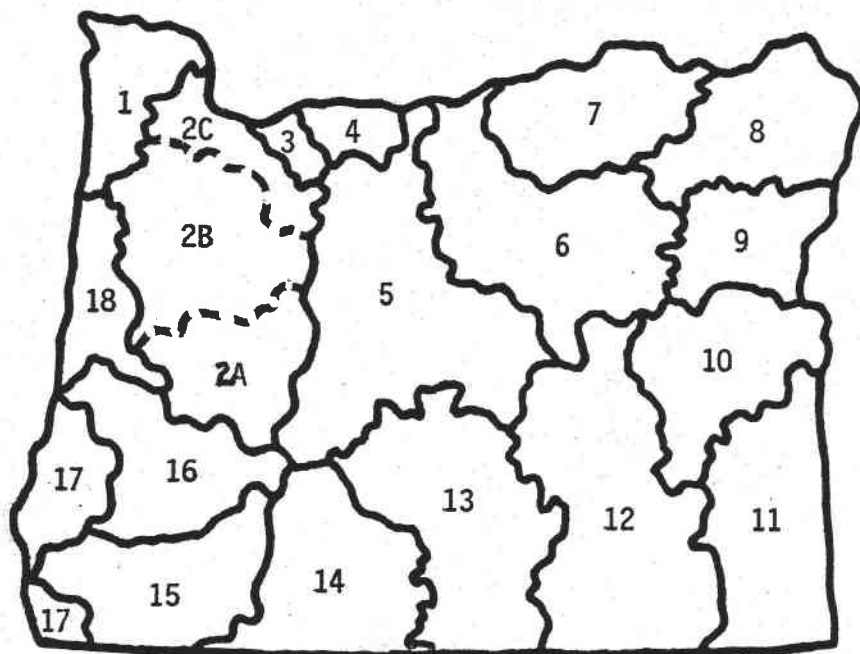


A RESOURCE SURVEY OF RIVER ENERGY
AND LOW-HEAD HYDROELECTRIC POWER POTENTIAL
IN OREGON

APPENDIX 14: KLAMATH BASIN



WATER RESOURCES RESEARCH INSTITUTE
Oregon State University
Corvallis, Oregon 97331

INDEX TO APPENDIX 14, KLAMATH BASIN

Drainage Basin Map 14-ii

Reach Hydro Potential Characteristics Sheets

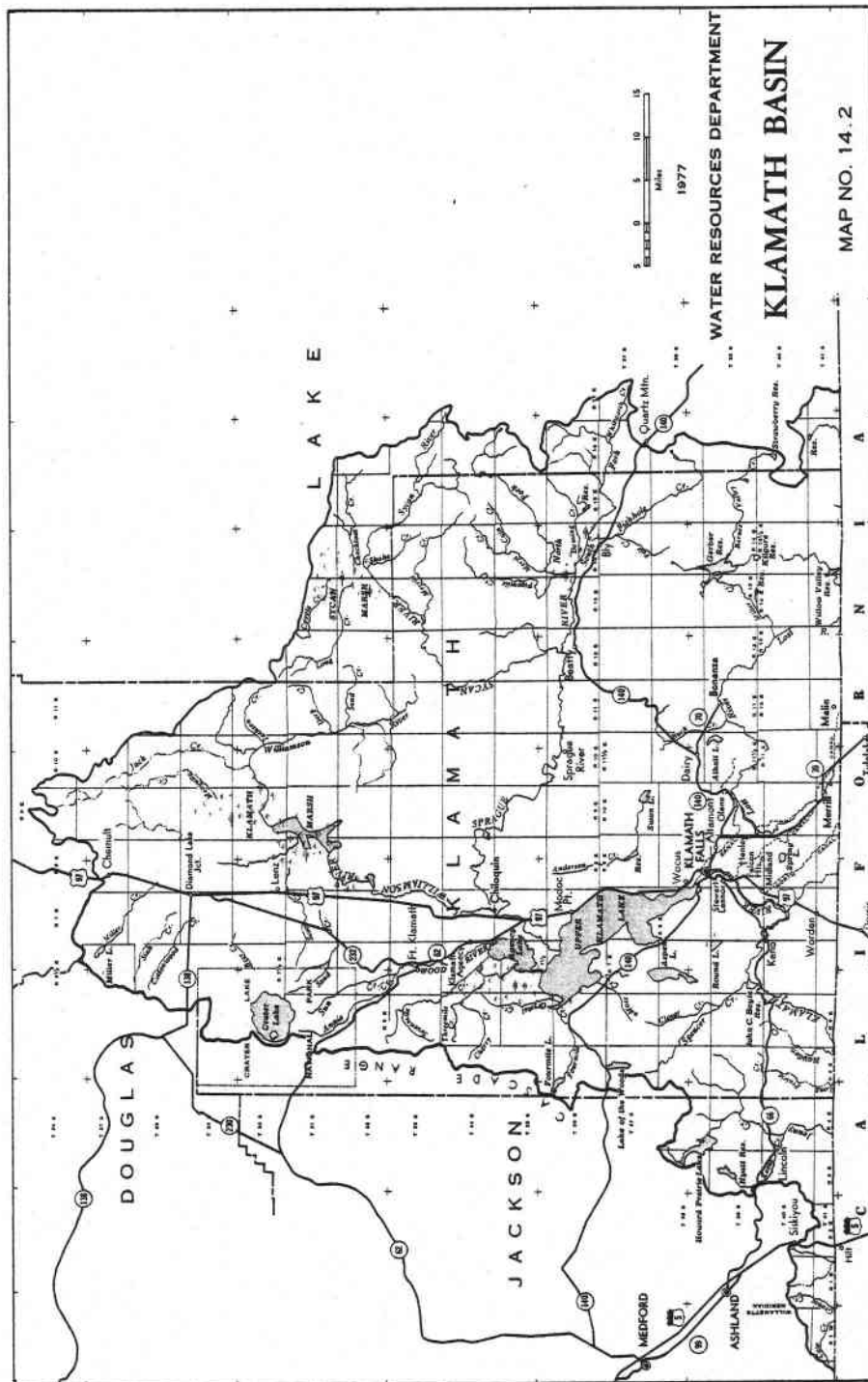
Jenny Creek 14-1 to 14-4

Klamath River 14-5 to 14-7

Williamson River Main Stem 14- 8, 26-30

Sprague River & Tribs. 14-9 to 14-25

Reach Feasibility Analysis Sheets 14-31 to 14-33



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-001-000-R0001

I. LOCATION

A. State	Oregon
B. County	Jackson
C. Township, Range	Sec. 18, T40S, R4E
D. Latitude, Longitude	42°04'N, 122°21'W
E. Stream Name	Jenny Creek
F. Major Basin Name	Klamath
G. River Mile	4.0 to 11.6

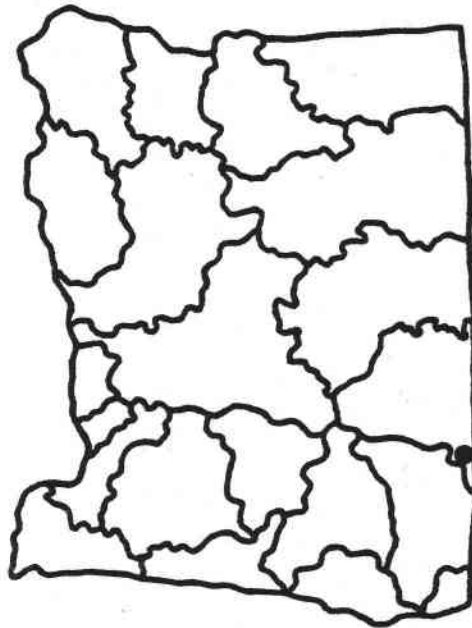
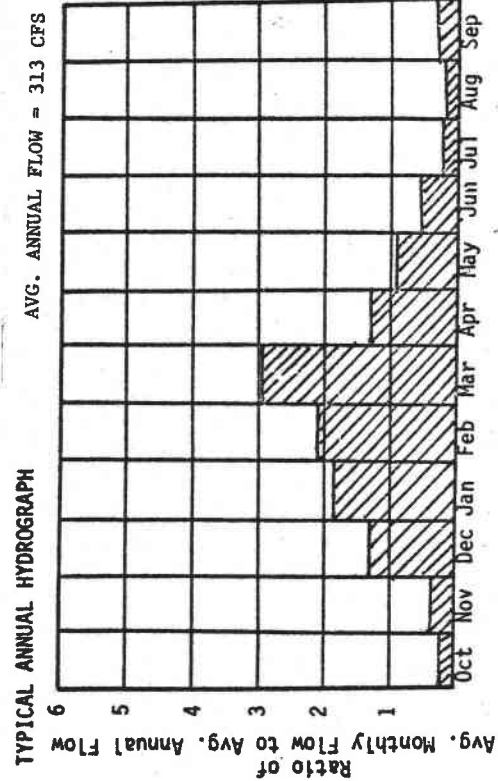
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	3020	Ft. MSL
B. Downstream Elevation of Reach	2960	Ft. MSL
C. Total Available Head in Reach	60	Ft.
D. Average Slope in Reach	7.9	Ft./Mi.
E. Drainage Area above Reach Mouth	191	Sq. Mi.
F. Inflow Classification	Regulated	

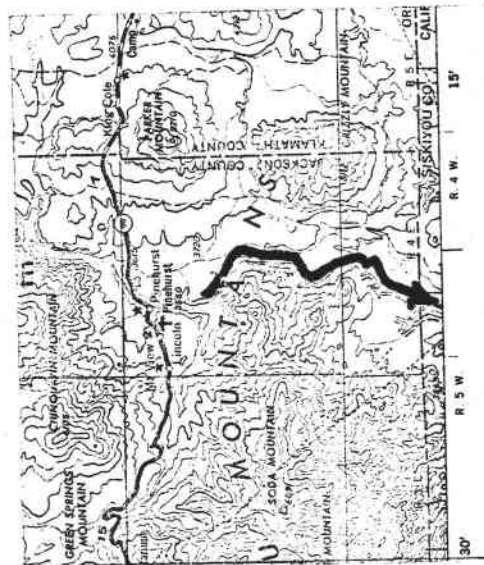
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

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 2.3 I	I .01 I	I .10 I	I 1.000 I
I 80 I	I 82.3 I	I .42 I	I 3.22 I	I .879 I
I 50 I	I 281.6 I	I 1.43 I	I 8.99 I	I .717 I
I 30 I	I 375.5 I	I 1.91 I	I 10.66 I	I .638 I
I 10 I	I 438.1 I	I 2.23 I	I 11.22 I	I .575 I

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-001-000-R0002

I. LOCATION

A. State	Oregon
B. County	Jackson
C. Township, Range	Sec. 19, T39S, R4E
D. Latitude, Longitude	42°09'N, 122°20'W
E. Stream Name	Jenny Creek
F. Major Basin Name	Klamath
G. River Mile	11.6 to 19.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

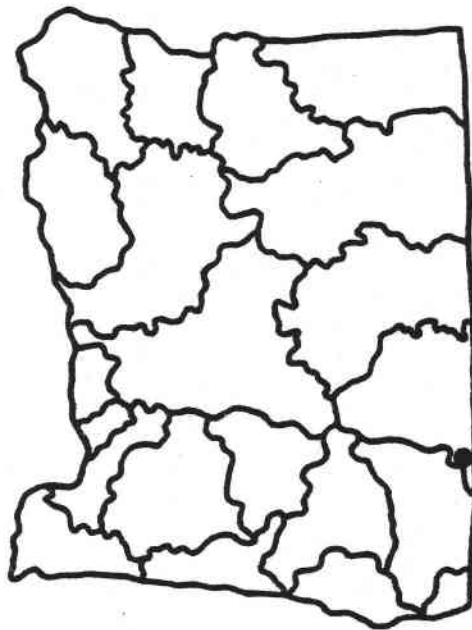
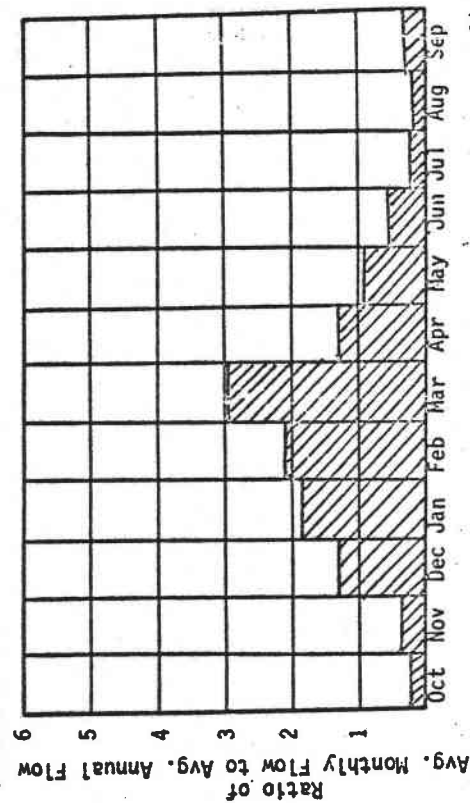
A. Upstream Elevation of Reach	3640	Ft. MSL
B. Downstream Elevation of Reach	3020	Ft. MSL
C. Total Available Head in Reach	620	Ft.
D. Average Slope in Reach	83.8	Ft./Mi.
E. Drainage Area above Reach Mouth	136	Sq. Mi.
F. Inflow Classification	Regulated	

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 1.4 I	I .07 I	I .64 I	I 1.000 I
I 80 I	I 48.7 I	I 2.56 I	I 19.69 I	I .879 I
I 50 I	I 166.6 I	I 8.76 I	I 54.98 I	I .717 I
I 30 I	I 222.2 I	I 11.67 I	I 65.20 I	I .638 I
I 10 I	I 259.2 I	I 13.62 I	I 68.61 I	I .575 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 186 CFS



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-001-000-R0003

I. LOCATION

A. State	Oregon
B. County	Jackson
C. Township, Range	Sec. 27, T39S, R4E
D. Latitude, Longitude	42°13'N, 122°19'W
E. Stream Name	Jenny Creek
F. Major Basin Name	Klamath
G. River Mile	19.0 to 22.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

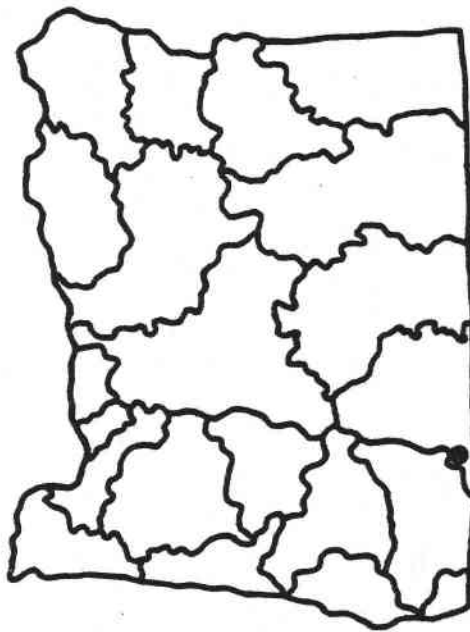
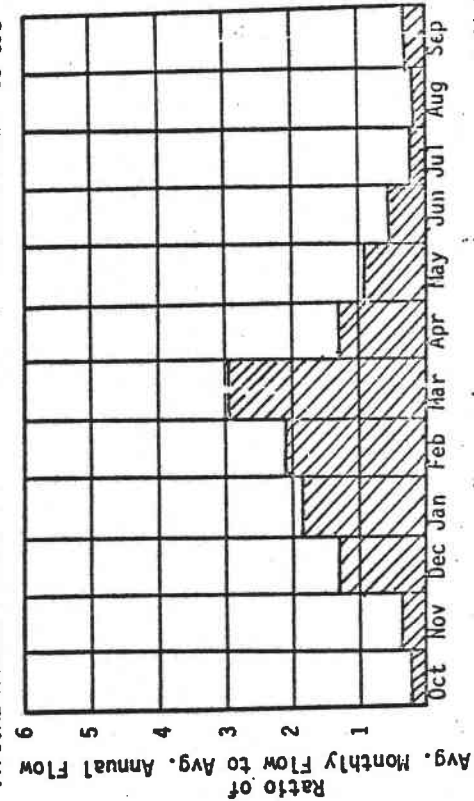
A. Upstream Elevation of Reach	4375	Ft. MSL
B. Downstream Elevation of Reach	3640	Ft. MSL
C. Total Available Head in Reach	735	Ft.
D. Average Slope in Reach	245	Ft./Mi.
E. Drainage Area above Reach Mouth	40	Sq. Mi.
F. Inflow Classification	Regulated	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

