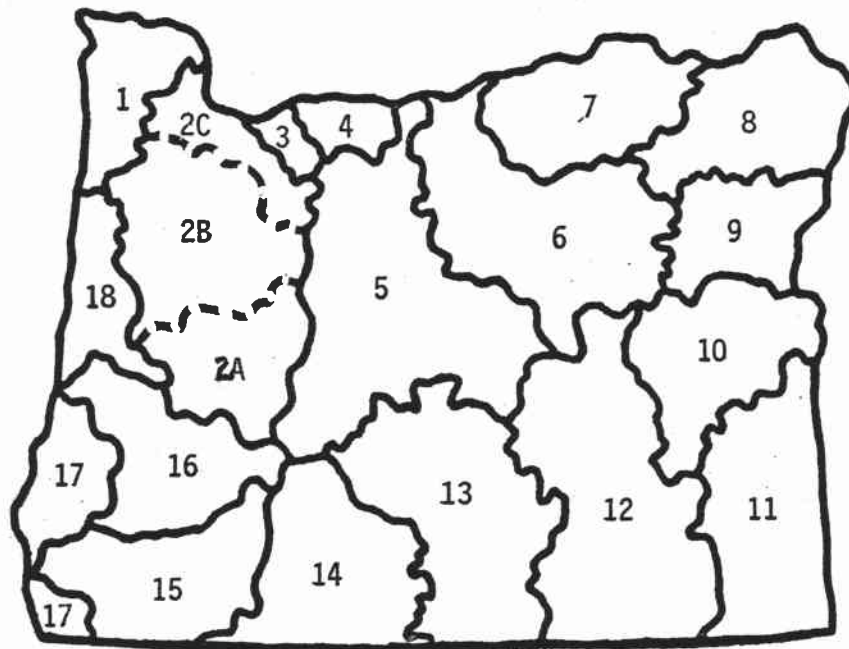


A RESOURCE SURVEY OF RIVER ENERGY  
AND LOW-HEAD HYDROELECTRIC POWER POTENTIAL  
IN OREGON

APPENDIX 4: HOOD BASIN



WATER RESOURCES RESEARCH INSTITUTE  
Oregon State University  
Corvallis, Oregon 97331

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# REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-125-000-000-R0001

## I. LOCATION

A. State	Oregon
B. County	Hood River
C. Township, Range	T2N, R7E
D. Latitude, Longitude	45°37'N, 121°36'W
E. Stream Name	Eagle Creek
F. Major Basin Name	Hood
G. River Mile	0.0 to 4.7

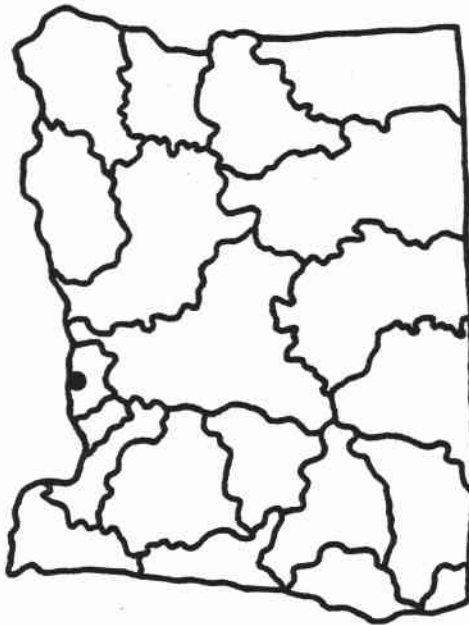
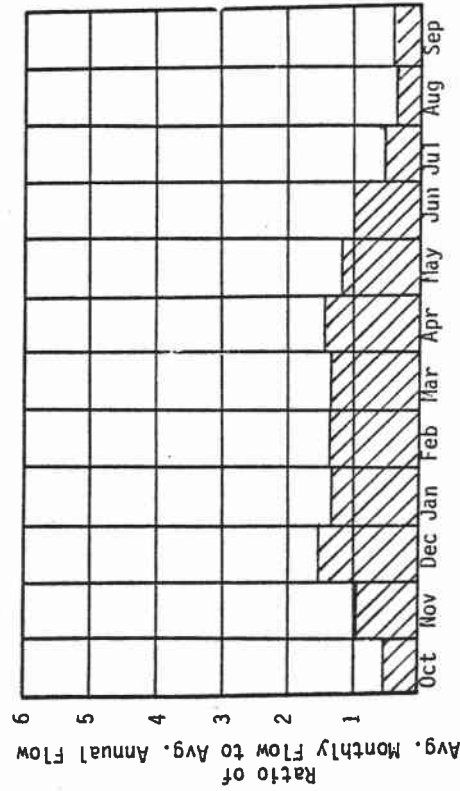
## II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	776	Ft. MSL
B. Downstream Elevation of Reach	72	Ft. MSL
C. Total Available Head in Reach	704	Ft.
D. Average Slope in Reach	149.8	Ft./Mi.
E. Drainage Area above Reach Mouth	33.7	Sq. Mi.
F. Inflow Classification	Natural	

