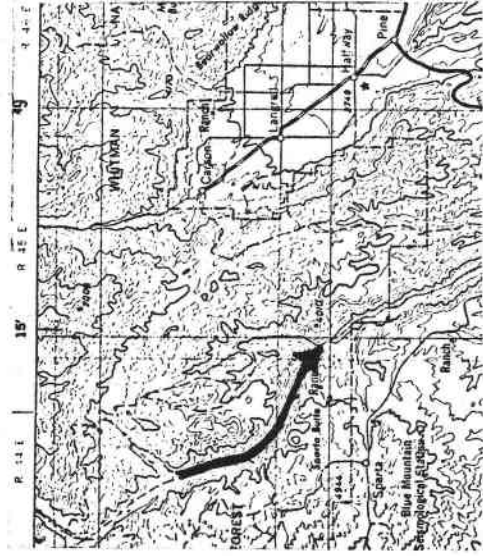
I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS I	I THEORETICAL I PLANT SIZE I MW I	I ANNUAL ENERGY I AVAILABLE I GWH I	I PLANT I FACTOR I
I 95 I	I 6.6 I	I .23 I	I 2.06 I	I 1.000 I
I 80 I	I 14.7 I	I .52 I	I 4.26 I	I .931 I
I 50 I	I 40.8 I	I 1.45 I	I 9.56 I	I .751 I
I 30 I	I 88.4 I	I 3.15 I	I 15.50 I	I .562 I
I 10 I	I 232.2 I	I 8.26 I	I 24.46 I	I .338 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 92 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-120-010-R0004

I. LOCATION

A. State	Oregon
B. County	Baker-Union
C. Township, Range	Sec. 21, T7S, R44E
D. Latitude, Longitude	44°56'N, 117°18'W
E. Stream Name	Eagle Creek
F. Major Basin Name	Powder
G. River Mile	18.0 to H.W.

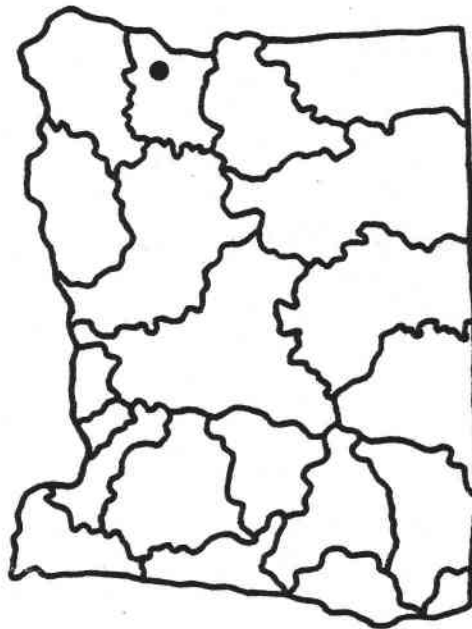
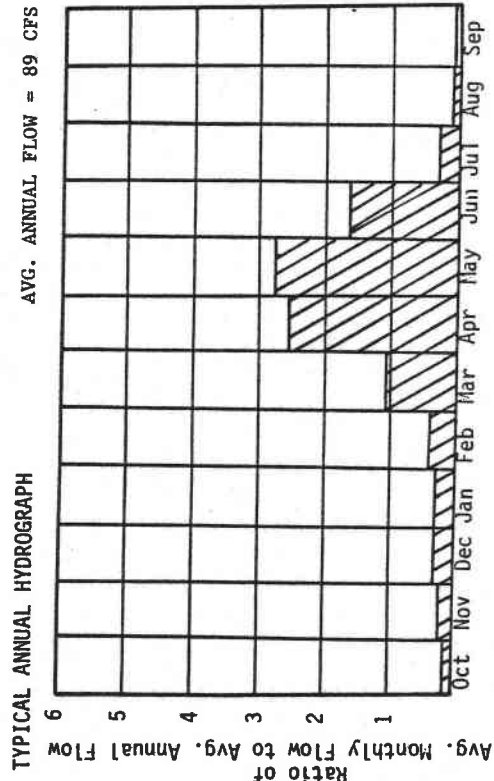
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	--	Ft. MSL
B. Downstream Elevation of Reach	--	Ft. MSL
C. Total Available Head in Reach	66	Ft.
D. Average Slope in Reach	--	Ft./Mi.
E. Drainage Area above Reach Mouth	114	Sq. Mi.
F. Inflow Classification	Natural	

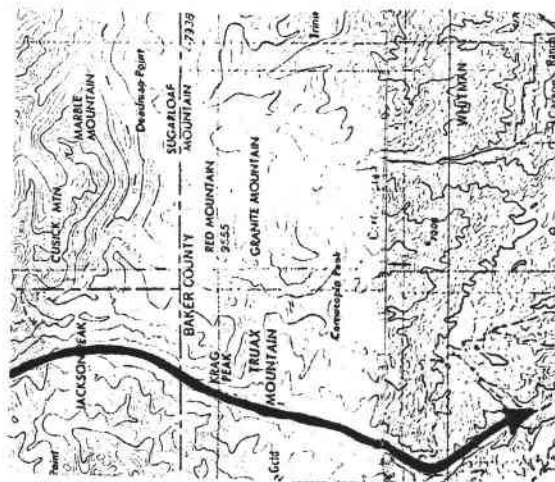
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS I	I THEORETICAL I PLANT SIZE I MW I	I ANNUAL ENERGY I AVAILABLE I GMH I	I PLANT I FACTOR I I
I 95 I	I 6.3 I	I .04 I	I .31 I	I 1.000 I
I 80 I	I 14.1 I	I .08 I	I .64 I	I .931 I
I 50 I	I 39.4 I	I .22 I	I 1.45 I	I .751 I
I 30 I	I 85.0 I	I .48 I	I 2.34 I	I .563 I
I 10 I	I 221.8 I	I 1.24 I	I 3.68 I	I .339 I