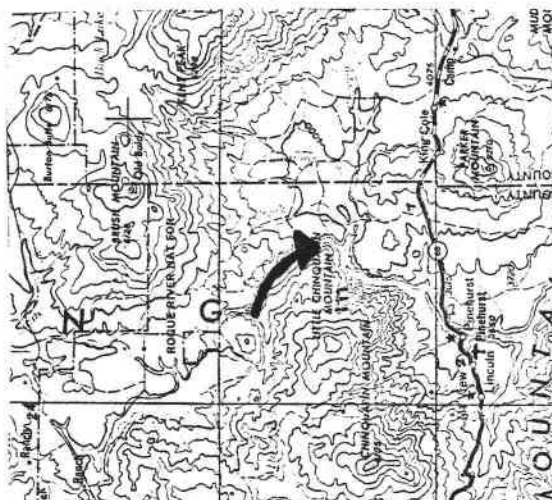
I	PERCENTAGE	I	DISCHARGE	I	THEORETICAL	I	ANNUAL ENERGY	I	PLANT
I	I	I	CFS	I	PLANT SIZE	I	AVAILABLE	I	FACTOR
I	I	I	I	I	MW	I	GWH	I	I
I	95	I	.5	I	.03	I	.26	I	1.000
I	80	I	16.5	I	1.03	I	7.90	I	.879
I	50	I	56.4	I	3.51	I	22.06	I	.717
I	30	I	75.2	I	4.68	I	26.17	I	.638
I	10	I	87.8	I	5.47	I	27.54	I	.575

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 63 CFS



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-001-000-R0004

I. LOCATION

A. State Oregon
 B. County Jackson
 C. Township, Range Sec. 23, T39S, R4E
 D. Latitude, Longitude 42°13'N, 122°20'W
 E. Stream Name Jenny Creek
 F. Major Basin Name Klamath
 G. River Mile 22.0 to H.W.

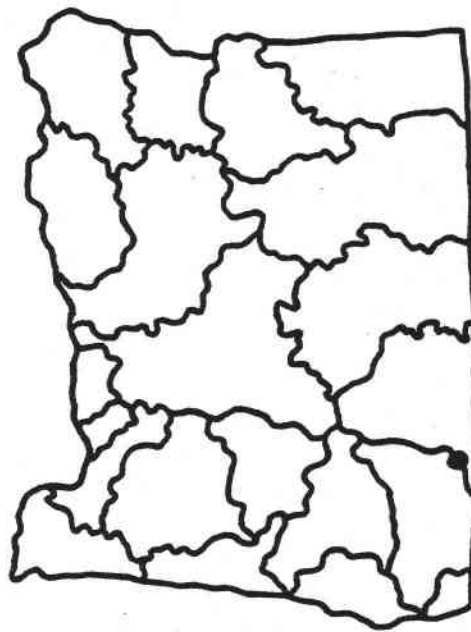
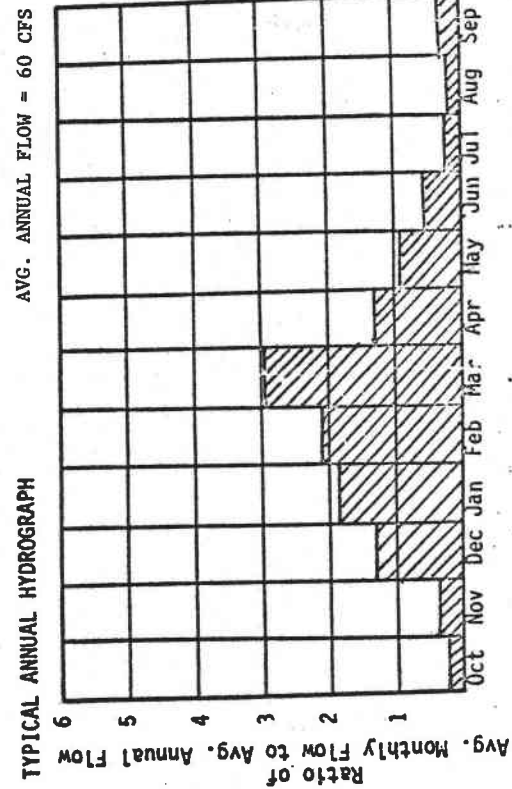
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

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 37 Sq.Mi.
 F. Inflow Classification Regulated

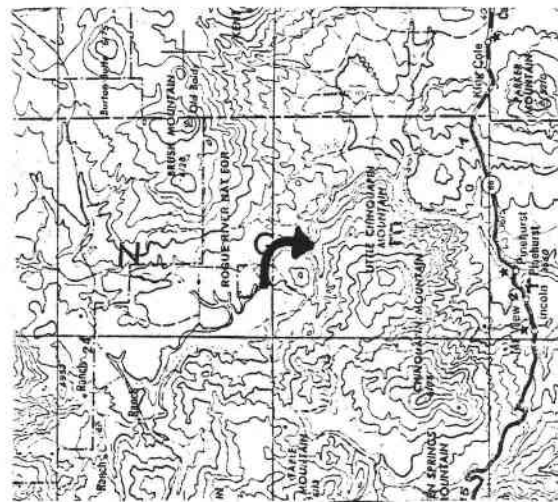
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS				THEORETICAL ANNUAL ENERGY AVAILABLE				PLANT FACTOR			
I	PERCENTAGE	I	DISCHARGE	I	THEORETICAL	I	ANNUAL ENERGY	I	PLANT	I	FACTOR
I	I	I	CFS	I	PLANT SIZE	I	AVAILABLE	I	I	I	I
I	I	I	I	I	MW	I	GW	I	I	I	I
I	95	I	.5	I	.00	I	.02	I	1.000	I	
I	80	I	15.9	I	.09	I	.68	I	.879	I	
I	50	I	54.3	I	.30	I	1.91	I	.717	I	
I	30	I	72.5	I	.41	I	2.26	I	.638	I	
I	10	I	84.5	I	.47	I	2.38	I	.575	I	

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-002-000-R0001

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 14, T41S, R6E
D. Latitude, Longitude	42°02'N, 122°06'W
E. Stream Name	Klamath River
F. Major Basin Name	Klamath
G. River Mile	207.5 to 219.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

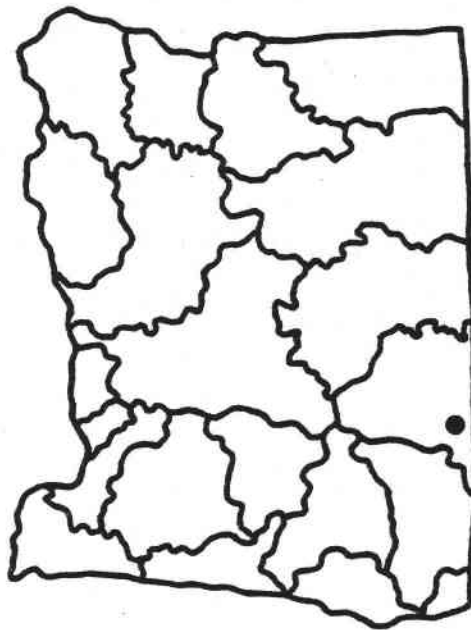
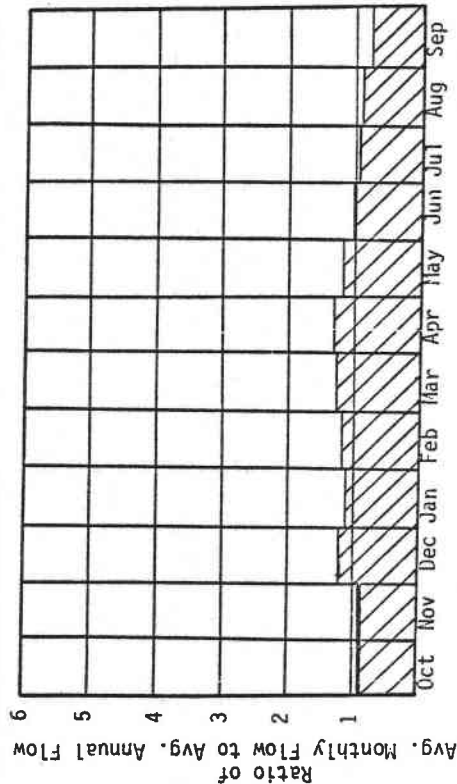
A. Upstream Elevation of Reach	3260	Ft. MSL
B. Downstream Elevation of Reach	2740	Ft. MSL
C. Total Available Head in Reach	520	Ft.
D. Average Slope in Reach	11.5	Ft./Mi.
E. Drainage Area above Reach Mouth	4102	Sq. Mi.
F. Inflow Classification	Regulated	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

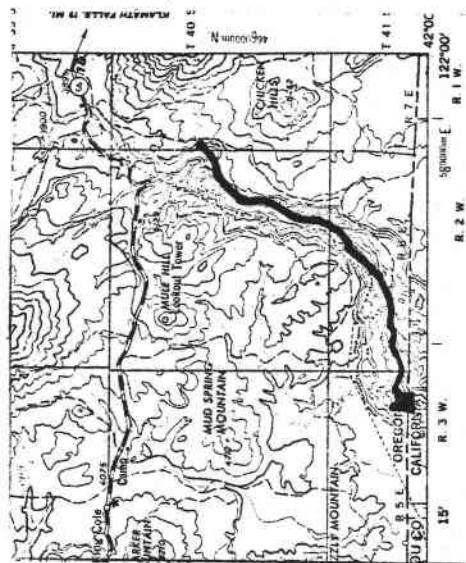
I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS I	I THEORETICAL I PLANT SIZE I MW I	I ANNUAL ENERGY I AVAILABLE I GWH I	I PLANT I FACTOR I
I 95 I	I 299.2 I	I 13.18 I	I 115.48 I	I 1.000 I
I 80 I	I 430.0 I	I 18.95 I	I 159.69 I	I .962 I
I 50 I	I 598.3 I	I 26.37 I	I 201.91 I	I .874 I
I 30 I	I 934.8 I	I 41.20 I	I 253.88 I	I .704 I
I 10 I	I 1682.7 I	I 74.15 I	I 311.62 I	I .480 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 1500 CFS



U.S.G.S. TOPO. SERIES
1:250,000 SCALE
MAP NAME: MEDFORD-WEED



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-002-000-R0002

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 30, T39S, R63E
D. Latitude, Longitude	42°09'N, 121°57'W
E. Stream Name	Klamath River
F. Major Basin Name	Klamath
G. River Mile	219.0 to 243.0

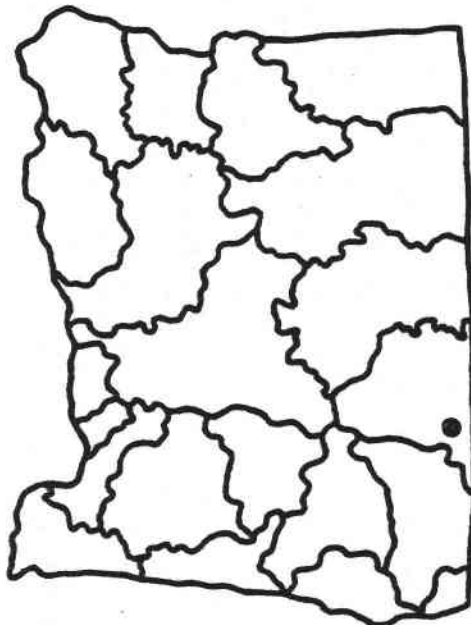
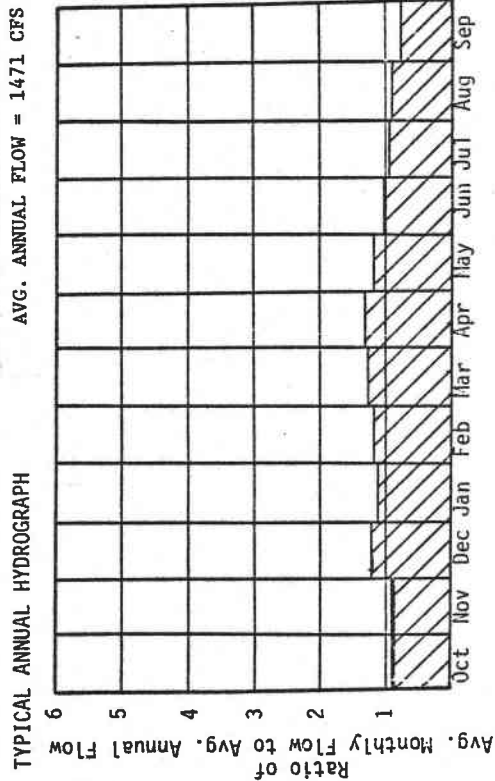
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	4050	Ft. MSL
B. Downstream Elevation of Reach	3260	Ft. MSL
C. Total Available Head in Reach	790	Ft.
D. Average Slope in Reach	32.9	Ft./Mi.
E. Drainage Area above Reach Mouth	3992	Sq. Mi.
F. Inflow Classification	Regulated	

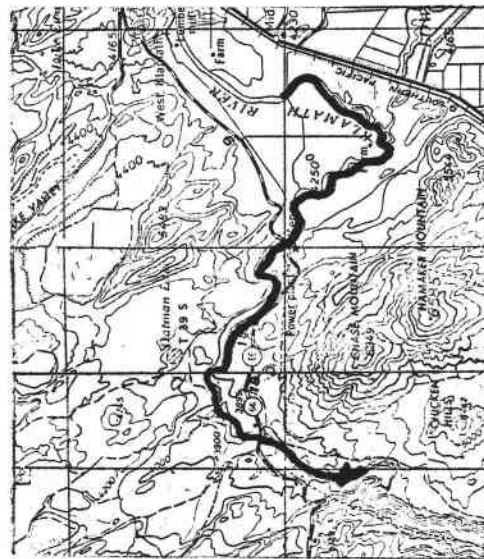
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

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	294.4	I	19.71	I	172.66	I	1.000
I	80	I	423.2	I	28.33	I	238.76	I	.962
I	50	I	588.8	I	39.42	I	301.89	I	.874
I	30	I	920.0	I	61.59	I	379.59	I	.704
I	10	I	1656.0	I	110.87	I	465.92	I	.480

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-002-000-R0003

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 3, T39S, R8E
D. Latitude, Longitude	42°11'N, 121°47'W
E. Stream Name	Klamath River
F. Major Basin Name	Klamath
G. River Mile	243.0 to 253.5