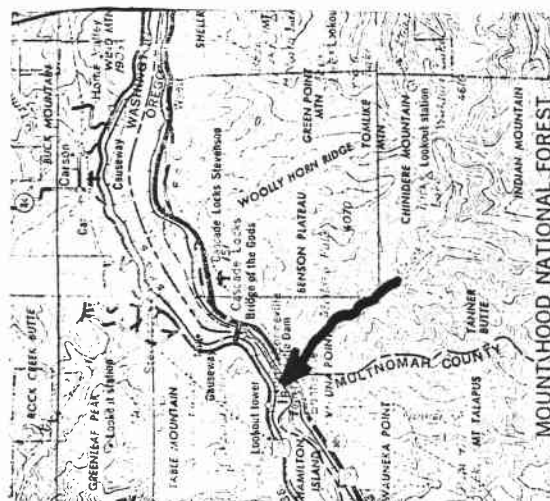
## III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

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 19.2 I	I 1.15 I	I 10.04 I	I 1.000 I
I 80 I	I 28.2 I	I 1.68 I	I 14.15 I	I .960 I
I 50 I	I 57.3 I	I 3.42 I	I 24.03 I	I .803 I
I 30 I	I 108.7 I	I 6.49 I	I 34.78 I	I .612 I
I 10 I	I 231.7 I	I 13.82 I	I 47.64 I	I .393 I

## IV. TYPICAL ANNUAL HYDROGRAPH



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



# REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-125-000-000-R0002

## I. LOCATION

A. State	Oregon
B. County	Hood River
C. Township, Range	T1N, R8E
D. Latitude, Longitude	45°36'N, 121°37'W
E. Stream Name	Eagle Creek
F. Major Basin Name	Hood
G. River Mile	4.7 to H.W.

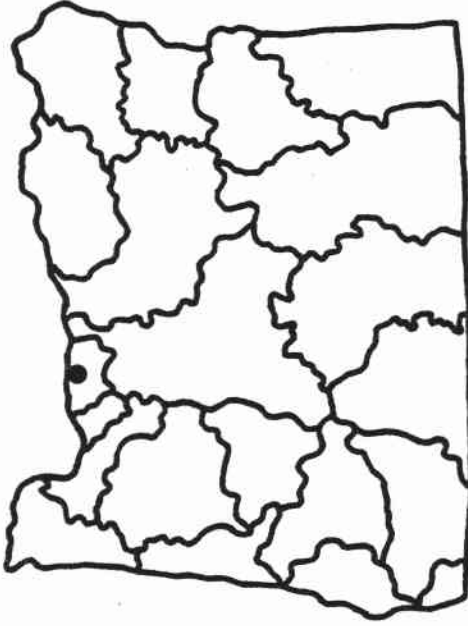
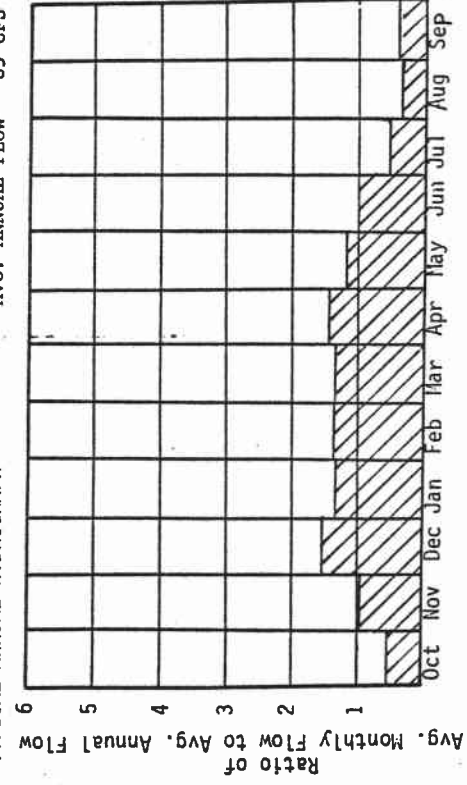
## II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