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-123-000-R0001

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 2, T14S, R44E
D. Latitude, Longitude	44° 22' N, 117° 18' W
E. Stream Name	Burnt River
F. Major Basin Name	Powder
G. River Mile	0.0 to 11.2

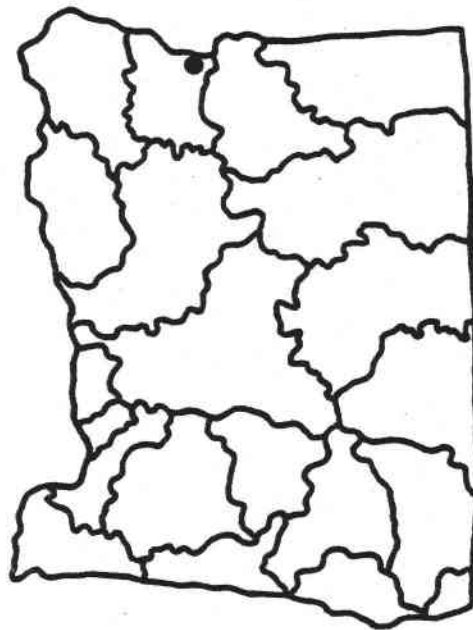
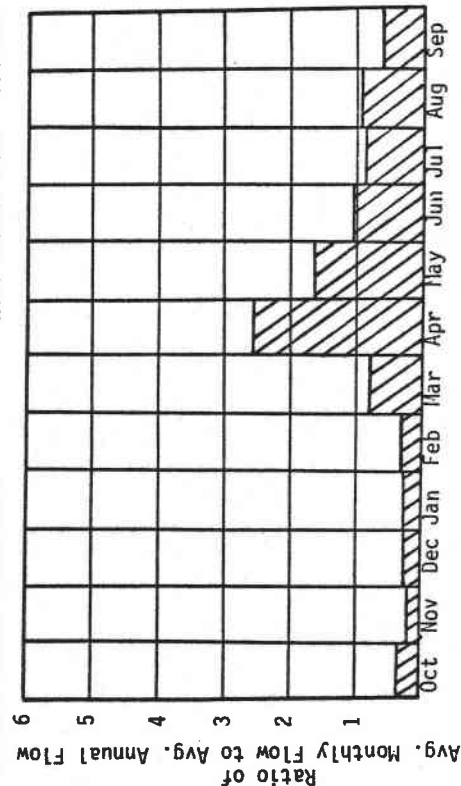
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	2300	Ft. MSL
B. Downstream Elevation of Reach	2077	Ft. MSL
C. Total Available Head in Reach	223	Ft.
D. Average Slope in Reach	19.9	Ft./Mi.
E. Drainage Area above Reach Mouth	1039	Sq. Mi.
F. Inflow Classification	Regulated	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS				THEORETICAL I ANNUAL ENERGY I PLANT I			
I EXCEEDANCE I	I DISCHARGE I	I CFS I	I PERCENTAGE I	I PLANT SIZE I	I AVAILABLE I	I GWH I	I FACTOR I
I 95 I	I 13.7 I	I .26 I	I 2.27 I	I 1.000 I			
I 80 I	I 28.6 I	I .54 I	I 4.43 I	I .935 I			
I 50 I	I 74.6 I	I 1.41 I	I 9.38 I	I .759 I			
I 30 I	I 175.5 I	I 3.32 I	I 16.06 I	I .553 I			
I 10 I	I 513.8 I	I 9.71 I	I 27.26 I	I .321 I			

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-123-000-R0002

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 32, T12S, R44E
D. Latitude, Longitude	44°28'N, 117°20'W
E. Stream Name	Burnt River
F. Major Basin Name	Powder
G. River Mile	11.2 to 19.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	2465	Ft. MSL
B. Downstream Elevation of Reach	2300	Ft. MSL
C. Total Available Head in Reach	165	Ft.
D. Average Slope in Reach	21.2	Ft./Mi.
E. Drainage Area above Reach Mouth	903	Sq.Mi.
F. Inflow Classification	Regulated	

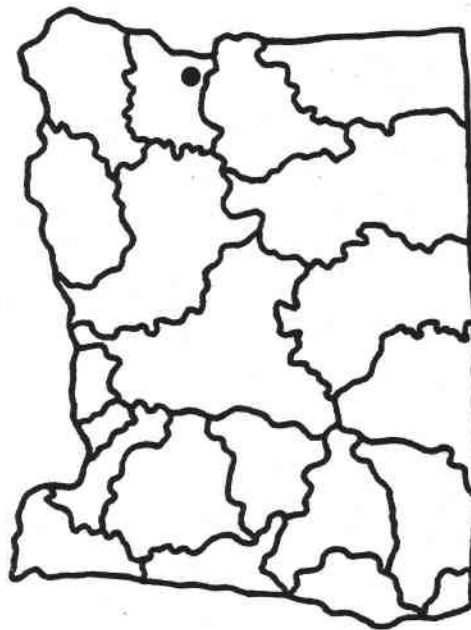
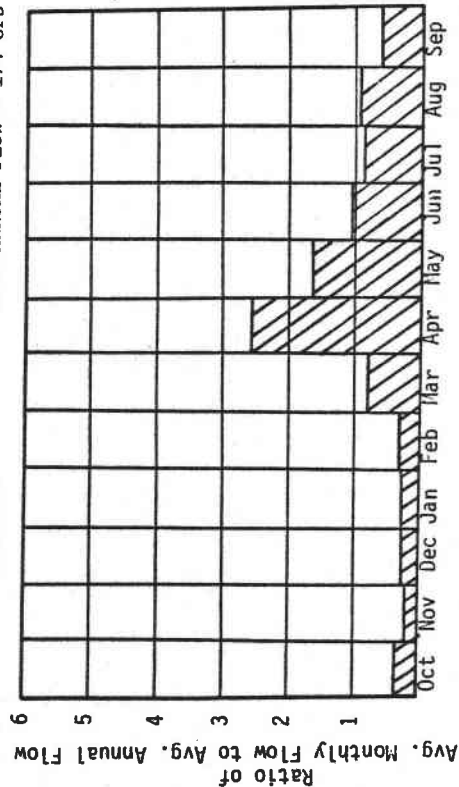
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