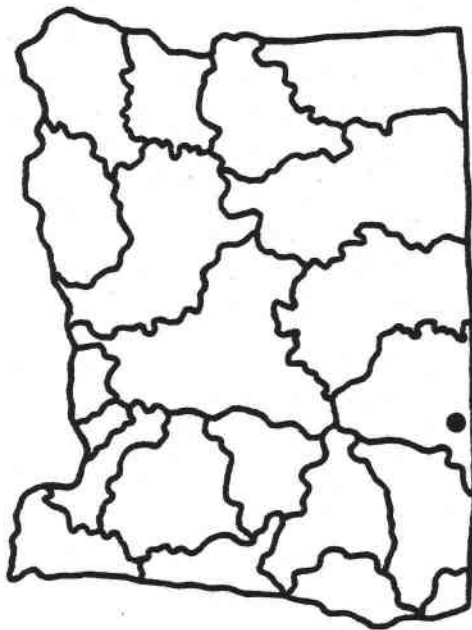
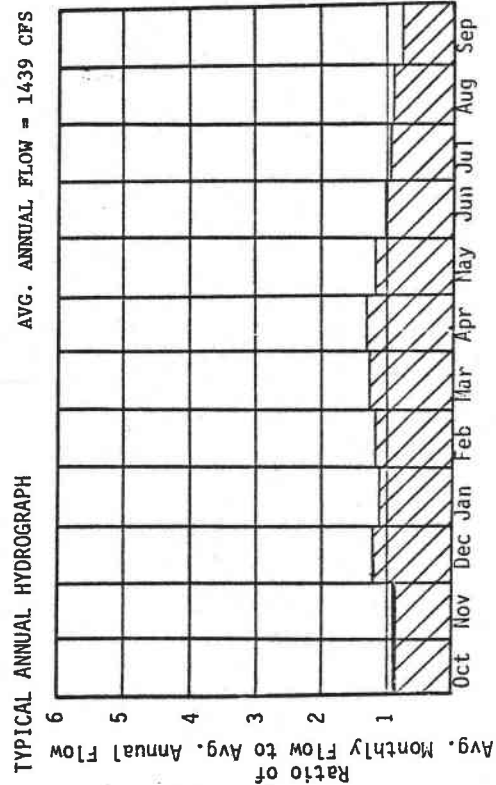
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	4120	Ft. MSL
B. Downstream Elevation of Reach	4050	Ft. MSL
C. Total Available Head in Reach	70	Ft.
D. Average Slope in Reach	6.7	Ft./Mi.
E. Drainage Area above Reach Mouth	3824	Sq. Mi.
F. Inflow Classification	Regulated	

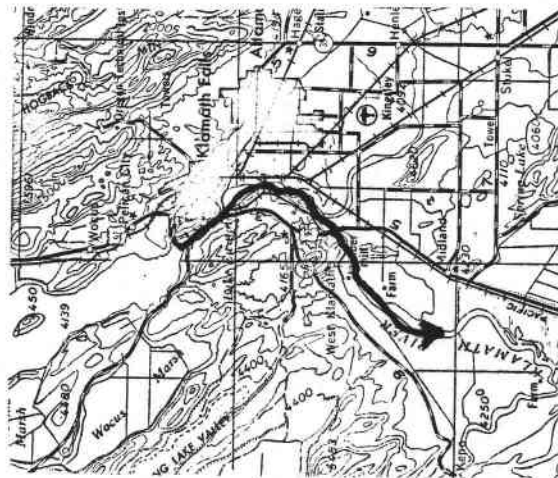
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

I EXCEEDANCE I PERCENTAGE	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 289.2	I 1.72	I 15.03	I 1.000
I 80	I 415.7	I 2.47	I 20.78	I .962
I 50	I 578.4	I 3.43	I 26.27	I .874
I 30	I 903.7	I 5.36	I 33.04	I .704
I 10	I 1626.6	I 9.65	I 40.55	I .480

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-000-RO001

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 9, T35S, R7E
D. Latitude, Longitude	42°32'N, 121°55'W
E. Stream Name	Williamson River
F. Major Basin Name	Klamath
G. River Mile	0.0 to 12.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

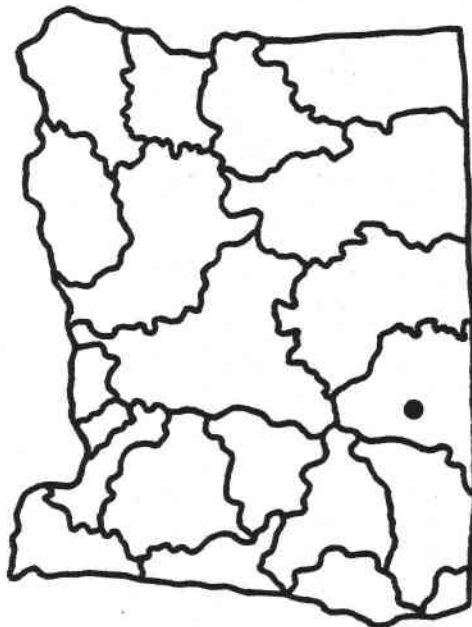
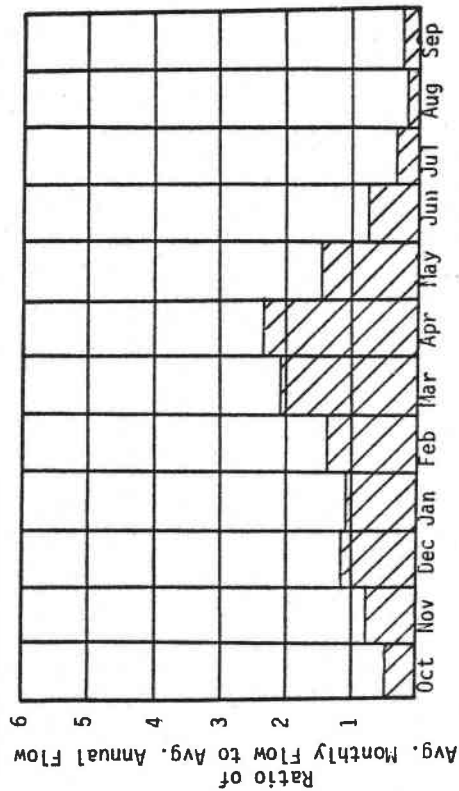
A. Upstream Elevation of Reach	4160	Ft. MSL
B. Downstream Elevation of Reach	4140	Ft. MSL
C. Total Available Head in Reach	20	Ft.
D. Average Slope in Reach	1.7	Ft./Mi.
E. Drainage Area above Reach Mouth	1746	Sq. Mi.
F. Inflow Classification	Regulated	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

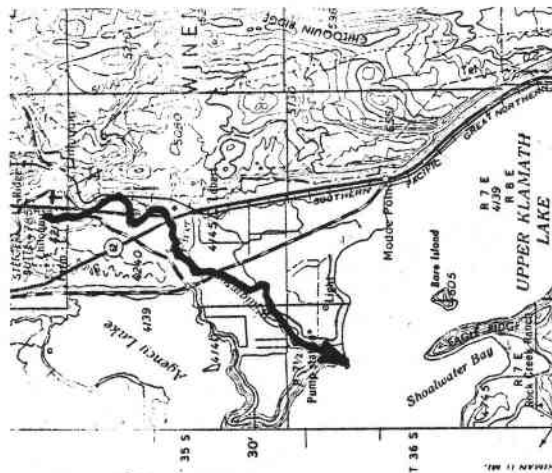
I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS	I THEORETICAL I PLANT SIZE I MW	I ANNUAL ENERGY I AVAILABLE I GWH	I PLANT I FACTOR I
I 95	I 161.5	I .27	I 2.40	I 1.000
I 80	I 232.2	I .39	I 3.32	I .962
I 50	I 323.1	I .55	I 4.19	I .874
I 30	I 504.8	I .86	I 5.27	I .704
I 10	I 908.7	I 1.54	I 6.47	I .480

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 702 CFS



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0001

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 30, T34S, R7E
D. Latitude, Longitude	42°35'N, 121°53'W
E. Stream Name	Sprague River
F. Major Basin Name	Klamath
G. River Mile	0.0 to 10.0

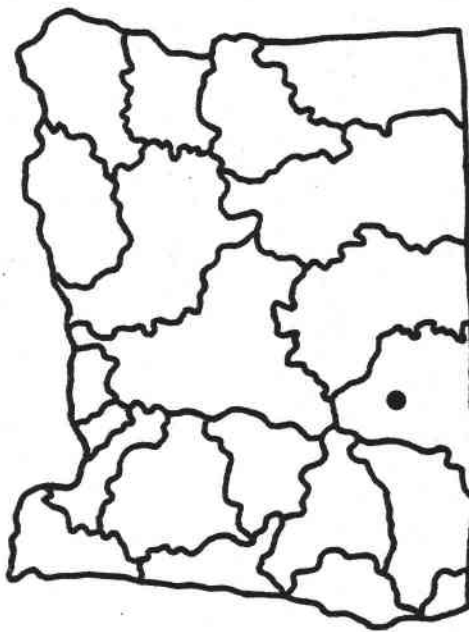
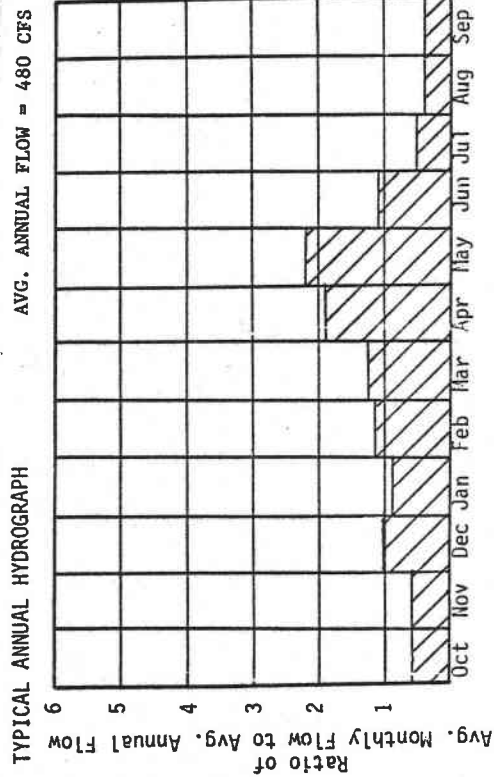
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	4245	Ft. MSL
B. Downstream Elevation of Reach	4160	Ft. MSL
C. Total Available Head in Reach	85	Ft.
D. Average Slope in Reach	8.5	Ft./Mi.
E. Drainage Area above Reach Mouth	1049	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 THEORETICAL I PLANT SIZE I MW	I ANNUAL ENERGY I AVAILABLE I GWH	I PLANT I FACTOR I
I 95	I 118.8	I .86	I 7.50	I 1.000
I 80	I 170.8	I 1.23	I 10.37	I .962
I 50	I 237.7	I 1.71	I 13.11	I .874
I 30	I 371.3	I 2.67	I 16.48	I .703
I 10	I 668.4	I 4.81	I 20.23	I .480

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0002

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 20, T34S, R8E
D. Latitude, Longitude	42° 36' N, 121° 45' W
E. Stream Name	Sprague River
F. Major Basin Name	Klamath
G. River Mile	10.0 to 20.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	4255	Ft. MSL
B. Downstream Elevation of Reach	4245	Ft. MSL
C. Total Available Head in Reach	10	Ft.
D. Average Slope in Reach	1	Ft./Mi.
E. Drainage Area above Reach Mouth	625	Sq. Mi.
F. Inflow Classification	Regulated	

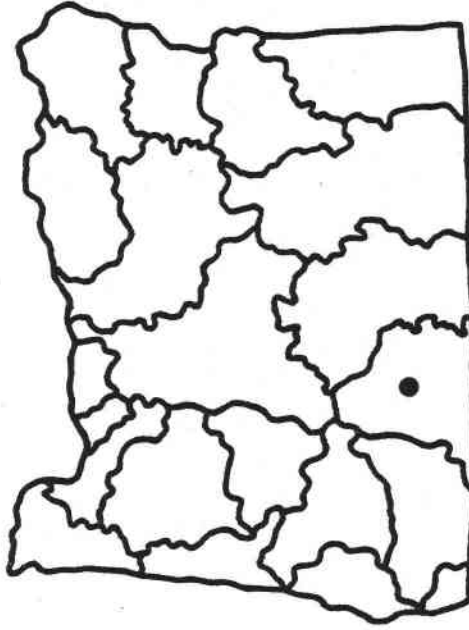
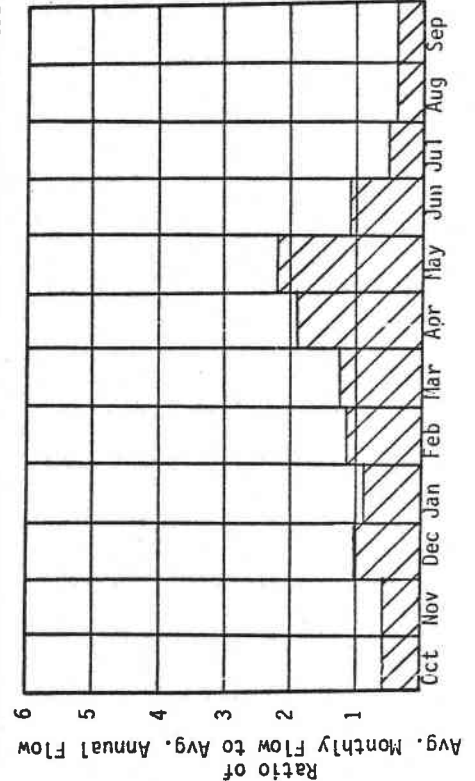
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

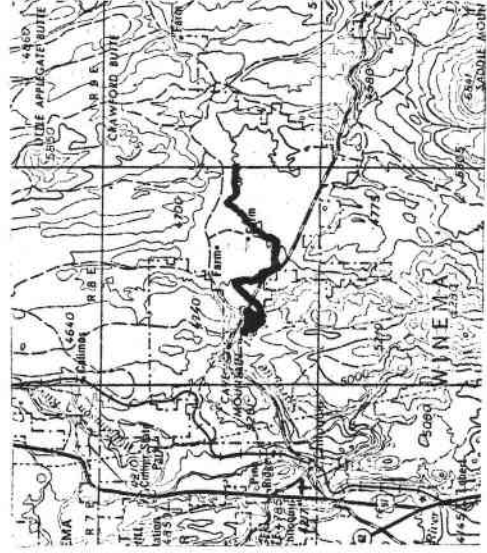
I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS I	I THEORETICAL I PLANT SIZE I MW I	I ANNUAL ENERGY I AVAILABLE I GWH I	I PLANT I FACTOR I
I 95 I	I 116.1 I	I .10 I	I .86 I	I 1.000 I
I 80 I	I 166.9 I	I .14 I	I 1.19 I	I .962 I
I 50 I	I 232.2 I	I .20 I	I 1.51 I	I .874 I
I 30 I	I 362.7 I	I .31 I	I 1.89 I	I .704 I
I 10 I	I 652.9 I	I .55 I	I 2.33 I	I .480 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 462 CFS



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0003

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 12, T35S, R9E
D. Latitude, Longitude	42°34'N, 121°41'W
E. Stream Name	Sprague River
F. Major Basin Name	Klamath
G. River Mile	20.0 to 38.3

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

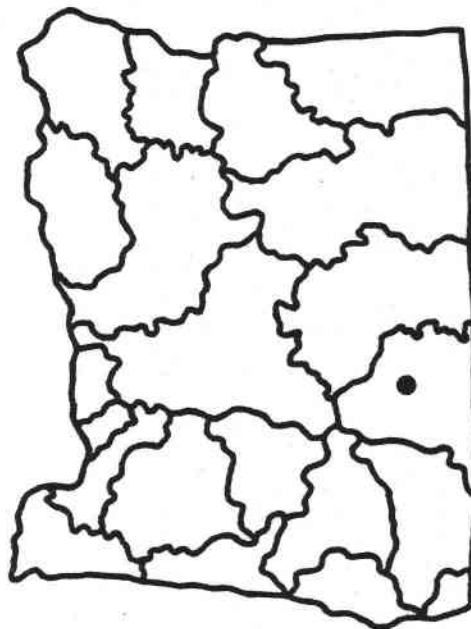
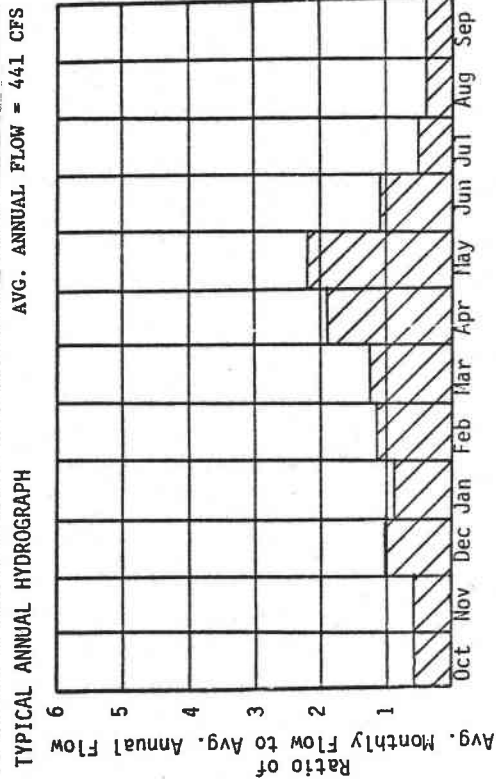
A. Upstream Elevation of Reach	4275	Ft. MSL
B. Downstream Elevation of Reach	4255	Ft. MSL
C. Total Available Head in Reach	20	Ft.
D. Average Slope in Reach	1.1	Ft./Mi.
E. Drainage Area above Reach Mouth	965	Sq. Mi.
F. Inflow Classification	Regulated	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