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	24.6	Sq. Mi.
F. Inflow Classification	Natural	

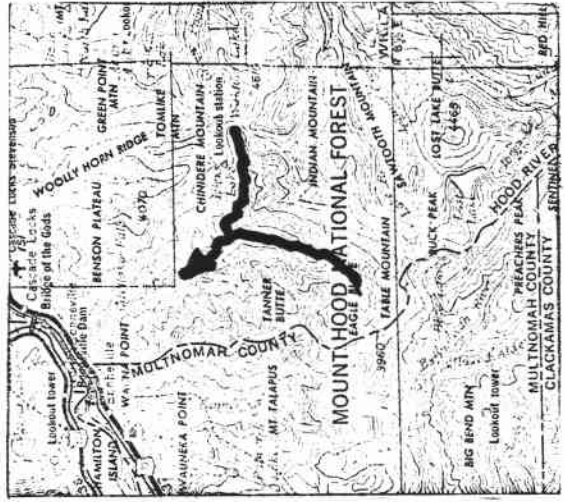
## III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

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 16.0 I	I .09 I	I .79 I	I 1.000 I
I 80 I	I 23.5 I	I .13 I	I 1.11 I	I .960 I
I 50 I	I 47.6 I	I .27 I	I 1.87 I	I .803 I
I 30 I	I 91.3 I	I .51 I	I 2.73 I	I .610 I
I 10 I	I 197.6 I	I 1.11 I	I 3.77 I	I .390 I

## IV. TYPICAL ANNUAL HYDROGRAPH



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



# REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-140-000-000-R0001

**I. LOCATION**

A. State	Oregon
B. County	Hood River
C. Township, Range	T2N, R10E, Sec. 1
D. Latitude, Longitude	45°41'N, 122°00'W
E. Stream Name	Hood River
F. Major Basin Name	Hood
G. River Mile	0.0 to 4.5

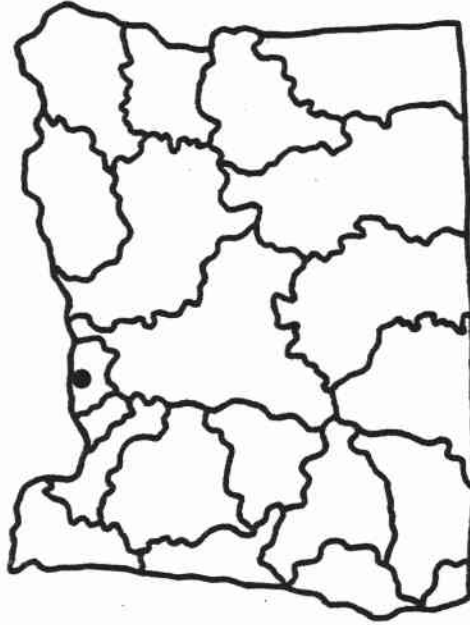
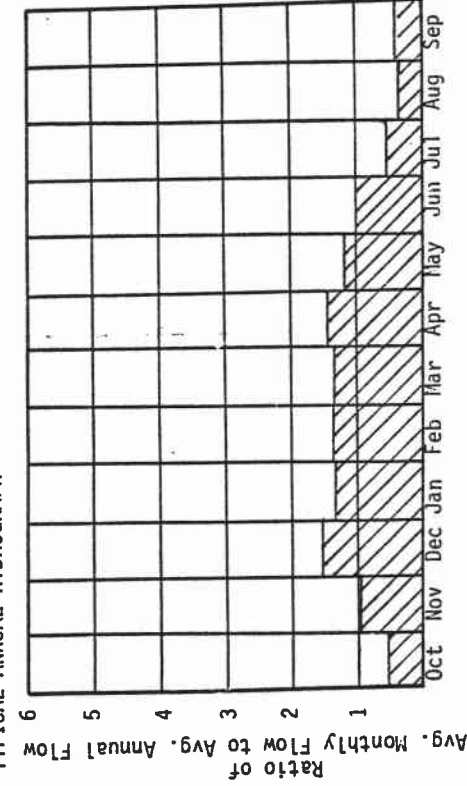
**II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS**