I EXCEEDANCE I	I DISCHARGE I	I THEORETICAL I	I ANNUAL ENERGY I	I PLANT I
I PERCENTAGE I	I CFS I	I PLANT SIZE I	I AVAILABLE I	I FACTOR I
I	I	I MW I	I GWH I	I
I 95 I	I 12.9 I	I .18 I	I 1.58 I	I 1.000 I
I 80 I	I 27.1 I	I .38 I	I 3.10 I	I .934 I
I 50 I	I 71.0 I	I .99 I	I 6.59 I	I .759 I
I 30 I	I 165.7 I	I 2.32 I	I 11.23 I	I .554 I
I 10 I	I 480.6 I	I 6.72 I	I 18.95 I	I .322 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 174 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



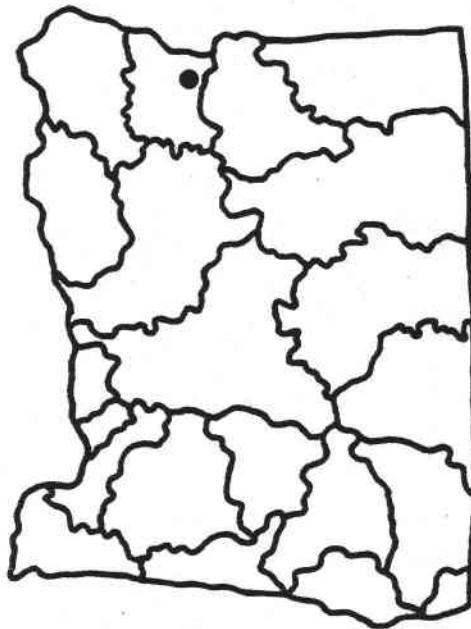
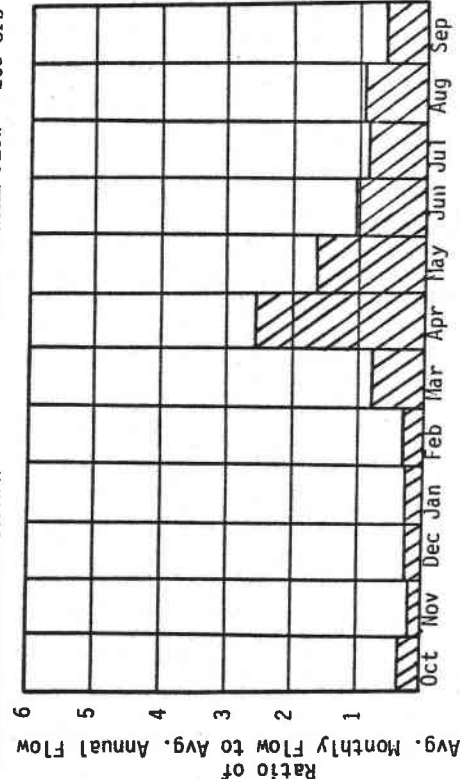
REACH # 02-500-240-123-000-R0003

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 11, T12S, R43E
D. Latitude, Longitude	44° 32' N, 117° 25' W
E. Stream Name	Burnt River
F. Major Basin Name	Powder
G. River Mile	19.0 to 25.1

A.	Upstream Elevation of Reach	2560	Ft. MSL
B.	Downstream Elevation of Reach	2465	Ft. MSL
C.	Total Available Head in Reach	95	Ft.
D.	Average Slope in Reach	15.6	Ft./Mi.
E.	Drainage Area above Reach Mouth	866	Sq.Mi.
F.	Inflow Classification	Regulated	

I	EXCEEDANCE	I	DISCHARGE	I	THEORETICAL	I	ANNUAL ENERGY	I	PLANT	I
I	PERCENTAGE	I	CFS	I	PLANT SIZE	I	AVAILABLE	I	FACTOR	I
I	I	I	I	I	MW	I	GWH	I	I	I
I	95	I	12.5	I	.10	I	.88	I	1.000	I
I	80	I	26.3	I	.21	I	1.73	I	.934	I
I	50	I	69.1	I	.56	I	3.70	I	.758	I
I	30	I	160.9	I	1.30	I	6.29	I	.554	I
I	10	I	464.6	I	3.74	I	10.57	I	.323	I

AVG. ANNUAL FLOW = 168 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-123-000-R0004

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 28, T12S, R43E
D. Latitude, Longitude	44° 35' N, 17° 28' W
E. Stream Name	Burnt River
F. Major Basin Name	Powder
G. River Mile	25.1 to 27.6