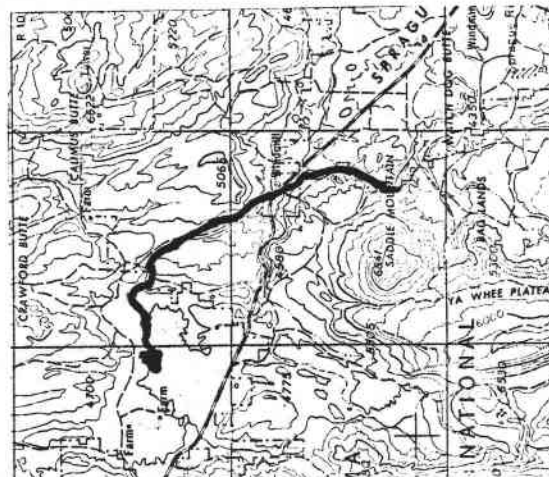
ENERGY CHARACTERISTICS

I EXCEEDANCE I	I DISCHARGE I	I THEORETICAL I	I ANNUAL ENERGY I	I PLANT I
I PERCENTAGE I	I CFS	I PLANT SIZE I	I AVAILABLE I	I FACTOR I
I	I	I MW	I GWH	I
I 95	I 111.1	I .19	I 1.65	I 1.000
I 80	I 159.8	I .27	I 2.28	I .962
I 50	I 222.3	I .38	I 2.89	I .874
I 30	I 347.3	I .59	I 3.63	I .704
I 10	I 625.2	I 1.06	I 4.45	I .480

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0004

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 18, T35S, R10E
D. Latitude, Longitude	42°30'N, 121°33'W
E. Stream Name	Sprague River
F. Major Basin Name	Klamath
G. River Mile	38.3 to 50.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	4290	Ft. MSL
B. Downstream Elevation of Reach	4275	Ft. MSL
C. Total Available Head in Reach	15	Ft.
D. Average Slope in Reach	1.3	Ft./Mi.
E. Drainage Area above Reach Mouth	848	Sq. Mi.
F. Inflow Classification	Regulated	

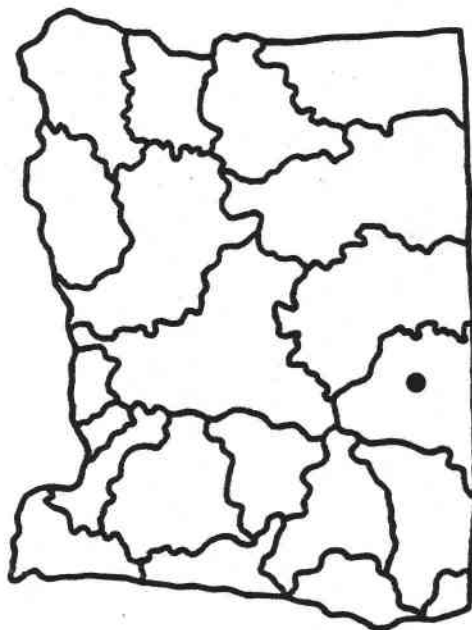
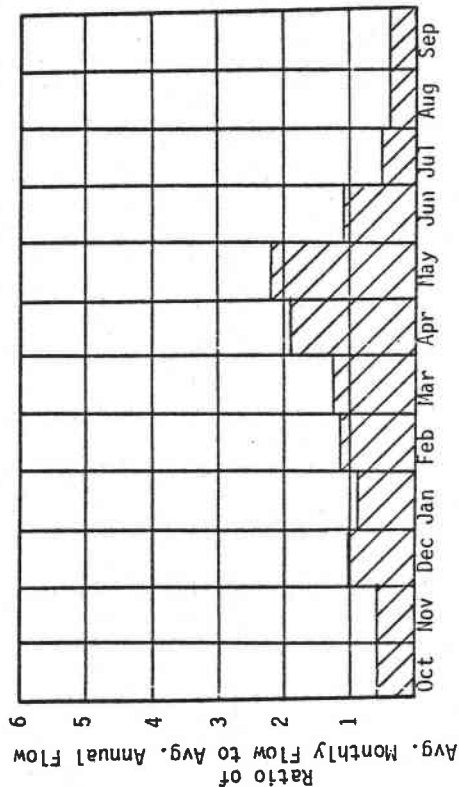
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

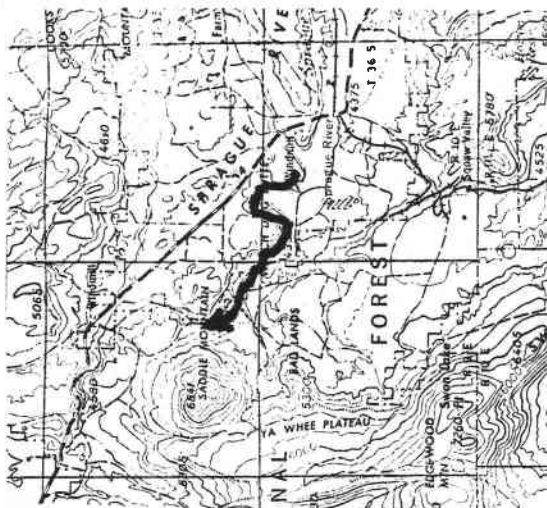
I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS I	I THEORETICAL I PLANT SIZE I MW I	I ANNUAL ENERGY I AVAILABLE I GWH I	I PLANT I FACTOR I
I 95 I	I 103.2 I	I .13 I	I 1.15 I	I 1.000 I
I 80 I	I 148.4 I	I .19 I	I 1.59 I	I .962 I
I 50 I	I 206.5 I	I .26 I	I 2.01 I	I .874 I
I 30 I	I 322.6 I	I .41 I	I 2.53 I	I .704 I
I 10 I	I 580.8 I	I .74 I	I 3.10 I	I .480 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 404 CFS



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0005

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 11, T36S, R11E
D. Latitude, Longitude	42° 28' N, 121° 26' W
E. Stream Name	Sprague River
F. Major Basin Name	Klamath
G. River Mile	50.0 to 64.3

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

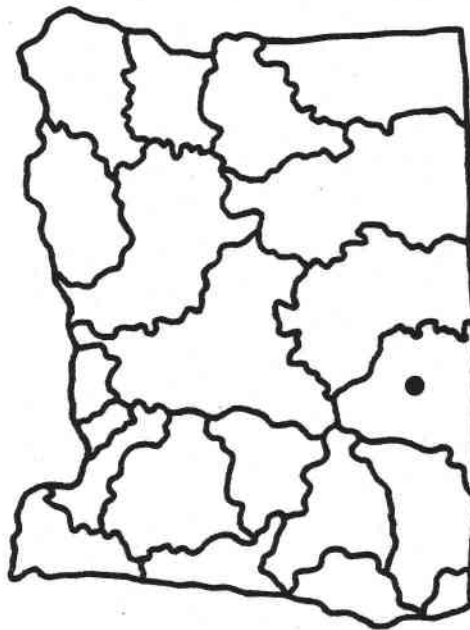
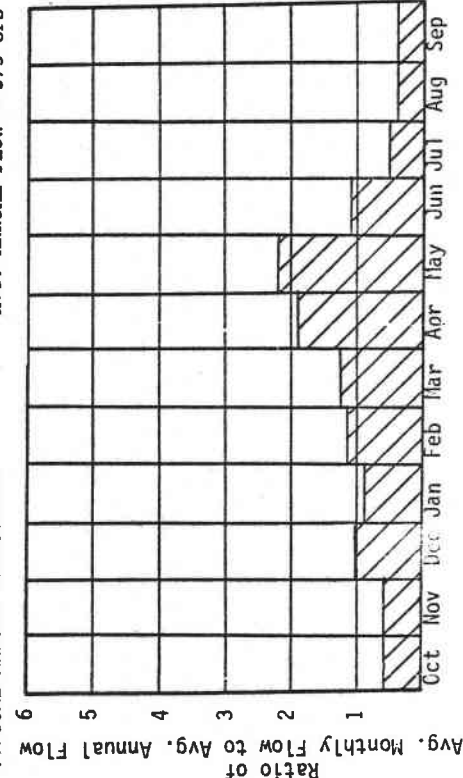
A. Upstream Elevation of Reach	4300.	Ft. MSL
B. Downstream Elevation of Reach	4290	Ft. MSL
C. Total Available Head in Reach	10	Ft.
D. Average Slope in Reach	0.7	Ft./Mi.
E. Drainage Area above Reach Mouth	778	Sq. Mi.
F. Inflow Classification	Regulated	

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 96.8 I	I .08 I	I .72 I	I 1.000 I
I 80 I	I 139.2 I	I .12 I	I .99 I	I .962 I
I 50 I	I 193.6 I	I .16 I	I 1.26 I	I .874 I
I 30 I	I 302.6 I	I .26 I	I 1.58 I	I .704 I
I 10 I	I 544.6 I	I .46 I	I 1.94 I	I .480 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 373 CFS



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0006

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 15, T36S, R12E
D. Latitude, Longitude	42°27'N, 121°19'W
E. Stream Name	Sprague River
F. Major Basin Name	Klamath
G. River Mile	64.3 to 70.5

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

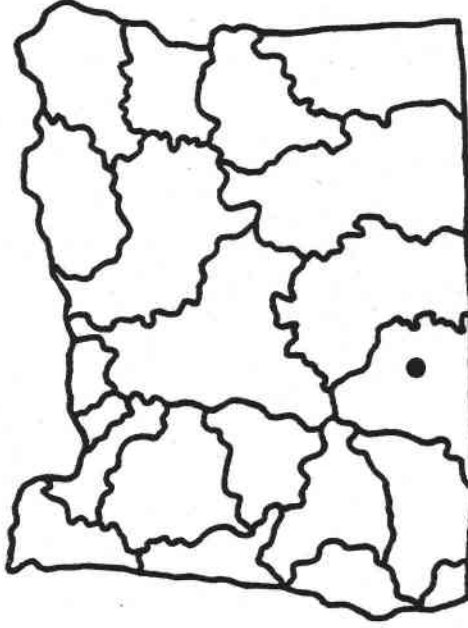
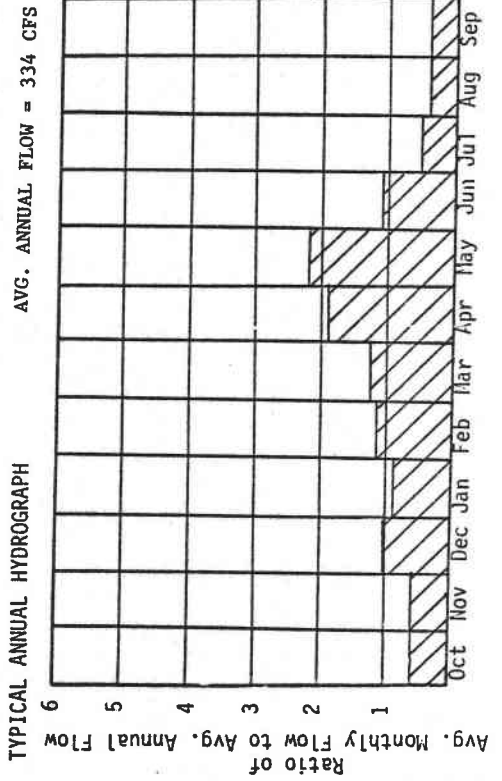
A. Upstream Elevation of Reach	4310	Ft. MSL
B. Downstream Elevation of Reach	4300	Ft. MSL
C. Total Available Head in Reach	10	Ft.
D. Average Slope in Reach	1.6	Ft./Mi.
E. Drainage Area above Reach Mouth	628	Sq. Mi.
F. Inflow Classification	Regulated	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

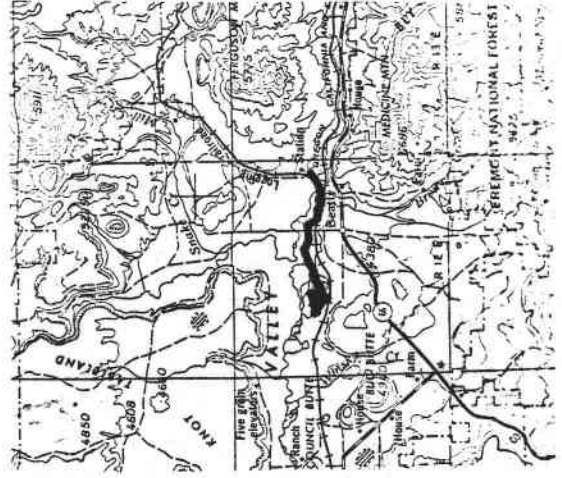
ENERGY CHARACTERISTICS

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 88.6 I	I .08 I	I .66 I	I 1.000 I
I 80 I	I 127.4 I	I .11 I	I .91 I	I .962 I
I 50 I	I 177.3 I	I .15 I	I 1.15 I	I .874 I
I 30 I	I 277.0 I	I .23 I	I 1.45 I	I .704 I
I 10 I	I 498.6 I	I .42 I	I 1.78 I	I .480 I

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0007

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 9, T36S, R13E
D. Latitude, Longitude	42°26'N 121°12'W
E. Stream Name	Sprague River
F. Major Basin Name	Klamath
G. River Mile	70.5 to 84.0

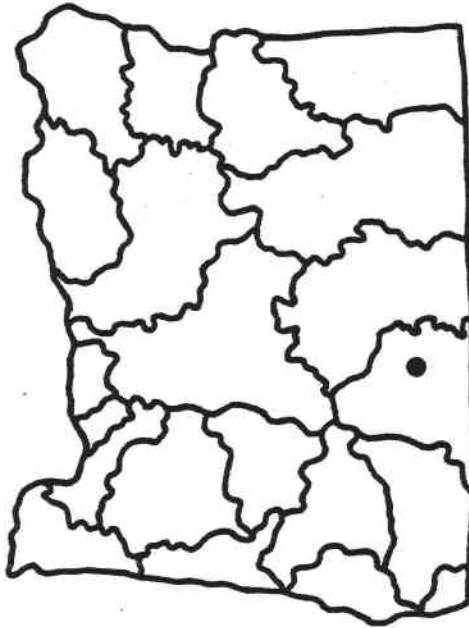
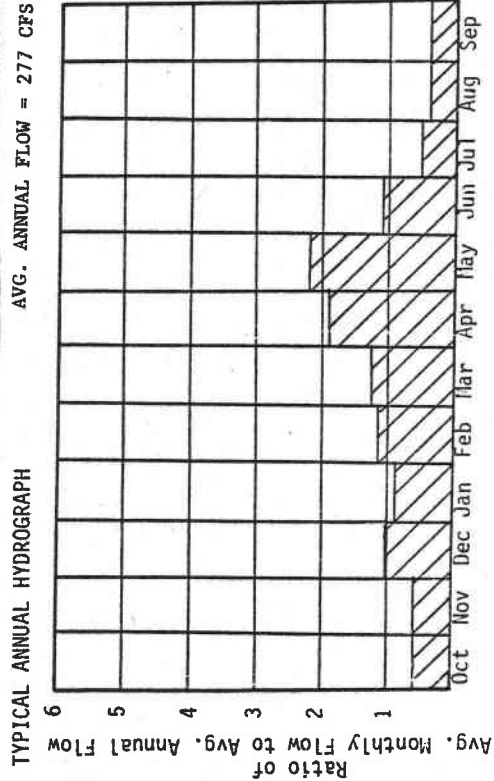
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	4330	Ft. MSL
B. Downstream Elevation of Reach	4310	Ft. MSL
C. Total Available Head in Reach	20	Ft.
D. Average Slope in Reach	1.5	Ft./Mi.
E. Drainage Area above Reach Mouth	298	Sq. Mi.
F. Inflow Classification	Natural	