A. Upstream Elevation of Reach	302	Ft. MSL
B. Downstream Elevation of Reach	47	Ft. MSL
C. Total Available Head in Reach	255	Ft.
D. Average Slope in Reach	56.7	Ft./M1.
E. Drainage Area above Reach Mouth	340.1	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					
I	I	CFS	PLANT SIZE I	AVAILABLE I	FACTOR I					
I	I	I	MW	GMH	I					
I	95	I	211.3	I	4.57	I	40.00	I	1.000	I
I	80	I	315.8	I	6.83	I	57.32	I	.959	I
I	50	I	667.4	I	14.42	I	100.58	I	.796	I
I	30	I	1100.4	I	23.78	I	133.36	I	.640	I
I	10	I	1922.5	I	41.55	I	164.49	I	.452	I

**IV. TYPICAL ANNUAL HYDROGRAPH**



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



# REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-140-000-000-R0002

## I. LOCATION

A. State	Oregon
B. County	Hood River
C. Township, Range	T2N, R10E, Sec. 20
D. Latitude, Longitude	45°35'N, 121°55'W
E. Stream Name	Hood River
F. Major Basin Name	Hood
G. River Mile	4.5 to 12.2

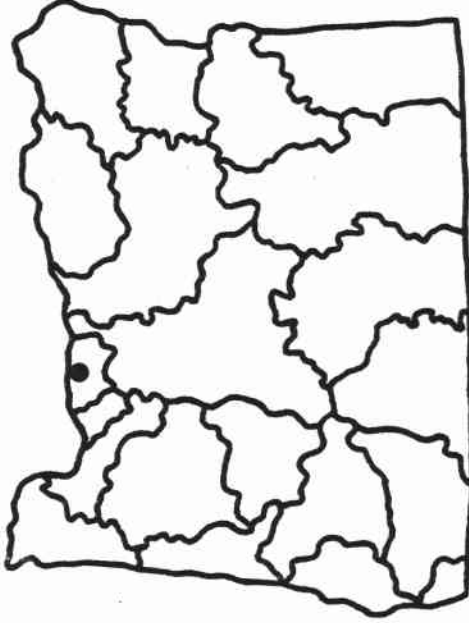
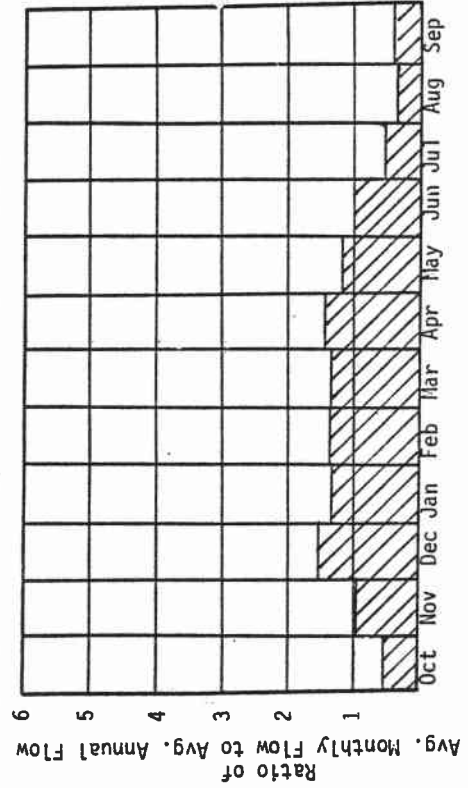
## II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	770	Ft. MSL
B. Downstream Elevation of Reach	302	Ft. MSL
C. Total Available Head in Reach	468	Ft.
D. Average Slope in Reach	60.8	Ft./Mi.
E. Drainage Area above Reach Mouth	325.4	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 192.6 I	I 7.64 I	I 66.91 I	I 1.000 I
I 80 I	I 287.6 I	I 11.41 I	I 95.80 I	I .959 I
I 50 I	I 606.9 I	I 24.07 I	I 167.89 I	I .796 I
I 30 I	I 1006.0 I	I 39.90 I	I 223.36 I	I .639 I
I 10 I	I 1771.2 I	I 70.25 I	I 276.54 I	I .449 I