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	2750	Ft. MSL
B. Downstream Elevation of Reach	2560	Ft. MSL
C. Total Available Head in Reach	190	Ft.
D. Average Slope in Reach	76	Ft./Mi.
E. Drainage Area above Reach Mouth	801	Sq. Mi.
F. Inflow Classification	Regulated	

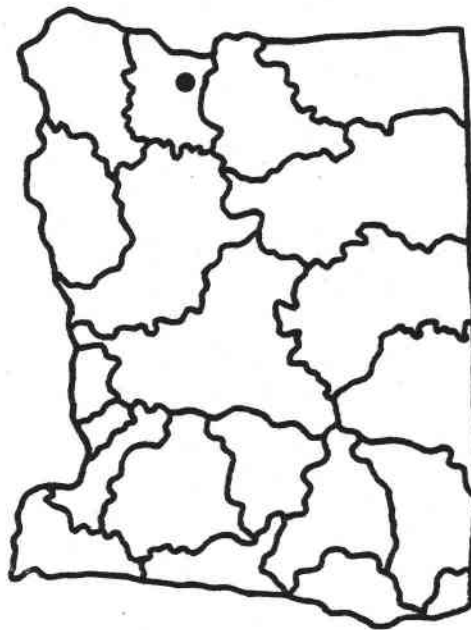
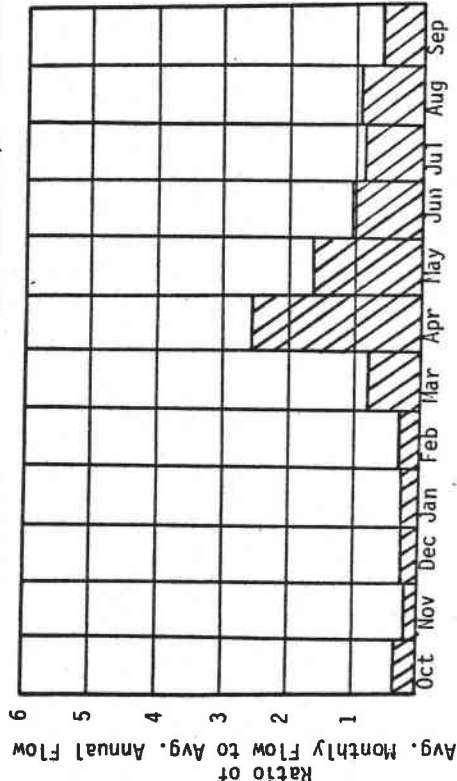
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

I	PERCENTAGE	I	DISCHARGE	I	THEORETICAL	I	ANNUAL ENERGY	I	PLANT
I	I	I	CFS	I	PLANT SIZE	I	AVAILABLE	I	FACTOR
I	I	I	I	I	MW	I	GWH	I	I
I	95	I	11.6	I	.19	I	1.64	I	1.000
I	80	I	24.7	I	.40	I	3.25	I	.934
I	50	I	65.2	I	1.05	I	6.97	I	.757
I	30	I	150.6	I	2.43	I	11.79	I	.555
I	10	I	430.4	I	6.93	I	19.68	I	.324

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 158 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH # 02-500-240-123-000-R0005

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 27, T11S, R42E
D. Latitude, Longitude	44°35'N, 117°33'W
E. Stream Name	Burnt River
F. Major Basin Name	Powder
G. River Mile	27.6 to 37.1

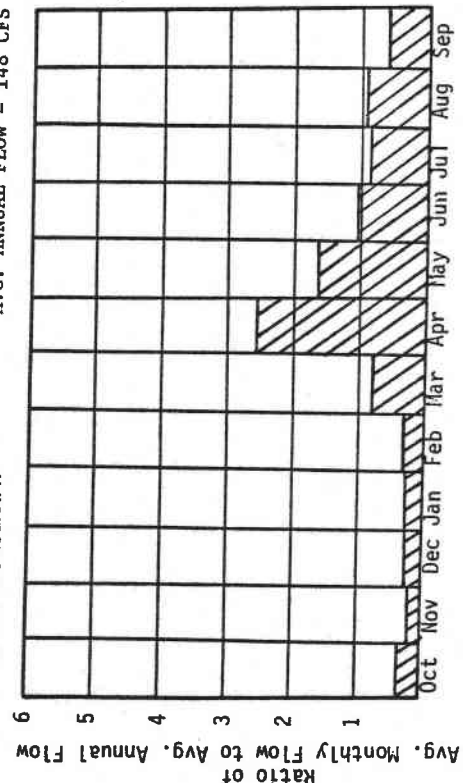
III. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A.	Upstream Elevation of Reach	3225	Ft. MSL
B.	Downstream Elevation of Reach	2750	Ft. MSL
C.	Total Available Head in Reach	475	Ft.
D.	Average Slope in Reach	50	Ft./Mi.
E.	Drainage Area above Reach Mouth	657	Sq.Mi.
F.	Inflow Classification	Regulated	