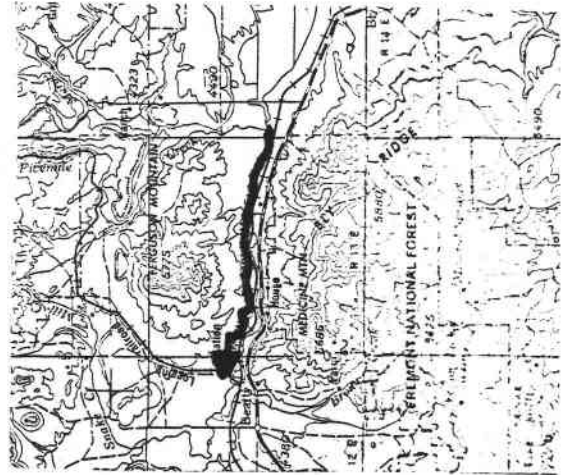
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

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 76.1 I	I .13 I	I 1.13 I	I 1.000 I
I 80 I	I 109.4 I	I .19 I	I 1.56 I	I .962 I
I 50 I	I 152.3 I	I .26 I	I 1.98 I	I .874 I
I 30 I	I 237.9 I	I .40 I	I 2.48 I	I .704 I
I 10 I	I 428.2 I	I .73 I	I 3.05 I	I .480 I

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0008

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 3, T36S, R14E
D. Latitude, Longitude	42°27'N, 121°07'W
E. Stream Name	North Fork Sprague River
F. Major Basin Name	Klamath
G. River Mile	0.0 to 3.0

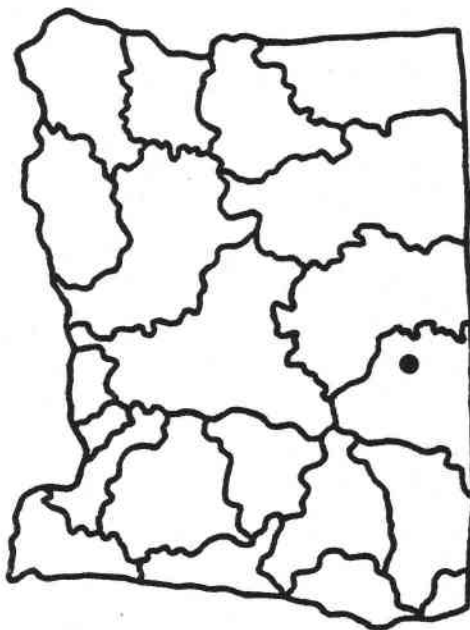
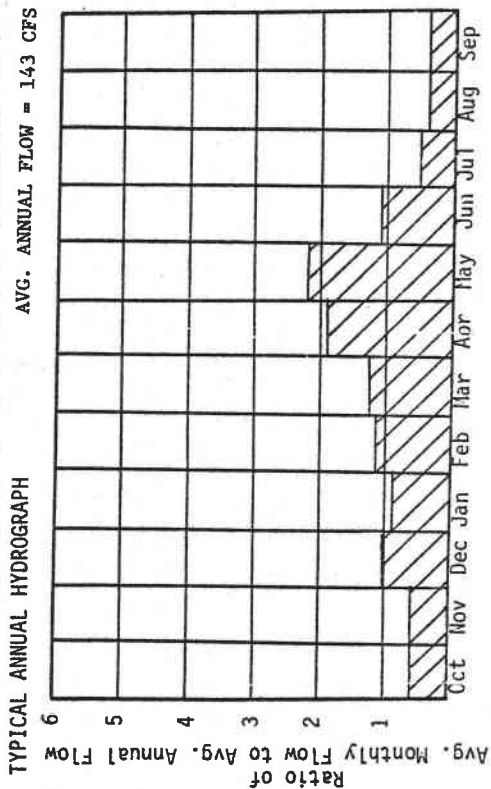
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	4340	Ft. MSL
B. Downstream Elevation of Reach	4330	Ft. MSL
C. Total Available Head in Reach	10	Ft.
D. Average Slope in Reach	3.3	Ft./Mi.
E. Drainage Area above Reach Mouth	204	Sq. Mi.
F. Inflow Classification	Natural	

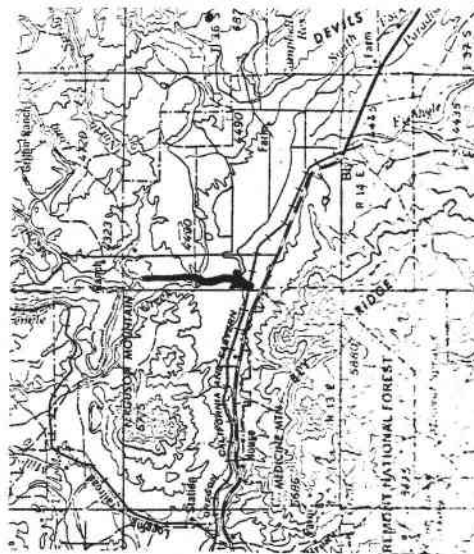
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

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 44.5	I .04	I .33	I 1.000
I 80	I 64.0	I .05	I .46	I .962
I 50	I 89.1	I .08	I .58	I .874
I 30	I 139.2	I .12	I .73	I .704
I 10	I 250.5	I .21	I .89	I .480

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0009

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 2, T36S, R14E
D. Latitude, Longitude	42°28'N 121°07'W
E. Stream Name	Fivemile Creek
F. Major Basin Name	Klamath
G. River Mile	0.0 to H.W.

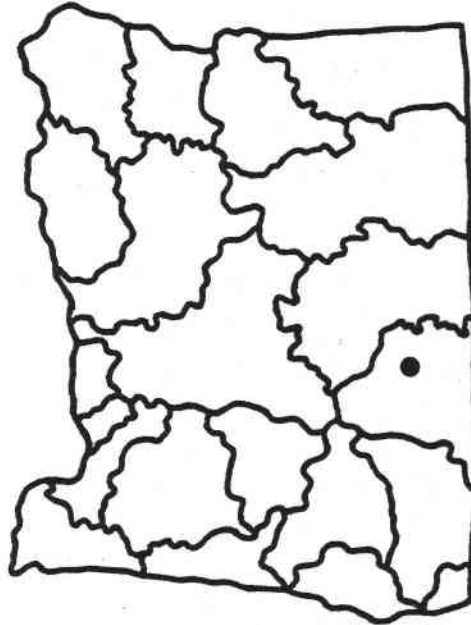
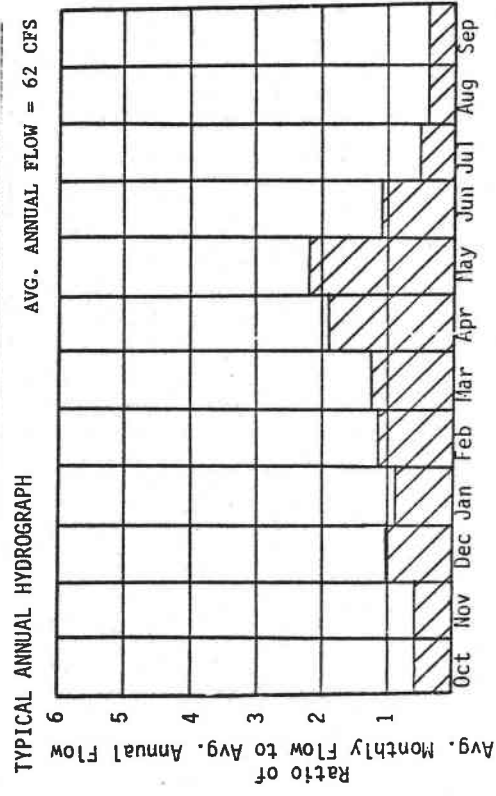
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

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	69	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 GWH	I
I 95	I 22.7	I .13	I 1.11	I 1.000
I 80	I 32.6	I .18	I 1.54	I .962
I 50	I 45.4	I .25	I 1.95	I .874
I 30	I 71.0	I .40	I 2.45	I .704
I 10	I 127.8	I .71	I 3.00	I .480

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0010

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 1, T36S, R14E
D. Latitude, Longitude	42° 29' N, 121° 07' W
E. Stream Name	North Fork Sprague River
F. Major Basin Name	Klamath
G. River Mile	3.0 to 5.3

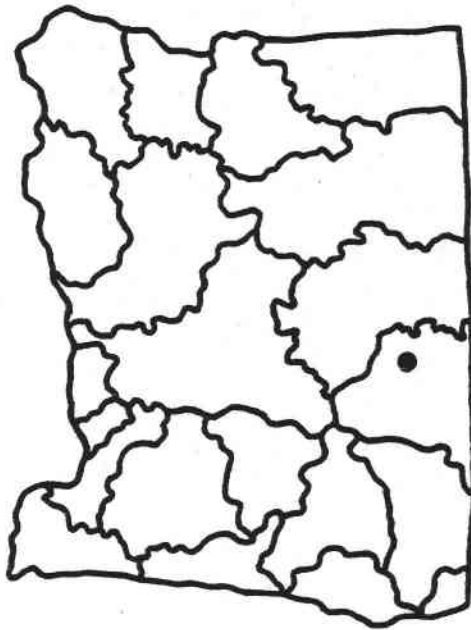
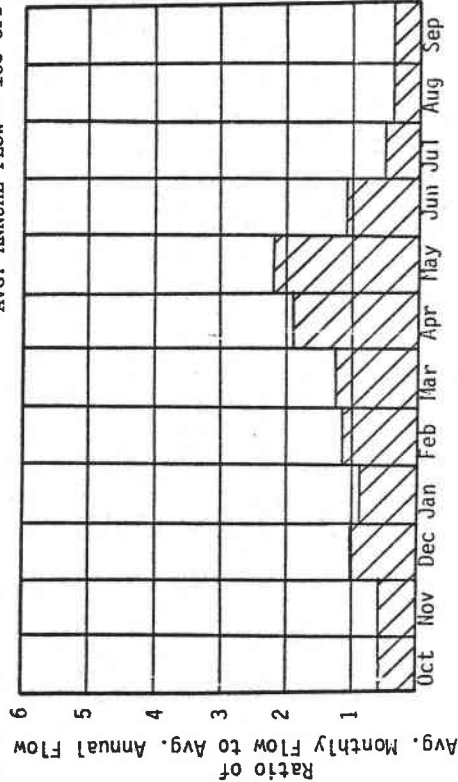
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	4370	Ft. MSL
B. Downstream Elevation of Reach	4340	Ft. MSL
C. Total Available Head in Reach	30	Ft.
D. Average Slope in Reach	13	Ft./Mi.
E. Drainage Area above Reach Mouth	133	Sq. Mi.
F. Inflow Classification	Natural	

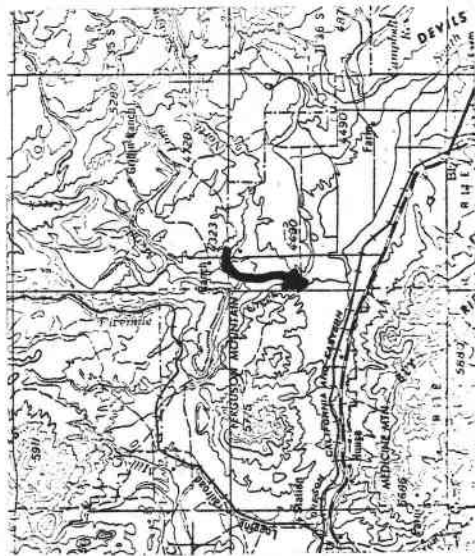
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

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 35.2 I	I .09 I	I .78 I	I 1.000 I
I 80 I	I 50.6 I	I .13 I	I 1.08 I	I .962 I
I 50 I	I 70.4 I	I .18 I	I 1.37 I	I .874 I
I 30 I	I 110.0 I	I .28 I	I 1.72 I	I .704 I
I 10 I	I 197.9 I	I .50 I	I 2.11 I	I .480 I

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0011

I. LOCATION

A. State Oregon
 B. County Klamath
 C. Township, Range Sec. 6, T35S, R14E
 D. Latitude, Longitude 42°29'N 121°07'W
 E. Stream Name North Fork Sprague River
 F. Major Basin Name Klamath
 G. River Mile 5.3 to H.W.

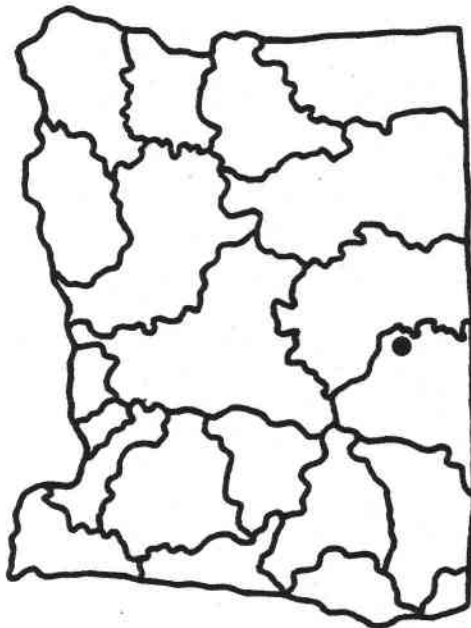
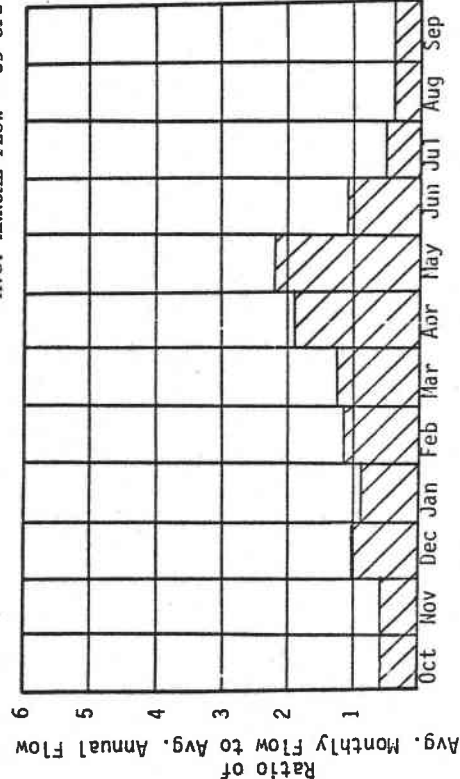
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

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 77 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 29.2 I	I .16 I	I 1.43 I	I 1.000 I
I 80	I 42.0 I	I .24 I	I 1.98 I	I .962 I
I 50	I 58.5 I	I .33 I	I 2.50 I	I .874 I
I 30	I 91.4 I	I .51 I	I 3.15 I	I .704 I
I 10	I 164.5 I	I .92 I	I 3.87 I	I .480 I

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0012

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 9, T36S, R14E
D. Latitude, Longitude	42°26'N, 121°06'W
E. Stream Name	South Fork Sprague River
F. Major Basin Name	Klamath
G. River Mile	0.0 to 2.8