## IV. TYPICAL ANNUAL HYDROGRAPH



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



# REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-140-010-000-R0001

## I. LOCATION

A. State	Oregon
B. County	Hood River
C. Township, Range	T1N, R9E, Sec. 14
D. Latitude, Longitude	45° 34' N, 121° 50' 30"
E. Stream Name	West Fork Hood River
F. Major Basin Name	Hood
G. River Mile	0.0 to 5.5

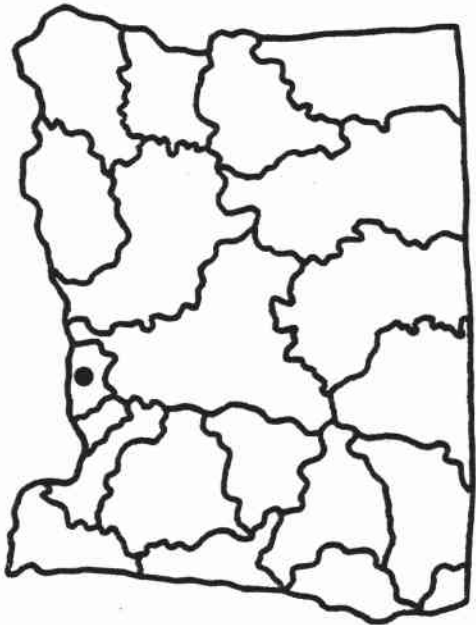
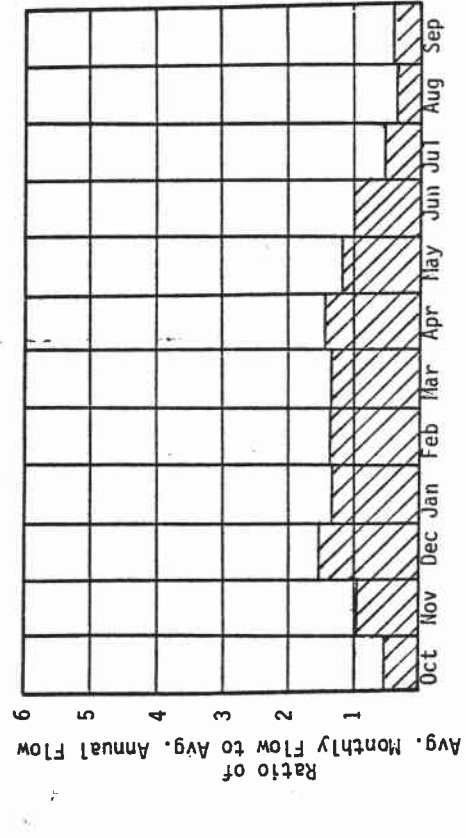
## II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	1220	Ft. MSL
B. Downstream Elevation of Reach	770	Ft. MSL
C. Total Available Head in Reach	450	Ft.
D. Average Slope in Reach	81.8	Ft./Mi.
E. Drainage Area above Reach Mouth	102.4	Sq. Mi.
F. Inflow Classification	Natural	

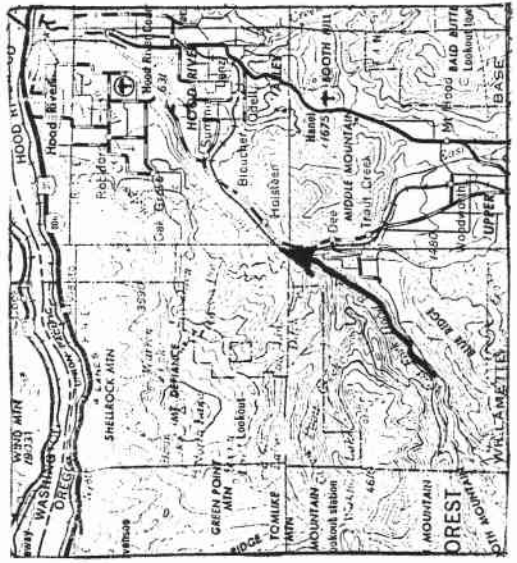
## III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