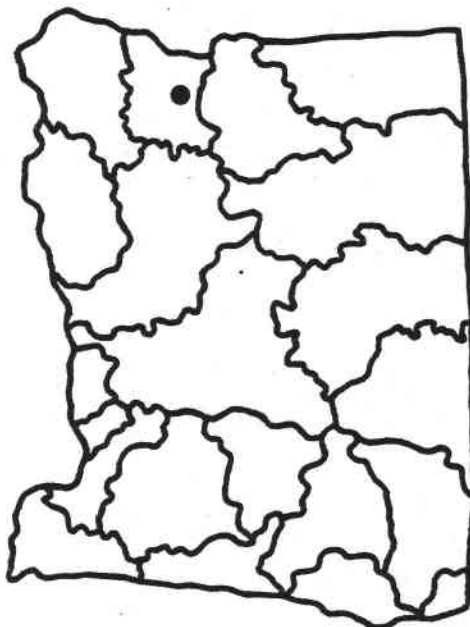
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS									
I	EXCEEDANCE	I	DISCHARGE	I	THEORETICAL	I	ANNUAL ENERGY	I	PLANT
I	PERCENTAGE	I	CFS	I	PLANT SIZE	I	AVAILABLE	I	FACTOR
I		I		I	MW	I	GWH	I	
I	95	I	10.9	I	.44	I	3.83	I	1.000
I	80	I	23.2	I	.93	I	7.63	I	.934
I	50	I	61.7	I	2.48	I	16.46	I	.757
I	30	I	141.4	I	5.69	I	27.70	I	.556
I	10	I	399.9	I	16.10	I	45.93	I	.326

IV. TYPICAL ANNUAL HYDROGRAPH



AVG. ANNUAL FLOW = 148 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-123-000-R0006

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 10, T12S, R41E
D. Latitude, Longitude	44°33'N, 117°41'W
E. Stream Name	Burnt River
F. Major Basin Name	Powder
G. River Mile	37.1 to 46.4

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

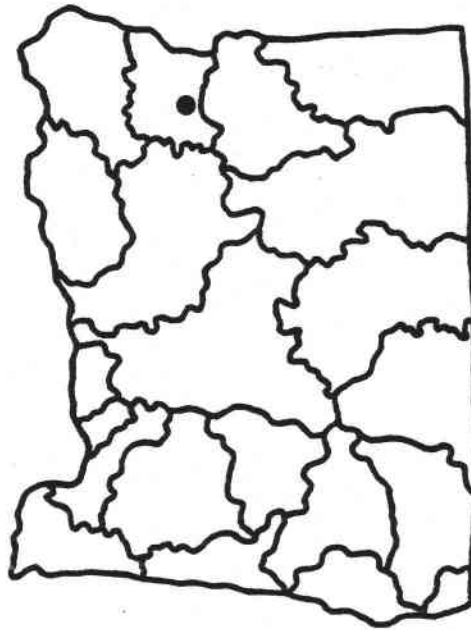
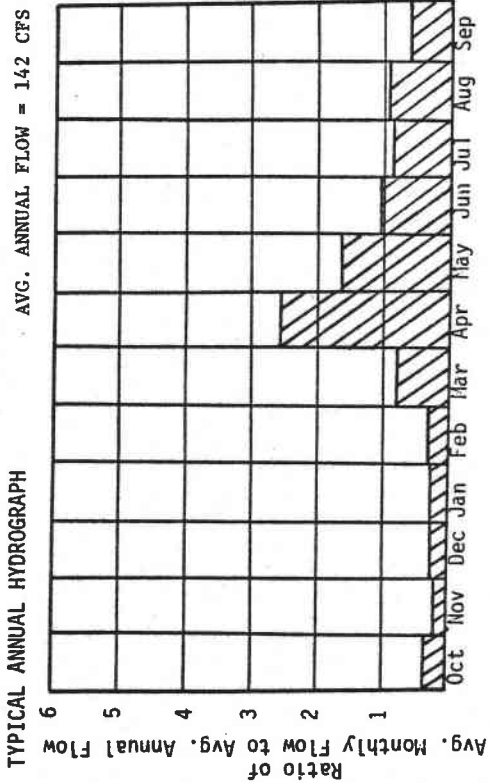
A. Upstream Elevation of Reach	3369	Ft. MSL
B. Downstream Elevation of Reach	3225	Ft. MSL
C. Total Available Head in Reach	144	Ft.
D. Average Slope in Reach	15.5	Ft./Mi.
E. Drainage Area above Reach Mouth	615	Sq. Mi.
F. Inflow Classification	Regulated	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

I	EXCEEDANCE I	DISCHARGE I	THEORETICAL I	PLANT SIZE I	ANNUAL ENERGY I	PLANT I
I	PERCENTAGE I	CFS I	I	I	AVAILABLE I	FACTOR I
I	I	I	MW I	I	GWH I	I
I	95	I	10.4 I	.13 I	1.11 I	1.000 I
I	80	I	22.2 I	.27 I	2.21 I	.933 I
I	50	I	59.3 I	.72 I	4.79 I	.756 I
I	30	I	135.1 I	1.65 I	8.04 I	.556 I
I	10	I	379.5 I	4.63 I	13.26 I	.327 I

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-123-000-R0007

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 26, T12S, R40E
D. Latitude, Longitude	44°30'N, 117°33'W
E. Stream Name	Burnt River
F. Major Basin Name	Powder
G. River Mile	46.4 to 55.8