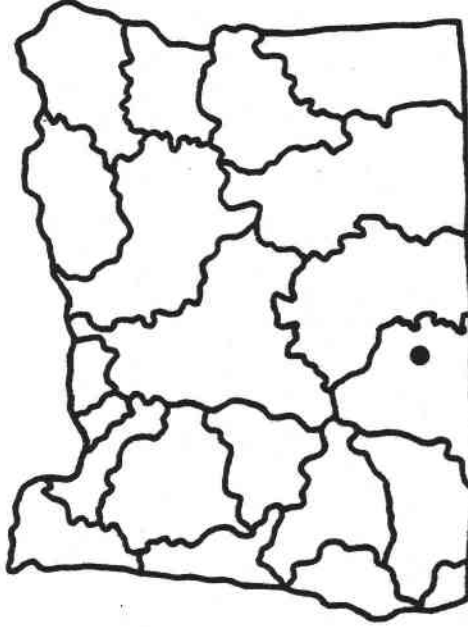
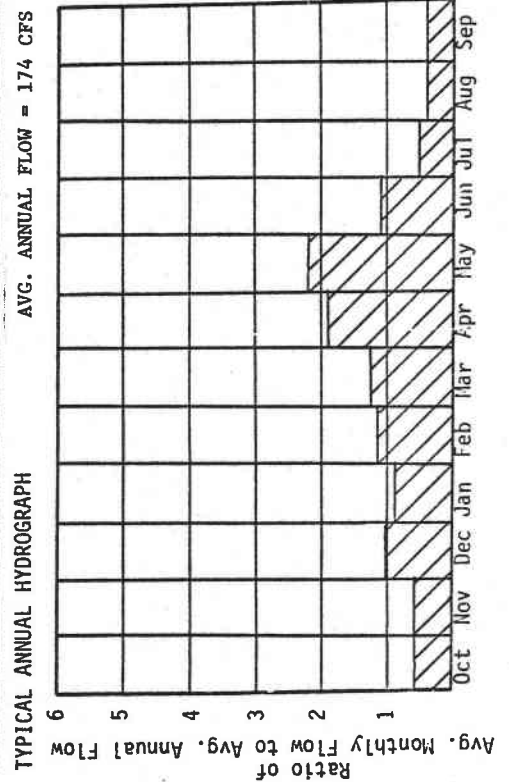
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	4335	Ft. MSL
B. Downstream Elevation of Reach	4330	Ft. MSL
C. Total Available Head in Reach	5	Ft.
D. Average Slope in Reach	0.6	Ft./Mi.
E. Drainage Area above Reach Mouth	328	Sq. Mi.
F. Inflow Classification	Natural	

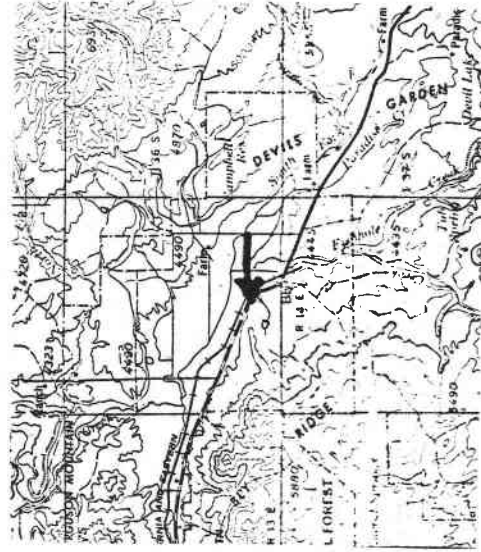
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

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 52.3 I	I .02 I	I .19 I	I 1.000 I
I 80 I	I 75.2 I	I .03 I	I .27 I	I .962 I
I 50 I	I 104.7 I	I .04 I	I .34 I	I .874 I
I 30 I	I 163.5 I	I .07 I	I .43 I	I .704 I
I 10 I	I 294.3 I	I .12 I	I .52 I	I .480 I

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0013

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 17, T36S, R14E
D. Latitude, Longitude	42°25'N, 121°04'W
E. Stream Name	South Fork Sprague River
F. Major Basin Name	Klamath
G. River Mile	2.8 to 4.5

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	4340	Ft. MSL
B. Downstream Elevation of Reach	4335	Ft. MSL
C. Total Available Head in Reach	5	Ft.
D. Average Slope in Reach	2.9	Ft./Mi.
E. Drainage Area above Reach Mouth	284	Sq. Mi.
F. Inflow Classification	Natural	

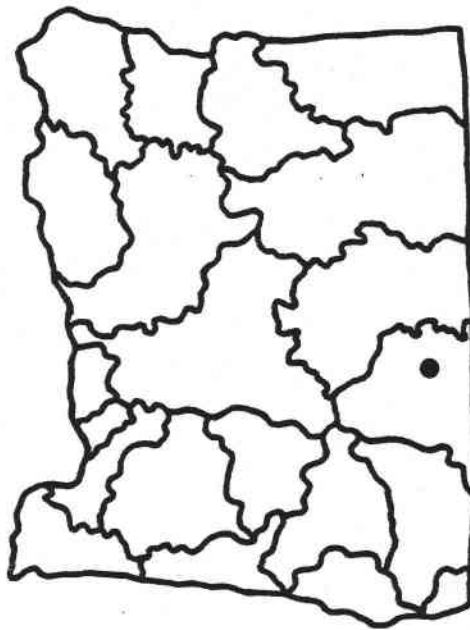
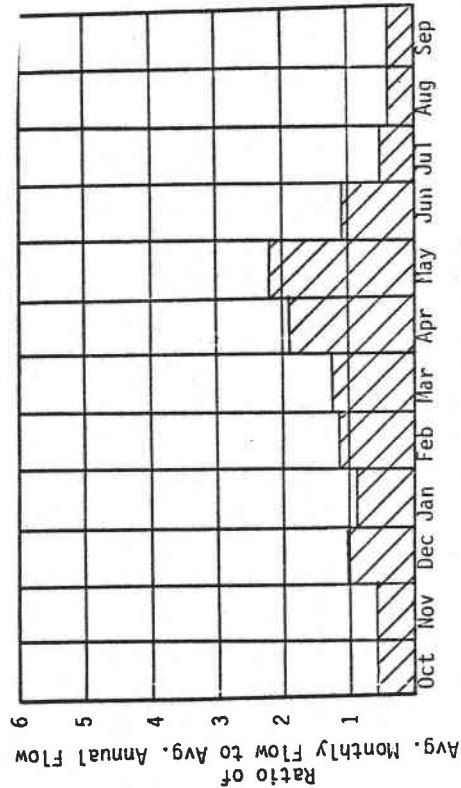
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

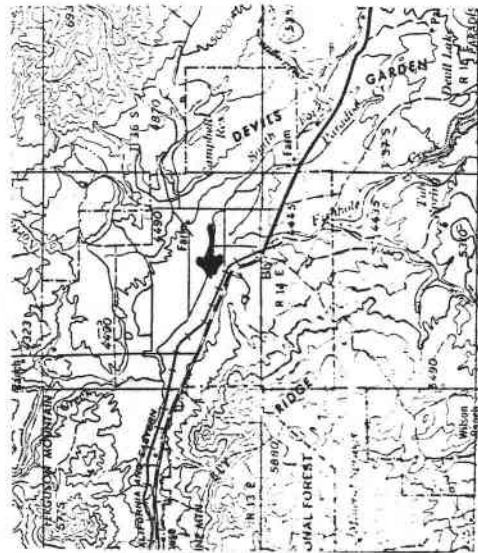
I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS I	I THEORETICAL I PLANT SIZE I MW I	I ANNUAL ENERGY I AVAILABLE I GWH I	I PLANT I FACTOR I
I 95 I	I 49.8 I	I .02 I	I .18 I	I 1.000 I
I 80 I	I 71.5 I	I .03 I	I .26 I	I .962 I
I 50 I	I 99.5 I	I .04 I	I .32 I	I .874 I
I 30 I	I 155.5 I	I .07 I	I .41 I	I .704 I
I 10 I	I 279.9 I	I .12 I	I .50 I	I .480 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 164 CFS



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0014

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 30, T36S, R14E
D. Latitude, Longitude	42° 24' N, 121° 07' W
E. Stream Name	Fishhole Creek
F. Major Basin Name	Klamath
G. River Mile	0.0 to 3.5

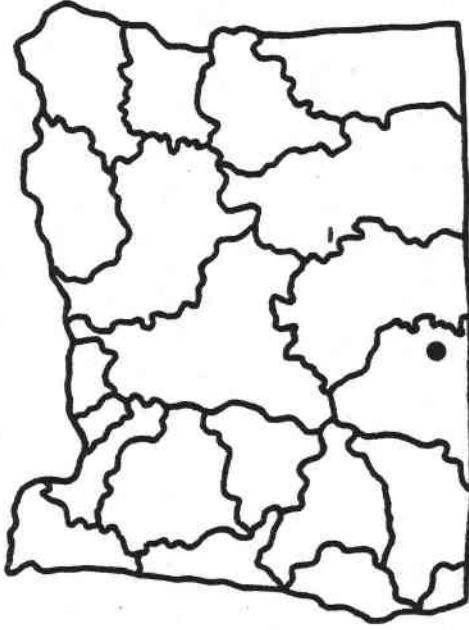
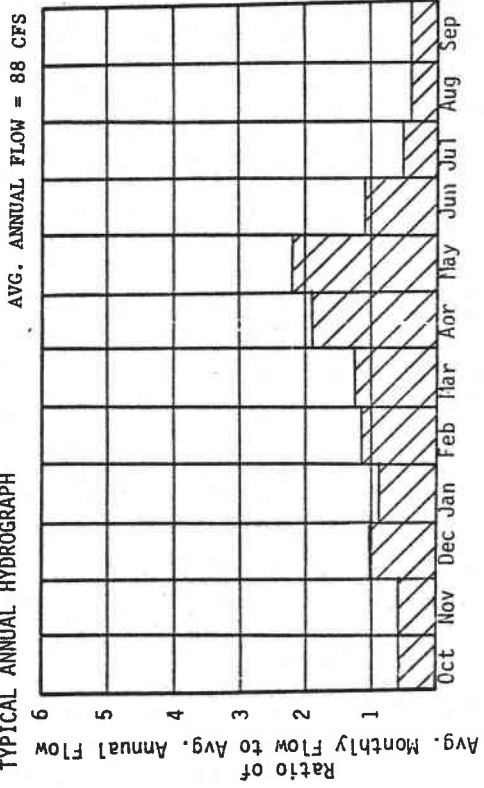
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	4360	Ft. MSL
B. Downstream Elevation of Reach	4340	Ft. MSL
C. Total Available Head in Reach	20	Ft.
D. Average Slope in Reach	5.7	Ft./Mi.
E. Drainage Area above Reach Mouth	154	Sq. Mi.
F. Inflow Classification	Natural	

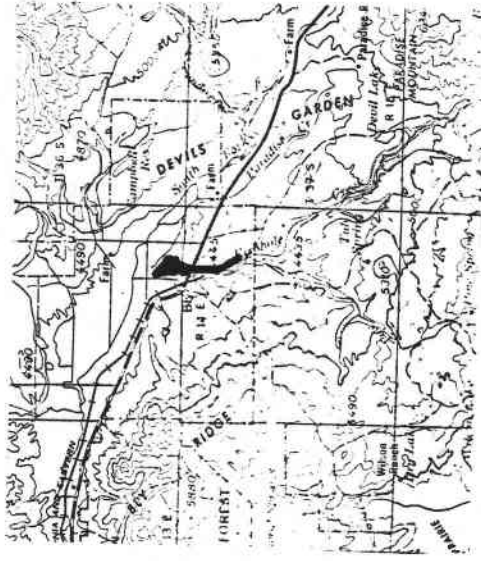
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

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	I 30.3 I	I .05 I	I .45 I	I 1.000 I
I 80 I	I 43.6 I	I .07 I	I .62 I	I .962 I
I 50 I	I 60.6 I	I .10 I	I .79 I	I .874 I
I 30 I	I 94.7 I	I .16 I	I .99 I	I .704 I
I 10 I	I 170.5 I	I .29 I	I 1.21 I	I .480 I

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0015

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 26, T37S, R14E
D. Latitude, Longitude	42° 22' N, 121° 02' W
E. Stream Name	Fishhole Creek
F. Major Basin Name	Klamath
G. River Mile	3.5 to H.W.

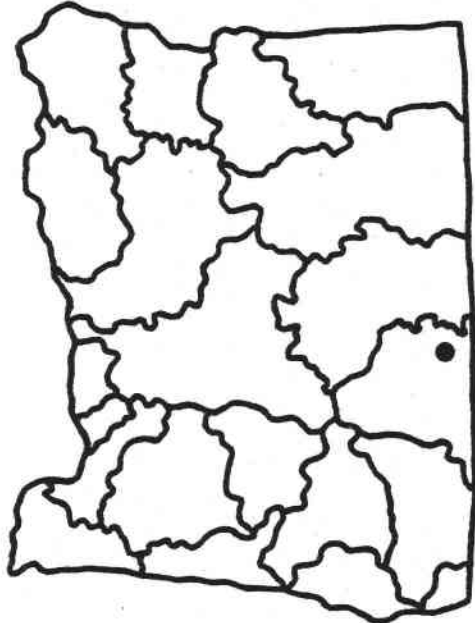
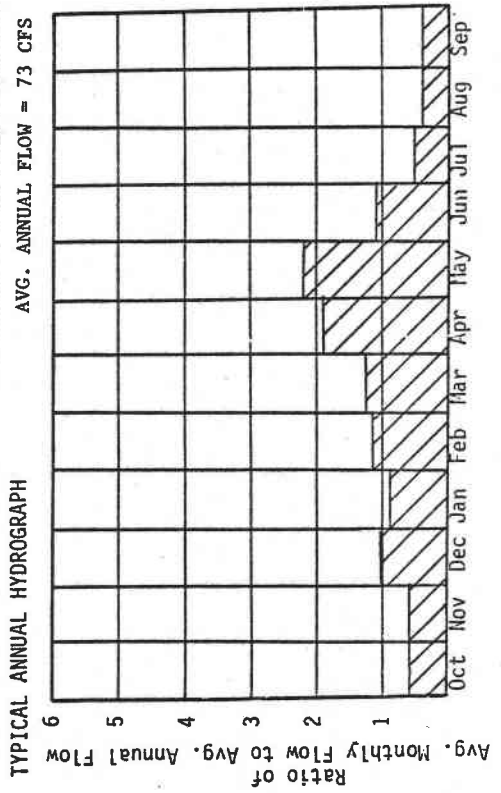
II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

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	88	Sq. Mi.
F. Inflow Classification	Natural	

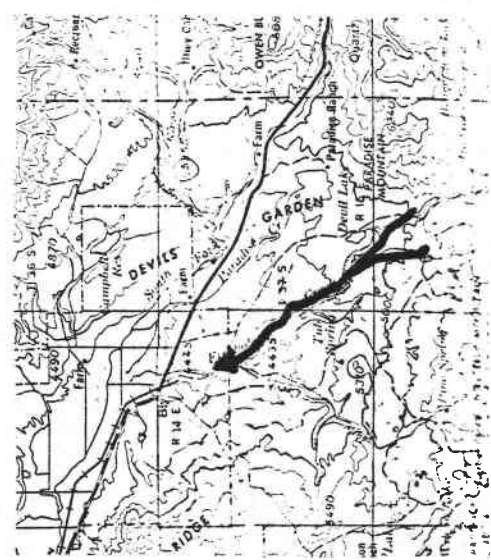
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

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 25.9 I	I .15 I	I 1.27 I	I 1.000 I
I 80 I	I 37.3 I	I .21 I	I 1.76 I	I .962 I
I 50 I	I 51.9 I	I .29 I	I 2.22 I	I .874 I
I 30 I	I 81.1 I	I .45 I	I 2.79 I	I .704 I
I 10 I	I 145.9 I	I .82 I	I 3.43 I	I .480 I