I	PERCENTAGE I	I	DISCHARGE I	I	THEORETICAL I	I	ANNUAL ENERGY I	I	PLANT I	I
I	I	I	CFS	I	PLANT SIZE I	I	AVAILABLE I	I	FACTOR I	I
I	I	I	I	I	MW	I	GWH	I	I	I
I	95	I	69.9	I	2.66	I	23.34	I	1.000	I
I	80	I	103.5	I	3.95	I	33.18	I	.959	I
I	50	I	214.8	I	8.19	I	57.35	I	.799	I
I	30	I	378.0	I	14.41	I	79.15	I	.627	I
I	10	I	723.8	I	27.60	I	102.25	I	.423	I

## IV. TYPICAL ANNUAL HYDROGRAPH



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





# REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-500-140-010-002-R0001

## I. LOCATION

A. State	Oregon
B. County	Hood River
C. Township, Range	T1N, R9E, Sec. 29
D. Latitude, Longitude	45°32'30"N, 121°46'30"W
E. Stream Name	Lake Branch
F. Major Basin Name	Hood
G. River Mile	0.0 to 2.5

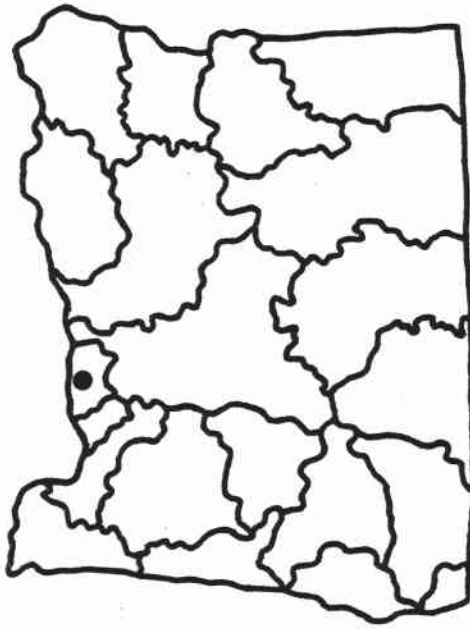
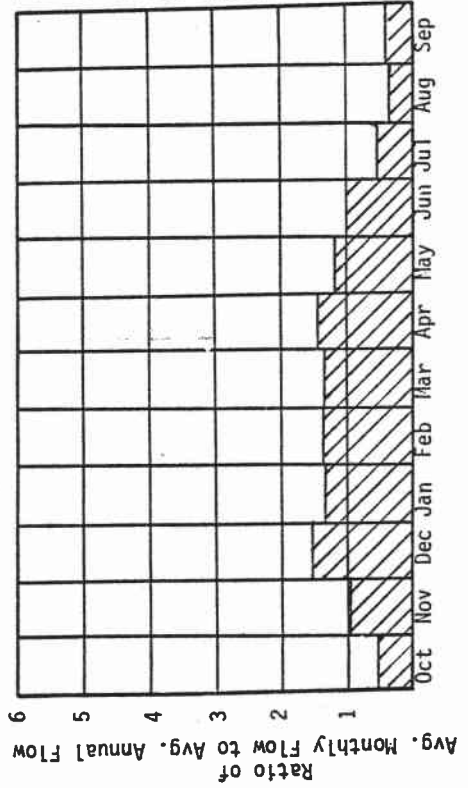
## II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	1516	Ft. MSL
B. Downstream Elevation of Reach	1220	Ft. MSL
C. Total Available Head in Reach	296	Ft.
D. Average Slope in Reach	118.4	Ft./Mi.
E. Drainage Area above Reach Mouth	29.6	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 17.3 I	I .43 I	I 3.79 I	I 1.000 I
I 80 I	I 25.3 I	I .63 I	I 5.34 I	I .960 I
I 50 I	I 51.3 I	I 1.29 I	I 9.06 I	I .803 I
I 30 I	I 98.1 I	I 2.46 I	I 13.16 I	I .611 I
I 10 I	I 210.8 I	I 5.29 I	I 18.12 I	I .391 I

## IV. TYPICAL ANNUAL HYDROGRAPH



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