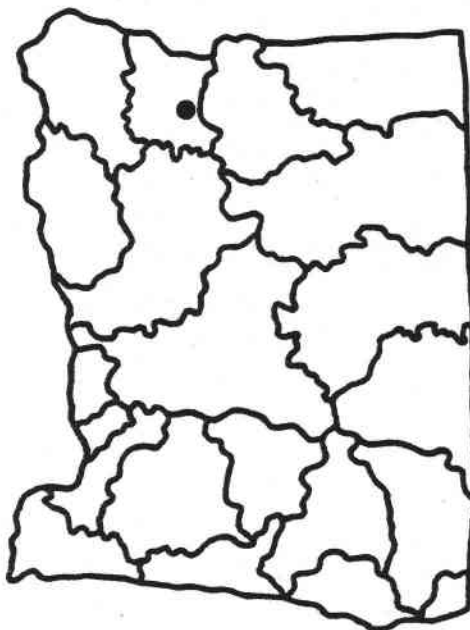
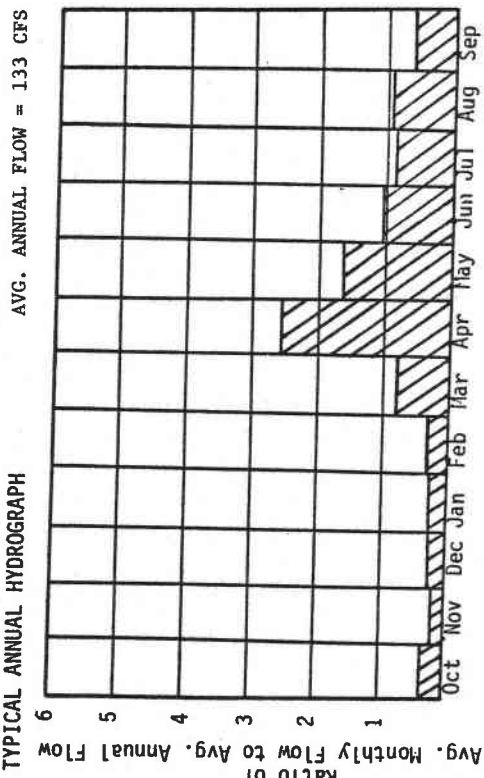
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	3440	Ft. MSL
B. Downstream Elevation of Reach	3369	Ft. MSL
C. Total Available Head in Reach	71	Ft.
D. Average Slope in Reach	7.5	Ft./Mi.
E. Drainage Area above Reach Mouth	556	Sq. Mi.
F. Inflow Classification	Regulated	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

I EXCEEDANCE I	I DISCHARGE I	I THEORETICAL I	I ANNUAL ENERGY I	I PLANT I
I PERCENTAGE I	I CFS I	I PLANT SIZE I	I AVAILABLE I	I FACTOR I
I	I	I MW I	I GWH I	I I
I 95 I	I 9.7 I	I .06 I	I .51 I	I 1.000 I
I 80 I	I 20.9 I	I .13 I	I 1.03 I	I .933 I
I 50 I	I 56.1 I	I .34 I	I 2.23 I	I .755 I
I 30 I	I 127.0 I	I .76 I	I 3.73 I	I .557 I
I 10 I	I 353.1 I	I 2.12 I	I 6.11 I	I .328 I

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-123-000-R0008

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 27, T12S, R39E
D. Latitude, Longitude	44°30'N, 117°56'W
E. Stream Name	Burnt River
F. Major Basin Name	Powder
G. River Mile	55.8 to 66.4

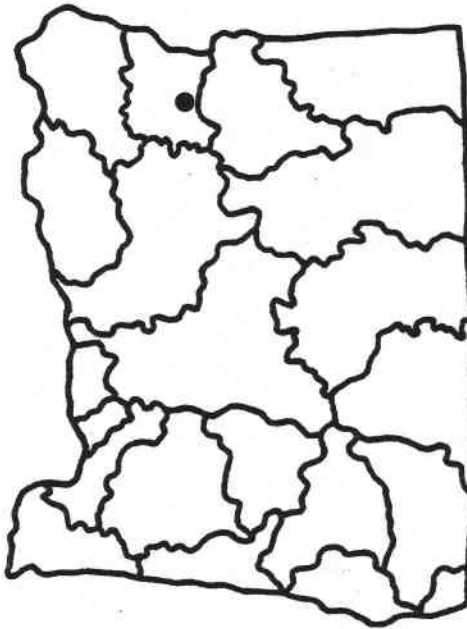
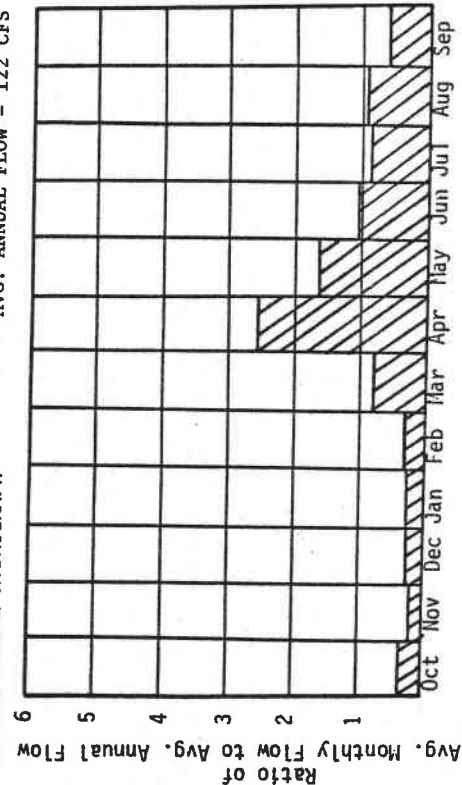
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	3590	Ft. MSL
B. Downstream Elevation of Reach	3440	Ft. MSL
C. Total Available Head in Reach	150	Ft.
D. Average Slope in Reach	14.2	Ft./Mi.
E. Drainage Area above Reach Mouth	503	Sq. Mi.
F. Inflow Classification	Regulated	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS I	I THEORETICAL I PLANT SIZE I MW I	I ANNUAL ENERGY I AVAILABLE I GWH I	I PLANT I FACTOR I
I 95 I	I 8.8 I	I .11 I	I .98 I	I 1.000 I
I 80 I	I 19.1 I	I .24 I	I 1.98 I	I .933 I
I 50 I	I 51.8 I	I .66 I	I 4.35 I	I .754 I
I 30 I	I 115.8 I	I 1.47 I	I 7.20 I	I .558 I
I 10 I	I 317.4 I	I 4.04 I	I 11.69 I	I .331 I