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0016

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 1, T37S, R15E
D. Latitude, Longitude	42°24' N, 121°00' W
E. Stream Name	South Fork Sprague River
F. Major Basin Name	Klamath
G. River Mile	4.5 to 12.3

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	4455	Ft. MSL
B. Downstream Elevation of Reach	4340	Ft. MSL
C. Total Available Head in Reach	115	Ft.
D. Average Slope in Reach	14.7	Ft./Mi.
E. Drainage Area above Reach Mouth	29	Sq. Mi.
F. Inflow Classification	Natural	

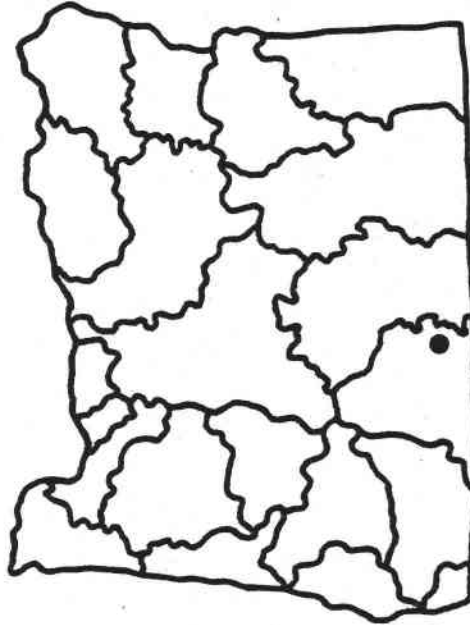
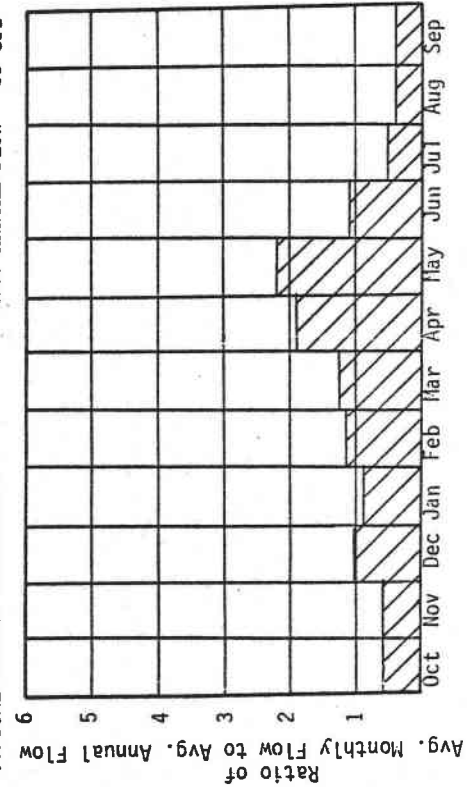
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

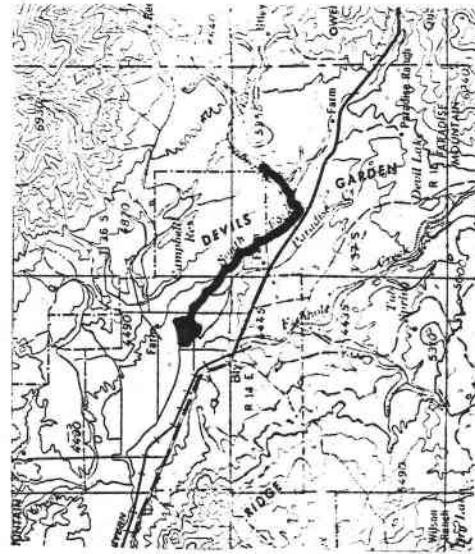
I EXCEEDANCE I	I DISCHARGE I	I THEORETICAL I	I ANNUAL ENERGY I	I PLANT I
I PERCENTAGE I	I CFS I	I PLANT SIZE I	I AVAILABLE I	I FACTOR I
I	I	I MW I	I GWH I	I
I 95 I	I 29.8 I	I .29 I	I 2.55 I	I 1.000 I
I 80 I	I 42.9 I	I .42 I	I 3.52 I	I .962 I
I 50 I	I 59.6 I	I .58 I	I 4.45 I	I .874 I
I 30 I	I 93.2 I	I .91 I	I 5.60 I	I .704 I
I 10 I	I 167.7 I	I 1.63 I	I 6.87 I	I .480 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 88 CFS



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-001-R0017

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 14, T37S, R15E
D. Latitude, Longitude	42°22'N, 120°58'W
E. Stream Name	South Fork Sprague River
F. Major Basin Name	Klamath
G. River Mile	12.3 to H.W.

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

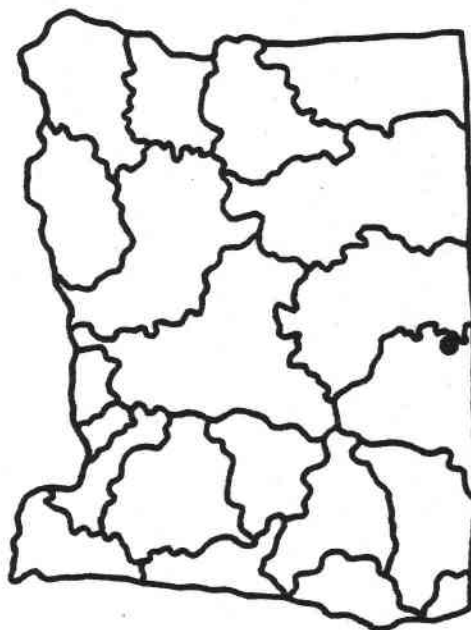
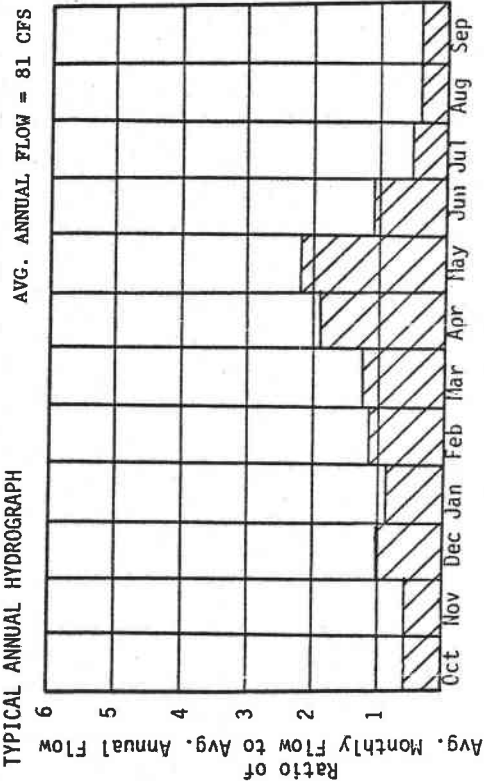
A. Upstream Elevation of Reach	---	Ft. MSL
B. Downstream Elevation of Reach	---	Ft. MSL
C. Total Available Head in Reach	66	Ft.
D. Average Slope in Reach	---	Ft./Mi.
E. Drainage Area above Reach Mouth	105	Sq. Mi.
F. Inflow Classification	Natural	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

I	PERCENTAGE	I	DISCHARGE	I	THEORETICAL	I	ANNUAL ENERGY	I	PLANT	I
I	I	I	CFS	I	PLANT SIZE	I	AVAILABLE	I	FACTOR	I
I	I	I	I	I	MW	I	GWH	I	I	I
I	95	I	28.3	I	.16	I	1.38	I	1.000	I
I	80	I	40.6	I	.23	I	1.91	I	.962	I
I	50	I	56.5	I	.32	I	2.42	I	.874	I
I	30	I	88.3	I	.49	I	3.04	I	.704	I
I	10	I	159.0	I	.89	I	3.74	I	.480	I

IV. TYPICAL ANNUAL HYDROGRAPH



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-000-R0002

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 30, T33S, R7E
D. Latitude, Longitude	42°40'N, 121°51'W
E. Stream Name	Williamson River
F. Major Basin Name	Klamath
G. River Mile	12.0 to 29.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

A. Upstream Elevation of Reach	4513	Ft. MSL
B. Downstream Elevation of Reach	4160	Ft. MSL
C. Total Available Head in Reach	353	Ft.
D. Average Slope in Reach	20.8	Ft./Mi.
E. Drainage Area above Reach Mouth	679	Sq. Mi.
F. Inflow Classification	Natural	

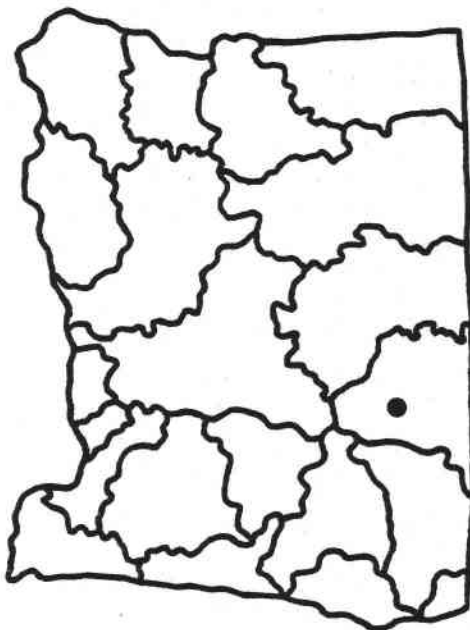
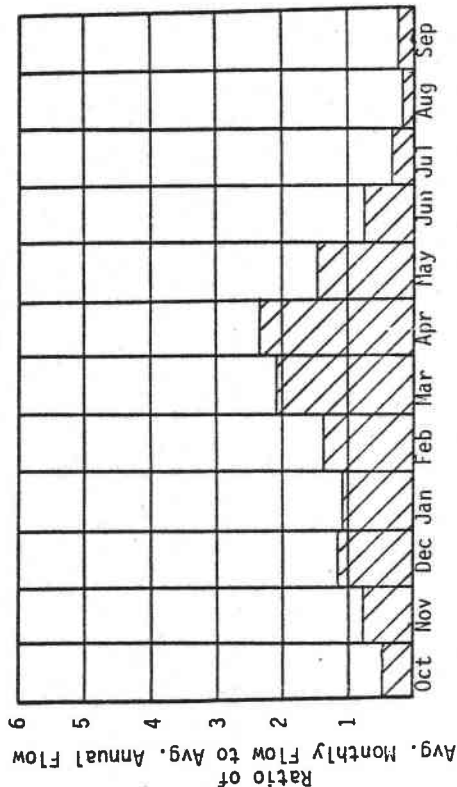
III. REACH FLOW DURATION AND THEORETICAL POTENTIAL

ENERGY CHARACTERISTICS

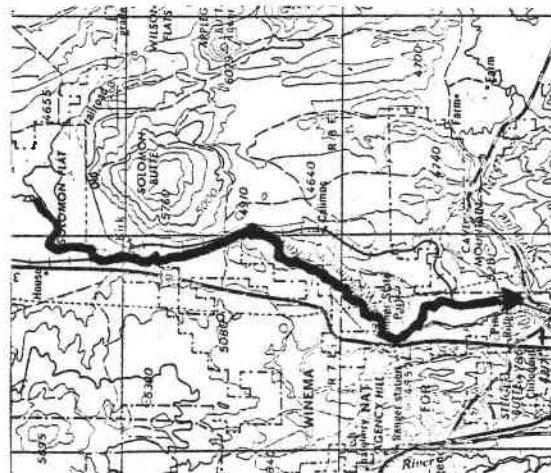
I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS I	I THEORETICAL I PLANT SIZE I MW I	I ANNUAL ENERGY I AVAILABLE I GWH I	I PLANT I FACTOR I
I 95 I	I 2.4 I	I .07 I	I .64 I	I 1.000 I
I 80 I	I 283.9 I	I 8.49 I	I 65.17 I	I .876 I
I 50 I	I 17073.3 I	I 510.75 I	I 2925.04 I	I .654 I
I 30 I	I 33916.6 I	I 1014.62 I	I 4690.60 I	I .528 I
I 10 I	I 63739.2 I	I 1906.77 I	I 6253.65 I	I .374 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 24471 CFS



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-000-R0003

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 2, T32S, R8E
D. Latitude, Longitude	42°49'N, 121°49'W
E. Stream Name	Williamson River
F. Major Basin Name	Klamath
G. River Mile	29.0 to 40.8

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

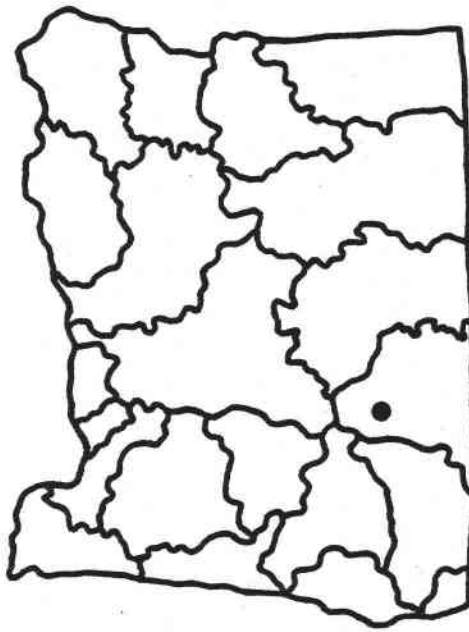
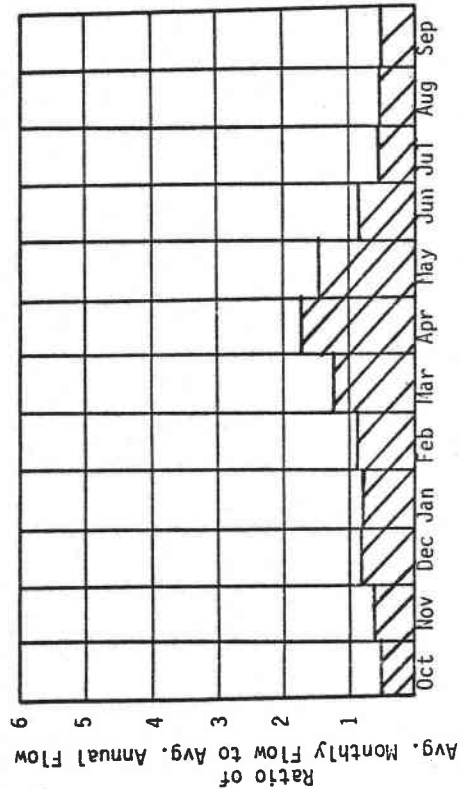
A. Upstream Elevation of Reach	4516	Ft. MSL
B. Downstream Elevation of Reach	4513	Ft. MSL
C. Total Available Head in Reach	3	Ft.
D. Average Slope in Reach	0.25	Ft./Mi.
E. Drainage Area above Reach Mouth	623	Sq. Mi.
F. Inflow Classification	Natural	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

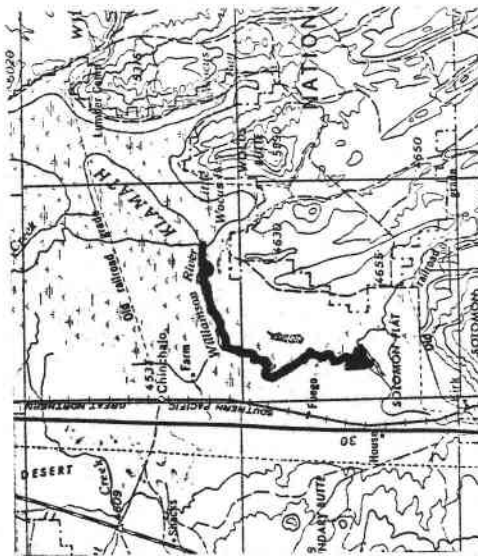
I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS I	I THEORETICAL I PLANT SIZE I MW I	I ANNUAL ENERGY I AVAILABLE I GWH I	I PLANT I FACTOR I
I 95 I	I 2.2 I	I .00 I	I .01 I	I 1.000 I
I 80 I	I 260.8 I	I .07 I	I .51 I	I .876 I
I 50 I	I 15683.5 I	I 3.99 I	I 22.84 I	I .654 I
I 30 I	I 31155.8 I	I 7.92 I	I 36.62 I	I .528 I
I 10 I	I 58550.8 I	I 14.89 I	I 48.82 I	I .374 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 22479 CFS