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER-CANYON CITY



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-123-000-R0009

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 27, T12S, R38E
D. Latitude, Longitude	44° 30' N, 118° 03' W
E. Stream Name	Burnt River
F. Major Basin Name	Powder
G. River Mile	66.4 to 74.2

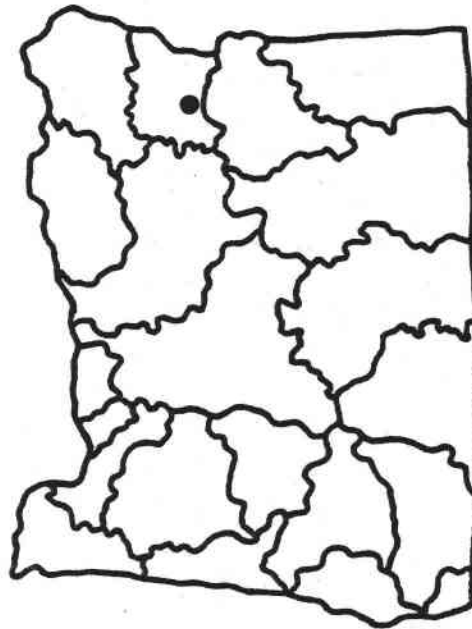
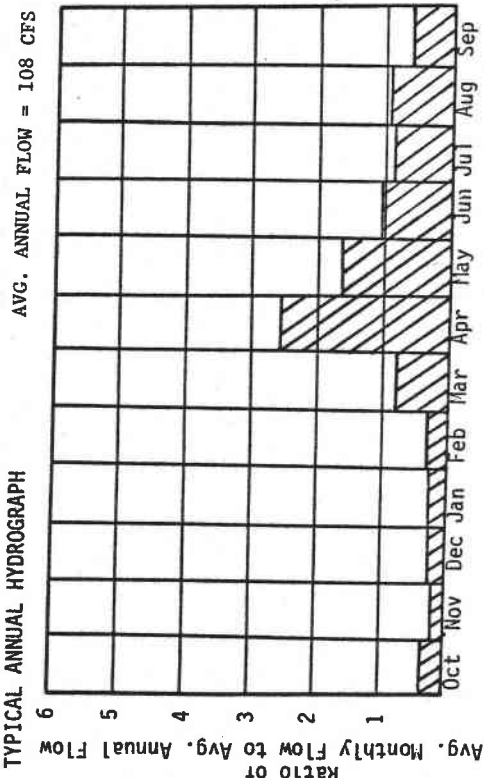
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	3670	Ft. MSL
B. Downstream Elevation of Reach	3590	Ft. MSL
C. Total Available Head in Reach	80	Ft.
D. Average Slope in Reach	10.3	Ft./Mi.
E. Drainage Area above Reach Mouth	413	Sq. Mi.
F. Inflow Classification	Regulated	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS I	I PLANT SIZE I MW I	I THEORETICAL I ANNUAL ENERGY I AVAILABLE I GWH I	I PLANT I FACTOR I
I 95 I	I 7.8 I	I .05 I	I .46 I	I 1.000 I
I 80 I	I 17.1 I	I .12 I	I .95 I	I .932 I
I 50 I	I 46.8 I	I .32 I	I 2.09 I	I .753 I
I 30 I	I 103.4 I	I .70 I	I 3.44 I	I .560 I
I 10 I	I 278.4 I	I 1.89 I	I 5.52 I	I .334 I

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: CANYON CITY



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-240-123-000-R0010

I. LOCATION

A. State	Oregon
B. County	Baker
C. Township, Range	Sec. 26, T12S, R37E
D. Latitude, Longitude	44°29'N, 118°07'W
E. Stream Name	Burnt River
F. Major Basin Name	Powder
G. River Mile	74.2 to 79.8

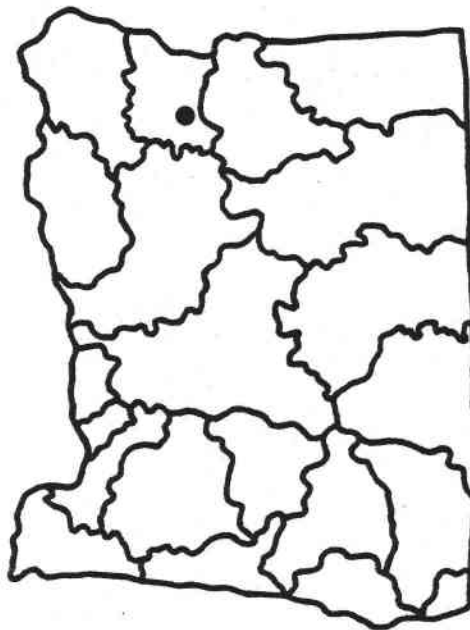
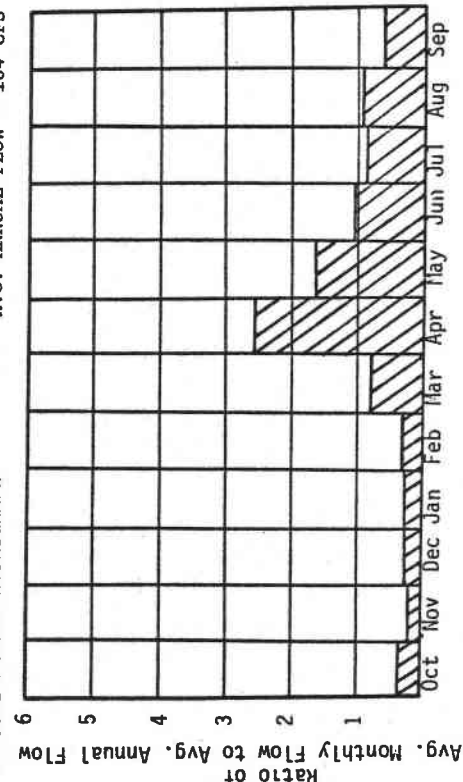
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	3780	Ft. MSL
B. Downstream Elevation of Reach	3670	Ft. MSL
C. Total Available Head in Reach	110	Ft.
D. Average Slope in Reach	19.6	Ft./Mi.
E. Drainage Area above Reach Mouth	341	Sq. Mi.
F. Inflow Classification	Regulated	

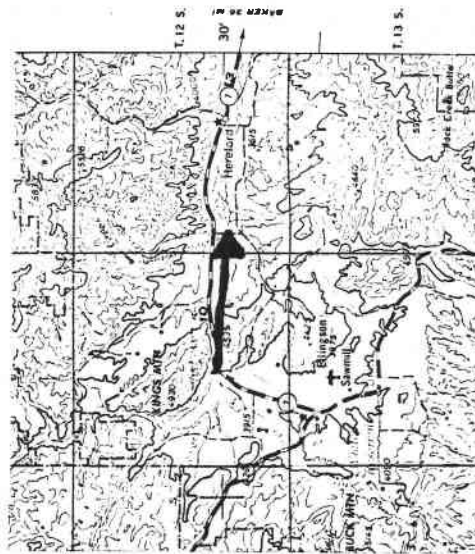
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

I EXCEEDANCE I	I DISCHARGE I	I THEORETICAL I	I ANNUAL ENERGY I	I PLANT I
I PERCENTAGE I	I CFS I	I PLANT SIZE I	I AVAILABLE I	I FACTOR I
I	I	I MW I	I GWH I	I
I 95 I	I 7.4 I	I .07 I	I .60 I	I 1.000 I
I 80 I	I 16.3 I	I .15 I	I 1.24 I	I .932 I
I 50 I	I 44.9 I	I .42 I	I 2.76 I	I .752 I
I 30 I	I 98.5 I	I .92 I	I 4.51 I	I .561 I
I 10 I	I 263.0 I	I 2.45 I	I 7.20 I	I .335 I

IV. TYPICAL ANNUAL HYDROGRAPH



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: BAKER



FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS

REACH IDENTIFICATION NUMBER	FEASIBILITY RESTRAINT				TRANSMISSION AND LOAD CONSIDERATIONS			
	LAND USE RESTRICTIONS	UTILITY DISPLACEMENT	BUILDING DISPLACEMENT	SPECIAL FISH PROBLEMS	DISTANCE TO NEAREST LINE Miles	LINE CAPACITY KVA	LOCAL MARKET	DISTANCE TO CITY > 1000 Miles
02-500-240-								
117-000-R0001	-	-	X	-	1.0	69-IP	-	13.0
117-000-R0002	-	-	X	-	3.2	69-IP	-	6.8
117-000-R0003	-	-	X	-	3.2	69-IP	-	5.2
120-010-R0001	-	-	X	-	2.1	230-IP	-	7.1
120-010-R0002	-	-	-	-	2.7	230-IP	1	5.2
120-010-R0003	-	-	-	-	5.2	230-IP	-	10.0
120-010-R0004	-	-	-	-	7.0	230-IP	-	12.0
120-000-R0002	-	X	-	-	1.2	230-IP	-	8.2
120-000-R0003	X	X	-	-	1.2	230-IP	-	11.6
120-000-R0004	-	X	-	-	2.2	230-IP	-	17.0
120-000-R0005	-	-	-	-	1.3	230-IP	-	8.8
120-000-R0006	X	-	-	-	1.7	230-CPU	-	7.0
120-000-R0007	-	-	-	-	1.8	230-IP	-	14.8

FEASIBILITY, TRANSMISSION AND LOAD RESTRAINTS

REACH IDENTIFICATION NUMBER	FEASIBILITY RESTRAINT				TRANSMISSION AND LOAD CONSIDERATIONS			
	LAND USE RESTRICTIONS	UTILITY DISPLACEMENT	BUILDING DISPLACEMENT	SPECIAL FISH PROBLEMS	DISTANCE TO NEAREST LINE Miles	LINE CAPACITY KVA	LOCAL MARKET	DISTANCE TO CITY > 1000 Miles
02-500-240-								
120-000-R0008	-	-	-	-	1.0	230-IP	-	19.0
120-000-R0009	-	-	-	-	0.2	69-CPU	-	10.0
120-000-R0010	-	-	-	-	0.3	23-CPU	-	11.2
120-000-R0011	-	-	-	-	3.0	69-CPU	-	7.0
120-000-R0012	-	X	-	-	0.3	23-CPU	1,2	1.0
120-000-R0013	-	X	-	-	2.0	138-IP	1,2	5.0
120-000-R0014	-	X	-	-	1.6	138-IP	-	9.7
120-000-R0015	-	X	-	-	1.0	138-IP	-	11.0
123-000-R0001	X	X	-	-	2.1	138-IP	-	8.0
123-000-R0002	-	X	-	-	8.6	138-IP	-	11.0
123-000-R0003	-	X	-	-	11.0	138-IP	-	15.0
123-000-R0004	-	X	-	-	12.5	138-IP	-	18.0
123-000-R0005	-	X	-	-	14.0	138-IP	-	20.0
123-000-R0006	X	X	-	-	12.5	69-IP	-	26.0