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-000-R0004

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 28, T30S, R9E
D. Latitude, Longitude	42°57'N, 121°37'W
E. Stream Name	Williamson River
F. Major Basin Name	Klamath
G. River Mile	48.9 to 59.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

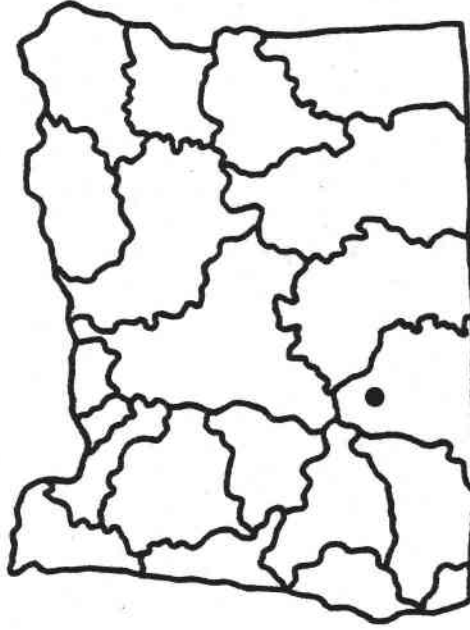
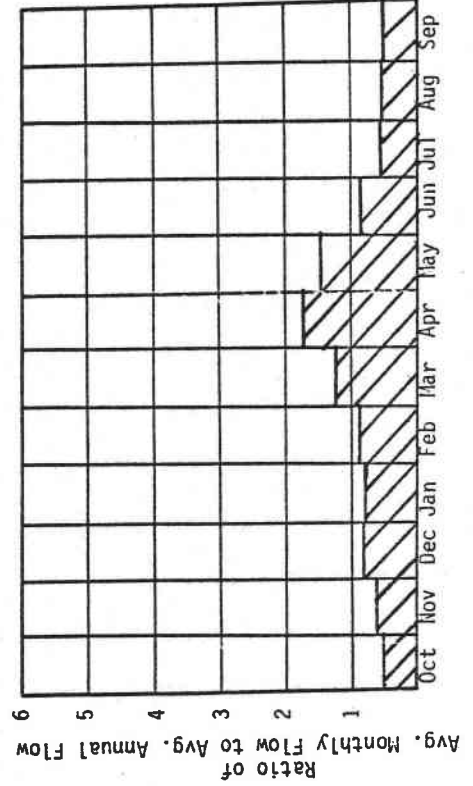
A. Upstream Elevation of Reach	4547	Ft. MSL
B. Downstream Elevation of Reach	4521	Ft. MSL
C. Total Available Head in Reach	26	Ft.
D. Average Slope in Reach	2.6	Ft./Mi.
E. Drainage Area above Reach Mouth	411	Sq. Mi.
F. Inflow Classification	Natural	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

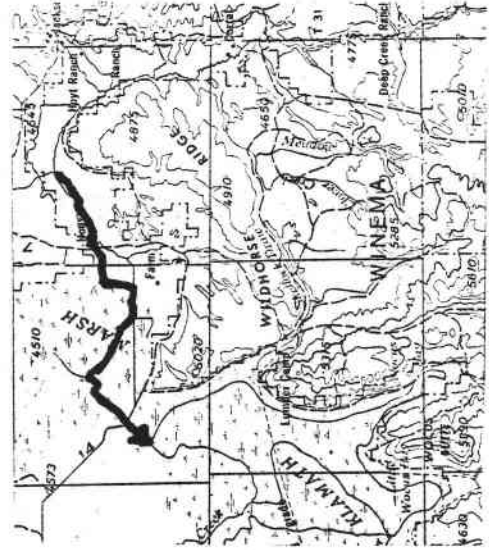
I EXCEEDANCE I PERCENTAGE	I DISCHARGE I CFS	I THEORETICAL I PLANT SIZE I MW	I ANNUAL ENERGY I AVAILABLE I GWH	I PLANT I FACTOR I
I 95	I 1.7	I .00	I .03	I 1.000
I 80	I 193.0	I .43	I 3.26	I .876
I 50	I 11605.7	I 25.57	I 146.45	I .654
I 30	I 23054.9	I 50.80	I 234.84	I .528
I 10	I 43327.0	I 95.47	I 313.10	I .374

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 16634 CFS



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-000-R0005

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 22, T30S, R10E
D. Latitude, Longitude	42° 59' N, 121° 37' W
E. Stream Name	Williamson River
F. Major Basin Name	Klamath
G. River Mile	59.0 to 62.0

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

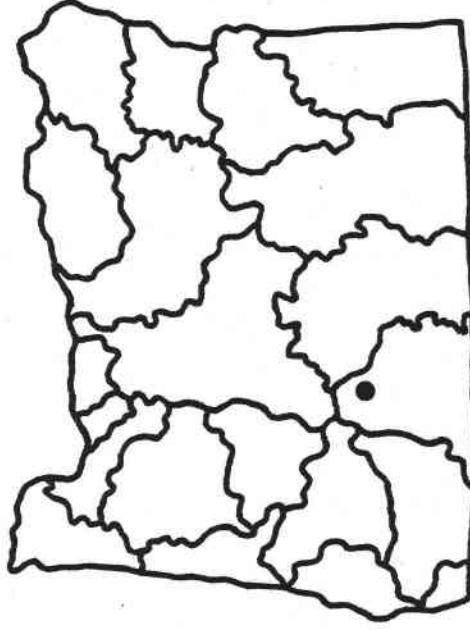
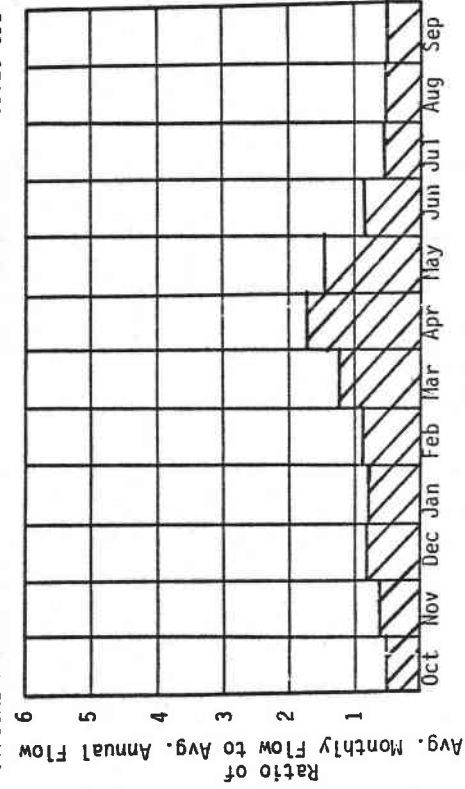
A. Upstream Elevation of Reach	4560	Ft. MSL
B. Downstream Elevation of Reach	4547	Ft. MSL
C. Total Available Head in Reach	13	Ft.
D. Average Slope in Reach	4.3	Ft./Mi.
E. Drainage Area above Reach Mouth	289	Sq. Mi.
F. Inflow Classification	Natural	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

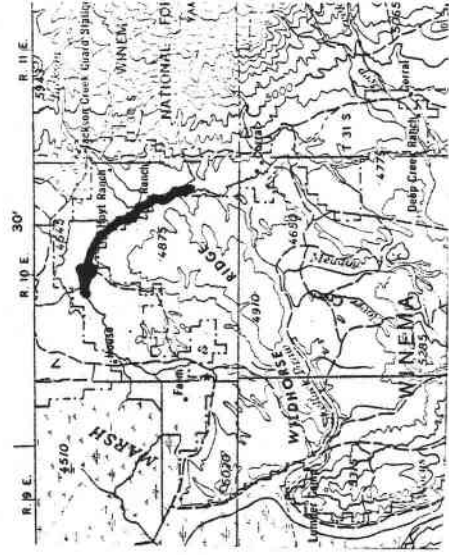
I EXCEEDANCE I PERCENTAGE I	I DISCHARGE I CFS I	I THEORETICAL I PLANT SIZE I MW I	I ANNUAL ENERGY I AVAILABLE I GWH I	I PLANT I FACTOR I
I 95 I	I 1.2 I	I .00 I	I .01 I	I 1.000 I
I 80 I	I 137.2 I	I .15 I	I 1.16 I	I .876 I
I 50 I	I 8251.3 I	I 9.09 I	I 52.06 I	I .654 I
I 30 I	I 16391.4 I	I 18.06 I	I 83.48 I	I .528 I
I 10 I	I 30804.2 I	I 33.94 I	I 111.30 I	I .374 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 11826 CFS



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



REACH HYDRO POTENTIAL CHARACTERISTICS

REACH # 02-000-014-003-000-R0006

I. LOCATION

A. State	Oregon
B. County	Klamath
C. Township, Range	Sec. 28, T30S, R10E
D. Latitude, Longitude	42°58'N, 121°30'W
E. Stream Name	Williamson River
F. Major Basin Name	Klamath
G. River Mile	62.0 to H.W.

II. HYDROLOGIC AND HYDRAULIC CHARACTERISTICS

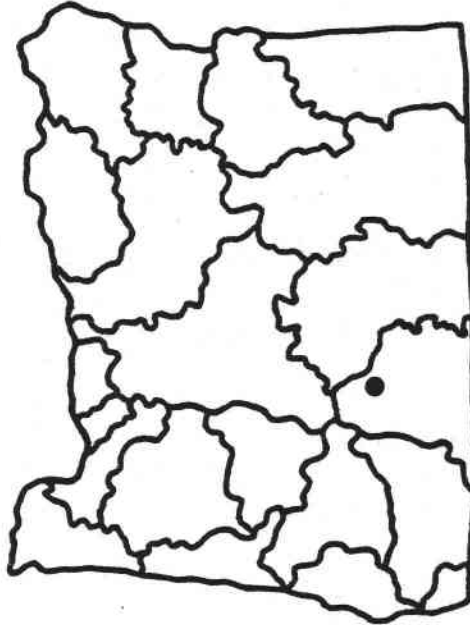
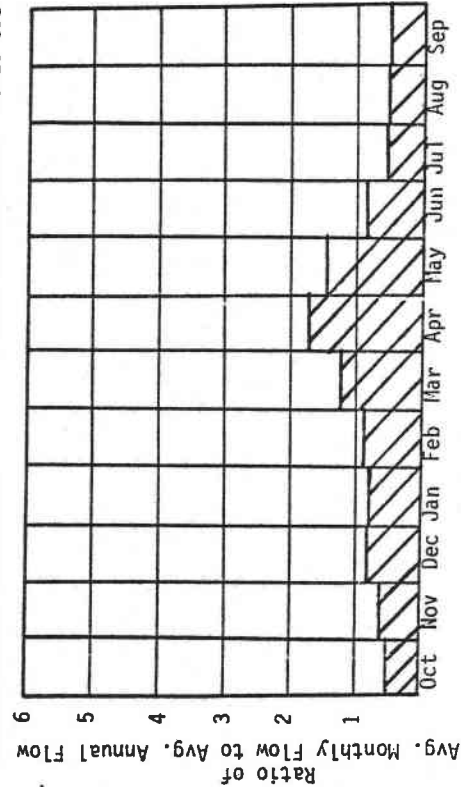
A. Upstream Elevation of Reach	---	Ft. MSL
B. Downstream Elevation of Reach	---	Ft. MSL
C. Total Available Head in Reach	66	Ft.
D. Average Slope in Reach	---	Ft./Mi.
E. Drainage Area above Reach Mouth	236	Sq. Mi.
F. Inflow Classification	Natural	

III. REACH FLOW DURATION AND THEORETICAL POTENTIAL ENERGY CHARACTERISTICS

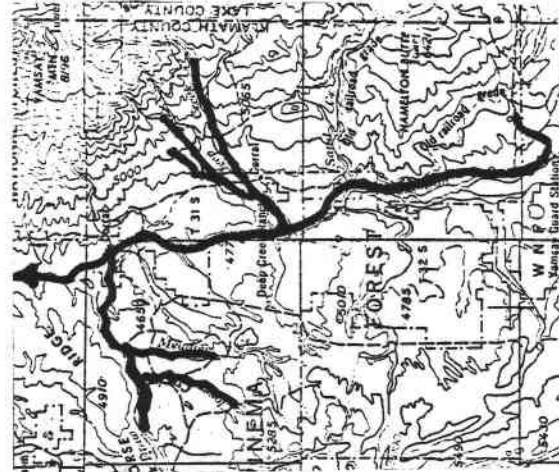
I EXCEEDANCE I	I DISCHARGE I	I THEORETICAL I	I ANNUAL ENERGY I	I PLANT I
I PERCENTAGE I	I CFS I	I PLANT SIZE I	I AVAILABLE I	I FACTOR I
I	I	I MW I	I GWH I	I
I 95 I	I 1.1 I	I .01 I	I .05 I	I 1.000 I
I 80 I	I 125.6 I	I .70 I	I 5.39 I	I .876 I
I 50 I	I 7554.4 I	I 42.25 I	I 241.98 I	I .654 I
I 30 I	I 15007.0 I	I 83.94 I	I 388.04 I	I .528 I
I 10 I	I 28202.5 I	I 157.74 I	I 517.35 I	I .374 I

IV. TYPICAL ANNUAL HYDROGRAPH

AVG. ANNUAL FLOW = 10826 CFS



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



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
02-000-014-									
001-000-R0001	-	-	-	-	X	2.1	69-PPL	-	31.0
001-000-R0002	-	-	-	-	X	6.2	69-PPL	-	29.5
001-000-R0003	-	-	-	-	X	8.0	69-PPL	-	29.0
001-000-R0004	-	-	-	-	X	8.8	69-PPL	-	29.0
002-000-R0001	X	-	-	-	-	0.3	69-PPL	-	23.0
002-000-R0002	-	-	-	-	-	0.2	69-PPL	-	11.2
002-000-R0003	-	-	X	-	-	0.7	230-PPL	1	4.0
003-000-R0001	-	X	X	-	-	0.6	69-PPL	-	21.5
003-001-R0001	-	X	-	-	-	0.3	115-PPL	-	24.0
003-001-R0002	-	-	-	-	-	0.6	115-PPL	-	25.0
003-001-R0003	-	X	-	-	-	1.8	115-PPL	-	23.5
003-001-R0004	-	-	-	-	-	2.0	115-PPL	-	21.5
003-001-R0005	-	-	-	-	-	0.2	115-PPL	-	24.0

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
02-000-014-								
003-001-R0006	-	-	-	-	0.8	69-PPL	-	29.0
003-001-R0007	-	X	-	-	1.0	69-PPL	-	34.0
003-001-R0008	-	-	-	-	0.9	69-PPL	-	44.0
003-001-R0009	-	-	-	-	2.5	69-PPL	-	45.0
003-001-R0010	-	-	-	-	3.1	69-PPL	-	46.0
003-001-R0011	-	-	-	-	3.4	69-PPL	-	47.0
003-001-R0012	-	-	-	-	0.4	69-PPL	-	46.0
003-001-R0013	-	-	-	-	0.3	69-PPL	-	44.0
003-001-R0014	-	-	-	-	0.4	115-PPL	-	37.0
003-001-R0015	-	-	-	-	2.8	115-PPL	-	36.0
003-001-R0016	-	-	-	-	0.3	69-PPL	-	37.0
003-001-R0017	-	-	-	-	1.0	69-PPL	-	33.0
003-000-R0002	-	X	-	-	1.1	230-PPL	-	30.0

